



# INDIAN PETROLEUM & NATURAL GAS STATISTICS 2021-22



**Government of India  
Ministry of Petroleum and Natural Gas  
Economic & Statistics Division**







**Economic & Statistics Division**  
**Ministry of Petroleum and Natural Gas**  
**Government of India**

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Minister of  
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Government of India

### MESSAGE

As the Management principle reads, “If you can't measure it, you can't manage it”, the success story of Hon'ble Prime Minister Shri Narendra Modi Ji's mission to ensure access, justice and equity of energy in India is best captured in the statistics and numbers of proportions the world has never seen before.

Achievements such as the release of more than 9.3 crore LPG connections under Pradhan Mantri Ujjwala Yojana (upto September 2022), tripling PNG connections from 25.4 lakh in 2014 to 98.53 lakh in 2022, increasing the number of CNG stations in India from 938 in 2014 to 4709 in 2022 and the rise in Ethanol-blending percentage in petrol from 1.53% in 2013-14 to 10.16% in July 2022 are not just figures and numbers, but a story of perseverance, determination and aspirations of India as it marches towards its goal of energy independence.

The Indian Petroleum & Natural Gas Statistics 2021-22 is a comprehensive document containing the latest and reliable statistics about the Oil & Gas sector in India, along with glimpses of the international scenario. I am sure that this publication would be widely used by policymakers, administrators, researchers and commentators across and outside India, providing valuable insights into the Oil & Gas sector for effective policymaking.



(Hardeep S Puri)

18<sup>th</sup> October 2022  
New Delhi



रामेश्वर तेली  
RAMESWAR TELI  
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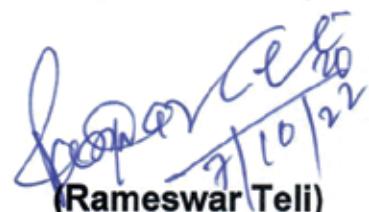
पेट्रोलियम एवं प्राकृतिक गैस और  
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Petroleum and Natural Gas &  
Labour and Employment  
Government of India

### MESSAGE

Oil and gas sector is among eight core industries in India and will continue to be a prominent driver of India's economic transformation. The petroleum and natural gas sector is a vital contributor of the energy mix and shall continue to be a main pillar in the future for ensuring the energy sustainability in this country.

The major reforms have been undertaken in the sub-sectors viz. Exploration & Production, Refinery, Pipeline, CGD, Bio-fuels and strategic storage etc. for ensuring the energy security of the country while pursuing the green path to progress for a balanced energy mix. India has achieved the target of 10% ethanol blending 5 months ahead of the schedule and has advanced the ethanol blending target of 20% in petrol to ESY 2025-26 from 2030. Ministry of Petroleum and Natural gas has taken the significant steps towards the Green Hydrogen Economy in India.

Statistics are vital for capturing trends, making realistic projections, and for making evidence based decisions and thereby contribute in creating the improved opportunities for the economic growth of the country. I am confident that this publication would be a useful source of information that provides deep insights into the oil and gas sector.



(Rameswar Teli)



पंकज जैन  
सचिव  
**Pankaj Jain**  
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October 7<sup>th</sup>, 2022

## FOREWORD

Energy is crucial to national security and to economic development. For India, Oil & Gas sector accounts for one third of our energy mix and will remain crucial to India's growth story. In recent years, major reforms have been undertaken in the hydrocarbon sector for ensuring energy security, energy access and energy sustainability in the country. These have encompassed the hydrocarbon sector as well as bio fuels. For instance, India has already achieved a target of 10% ethanol blending and is working towards achieving the goal of ethanol blending of 20% by 2025-26.

India has a rich legacy in oil and gas with her first refinery dating back to 1901. Over the years the sector has grown manifold. This publication, 56<sup>th</sup> edition in the series, presents an integrated, reliable, updated and holistic database of the Oil & Gas Sector in the country. This repository serves as a vital resource for policy making covering the entire gamut of hydrocarbon data including reserves, production, capacity, trade, prices, taxes, consumption, manpower and trade.

I would like to compliment the efforts of the officers and the staff working in the Economics & Statistics Division, under this Ministry, in bringing out this comprehensive publication which is a relevant data source pertinent to Crude Oil, Natural Gas, LNG, Petroleum Products and Bio-fuels. I am sure that this publication will be a valuable referral document for policy makers, planners, administrators, academicians, people from the industry and researchers, working in the Oil & Gas sector, across India and world-wide.



[ Pankaj Jain ]



**Praveen M. Khanooja,**  
Additional Secretary



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## MESSAGE

The publication entitled "Indian Petroleum and Natural Gas Statistics" is brought out every year by the Ministry of Petroleum and Natural Gas. This publication, a comprehensive and a valuable database, comprises the latest available statistics pertinent to the Oil & Gas Sector, referred widely across India and across the world.

The 56<sup>th</sup> edition of this publication provides a brief analysis of national statistics on the Production, Exploration, Refining, Transportation & Marketing, Prices, Consumption, Energy, Bio-fuels, Imports and Exports of crude oil and petroleum products along with the taxes and duties realized. The publication also provides a glimpse of International Petroleum scenario. In order to extend the utility of this report to a range of diverse users, parameters have largely been featured calendar year-wise and financial year-wise as well.

I compliment the officers and staff, under the leadership of DDG (E&S) of this ministry, in their sustained endeavour to bring out the 56<sup>th</sup> Publication of Indian Petroleum and Natural Gas (IPNG) Statistics 2021-22. I am sure that this publication would continue to be used extensively by the planners, the policy makers, the administrators, the researchers, the commentators, and by everyone having interest in the oil and gas sector.

(Praveen M. Khanooja)

Date: 06.10.2022  
New Delhi



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### Message

Focusing on the India's Oil and Gas sector, in particular, it is a matter of proud privilege, immense pleasure and great satisfaction to present the 56<sup>th</sup> edition of Indian Petroleum & Natural Gas Statistics (IPNG) report 2021-22.

This issue has been designed for perusal by the oil and gas industry that shall be profoundly useful in providing the fundamentals statistics pertinent to the sector and in explaining the key concepts and the standards of measurement. The report focuses on all the three major segments of the oil and gas industry: upstream, midstream, and downstream. Also, it presents the highlights of industry's recent trends in terms of the exploration & production, import-export distribution, supply, taxes and duties, manpower in oil and gas CPSEs, etc.

I am grateful to various ministries/departments, oil and gas CPSEs, attached offices of MoPNG and major international organizations pertaining to the oil and gas sector for their cooperation in time-bound sharing of the necessary information enabling the timely release of this vital publication.

Also, I would like to take the opportunity to put on record the contribution of the officers and the staff in the Economics and Statistics Division whose collaboration and untiring efforts have been auxiliary in bringing out this publication. Shri Gaurav Katiyar (Deputy Director), Ms. Avinash Kumari (Assistant Director), Shri Shyam Lal (Senior Statistical Officer), Shri Shiv Prakash (Junior Statistical Officer) and Shri Arun Kumar (Consultant) have played a crucial role in the collection, compilation, analysis, reporting and the graphic designing of this publication. I convey my special thanks to the technical Consultants of this division - Shri Amit Duhan, Shri Ramit Kalia and Shri Kishor Kumar Sahu for providing the valuable insights and suggestions based on their expertise and knowledge on the energy data management.

We are looking forward to readers' feedback by sharing their great ideas, comments suggestions for improvising the subsequent issue of this publication.

Date: 06.10.2022  
New Delhi

(D. K. Ojha)

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## SCOPE AND COVERAGE OF DATA PUBLISHED

1. **Scope :** The "Indian Petroleum & Natural Gas Statistics" presents updated comprehensive statistics on various aspects of Indian Petroleum & Natural Gas sector. The data on international developments in respect of the key parameters of Petroleum and Natural Gas sector have also been captured in the publication.
2. **Coverage :** The Statistics presented in the current publication cover the exploration, production, refining, alternate fuels, marketing activities, etc. of Oil and Gas sector.
3. **Source :** The primary statistics in respect of petroleum and natural gas industries included in the publication are based on various returns, submitted by the Oil& Gas Central Public Sector Enterprises (CPSEs), Joint Venture companies and Private companies under the Ministry of Petroleum & Natural Gas. The sources of all the secondary data, including international statistics, incorporated in the publication, have been indicated at the bottom of relevant tables.
4. **Limitations :** The data in respect of sales/consumption of petroleum products reflect dispatches of various petroleum products from the sales depots of different oil companies to the bulk consumers/ retail outlets. The state-wise sales/consumption of such products show dispatches to direct consumers/retail outlets meant for consumption / sales in a particular state.
5. **Reference Period :** Key statistics for the domestic petroleum and natural gas industries have been presented on calendar (January-December) as well as on financial year (April-March) basis.
6. **Natural Gas :** The gross production of natural gas reflects gross withdrawals of natural gas from reservoir. On the other hand, the net production of natural gas show gross withdrawal of natural gas from reservoirs less gas used for reinjection into reservoirs for pressuring gas which is flared and / or vented/loss. The utilization data for natural gas includes gas marketed, gas used for LPG extraction and gas consumed for field operations by the companies engaged in hydrocarbons exploration / production activities.
7. **Petroleum Imports :** The crude oil and product import figures given in the publication includes crude oil / petroleum products imported by the oil PSUs, private and parallel marketers on behalf of Nepal for processing of crude oil in Indian refineries and arranging supplies of desired products to Nepal. Petroleum products actually brought into the country from processing of Indian and International crudes at foreign refineries for Indian oil companies have also been included under the product import figures.
8. **Value of Import/Export :** The value data in respect of exports of petroleum included in the publication show F.O.B. value of exports whereas similar value figures for imports reflect C.I.F. value of imports.
9. **Revision / Modification / Updation :** The statistics provided in this publication for the current year is provisional in view of the time lag involved in receipt of actual figures. In view of this, some information based on provisional data may undergo change as and when the actual data are available.  
Necessary revision / updation in the past data has been made in the light of latest available figures. To illustrate:
  - (a) Data on international statistics of certain parameters like world crude oil exports taken from different sources viz. OPEC Bulletins and BP Statistical Review may not tally due to difference in coverage and methodology used.
  - (b) Given the details information of Projects under implementation in the Petroleum & Natural Gas Sector, a new chapter on Infrastructure Projects has been compiled as a maiden exercise which consists total eight tables as:

XII. 1	Overall Summary of Oil & Gas CPSEs Projects
XII. 2	Total Number of Ongoing Oil & Gas CPSEs Projects - CPSE wise
XII. 3	Total Number of Ongoing Oil & Gas CPSEs Projects - Sector wise
XII. 4	Total Number of Ongoing Oil & Gas CPSEs Projects - State wise
XII. 5	Overall Summary of Oil & Gas CPSEs Completed Projects
XII. 6	Completed Oil & Gas CPSEs Projects - State wise

XII. 7	Completed Oil & Gas CPSEs Projects - Sector wise
XII. 8	Completed Oil & Gas CPSEs Projects - State wise

- (c) Additionally above, Following new tables are included in the Ch-9 (Bio-Fuels):-
1. IX.2: Saving of Foreign Currency by Ethanol Blending
  2. IX.8: Status on CBG as on 31.03.2022
  3. IX.9: State wise Ethanol Producing Plants and Capacity (as on 01.04.2022)
10. **Abbreviations :** Details of abbreviations used have been provided in Appendix.
11. **Conversion factor :** The conversion factors generally used in the Oil & Gas sector are also given in the Appendix. Errors or Omissions and Commissions, if any, detected may kindly be brought to the notice of the Deputy Director, Economic & Statistics Division, Ministry of Petroleum & Natural Gas at email **eands-mopng@gov.in** for rectification in the subsequent issue.

# CHAPTER - I



PERFORMANCE OF PETROLEUM &  
NATURAL GAS SECTOR- SOME KEY  
MACRO-ECONOMIC TRENDS



## Introduction:

### Performance of Petroleum & Natural Gas Sector-Some Key Macro-Economic Trends

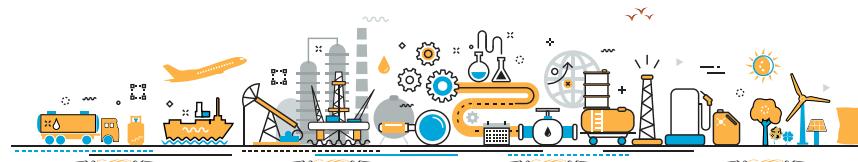
India's continued industrialisation and urbanisation will make huge demands of its energy sector and its policy makers. As per IEA's World Energy Outlook 2021, Energy use on a per capita basis is well under half the global average, and there are widespread differences in energy use and the quality of service across states and between rural and urban areas. An expanding economy, population, urbanisation and industrialisation mean that India sees the largest increase in energy demand of any country, across all scenarios to 2040. Over 80% of India's energy needs are met by three fuels: coal, oil and solid biomass.

As per IEA's World Energy Outlook 2021, India's oil demand rises by almost 4 million barrels per day (mb/d) to reach 8.7 mb/d in 2040, the largest increase of any country. In the Sustainable Development Scenario, by contrast, a much stronger push for electrification, efficiency and fuel switching limits growth in the oil demand to less than 1 mb/d.

As per World Energy Outlook 2021 of IEA, the current share of India in global primary energy consumption is 6.1% and is likely to increase to about 9.8% under stated policies scenario by 2050. Government has set a target to raise the share of natural gas in energy mix to 15% by 2030. At present (in 2021), share of natural gas in primary energy mix is 6.3%. Growth in India's gas demand has outpaced domestic production, leading to rising dependence on imported LNG. As per IEA, imports of natural gas have risen from 20% of India's total gas demand in 2010 to 50% today. India has ambitious plans for city gas distribution (CGD) networks to cater to households, commercial establishments and factories within cities. After 11<sup>th</sup> CGD bidding round, PNGRB has authorized 268 GAs for development of CGD Network in the country. Further, recently under 11<sup>th</sup> A CGD bidding rounds PNGRB has invited bids for 6 GAs. After the completion of 11<sup>th</sup> and 11<sup>th</sup> A CGD bidding rounds, the CGD network shall potentially cover 98% population and 88% geographical area of the country.

To meet the increased requirement of hydrocarbon fuel, major strategies adopted inter alia include: attracting investment in Exploration & Production to enhance domestic oil and gas production, shifting to gas based economy, technological upgradation to improve refinery processes, energy efficiency and productivity, accelerating bio-fuel economy, expanding overseas oil and gas portfolio, diversifying oil and gas supply sources, etc. Government has taken up development of National Gas Grid, City Gas Distribution Networks to cover major demand centres across the country to provide clean and green fuel.

India has achieved the target of 10 percent ethanol blending in June 2022, 5 months ahead of schedule. India's first pure green hydrogen plant commissioned in Jorhat. Oil India Limited (OIL) has taken the first significant step towards Green Hydrogen Economy in India with the commissioning of India's First pure Green Hydrogen pilot plant, with an installed capacity of 10 kg per day at its Jorhat Pump Station in Assam. The Government has also taken various steps towards achieving 20% blending of ethanol in petrol by 2025 which includes allowing use of sugarcane, damaged food grains and maize for conversion to ethanol. The National Policy on Biofuels – 2018 prescribes an indicative target of 5% blending of biodiesel in diesel by 2030. Thrust is being given to Advanced Biofuels such as Second Generation (2G) Ethanol, Bio CNG/ Compressed Bio Gas (CBG), UCO based biodiesel etc. which can be sourced from wastes such as crop residues, Biomass, industrial waste, sewage water etc. and are abundantly available in the Country. 'SATAT' (Sustainable Alternative Towards Affordable Transportation) scheme for CBG was launched in 2018 which envisages targeting production of 15 MMT of CBG from 5000 plants by 2023.





## I.1 Production of Crude Oil, Natural Gas and Petroleum Products

India has a long-standing ambition to reduce oil import dependence by variety of policies, including policies to expand the use of alternative transport fuels such as bio ethanol, biodiesel and CNG, and through the expansion of domestic oil & gas production. To encourage domestic exploration and production, the government adopted the Discovered Small Field Policy, Reforms in Hydrocarbon Exploration and Licensing Policy for enhancing domestic exploration and production of Oil & Gas 2019, Natural Gas Marketing Reforms 2020, Policy to promote and incentivize enhanced recovery methods for Oil and Gas, Redevelopment of existing matured fields and development of new/marginal fields, Revival of Sick Wells, improving recovery factors through the implementation of Improved Oil Recovery (IOR) and Enhanced Oil Recovery (EOR) techniques, etc.



The crude oil production during the year 2021-22 is at 29.69 Million Metric Tonnes (MMT) against production of 30.49 MMT in 2020-21, showing a decline of 2.6%. Out of the total crude oil production, there is contribution of 65.5% (19.45 MMT) from ONGC (nomination), 10.1% (2.99 MMT) from OIL (nomination) and 24.4% (7.25 MMT) from PSC/RSC regime. The reasons for lower domestic oil production are inter-alia declining production from old and marginal fields, unplanned shutdown and operational losses from few producing.

Further, Natural Gas production during the year 2021-22 stood at 34.02 Billion Cubic Meters (BCM) which is 18.7% higher than production of 28.67 BCM in 2020-21. Out of total natural gas production, there is contribution of 60.6% (20.63 BCM) from ONGC (nomination), 8.5% (2.89 BCM) from OIL (nomination) and 30.9% (10.50 BCM) from PSC/RSC/CBM regime.

The production of petroleum products is at 254.31 MMT in year 2021-22 against 233.51 MMT achieved in 2020-21, showing an increase of about 8.9%. During FY 2021-22, Diesel (HSD+LDO) accounted for the highest Production share (42.5%) followed by Petrol/Motor Spirit (15.8%), Naphtha (7.9%), Petroleum Coke (6.1%), LPG (4.8%), ATF (4%), Fuel Oil (3.3%), Bitumen (2.0%), Kerosene (0.8%) and Lubes & Greases (0.5%).



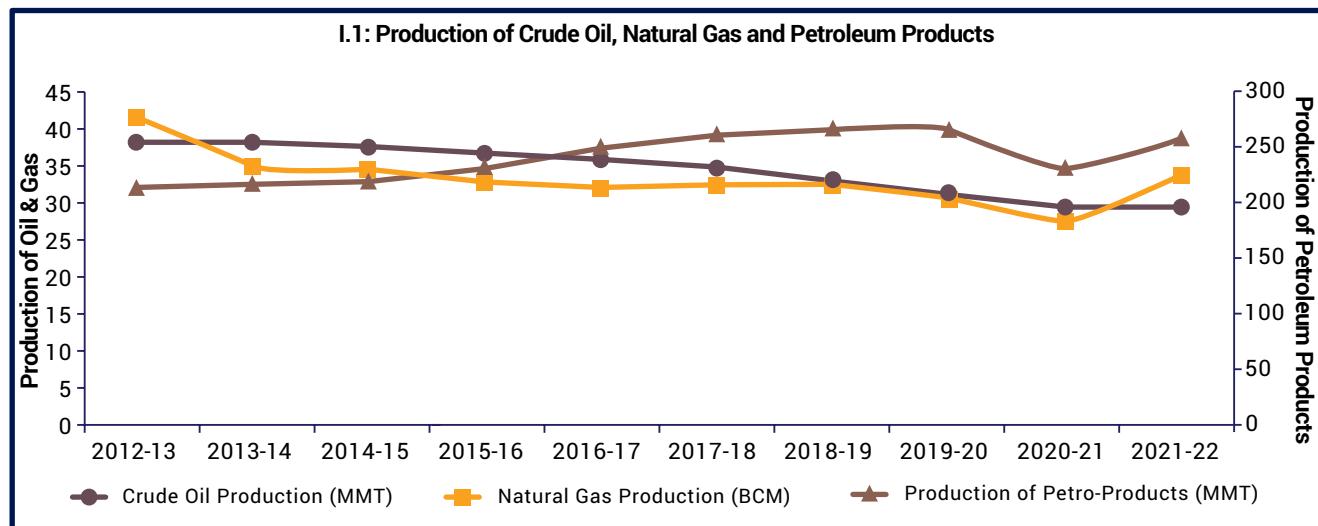
The trends in the production of crude oil and natural gas from the year 1960-61 to 2021-22 have been depicted as follows: -

**Table-I.1: Production of Crude Oil, Natural Gas Production & Petroleum Products**

Year	Crude Oil Production (MMT)	% Growth in Crude Oil Production	Natural Gas Production (BCM)	% Growth in Natural Gas Production	Production of Petro-Products (MMT)	% Growth in Production of Petro-Products
<b>1960-61</b>	0.45	-	-	-	5.78	-
<b>1970-71</b>	6.82	1.49	1.45	5.07	17.11	3.13
<b>1980-81</b>	10.51	-10.71	2.40	-13.36	24.12	-6.48
<b>1990-91</b>	33.02	-3.14	18.00	5.88	48.56	-0.27
<b>2000-01</b>	32.45	1.56	29.48	3.79	95.61	20.41
<b>2010-11</b>	37.71	11.94	52.22	9.95	194.82	5.53
<b>2012-13</b>	37.86	-0.60	40.68	-14.47	217.74	7.15
<b>2013-14</b>	37.79	-0.19	35.41	-12.96	220.76	1.39
<b>2014-15</b>	37.46	-0.87	33.66	-4.94	221.14	0.17
<b>2015-16</b>	36.94	-1.39	32.25	-4.18	231.92	4.88
<b>2016-17</b>	36.01	-2.53	31.90	-1.09	243.55	5.01
<b>2017-18</b>	35.68	-0.90	32.65	2.36	254.40	4.46
<b>2018-19</b>	34.20	-4.15	32.87	0.69	262.36	3.13
<b>2019-20</b>	32.17	-5.95	31.18	-5.14	262.94	0.22
<b>2020-21</b>	30.49	-5.21	28.67	-8.05	233.51	-11.19
<b>2021-22 (P)</b>	<b>29.69</b>	<b>-2.63</b>	<b>34.02</b>	<b>18.66</b>	<b>254.31</b>	<b>8.90</b>
<b>CAGR 2012-13 to 2021-22 (%)</b>		<b>-2.7</b>		<b>-2.0</b>		<b>1.7</b>

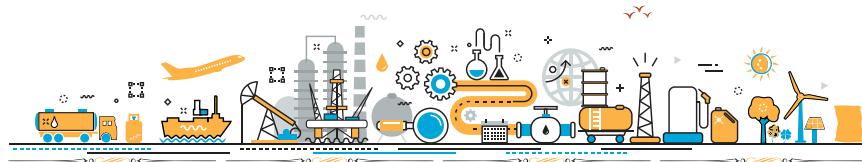
Note: % Growth based on the previous Financial Year

P. Provisional



## I.2 Refinery Capacity & Refinery Crude Throughput (Crude Oil Processed):

India's refining capacity stands at 251 MMT per year, making it the fourth largest in the world. While production is largely in the hands of publicly owned companies, India's largest refineries are privately owned, notably the world's largest refinery is Reliance-owned Jamnagar refinery located on the western coast of Gujarat. The Refinery capacity utilisation is 97.0% for the year 2021-22. Crude Oil Processed during FY 2021-22 is 241.70 MMT against 221.77 MMT in 2020-21, marking an increase of about 8.99%. The trend in Refinery Capacity and Crude throughput from the year 1960-61 to 2021-22 have been depicted as follows: -



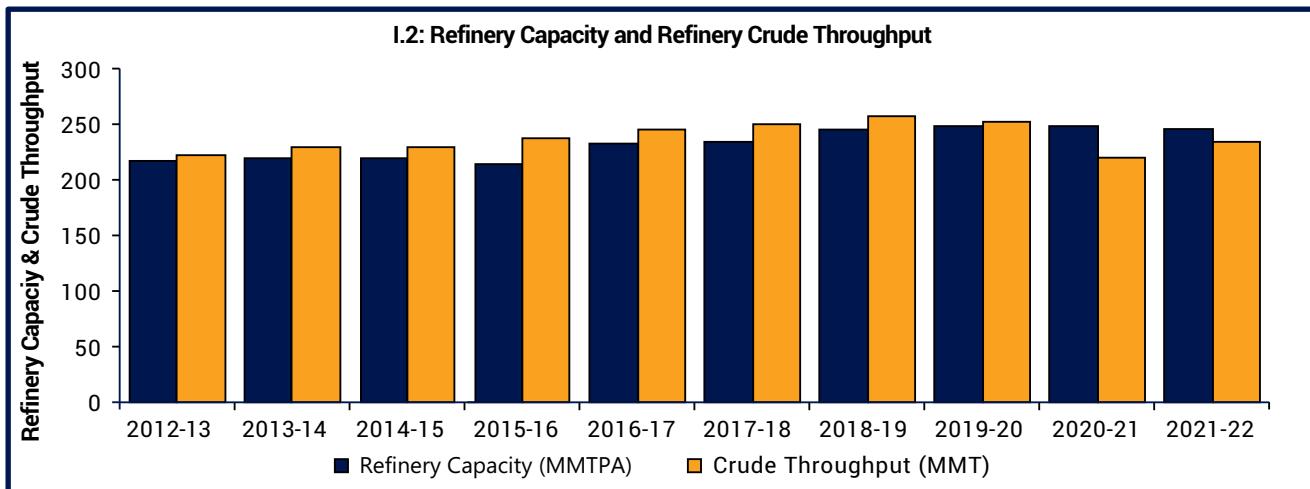


**Table I.2: Refinery Capacity & Refinery Crude Throughput**

Year	Refinery Capacity (MMTPA) <sup>a</sup>	% Growth in Refinery Capacity	Crude Throughput (MMT)	% Growth in Crude Throughput	Refinery Capacity Utilization (%)
1960-61	6.09	-	6.13	-	100.66
1970-71	18.46	5.49	18.37	2.57	99.51
1980-81	25.08	-10.91	25.84	-5.93	103.03
1990-91	51.67	-0.58	51.77	-0.33	100.19
2000-01	101.79	27.97	103.44	20.34	101.62
2010-11	183.39	4.22	196.99	5.60	107.42
2012-13	213.07	13.70	219.21	7.39	102.88
2013-14	215.07	0.94	222.50	1.50	103.46
2014-15	215.07	0.00	223.24	0.33	103.80
2015-16	215.07	0.00	232.86	4.31	108.28
2016-17	230.07	6.97	245.36	5.37	106.65
2017-18	233.97	1.70	251.93	2.68	107.68
2018-19	247.57	5.81	257.20	2.09	103.89
2019-20	249.37	0.73	254.39	-1.10	102.01
2020-21	249.87	0.20	221.77	-12.82	88.76
2021-22 (P)	249.22	-0.26	241.70	8.99	96.99
2022-23	251.22	0.80	-	-	-
CAGR 2012-13 to 2021-22 (%)	1.8		1.1		-

Note: % Growth based on the previous Financial Year P: Provisional ^: As on 1<sup>st</sup> April of initial year.





### I.3 Consumption of Petroleum Products & Natural Gas:

Oil consumption and imports have grown rapidly on account of rising vehicle ownership and road transport use. The Pradhan Mantri Ujjwala Yojana (PMUY) scheme provides LPG connections to households living below the poverty line. Alongside the increasing use of LPG in rural areas, there has also been growth in the use of pipeline natural gas (PNG) in urban areas. The market for natural gas is growing fast in India, but its role varies by sector, by scenario and over time. The 6.3% share of natural gas in India's current energy mix is among the lowest in the world. As per World Energy Outlook 2021 of IEA, Energy demand for road transport is projected to more than double over the next two decades. An extra 25 million trucks are travelling on India's roads by 2040 as road freight activity triples, and a total of 300 million vehicles of all types are added to India's fleet between now and then. Transport has been the fastest-growing end-use sector in recent years, and India is set for a huge expansion of transportation infrastructure – from highways, railways and metro lines to airports and ports.



Total consumption of petroleum products in the country during FY 2021-22 was 204.23 million metric tonnes (MMT) registering positive growth rate of 3.9% vis-à-vis FY 2020-21 (194.30 MMT). During FY 2021-22, Diesel (HSD+LDO) accounted for the highest consumption share (38%) followed by Petrol/Motor Spirit (15.1%), LPG (13.9%), Petroleum Coke (7.7%), Naphtha (7%), Bitumen (3.9%), Fuel Oil (3.1%), ATF (2.5%), Lubes & Greases (2.2%) and Kerosene (0.7%).

Total consumption of natural gas in 2021-22 stands at 63.91 BCM which is 5.08% higher than the consumption during the 2020-21 (60.82 BCM). Consumption of Natural gas for energy purpose as fuel stand at 63.1% against 36.9% for non-energy purpose as feedstock. During 2021-22, highest consumption of natural gas was in fertilizer industry at 30.4% followed by City & Local Natural Gas Distribution Network (including Road Transport) at 20.4%, power sector 15.0% and refinery 8.9%. The trend in production and consumption of petroleum products from the year 1960-61 to 2020-21 have been depicted as follows: -



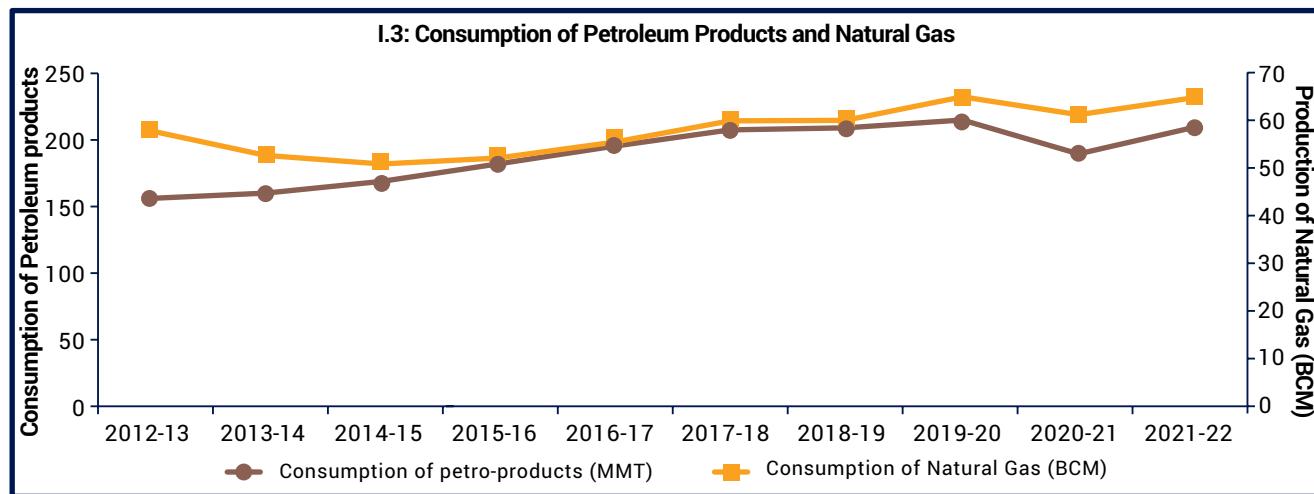


**Table I.3: Consumption of Petroleum Products and Natural Gas**

Year	Consumption of Petro-Products (MMT)	% Growth in Consumption of Petro-Products	Consumption of Natural Gas (BCM)	% Growth in Consumption of Natural Gas
1960-61	7.10	-	-	-
1970-71	19.14	17.35	-	-
1980-81	32.26	3.00	-	-
1990-91	57.75	1.71	-	-
2000-01	100.07	3.07	-	-
2010-11	141.04	2.35	-	-
2012-13	157.06	6.02	57.37	-10.99
2013-14	158.41	0.86	52.37	-8.70
2014-15	165.52	4.49	51.30	-2.05
2015-16	184.67	11.57	52.52	2.37
2016-17	194.60	5.37	55.70	6.05
2017-18	206.17	5.95	59.17	6.24
2018-19	213.22	3.42	60.80	2.75
2019-20	214.13	0.43	64.14	5.51
2020-21	194.30	-9.26	60.82	-5.19
2021-22 (P)	204.23	5.11	63.91	5.08
CAGR 2012-13 to 2021-22 (%)		3.0		1.2

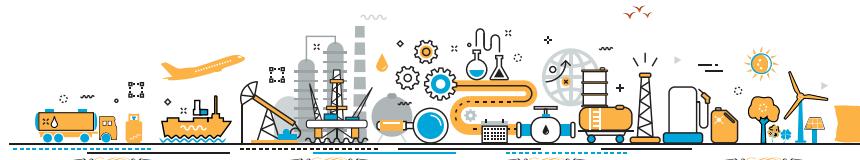
Note: % Growth based on the previous Financial Year P. Provisional





#### I.4 Average Crude Oil Price and Import of Crude Oil & Natural Gas:

Since the price of crude oil in the international markets are quoted in US Dollars, the Indian ₹–US\$ exchange rate plays a vital role in the Indian context. The sharp rise and volatility of prices of oil and petroleum products in the international markets since 2004 became a matter of global concern. The Indian basket of crude oil, which averaged about \$23/bbl at the time of dismantling of APM in March 2002 and \$36/bbl in May 2004, went up to an average of \$85.09 per barrel during 2010-11. The average price of Indian basket of crude oil further increased to \$111.89/bbl. during 2011-12. The prices of crude oil, after continuously being at the level of more than \$100/bbl for over three years, started falling sharply during the second half of 2014. As a result, the average price of Indian crude oil basket during 2015-16, 2016-17 and 2017-18 was recorded at \$46.17/bbl, \$47.56/bbl and \$56.43/bbl respectively. The price increased to \$ 69.88/bbl during 2018-19 and fell to \$60.47/bbl in 2019-20 and fell further to \$44.82/bbl during 2020-21 due to the impact of Covid-19. International crude oil price (Indian basket) dipped by 76.7% from 44.82 US \$/bbl during 2020-21 to 79.18 US \$/bbl during 2021-22.



Import of crude oil during 2021-22 was 211.98 MMT valued at ₹ 8,99,312 crore as against import of 196.46 MMT valued at ₹ 4,59,779 crore in 2020-21 which is higher by 7.9% in quantity terms and 95.6% in value terms vis-a-vis 2020-21. Import of natural gas (LNG) during 2021-22 was 23.23 MMT valued at ₹ 1,00,011 crore against import of 24.93 MMT valued at ₹ 58,129 crore in 2020-21 which is lower by 6.8% in quantity terms but higher by 72.1% in value terms vis-a-vis 2020-21.

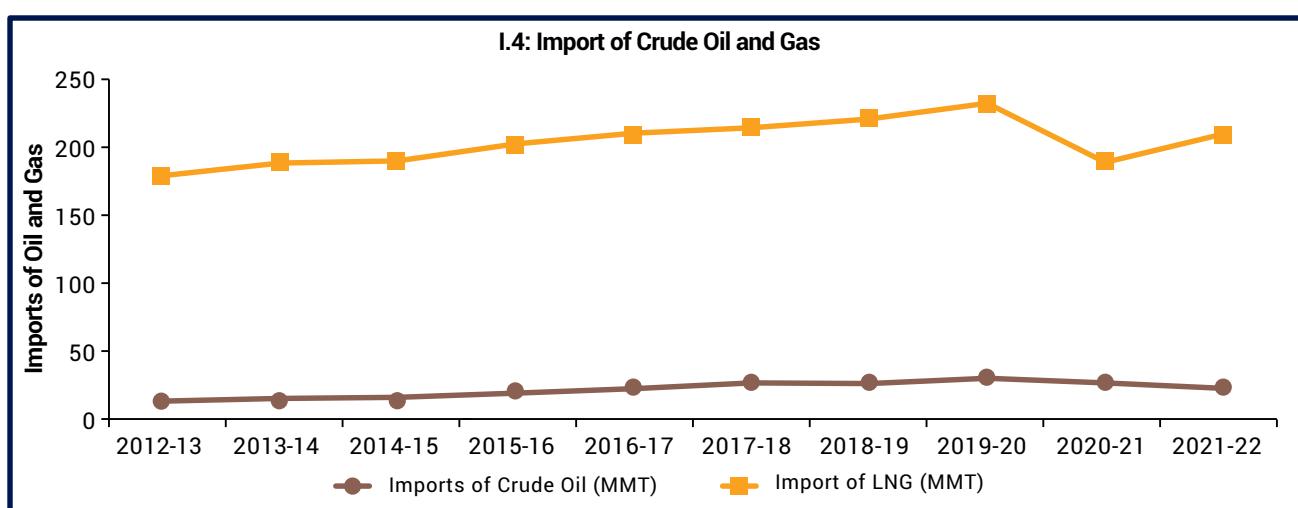
The trend in growth of crude oil import and crude oil international (Indian Basket) prices is shown in Table-4 & Graph- 4.

**Table I.4: Import of Crude Oil and Gas**

Year	Imports of Crude Oil (MMT)	% Growth in Imports of Crude Oil	Imports of Crude Oil (₹ Crore)	% Growth in Imports of Crude Oil	Imports of LNG (MMT)	% Growth in Imports of LNG	Imports of LNG (₹ Crore)	% Growth in Value of Imports of LNG
2000-01	74.10	-	65932	-	-	-	-	-
2010-11	163.60	2.72	455276	21.32	-	-	-	-
2012-13	184.80	7.61	784652	16.73	13.29	-2.13	41902	32.11
2013-14	189.24	2.40	864875	10.22	13.43	1.06	53123	26.78
2014-15	189.43	0.10	687416	-20.52	14.04	4.53	58359	9.85
2015-16	202.85	7.08	416579	-39.40	16.14	14.95	45039	-22.82
2016-17	213.93	5.46	470159	12.86	18.75	16.18	41084	-8.78
2017-18	220.43	3.04	566450	20.48	20.71	10.42	52122	26.87
2018-19	226.50	2.75	783183	38.26	21.69	4.74	71867	37.88
2019-20	226.95	0.20	717001	-8.45	25.57	17.91	67383	-6.24
2020-21	196.46	-13.44	459779	-35.87	24.93	-2.52	58129	-13.73
2021-22 (P)	211.98	7.90	899312	95.60	23.23	-6.83	100011	72.05
CAGR 2012-13 to 2021-22 (%)	1.5		1.5			6.4		10.1

Note: % Growth based on the previous Financial Year

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## I.5 Imports & Exports of Petroleum Products & Gas:

The import of petroleum products during 2021-22 was 42.06 MMT valued at ₹1,88,636 crore against the import of 43.25 MMT valued at ₹ 1,09,430 crore in 2020-21 which is lower by 2.7% in quantity terms and higher by 72.4% in value terms vis-a-vis 2020-21. Further, the exports of petroleum products during 2021-22 was 62.71 MMT valued at ₹3,31,615 crore showing an increase of 10.5% in quantity terms and 111% in value terms against the exports of 56.77 MMT valued at ₹ 1,57,168 crore during 2020-21. The trend in imports/ exports of petroleum products and LNG from the year 2000-01 to 2021-22 have been depicted as follows:-

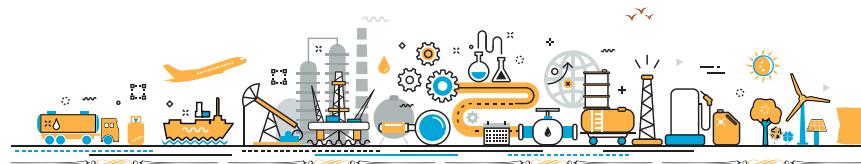
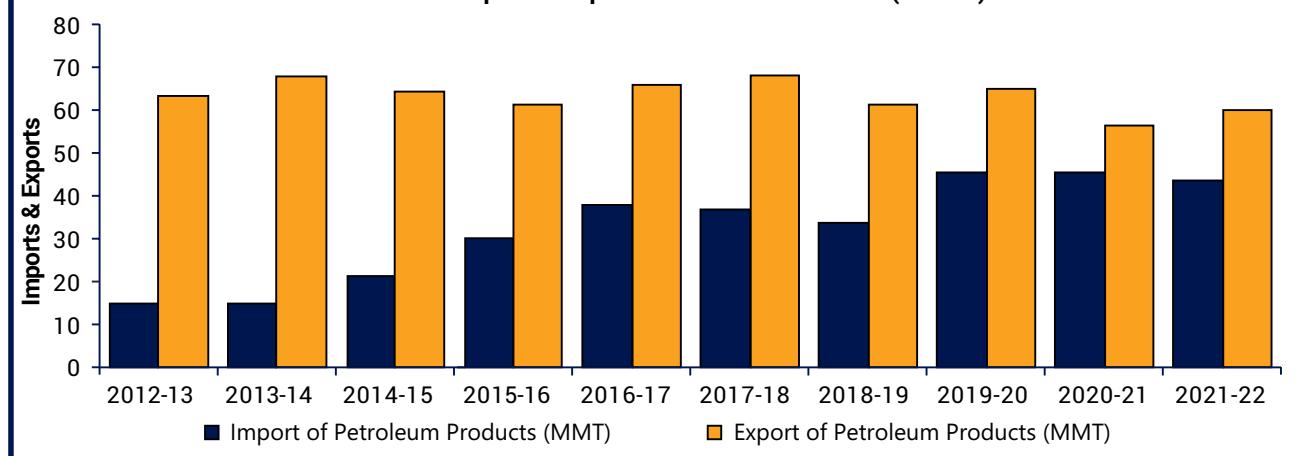
**Table I.5: Imports & Exports of Petroleum Products and Gas**

Year	Imports of Petroleum Products (MMT)	% Growth in Imports of Petroleum Products	Imports of Petroleum Products (₹ Crore)	% Growth in Imports of Petroleum Products	Exports of Petroleum Products (MMT)	% Growth in Export of Petroleum Products	Exports of Petroleum Products (₹ Crore)	% Growth in Export of Petroleum Products
2000-01	9.27	-44.20	12093	-14.75	8.37	1021.31	7672	999.14
2010-11	17.38	18.51	55998	65.68	59.08	15.49	196861	36.06
2012-13	16.35	3.18	68852	1.12	63.41	4.23	320090	12.45
2013-14	16.70	2.10	75896	10.23	67.86	7.03	368279	15.05
2014-15	21.30	27.57	74644	-1.65	63.93	-5.79	288580	-21.64
2015-16	29.46	38.28	65361	-12.44	60.54	-5.31	176780	-38.74
2016-17	36.29	23.19	71566	9.49	65.51	8.22	194893	10.25
2017-18	35.46	-2.28	88374	23.49	66.83	2.01	225388	15.65
2018-19	33.35	-5.96	113665	28.62	61.10	-8.58	267697	18.77
2019-20	43.79	31.30	125742	10.62	65.69	7.51	254018	-5.11
2020-21	43.25	-1.23	109430	-12.97	56.77	-13.57	157168	-38.13
2021-22 (P)	42.06	-2.74	188636	72.38	62.71	10.47	331615	110.99
CAGR 2012-13 to 2021-22 (%)		11.1		11.8		-0.1		0.4

Note: % Growth based on the previous Financial Year

P. Provisional

**I.5: Trend in Imports & Exports of Petroleum Products (in MMT)**



## I.6 Foreign Direct Investment Inflows:

The Government of India permits Foreign Direct Investment (FDI) across the hydrocarbon value chain covering the upstream, downstream and midstream sectors. The present FDI policy for petroleum & natural gas sector allows 100% automatic route for exploration and production & refining for private companies (49% for PSUs' on automatic route without any disinvestment or dilution of domestic equity in the existing PSUs), marketing of petroleum products, pipelines, storage and LNG regasification infrastructure and all related services, subject to existing sectoral policy and regulatory framework in the oil and gas sector. However, Foreign investment up to 100% under the automatic route is allowed for Petroleum refining by the Public Sector Undertakings (PSU), without any disinvestment or dilution of domestic equity in the existing PSUs in case an 'in-principle' approval for strategic disinvestment of a PSU has been granted by the Government. Exploration and Production of oil and gas are capital intensive and high risk activities requiring use of expensive state-of-the-art technologies and best management practices. Accordingly, the Government is encouraging participation of the private sector, including foreign companies in exploration, production and transportation network for petroleum and natural gas, in order to supplement the domestic investment as well as the efforts of the national oil companies in meeting the rising demand of oil and gas and reducing import dependence. It may be observed that inflow of FDI in petroleum and natural gas has varied considerably over the years that could at least be partly due to the bulkiness of investments in the sector. The Government of India has reviewed the extant FDI policy for curbing opportunistic takeovers/acquisitions of Indian companies due to the current COVID-19 pandemic and amended para 3.1.1 of extant FDI policy as contained in Consolidated FDI Policy, 2017 as under:

- (a) A non-resident entity can invest in India, subject to the FDI Policy except in those sectors/activities which are prohibited. However, an entity of a country, which shares land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country, can invest only under the Government route. Further, a citizen of Pakistan or an entity incorporated in Pakistan can invest, only under the Government route, in sectors/activities other than defense, space, atomic energy and sectors/activities prohibited for foreign investment.
- (b) In the event of the transfer of ownership of any existing or future FDI in an entity in India, directly or indirectly, resulting in the beneficial ownership falling within the restriction/purview of the para 3.1.1(a), such subsequent change in beneficial ownership will also require Government approval.

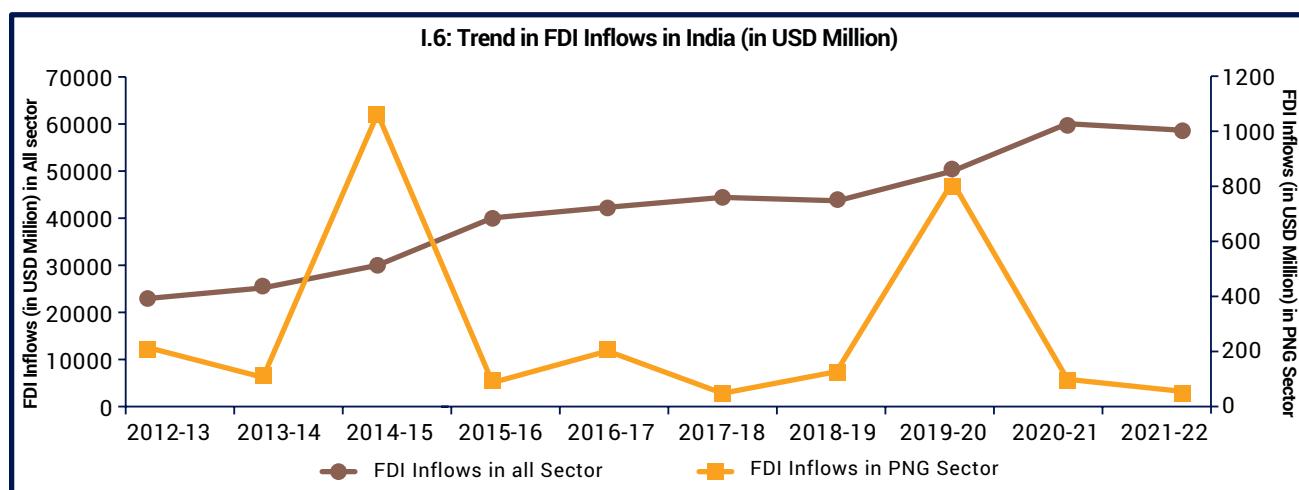


During the year 2021-22, FDI inflow received was 56 USD Million in the P& NG Sector contributing 0.1% of total FDI inflow (58,773 USD million) in the economy. The trend in FDI inflows under Oil & Gas Sector are depicted in Table I.6.

**Table I.6: Year wise FDI Inflows under Petroleum & Gas Sector**

Years	FDI inflows (in US\$ Million)			
	All Sector		P&NG Sector	
	FDI Inflows	% Growth	FDI Inflows	% Growth
2010-11	21383	-17.23	556	109.55
2012-13	22424	-36.15	215	-89.42
2013-14	24299	8.37	112	-47.75
2014-15	29737	22.38	1079	861.44
2015-16	40001	34.51	103	-90.45
2016-17	43478	8.69	180	75.10
2017-18	44857	3.17	24	-86.60
2018-19	44366	-1.09	138	472.50
2019-20	49977	12.65	806	482.07
2020-21	59636	19.33	103	-87.24
2021-22 (P)	58773	-1.45	56	-45.13
CAGR 2012-13 to 2021-22 (%)	11.3		-13.8	

Note: % Growth based on the previous Financial Year P: Provisional



## I.7 Outlay for Ministry of Petroleum & Natural Gas:

Total budgeted Internal and Extra Budgetary Resources (IEBR) for CPSE's under the Ministry of Petroleum and Natural gas in 2021-22 (₹ 1,11,354 crore) was 3.1% higher over actual expenditure of FY 2021-22 (₹ 1,07,968 crore). Actual expenditure of IEBR during 2021-22 (₹ 1,07,968 crore) is 2.9% lower than actual expenditure in 2020-21 (₹ 1,11,194 crore) and 103.2% of BE 2021-22 (₹ 1,04,620 crore). The trend in Sector-wise IEBR of under Petroleum & Gas Sector is depicted in Table I.7.



**Table I.7: Sector-wise IEBR (in ₹ Crore) under Petroleum & Gas Sector**

Sector	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual	Actual	Actual	Actual	BE
<b>Exploration &amp; Production Sector</b>	49,613	44,769	52,994	46,376	50,536
<b>Refining &amp; Marketing Sector</b>	46,990	56,668	51,446	54,948	53,876
<b>Petro-Chemicals Sector</b>	3,487	3,949	5,979	6,551	6,742
<b>Engineering Sector</b>	219	217	776	93	200
<b>Total</b>	<b>1,00,309</b>	<b>1,05,603</b>	<b>1,11,194</b>	<b>1,07,968</b>	<b>1,11,354</b>



## I.8: Indian Economy-Selected Indicators

Indicator	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>1. Gross Domestic Product :</b>						
(i) At current prices (₹. Crore)	15,391,669	17,090,042	18,899,668	20,074,856	19,800,914	23,664,637
(ii) At constant prices (₹. Crore)	12,308,193	13,144,582	13,992,914	14,515,958	13,558,473	14,735,515
<b>2. GVA at Basic Price :</b>						
(i) At current prices (₹. Crore)	13,965,200	15,505,665	17,175,128	18,355,109	18,057,810	21,349,399
(ii) At constant prices (₹. Crore)	11,328,285	12,034,171	12,733,798	13,219,476	12,585,074	13,605,474
<b>3. Per Capita NNI (Population in Million) :</b>						
(i) At current prices (₹.)	104,880	115,224	125,946	132,115	126,855	150,007
(ii) At constant prices (₹.)	83,003	87,586	92,133	94,270	85,110	91,481
<b>4. Foreign Exchange Reserves :</b>						
(i) Gold (₹. Crore)	128,830	139,740	159,585	230,527	248,767	329,562
(ii) SDR (₹. Crore)	9,380	10,020	10,076	10,800	10,866	143,446
(iii) Foreign Currency Assets (₹. Crore)	2,244,940	2,597,570	2,665,564	3,333,815	3,922,298	4,195,294
(iv) Reserve Tranch Position (₹. Crore)	15,050	13,520	20,657	27,013	36,183	39,094
<b>5. Foreign Trade :</b>						
(i) Import (₹. Crore)	2,577,675	3,001,033	3,594,675	3,360,954	2,915,958	4,569,443
(ii) Export(₹. Crore)	1,849,434	1,956,515	2,307,726	2,219,854	2,159,043	3,146,186
(iii) Balance of Trade (₹. Crore)	-728,242	-1,044,519	-1,286,948	-1,141,100	-756,914	-1,423,256
<b>6. Index:</b>						
(i) Agricultural Production Index (2007-08=100)	132.8	139.4	138.1	145.5	139.0	143.3
(ii) Index of Industrial Production (2011-12=100)	120.0	125.3	130.1	129.0	118.1	131.5
(iii) Wholesale Price Index (2011-12=100)	111.6	114.9	119.8	121.8	123.4	139.4
(iv) Consumer Price Index of Industrial Workers (Base 2012=100)2	305.0	310.0	312.0	335.0	118.0	-
(v) Consumer Price Index of Agricultural Labourers (Base 1960-61=100)	869.8	888.9	907.3	979.6	1,034.0	-
(vi) Consumer Price Index of Combined (Rural+Urban) Labourers (2012=100)	130.3	135.0	139.6	146.3	155.3	-
(vii) Eight Core Industries Index (Base 2011-12=100)	120.5	125.7	131.2	131.6	123.2	136.1
<b>7. Energy Generation (Gross) :</b>						
(i) Coal & Lignite (TMT)	703	722	773	773	754	826
(ii) Natural Gas (BCM)	32	33	33	31	29	34
(iii) Crude Oil (MMT)	36	36	34	32	30	30
(iv) Petroleum Products (MMT)	244	254	262	263	234	254
(v) Electricity Generation (Thousand GWh)	1407	1483	1585	1623	1598	1719

P : Provisional

Source: Oil Companies, CEA, Ministry of Power, Ministry of Coal, MoSPI, RBI and Labour Bureau, Govt. of India,

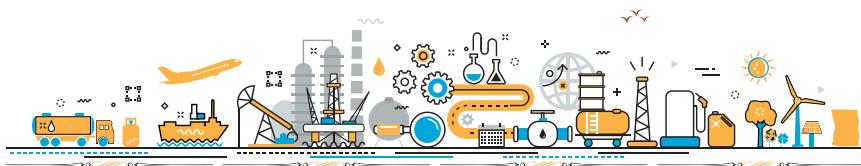


## I.9: Trends in Indian Petroleum Industry at a Glance

Item (1)	Unit (2)	2016-17 (3)	2017-18 (4)	2018-19 (5)	2019-20 (6)	2020-21 (7)	2021-22 (P) (8)
<b>1. Production</b>							
(i) Crude Oil	MMT	36.01	35.68	34.20	32.17	30.49	29.69
(ii) Natural Gas	BCM	31.90	32.65	32.87	31.18	28.67	34.02
(iii) Petroleum Products	MMT	243.55	254.40	262.36	262.94	233.51	254.31
<b>2. Consumption</b>							
(i) Crude Oil (in terms of refinery crude processed)	MMT	245.36	251.93	257.20	254.39	221.77	241.70
(ii) Natural Gas (including LNG)	BCM	55.70	59.17	60.80	64.14	60.82	63.91
(iii) Petroleum Products	MMT	194.60	206.17	213.22	214.13	194.30	204.23
<b>3. Reserves (Balance Recoverable) as on 31<sup>st</sup> March</b>							
(i) Crude Oil	MMT	604.10	594.49	618.95	608.28	591.92	651.77
(ii) Natural Gas	BCM	1289.70	1339.57	1384.06	1373.55	1372.37	1138.67
<b>4. Imports &amp; Exports</b>							
<b>(i) Gross Imports :</b>							
(a) Qty : Crude Oil	MMT	213.93	220.43	226.50	226.95	196.46	211.98
LNG	MMT	18.75	20.71	21.69	25.57	24.93	23.23
Pol. Products	MMT	36.29	35.46	33.35	43.79	43.25	42.06
<b>Total (a)</b>	MMT	268.97	276.60	281.54	296.32	264.64	277.27
(b) Value: Crude Oil	₹ Billion	4701.59	5664.50	7831.83	7170.01	4597.79	8993.12
LNG	₹ Billion	410.84	521.22	718.67	673.83	581.29	1000.11
Pol. Products	₹ Billion	715.66	883.74	1136.65	1257.42	1094.30	1886.36
<b>Total (b)</b>	₹ Billion	5828.09	7069.46	9687.16	9101.25	6273.38	11879.59
<b>(ii) Exports :</b>							
(a) Qty : Pol. Products	MMT	65.51	66.83	61.10	65.69	56.77	62.71
(b) Value: Pol. Products	₹ Billion	1948.93	2253.88	2676.97	2540.18	1571.68	3316.15
<b>(iii) Net Imports :</b>							
(a) Qty : Crude Oil	MMT	213.93	220.43	226.50	226.95	196.46	211.98
LNG	MMT	18.75	20.71	21.69	25.57	24.93	23.23
Pol. Products	MMT	-29.23	-31.37	-27.75	-21.90	-13.52	-20.65
<b>Total (a)</b>	MMT	203.46	209.77	220.44	230.63	207.87	214.56
(b) Value: Crude Oil	₹ Billion	4701.59	5664.50	7831.83	7170.01	4597.79	8993.12
LNG	₹ Billion	410.84	521.22	718.67	673.83	581.29	1000.11
Pol. Products	₹ Billion	-1233.27	-1370.14	-1540.31	-1282.76	-477.38	-1429.79
<b>Total (b)</b>	₹ Billion	3879.16	4815.58	7010.19	6561.08	4701.70	8563.44
<b>(iv) Unit Value of Crude</b>							
oil imports(gross)	₹./MT	21977.04	25697.18	34577.97	31592.26	23403.06	42424.40
(v) India's Total Imports	₹ Billion	25776.75	30010.33	35946.75	33609.54	29159.58	45694.43
(vi) India's Total Exports	₹ Billion	18494.34	19565.15	23077.26	22198.54	21590.43	31461.86
(vii) Petroleum Imports as % of India's Total Imports	%	22.61	23.56	26.95	27.08	21.51	26.00
(viii)Petroleum Exports as % of India's Total Exports	%	10.54	11.52	11.60	11.44	7.28	10.54
<b>5. Contribution of Oil Sector to Centre/State Resources</b>							
(i) Royalty from Oil & Gas	₹ Crore	16592	14117	19433	17484	10768	19164
(ii) Oil Development Cess	₹ Crore	13082	14514	17741	14789	10676	19214
(iii) Excise & Custom duties	₹ Crore	251489	240887	230405	245985	386484	374728
(iv) Sales Tax	₹ Crore	166414	185850	201265	200493	202937	256248
(v) GST	₹ Crore	-	4974	7961	7345	6121	11017
(vi) CPSEs Dividend Paid	₹ Crore	33487	29801	30323	25685	22227	46323
(vii) CPSEs Gross Turnover	₹ Crore	1167141	1316380	1603649	1512196	1353143	1951437
(viii)CPSEs Net Profit	₹ Crore	64320	69619	69763	26927	74198	103829

P : Provisional

Source: Oil &amp; Gas Companies, PPAC, RBI, CBIC and Economic Survey





# CHAPTER - II



 EXPLORATION &  
PRODUCTION-CRUIDE OIL &  
NATURAL GAS

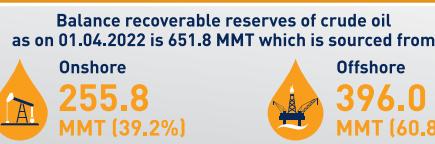


# Highlights of Chapter



Explore oil and gas fields, over **5.61 lakh** geological surveys have been conducted in India

566 wells (of which 82.2% are development wells and 17.8% exploratory wells) with 12.64 lakh Metreage area drilled by Oil & Gas Companies during 2021-22.



ONGC (nomination) contributed with the largest share of 63.5% in reserves of crude oil followed by Pvt' JVs in Production Sharing Contract (PSC) / Revenue Sharing Contract (RSC) regime (26.0%) and OIL (nomination) (10.4%).



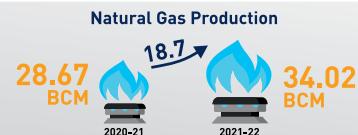
In indigenous maximum production of crude oil from the western offshore of ONGC around 45.8% of total crude oil production during 2021-22.



Crude oil & condensate production of 29.69 MMT in 2021-22



ONGC (Nomination) contributed with the largest share of 49.2% in natural gas reserves followed by PSC/RSC/CBM regime and OIL (nomination) at 39.9% and 10.9% respectively.



In indigenous maximum production of natural gas from the western offshore of ONGC around 46.1% of the total natural gas production during 2021-22.



Total natural gas production of 34.02 BCM in 2021-22



Oil and Gas production from assets abroad is 21.83 MMToE during 2021-22, which is 34.3% of the domestic oil and gas production (63.71 MMToE).



## II.1: Area-wise Development of Deep Drilling Rigs, Wells & Metreage Drilled

Year	Onshore			Offshore			Total		
	Rigs	Wells	Metreage	Rigs	Wells	Metreage	Rigs	Wells	Metreage
	(Numbers)	(Numbers)	('000')	(Numbers)	(Numbers)	('000')	(Numbers)	(Numbers)	('000')
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>(A) Oil &amp; Natural Gas Corporation Ltd. (Nomination)<sup>1</sup></b>									
2016-17	69	319	636	36	117	316	105	436	951
2017-18	70	331	659	37	108	283	107	439	942
2018-19	70	356	696	31	116	310	101	472	1006
2019-20	73	344	737	34	106	249	107	450	987
2020-21	68	313	630	36	131	275	104	444	905
<b>2021-22 (P)</b>	<b>63</b>	<b>299</b>	<b>617</b>	<b>34</b>	<b>104</b>	<b>266</b>	<b>97</b>	<b>403</b>	<b>883</b>
<b>(B) Oil India Limited (Nomination)</b>									
2016-17	19	56	169	-	-	-	19	56	169
2017-18	19	39	135	-	-	-	19	39	135
2018-19	17	33	112	-	-	-	17	33	112
2019-20	19	36	118	-	-	-	19	36	118
2020-21	19	36	91	0	0	0	19	36	91
<b>2021-22 (P)</b>	<b>19</b>	<b>38</b>	<b>117</b>				<b>19</b>	<b>38</b>	<b>117</b>
<b>(C) PSC/RSC &amp; CBM Regime</b>									
2016-17	23	39	100	9	9	25	32	48	125
2017-18	23	53	120	10	14	31	33	67	152
2018-19	44	151	295	18	33	95	62	184	390
2019-20	26	131	260	11	30	77	37	161	337
2020-21	18	66	154	8	16	53	26	82	206
<b>2021-22 (P)</b>	<b>21</b>	<b>119</b>	<b>242</b>	<b>3</b>	<b>6</b>	<b>22</b>	<b>24</b>	<b>125</b>	<b>263</b>
<b>Total (A+B+C)</b>									
2016-17	111	414	904	45	126	341	156	540	1246
2017-18	112	423	915	47	122	314	159	545	1228
2018-19	131	540	1103	49	149	404	180	689	1507
2019-20	118	511	1115	45	136	326	163	647	1442
2020-21	105	415	875	44	147	328	149	562	1203
<b>2021-22 (P)</b>	<b>103</b>	<b>456</b>	<b>975</b>	<b>37</b>	<b>110</b>	<b>288</b>	<b>140</b>	<b>566</b>	<b>1264</b>

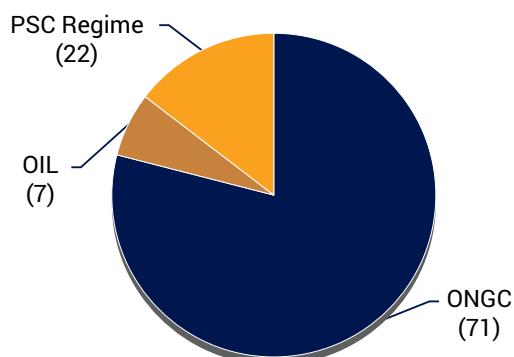
**Note:** Total may not tally due to rounding off

P. Provisional

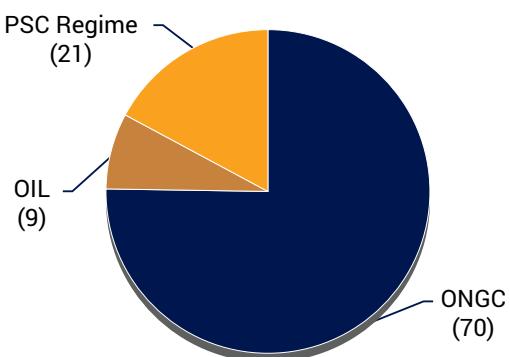
1. Nomination wells includes Exploratory, Development & Side tracked wells. CBM wells not included

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd & DGH

**Figure II.1: Share of wells drilled during 2021- 22 (%)**



**Figure II.2: Share in metrage drilled during 2021- 22 (%)**



## II.2: Exploratory & Development Drilling by Oil Companies

Year	Exploratory		Development		Total	
	Wells (Nos.)	Metreage ('000')	Wells (Nos.)	Metreage ('000')	Wells (Nos.)	Metreage ('000')
	(1)	(2)	(3)	(4)	(5)	(6)
<b>(A) Onshore</b>						
2016-17	102	277	312	628	414	904
2017-18	85	266	338	649	423	915
2018-19	89	229	451	874	540	1103
2019-20	84	270	427	845	511	1115
2020-21	78	226	337	649	415	875
<b>2021-22 (P)</b>	<b>76</b>	<b>212</b>	<b>380</b>	<b>763</b>	<b>456</b>	<b>975</b>
<b>(B) Offshore</b>						
2016-17	40	119	86	222	126	341
2017-18	59	149	63	165	122	314
2018-19	35	104	114	300	149	404
2019-20	37	102	99	224	136	327
2020-21	39	111	108	217	147	328
<b>2021-22 (P)</b>	<b>25</b>	<b>68</b>	<b>85</b>	<b>220</b>	<b>110</b>	<b>288</b>
<b>Total (A+B)</b>						
2016-17	142	396	398	850	540	1246
2017-18	144	414	401	814	545	1228
2018-19	124	333	565	1174	689	1507
2019-20	121	373	526	1069	647	1442
2020-21	117	337	445	866	562	1203
<b>2021-22 (P)</b>	<b>101</b>	<b>280</b>	<b>465</b>	<b>984</b>	<b>566</b>	<b>1264</b>

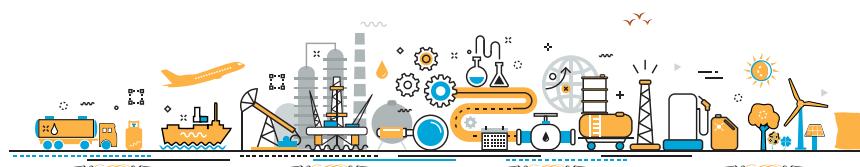
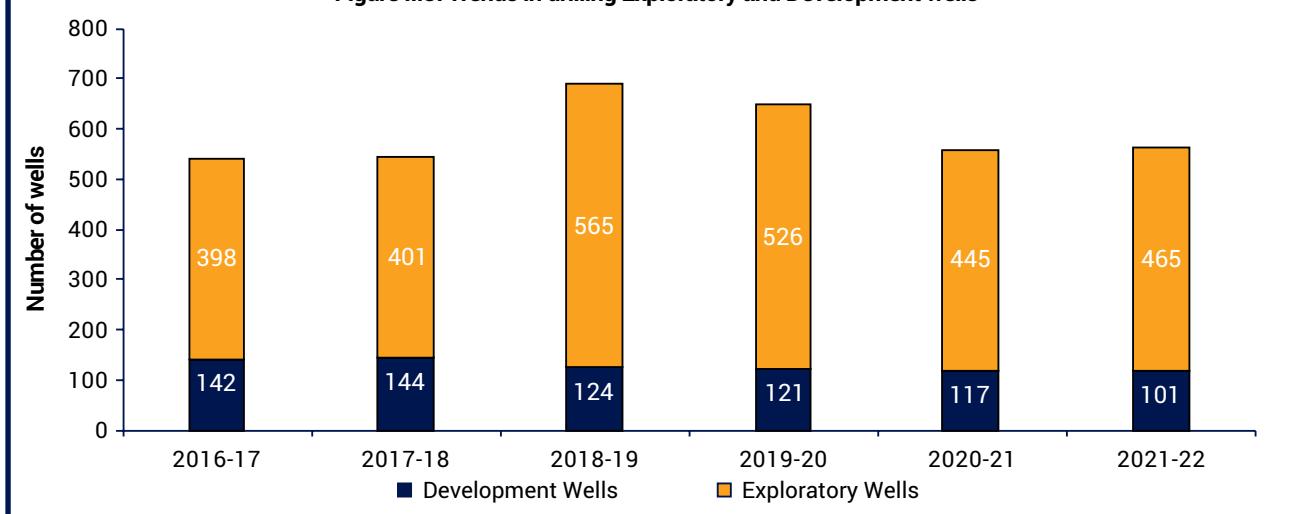
Note:

P: Provisional

- Includes Water Disposal Wells and Non-Associated Gas Wells
- Total may not tally due to rounding off
- ONGC's Nomination wells includes Exploratory, Development & Side tracked wells. CBM wells not included. One well drilled in Pre-NELP Acreage with Metreage of 3.003 TMT from ONGC in 2018-19.

Source: Oil &amp; Natural Gas Corporation Ltd., Oil India Ltd &amp; DGH

**Figure II.3: Trends in drilling Exploratory and Development wells**



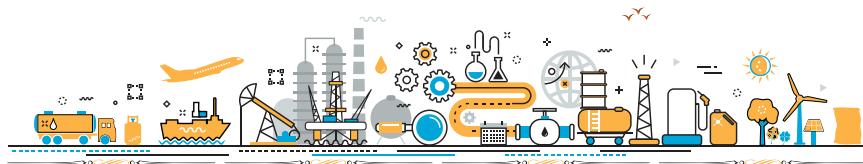
### II.3 Status of Wells (as on 01.04.2022)

Status	Offshore	Gujarat	Rajasthan	Assam & Arunachal Pradesh	Tripura	Andhra Pradesh	Tamilnadu	West Bengal (CBM)	Jharkhand (CBM)	Madhya Pradesh (CBM)	Other state (UP, HP, MP, Bihar, Punjab, JK, WB)	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
ONGC (Nomination)	1254	3390	0	429	0	46	89	0	0	0		5208
Oil (Nomination)	0	0	9	373	0	0	0	0	0	0	0	382
PSC/RSC & CBM Regime	32	151	387	31	0	4	6	0	0	0	0	611
<b>Total-Flowing Oil Wells</b>	<b>1286</b>	<b>3541</b>	<b>833</b>	<b>0</b>	<b>50</b>	<b>95</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6201</b>
ONGC (Nomination)	185	76	0	10	109	96	77	0				553
Oil (Nomination)	0	0	20	92	0	0	0	0	0	0	0	112
PSC/RSC & CBM Regime	19	11	88	6	0	0	0	0	347	40	298	809
<b>Total - Flowing Gas Wells</b>	<b>204</b>	<b>87</b>	<b>108</b>	<b>109</b>	<b>96</b>	<b>77</b>	<b>347</b>	<b>40</b>	<b>298</b>	<b>0</b>	<b>1474</b>	
<b>Total Flowing Wells (a)</b>	<b>1490</b>	<b>3628</b>	<b>504</b>	<b>941</b>	<b>109</b>	<b>146</b>	<b>172</b>	<b>347</b>	<b>40</b>	<b>298</b>	<b>0</b>	<b>7675</b>
ONGC (Nomination)	257	976	29	185	35	69	81					1632
Oil (Nomination)	0	0	21	282	0	0	0	0	0	0	0	303
PSC/RSC & CBM Regime	22	96	120	35	0	0	7	150	11	52	0	493
<b>Total Non Flowing (b)</b>	<b>279</b>	<b>1072</b>	<b>170</b>	<b>502</b>	<b>35</b>	<b>69</b>	<b>88</b>	<b>150</b>	<b>11</b>	<b>52</b>	<b>0</b>	<b>2428</b>
<b>Total flowing + Non flowing well (a+b)</b>	<b>1769</b>	<b>4700</b>	<b>674</b>	<b>1443</b>	<b>144</b>	<b>215</b>	<b>260</b>	<b>497</b>	<b>51</b>	<b>350</b>	<b>0</b>	<b>10103</b>
ONGC (Nomination)	413	4109	52	1297	149	508	495	0	0			7023
Oil (Nomination)	0	0	31	924	0	0	0	0	0	0	0	955
PSC/RSC & CBM Regime	11	144	314	4	0	0	0	0	0	0	0	473
<b>Other Flowing &amp; Non flowing (c)</b>	<b>424</b>	<b>4253</b>	<b>397</b>	<b>2225</b>	<b>149</b>	<b>508</b>	<b>495</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8451</b>
ONGC (Nomination)	2109	8551	81	1921	293	719	742	0	0	0	0	14416
Oil (Nomination)	0	0	81	1671	0	0	0	0	0	0	0	1752
PSC/RSC & CBM Regime	84	402	909	76	0	4	13	497	51	350	0	2386
<b>Total (a+b+c)</b>	<b>2193</b>	<b>8953</b>	<b>1071</b>	<b>3668</b>	<b>293</b>	<b>723</b>	<b>755</b>	<b>497</b>	<b>51</b>	<b>350</b>	<b>0</b>	<b>18554</b>

**Note:** Others includes injector well, abandoned, to be abandoned etc.

1. ONGC Offshore wells tabulated above are nomination regime only.

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd & DGH



## II.4: State-wise Geological Surveys Achievements upto 31.03.2022

(in Numbers)

States	ONGC	OIL	Survey under NSP LKM	Total Geological Surveys
(1)	(2)	(3)	(4)	(5)
Andhra Pradesh	53427	-	2172	55599
A.N. Islands	6860	-	264	7124
Arunachal Pradesh	3692	-	186	3878
Assam	48073	-	3899	51972
Bihar (incl. Jharkhand)	4035	-	766	4801
Gujarat (Gulf Of Cambay)	60625	-	5688	66313
Haryana		-	250	250
Himachal Pradesh	9948	-	709	10657
Jammu & Kashmir	31970	-	188	32158
Kerala-Karnataka (incl. Goa)	4000	-	2058	6058
Madhya Pradesh	117920	-	6472	124392
Chhattisgarh	5920	-	2223	8143
Manipur	2781	-	5	2786
Meghalaya	1911	-	13	1924
Mizoram	6194	-	980	7174
Nagaland	6971	-		6971
Odisha		-	2481	2481
Punjab		-	802	802
Rajasthan	46501	-	3313	49814
Sikkim	720	-		720
Tamil Nadu (Incl. Puducherry)	20003	-		20003
Telangana		-	800	800
Tripura	21263	-	163	21426
Uttar Pradesh (incl. Uttarakhand)	29797	-	2920	32717
West Bengal	8808	-	911	9719
Maharashtra	-	-	9696	9696
Eastern offshore	-	-	-	0
Western offshore	-	-	-	0
Andaman offshore*	-	-	22554	22554
<b>Total</b>	<b>491419</b>	<b>0</b>	<b>69514</b>	<b>560933</b>

\*: Special project to appraise Andaman offshore

NSP: National Seismic Programme LKM: Line Kilometre

Source: Oil and Natural Gas Corporation Limited Oil India Limited, DGH



## II.5: State-wise Achievements of Geophysical Field Parties in India since inception upto 31.03.2022

Area/ State	ONGC (Nomination)		OIL (Nomination)		PSC + RSC/CBM (Including DSF) Regime		Grand Total	
	2D (LKM)	3D (SKM)	2D (LKM)	3D (SKM)	2D (LKM)	3D (SKM)	2D (LKM)	3D (SKM)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>(A) Onshore</b>								
Andhra Pradesh	39166	10392	0	0	1271	1497	40436	11889
Arunachal Pradesh	0	0	2641	338	675	114	3316	452
Assam <sup>1</sup>	31369	5474	9003	7907	4869	2397	45241	15777
Bihar <sup>2</sup>	6566	0	0	0	2423	947	8989	947
Chhattisgarh	202	0	0	0	0	0	202	0
Gujarat	104712	11383	0	0	8770	8121	113482	19505
Himachal Pradesh	4172	0	0	0	810	0	4982	0
Haryana	1038	0	0	0	0	0	1038	0
Jammu & Kashmir	2563	0	0	0	0	0	2563	0
Madhya Pradesh	10021	1189	0	0	4097	1523	14118	2712
Maharashtra	0	0	0	0	476	0	476	0
Manipur	0	0	0	0	210	0	210	0
Meghalaya	205	0	0	0	0	0	205	0
Mizoram	35	0	0	0	1526	613	1561	613
Nagaland	602	6	0	0	0	0	602	6
Odisha	313	0	1822	0	1975	1375	4110	1375
Punjab	4078	0	0	0	0	0	4078	0
Rajasthan	20571	1633	11571	729	26949	17408	59090	19771
Tamil Nadu	41031	8269	0	0	1710	2763	42740	11033
Telangana	0	0	0	0	195	0	195	0
Tripura	6365	1268	0	0	1842	115	8207	1383
Uttar Pradesh	26798	0	0	0	2860	211	29658	211
Uttarakhand	1522	0	0	0	0	0	1522	0
West Bengal	29227	596	0	0	4476	4031	33702	4627
<b>Total(A)</b>	<b>330554</b>	<b>40211</b>	<b>25036</b>	<b>8974</b>	<b>65133</b>	<b>41116</b>	<b>420723</b>	<b>90301</b>
<b>(B) Offshore</b>								
Andaman	0	0	0	0	272	0	272	0
Eastern offshore	117515	8100	2863	0	235463	196152	355841	204252
Western offshore	434940	84378	0	0	116729	75406	551669	159784
<b>Total(B)</b>	<b>552454</b>	<b>92478</b>	<b>2863</b>	<b>0</b>	<b>352464</b>	<b>271558</b>	<b>907781</b>	<b>364036</b>
<b>Total</b>	<b>883008</b>	<b>132689</b>	<b>27899</b>	<b>8974</b>	<b>417597</b>	<b>312675</b>	<b>1328505</b>	<b>454338</b>

Note: Total may not tally due to round off.

LKM: Line Kilometre SKM: Square Kilometre

- Excludes 387.81 LKM in Pre-NELP acreage (Assam) in ONGC's 2D LKM.
- Geophysical fields of Pvt./JVs in State of Bihar include Jharkhand
- Figures not strictly comparable with earlier issues of publication prior to 2015-16 due to change in nomenclature, rationalisation and classification of reporting.

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd. and DGH



## II.6: Basin-wise / State-wise Achievements of Drilling since inception upto 31.03.2022

Basin	State / Region	Wells Numbers	Metreage ('000')
(1)	(2)	(3)	(4)
<b>(A) Onshore</b>		<b>14773</b>	<b>33307</b>
Cambay	Gujarat	8807	15050
Kutch	Gujarat	0	0
Rajasthan	Rajasthan	275	604
Vindhyan	Rajasthan	0	0
	Madhya Pradesh	0	0
<b>Total WRBC</b>		<b>9082</b>	<b>15654</b>
	Nagaland	37	131
Upper Assam	Assam	3626	11890
	Meghalaya	3	6
Mahanadi	Odisha	5	11
Fold Belt	Mizoram under ERBC	8	27
	Arunachal Pradesh	65	171
Assam-Arakan	Tripura	293	849
<b>Total ERBC</b>		<b>4037</b>	<b>13085</b>
Foot hills & Ganga Valley	West Bengal	59	168
Ganga Valley	Bihar	6	30
CBM	Jharkhand	32	36
CBM	West Bengal	37	42
Satpura-South Rewa-Damodar	Madhya Pradesh	0	0
<b>Total CRBC</b>		<b>134</b>	<b>276</b>
Himalayan Foot-hills,	Himachal Pradesh	15	54
Ganga Valley &	Punjab	4	16
Vindhyan/Gondwana/Ganga	Uttar Pradesh	8	30
	Madhya Pradesh	21	61
	Jammu & Kashmir	4	12
<b>Total NRBC</b>		<b>52</b>	<b>172</b>
Krishna-Godavari	Andhra Pradesh	720	2185
Pranhita-Godavari	Andhra Pradesh	10	37
Cauvery	Tamil Nadu	738	1898
<b>Total SRBC</b>		<b>1468</b>	<b>4120</b>
<b>(B) Offshore</b>		<b>3541</b>	<b>8992</b>
East Coast(SW+DW)	East Coast including KG, Cauvery	317	1042
West Coast(SW+DW)	West Coast including drilling in	3206	7889
	Orissa, Andaman & Saurashtra	18	61
	Others	0	0
<b>Total (A+B)</b>		<b>18314</b>	<b>42299</b>

**Note:** All figures are provisional

WRBC: Western Region Basin Coast, CRBC: Central Region Basin Coast, SRBC: Southern Region Basin Coast, NRBC: Northern Region Basin Coast, ERBC: Eastern Region Basin Coast

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd. and DGH



## II.7: State-wise/Basin-wise Oil Fields in India (as on 31.03.2022)

(in Number)

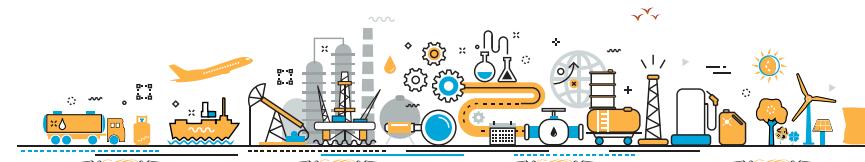
Company / State	Basin	Oil Fields	Gas Fields	Oil and Gas Fields	Total Fields
(1)	(2)	(3)	(4)	(5)	(6)
<b>A. Oil &amp; Natural Gas Corporation Ltd. (Nomination)</b>		<b>123</b>	<b>77</b>	<b>25</b>	<b>225</b>
Gujarat	Cambay	73	5	0	78
Assam	Upper Assam	26	0	0	26
Assam	A&AA	2	2	0	4
Rajasthan	Jodhpur	0	4	0	4
Andhra Pradesh	K.G. Basin	8	39	0	47
Tamil Nadu	Cauvery	14	11	0	25
Tripura	AAFB	0	9	0	9
Nagaland	A&AA	0	0	0	0
Madhya Pradesh	Vindhyan Basin	0	0	0	0
<b>Total Onshore</b>		<b>123</b>	<b>70</b>	<b>0</b>	<b>193</b>
East Coast	Cauvery Offshore	0	0	0	0
East Coast	KG Offshore(Shallow)	0	1	0	1
East Coast	KG Offshore(Deep)	0	3	3	6
West Coast	Cambay	0	0	0	0
West Coast	Mumbai Offshore	0	3	21	24
West Coast	Kutch	0	0	1	1
<b>Total Offshore</b>		<b>0</b>	<b>7</b>	<b>25</b>	<b>32</b>
<b>B. Oil India Ltd. (Nomination)</b>		<b>1</b>	<b>3</b>	<b>15</b>	<b>19</b>
Assam	Upper Assam	0	0	14	14
Arunachal Pradesh	Upper Assam	0	0	1	1
Rajasthan	Jaisalmer	0	3	0	3
	Bikaner Nagur	1	0	0	1
<b>C. PSC + RSC/CBM</b>		<b>54</b>	<b>19</b>	<b>4</b>	<b>77</b>
Andhra Pradesh	Krishna Godavari	1	0	0	1
Arunachal Pradesh	Assam-Arakan	1	0	0	1
Assam	Assam-Arakan		2	0	2
Tripura	Assam-Arakan	0	0	0	0
Gujarat	Cambay	35	3	0	38
Madhya Pradesh*	Sohagpur	0	2	0	2
Jharkhand*	Jharia	0	1	0	1
Jharkhand*	Bokaro	0	1	0	1
Rajasthan	Rajasthan	12	2	0	14
Tamil Nadu	Cauvery	1	0	1	2
West Bengal	Bengal	1	0	0	1
West Bengal*	Raniganj	0	2	0	2
<b>Total Onshore+CBM</b>		<b>51</b>	<b>13</b>	<b>1</b>	<b>65</b>
East Coast	Cauvery	1	1	0	2
East Coast	Krishna Godavari	2	4	1	7
West Coast	Mumbai	0	0	0	0
West Coast	Cambay	0	1	2	3
Total Offshore		3	6	3	12
<b>Grand Total (A+B+C)</b>		<b>178</b>	<b>99</b>	<b>44</b>	<b>321</b>

A&AA : Assam & Assam Arakan.

\*: CBM Fields

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd. and DGH

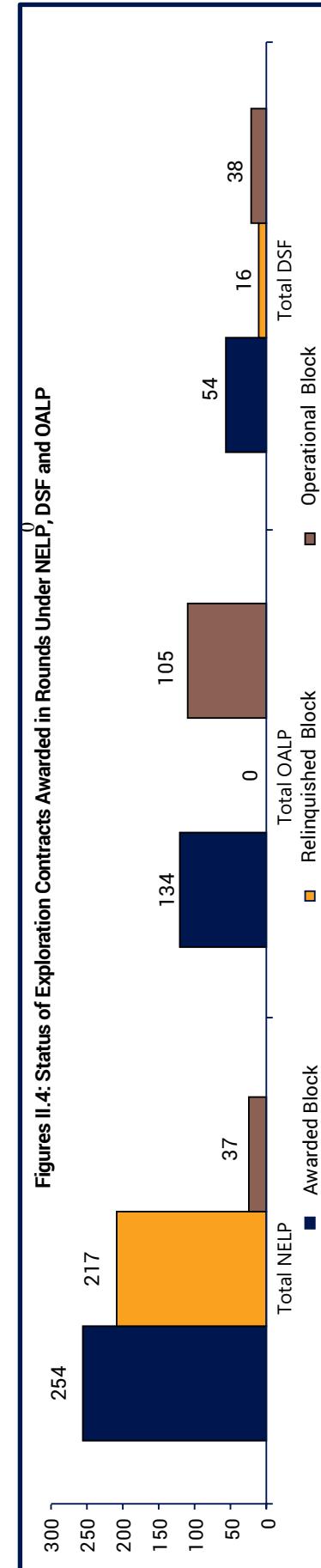




## II.8: Exploration Contracts Awarded in Rounds Under NELP, DSF and OALP

Round	Launch Year	Offered Block/Contract Area	RSC/PSC Signed for Blocks						Relinquished Block			Operational Block			Area Awarded (Sq. Km)			
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
NELP-I	1999	48	7	16	1	24	5	15	1	21	2	1	0	0	3	231527		
NELP-II	2000	25	8	8	7	23	8	8	6	22	0	0	0	0	1	1	1	267883
NELP-III	2002	27	9	6	8	23	9	5	5	19	0	0	1	3	4	3	4	204596
NELP-IV	2003	24	10	0	10	20	10	10	7	17	0	0	0	0	3	3	3	192810
NELP-V	2005	20	6	2	12	20	6	1	9	16	0	0	1	1	3	4	4	115180
NELP-VI	2006	55	21	6	25	52	21	4	21	46	0	0	2	4	6	6	6	306426
NELP-VII	2007	57	11	7	23	41	11	4	20	35	0	0	3	3	3	3	6	112947
NELP-VIII	2009	70	8	11	13	32	8	9	12	29	0	0	2	1	3	3	3	52573
NELP-IX	2010	34	1	3	15	19	1	2	9	12	0	0	1	6	7	7	7	26441
<b>Total NELP</b>		<b>360</b>	<b>81</b>	<b>59</b>	<b>114</b>	<b>254</b>	<b>79</b>	<b>48</b>	<b>90</b>	<b>217</b>	<b>2</b>	<b>11</b>	<b>24</b>	<b>37</b>	<b>37</b>	<b>1510383</b>		
OALP-I	2018	55	1	8	46	55	0	0	0	4	1	8	42	51	51	51	51	59283
OALP-II	2019	14	1	5	8	14	0	0	0	0	1	5	7	13	13	13	13	29233
OALP-III	2019	23	1	3	14	18	0	0	0	3	1	3	9	13	13	13	13	29765
OALP-IV	2019	7	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	18510
OALP-V	2020	11	1	2	8	11	0	0	0	0	0	0	1	2	8	11	11	19789
OALP-VI	2021	21	2	4	15	21	0	0	0	0	0	0	0	0	0	0	0	35346
OALP-VII	2021	8	1	2	5	8	0	0	0	0	0	0	0	0	0	0	0	15766
<b>Total OALP</b>		<b>139</b>	<b>7</b>	<b>24</b>	<b>103</b>	<b>134</b>	<b>0</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>18</b>	<b>73</b>	<b>95</b>	<b>95</b>	<b>95</b>	<b>95</b>	<b>95</b>	<b>207692</b>
DSF-I	2016	46	0	7	23	30	0	4	7	11	0	0	3	16	19	19	19	777
DSF-II	2018	25	0	9	15	24	0	1	4	5	0	0	8	11	19	19	19	3000
<b>Total DSF</b>		<b>71</b>	<b>0</b>	<b>16</b>	<b>38</b>	<b>54</b>	<b>0</b>	<b>5</b>	<b>11</b>	<b>16</b>	<b>0</b>	<b>11</b>	<b>27</b>	<b>38</b>	<b>38</b>	<b>38</b>	<b>38</b>	<b>377</b>

Source: DGH



## II.9: State-wise/Area-wise Balance Recoverable Reserves of Crude Oil (in MMT)

State/Region	01.04.2017		01.04.2018		01.04.2019		01.04.2020		01.04.2021		01.04.2022 (P)					
	Total	Reserves (2P)	Total	Reserves (2P)	"Contingent Resources# 2C (CR)"	Total	Reserves (2P)	"Contingent Resources# 2C (CR)"	Total	Reserves (2P)	"Contingent Resources# 2C (CR)"	Total				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Andhra Pradesh	8.2	7.9	3.9	4.2	8.0	3.6	4.2	7.9	3.5	3.8	7.3	3.6	7.8	11.4	1.7	
Arunachal Pradesh	1.5	1.7	2.7	0.0	2.7	3.1	0.0	3.1	3.6	0.0	3.6	2.4	0.5	2.9	0.4	
Assam	160.0	160.3	115.9	42.7	158.6	112.6	42.9	155.5	110.8	42.2	153.1	107.4	41.2	148.6	22.8	
Gujarat	118.6	118.2	90.4	29.2	119.6	89.6	29.2	118.8	86.3	29.1	115.4	89.4	28.5	117.9	18.1	
Nagaland	2.4	2.4	2.4	0.0	2.4	0.0	2.4	2.4	0.0	2.4	2.4	0.0	2.4	2.4	0.4	
Rajasthan	24.6	18.0	40.7	0.0	40.7	40.1	0.0	40.1	0.0	35.3	0.0	35.3	31.0	72.7	103.7	
Tamil Nadu	9.0	9.2	6.6	2.6	9.2	6.7	2.4	9.0	6.8	2.2	9.0	5.9	3.1	9.0	1.4	
Tripura	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	
West Bengal										0.0	0.0	0.0	0.02	0.02	0.09	0.1
Eastern Offshore	40.7	40.4	38.2	4.1	42.3	38.4	3.7	42.0	39.0	4.0	43.0	32.0	7.2	39.2	6.0	
Western Offshore	239.2	236.3	204.0	31.2	235.3	196.7	32.7	229.4	189.9	32.9	222.8	177.1	39.5	216.6	33.2	
<b>Total Reserves of Crude Oil</b>	<b>604.1</b>	<b>594.5</b>	<b>504.9</b>	<b>114.1</b>	<b>618.9</b>	<b>490.9</b>	<b>117.4</b>	<b>608.3</b>	<b>475.3</b>	<b>116.6</b>	<b>591.9</b>	<b>449.0</b>	<b>202.8</b>	<b>651.8</b>	<b>100.0</b>	
<b>Initial-in Place</b>	<b>6754.0</b>	<b>6895.3</b>	<b>7021.5</b>			<b>6960.9</b>				<b>6996.3</b>		<b>7447.0</b>			-	-
<b>Ultimate</b>	<b>1894.7</b>	<b>1919.8</b>	<b>1977.9</b>			<b>1967.9</b>				<b>2006.8</b>		<b>1888.0</b>			-	-
<b>Reserves Replacement Ratio</b>	-	-	-							0.39			0.75			-

P: Provisional

1. Western offshore includes Gujarat offshore
2. Total may not tally due to rounding off
3. ONGC adopted PRMS System w.e.f 01.04.2019; Oil & Contract Regime adopted PRMS system w.e.f 01.04.2022. Revision/changes in Reserves figures are mainly attributed to the adoption of PRMS guidelines in reserves reporting.

4. As per PRMS system, Under PRMS, each project must be classified individually so that the estimated recoverable sales quantities associated with that project can be correctly assigned to one of the three main classes: Reserves, Contingent Resources or Prospective Resources.
  - Reserves are associated with projects that the owners can demonstrate to be economic and that have approval for development by all partners.
  - Contingent resources are associated with projects that are discoveries, but for some reason the project is not yet approved for development.
  - Prospective resources are from projects that remain as prospects, i.e. are yet to be discovered."

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd. and DGH



## II.10: State-wise/Area-wise Balance Recoverable Reserves of Natural Gas (BCM)

State/Region	01.04.2017			01.04.2018			01.04.2019			01.04.2020			01.04.2021			01.04.2022 (P)			% of Total (01.04.2022)
	Total	Total	Reserves (2P)	Reserves (2P)	Total	"Contingent Resources# 2C (CR)"	Reserves (2P)	"Contingent Resources# 2C (CR)"	Total	Re- serves (2P)	"Contingent Resources# 2C (CR)"	Total	Reserves (2P)	"Contingent Resources# 2C (CR)"	Total	Reserves (2P)	"Contingent Resources# 2C (CR)"	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)			
Andhra Pradesh	48.3	59.9	26.5	37.1	63.6	27.5	36.3	63.8	27.1	37.7	64.8	22.1	41.5	63.6	63.6	5.6			
Arunachal Pradesh	0.7	1.3	1.6	0.0	1.6	2.7	0.0	2.7	3.1	0.0	3.1	0.0	7.3	7.3	7.3	7.3	0.6		
Assam	158.6	161.7	144.9	21.0	165.9	145.3	21.3	166.6	144.3	22.2	166.5	80.3	84.8	165.1	165.1	14.5			
Gujarat	62.3	58.2	46.4	13.0	59.4	45.7	11.6	57.3	45.6	11.6	57.2	43.3	12.5	55.9	55.9	4.9			
Jharkhand (CBM)	8.1	8.1	11.5	0.0	11.5	0.0	11.8	8.6	0.0	8.6	4.1	0.0	4.1	0.0	4.1	0.4			
Madhya Pradesh (CBM)	32.1	31.9	31.6	0.0	31.6	31.2	0.0	31.2	30.9	0.0	30.9	0.0	24.2	0.9	24.2	0.9	2.2		
Nagaland	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0		
Rajasthan	34.9	54.8	61.1	1.9	63.0	60.0	0.5	60.5	57.7	1.4	59.1	56.0	17.6	73.7	73.7	6.5			
Tamil Nadu	32.0	39.1	30.2	7.8	38.0	28.0	9.1	37.1	27.3	10.6	37.9	25.2	13.3	38.5	38.5	3.4			
Tripura	36.1	35.2	21.3	6.7	28.0	21.7	7.8	29.5	22.2	7.1	29.3	18.8	11.5	30.3	30.3	2.7			
West Bengal (CBM)	66.5	65.9	32.9	0.0	32.9	32.6	0.0	32.6	32.2	0.0	32.2	32.2	27.1	41.6	41.6	6.0			
Eastern Offshore	507.8	510.8	524.0	41.2	565.2	514.2	42.1	556.3	514.5	42.6	557.1	155.3	113.8	269.0	269.0	23.6			
Western Offshore	302.3	312.5	224.1	99.1	323.2	235.2	88.8	324.0	228.5	97.1	325.6	193.4	143.9	337.3	337.3	29.6			
<b>Total Natural Gas Reserves</b>	<b>1289.7</b>	<b>1339.6</b>	<b>1156.2</b>	<b>227.9</b>	<b>1384.1</b>	<b>1156.1</b>	<b>217.5</b>	<b>1373.5</b>	<b>1142.0</b>	<b>230.3</b>	<b>1372.4</b>	<b>649.8</b>	<b>488.8</b>	<b>1138.7</b>	<b>1138.7</b>				
<b>Initial-in Place</b>	<b>3980.6</b>	<b>4113.5</b>	<b>4328.3</b>			<b>4305.1</b>				<b>4225.0</b>			<b>3865.0</b>			-			
<b>Ultimate Reserves</b>	<b>2230.6</b>	<b>2312.8</b>	<b>2390.0</b>			<b>2373.3</b>				<b>2399.1</b>			<b>1702.0</b>			-			
<b>Replacement Ratio</b>	-	-	-							1.3		1.1		0.6					

Note: Figures as on 1<sup>st</sup> April of particular year

1. Western offshore includes Gujarat offshore

2. Total may not tally due to rounding off

3. ONGC adopted PRMS System w.e.f 01.04.2019; Oil & Contract Regime adopted PRMS system w.e.f 01.04.2022. Revision/changes in Reserves figures are mainly attributed to the adoption of PRMS guidelines in reserves reporting

4. As per PRMS system, Under PRMS, each project must be classified individually so that the estimated recoverable sales quantities associated with that project can be correctly assigned to one of the three main classes: Reserves, Contingent Resources or Prospective Resources.

- Reserves are associated with projects that the owners can demonstrate to be economic and that have approval for development by all partners.
- Contingent resources are associated with projects that are discoveries, but for some reason the project is not yet approved for development.
- Prospective resources are from projects that remain as prospects, i.e. are yet to be discovered."

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd. and DGH



## II.11: Production of Crude Oil and Condensate (Calendar Year-wise)

State/Region	2016	2017	2018	2019	2020	2021 (P)	% variation in 2021 over 2020
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. State-wise Crude Oil Production (TMT)*</b>							
Andhra Pradesh	273	322	299	252	206	198	-4.1
Arunachal Pradesh	58	52	43	52	55	50	-9.7
Assam	4153	4341	4353	4113	3951	3949	0.0
Gujarat	4590	4597	4622	4676	4668	4646	-0.5
Rajasthan	8288	7876	7832	7024	5859	5964	1.8
Tamil Nadu	269	341	375	415	413	383	-7.1
Tripura	-	-	-	-	-	2	-
West Bengal	-	-	-	-	-	0.1	-
Offshore	18412	18369	17163	16111	15625	14699	-5.9
<b>Total</b>	<b>36042</b>	<b>35898</b>	<b>34687</b>	<b>32642</b>	<b>30777</b>	<b>29891</b>	<b>-2.9</b>
of which							
Crude Oil Production	34592	34302	32969	30959	29329	28622	-2.4
Condensate Production	1450	1596	1718	1683	1448	1269	-12.4
<b>2. Entity-wise Crude Oil Production (TMT)*</b>							
<b>Onshore</b>	<b>17630</b>	<b>17529</b>	<b>17524</b>	<b>16531</b>	<b>15152</b>	<b>15192</b>	<b>0.3</b>
of which							
ONGC-Nomination	5913	6016	6053	6064	5990	5848	-2.4
OIL-Nomination	3206	3376	3344	3131	2979	2955	-0.8
Pvt/JVs-PSC + RSC/CBM	8512	8137	8127	7336	6183	6389	3.3
<b>Offshore</b>	<b>18412</b>	<b>18369</b>	<b>17163</b>	<b>16111</b>	<b>15625</b>	<b>14699</b>	<b>-5.9</b>
of which							
ONGC-Nomination	16199	16422	15256	14457	14459	13722	-5.1
Pvt/JVs-PSC + RSC/CBM	2212	1947	1907	1653	1166	977	-16.2
<b>Total Crude Oil Production*</b>	<b>36042</b>	<b>35898</b>	<b>34687</b>	<b>32642</b>	<b>30777</b>	<b>29891</b>	<b>-2.9</b>
of which							
ONGC-Nomination	22112	22438	21309	20521	20449	19570	-4.3
OIL-Nomination	3206	3376	3344	3131	2979	2955	-0.8
Pvt/JVs-PSC + RSC/CBM	10724	10084	10035	8989	7350	7366	0.2

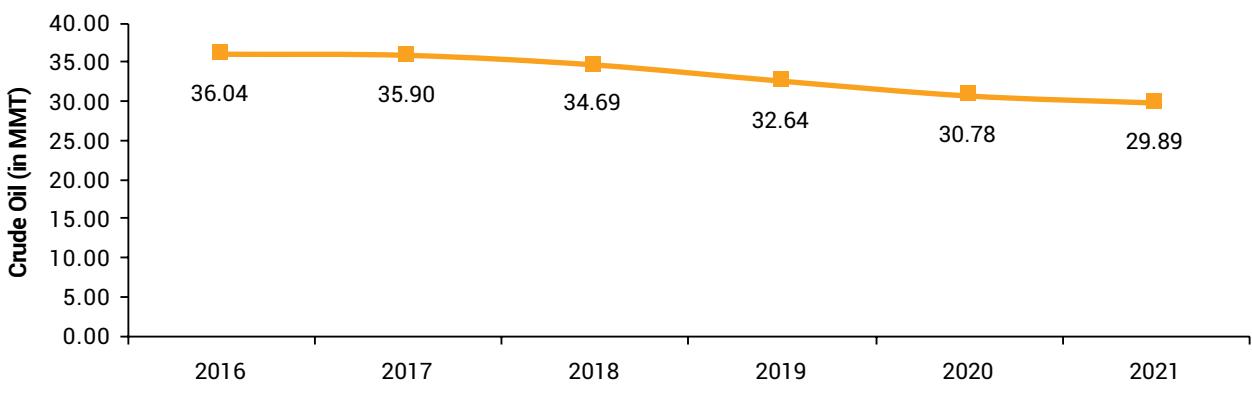
Note: Total may not tally due to rounding off

P. Provisional

\*:Included Condensate

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd. and DGH

Figure II.7: Trend in Crude Oil Production (included Condensate)



## II.12: Production of Crude Oil and Condensate (Financial Year-wise)

State/Region	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% variation in 2021-22 over 2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. State-wise Crude Oil Production (TMT)*</b>							
Andhra Pradesh	276	322	296	243	195	202	3.9
Arunachal Pradesh	55	50	43	56	53	48	-10.0
Assam	4203	4345	4309	4093	3902	3988	2.2
Gujarat	4605	4591	4626	4707	4651	4627	-0.5
Rajasthan	8165	7887	7667	6653	5891	5887	-0.1
Tamil Nadu	284	345	395	415	410	367	-10.6
Tripura	-	-	-	-	-	3	-
West Bengal	-	-	-	-	-	0	-
Offshore	18421	18145	16868	16003	15391	14569	-5.3
<b>Total</b>	<b>36009</b>	<b>35684</b>	<b>34203</b>	<b>32170</b>	<b>30494</b>	<b>29691</b>	<b>-2.6</b>
of which							
Crude Oil Production	34501	34045	32474	30524	29121	28450	-2.3
Condensate Production	1508	1639	1729	1646	1373	1241	-9.6
<b>2. Entity-wise Crude Oil Production (TMT)*</b>							
<b>Onshore</b>	<b>17588</b>	<b>17540</b>	<b>17336</b>	<b>16167</b>	<b>15103</b>	<b>15122</b>	<b>0.1</b>
of which							
ONGC-Nomination	5934	6010	6074	6090	5934	5833	-1.7
OIL-Nomination	3258	3376	3293	3107	2937	2987	1.7
Pvt/JVs-PSC + RSC/CBM	8396	8154	7969	6970	6232	6303	1.1
<b>Offshore</b>	<b>18421</b>	<b>18145</b>	<b>16868</b>	<b>16003</b>	<b>15391</b>	<b>14569</b>	<b>-5.3</b>
of which							
ONGC-Nomination	16284	16240	14969	14537	14249	13619	-4.4
Pvt/JVs-PSC + RSC/CBM	2137	1905	1899	1466	1142	950	-16.8
<b>Total Crude Oil Production*</b>	<b>36009</b>	<b>35684</b>	<b>34203</b>	<b>32170</b>	<b>30494</b>	<b>29691</b>	<b>-2.6</b>
of which							
ONGC-Nomination	22218	22249	21042	20627	20183	19451	-3.6
OIL-Nomination	3258	3376	3293	3107	2937	2987	1.7
Pvt/JVs-PSC + RSC/CBM	10532	10059	9868	8436	7374	7253	-1.6

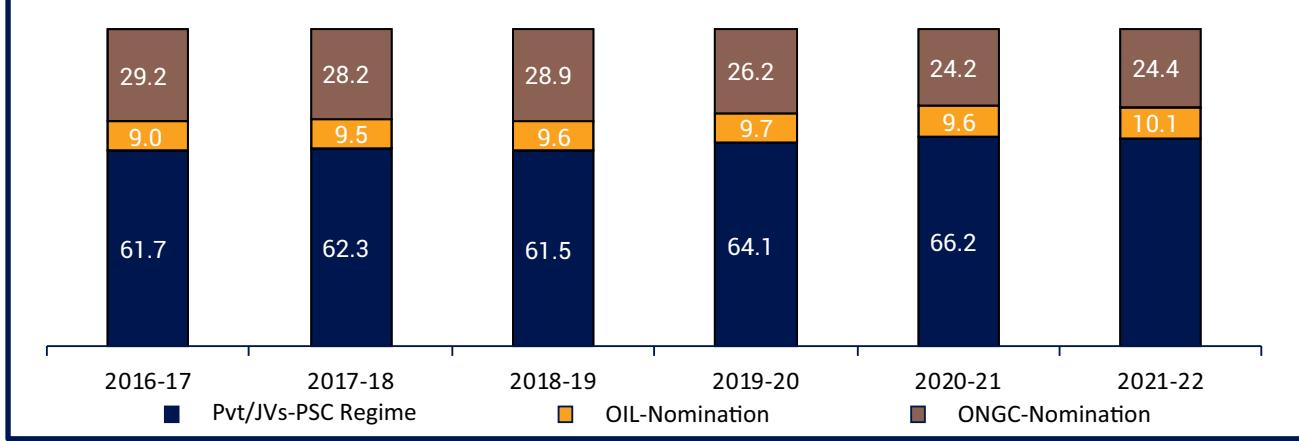
Note: Total may not tally due to rounding off

P: Provisional

\*:Included Condensate

Source: Oil &amp; Natural Gas Corporation Ltd., Oil India Ltd. and DGH

**Figure II.8: Entity-wise % Share of Crude Oil Production**



## II.13: Basin-wise Production of Crude Oil

(Figures in TMT)

Basin	State	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total 2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)		(8)
<b>Crude Oil Production by Oil and Natural Gas Corporation</b>								
Western Offshore*	Maharashtra	16268	16231	14950	14517	14236	13604	45.8
Krishna Godavari Offshore (Eastern offshore)	Andhra Pradesh	16	8	18	19	13	14	0.0
Western Onland	Gujarat	4468	4452	4492	4574	4484	4388	14.8
Assam & Assam Arakan	Assam	953	975	993	987	964	994	3.3
Krishna Godavari	Andhra Pradesh	276	322	285	202	154	159	0.5
Cauvery	Tamilnadu	238	262	303	328	331	291	1.0
ONGC-Nomination		22218	22249	21042	20627	20183	19451	65.5
ONGC-NELP/JVs Share		3316	3186	3189	2726	2350	2256	7.6
<b>Total ONGC's Production</b>		<b>25534</b>	<b>25435</b>	<b>24231</b>	<b>23353</b>	<b>22533</b>	<b>21707</b>	<b>73.1</b>
<b>Crude Oil Production by Oil India Ltd.</b>								
Assam-Arakan	Assam	3250	3367	3282	3075	2905	2957	10.0
Assam-Arakan	Arunachal Pradesh	8	7	9	23	24	21	0.1
Rajasthan	Rajasthan	0	2	3	8	9	9	0.0
OIL-Nomination		3258	3376	3293	3107	2937	2987	10.1
OIL-JVs Share		19	17	14	26	27	23	0.1
<b>Total OIL's Production</b>		<b>3277</b>	<b>3393</b>	<b>3307</b>	<b>3133</b>	<b>2964</b>	<b>3010</b>	<b>10.1</b>
<b>Crude Oil Production by Pvt/JVs-in PSC + RSC/CBM</b>								
Krishna Godavari Offshore (Eastern offshore)	Andhra Pradesh	960.2	814.5	633.7	537.1	731	611.8	2.1
Cauvery Offshore (Eastern offshore)	Tamilnadu	2.4	4.2	2.2	0.7	0	0.0	0.0
Cambay (Offshore)	Gujarat Offshore	381.6	399.1	735.6	590.8	411	338.2	1.1
Mumbai Offshore (Western Offshore)	Western Offshore	792.5	687.2	527.4	337.8	0	0.0	0.0
KG Onshore	Andhra Pradesh	0.0	0.0	11.2	41.2	40	43.0	0.1
Assam-Arakan	Arunachal Pradesh	47.6	42.9	34.1	32.2	30	26.8	0.1
	Assam	0.0	3.1	34.4	30.1	33	40.0	0.1
Cambay	Gujarat	137.2	139.3	133.5	133.8	167	238.6	0.8
Rajasthan	Rajasthan	8164.6	7885.3	7663.8	6644.9	5882	5878.7	19.8
Cauvery	Tamilnadu	46.3	83.1	92.1	87.5	79	75.5	0.3
Bengal	West Bengal	0.0	0.0	0.0	0.0	0	0.1	0.0
<b>Total Pvt/JVs Production-in PSC + RSC/CBM **</b>		<b>10532</b>	<b>10059</b>	<b>9868</b>	<b>8436</b>	<b>7374</b>	<b>7253</b>	<b>24.4</b>
<b>Total Crude Oil Production</b>		<b>36009</b>	<b>35684</b>	<b>34203</b>	<b>32170</b>	<b>30494</b>	<b>29691</b>	<b>100.0</b>

Note: Total may not tally due to rounding off

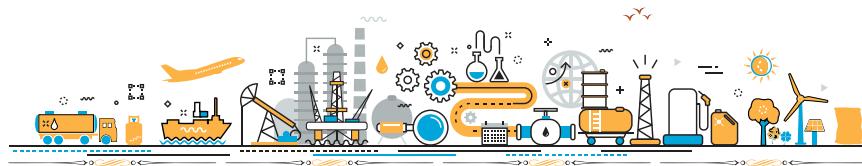
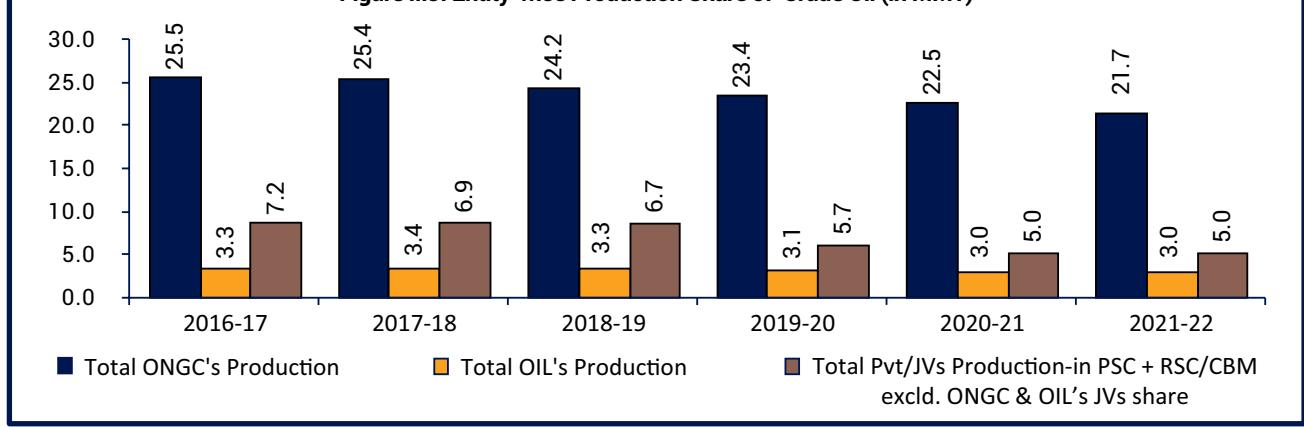
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\* Condensate receipt at Uran &amp; Hazira included in Western Offshore Basin of Maharashtra

\*\* Including NELP/JVs Share of ONGC's &amp; OIL's Production

Source: Oil &amp; Natural Gas Corporation Ltd., Oil India Ltd. and DGH

Figure II.9: Entity-wise Production Share of Crude Oil (in MMT)



## II.14: Production of Natural Gas (Calendar Year-wise)

State/Region	2016	2017	2018	2019	2020	2021 (P)	% variation in 2021 over 2020
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. State-wise Natural Gas Production (MMSCM)</b>							
Andhra Pradesh	811	921	1090	950	847	818	-3.4
Arunachal Pradesh	27	28	31	37	55	57	3.8
Assam	3113	3219	3263	3239	2979	3251	9.1
Gujarat	1529	1669	1424	1356	1184	1051	-11.2
Jharkhand	3	4	3	5	2	3	80.6
Madhya Pradesh	5	126	345	344	344	300	-12.8
Rajasthan	1313	1373	1472	1721	2007	2633	31.2
Tamil Nadu	962	1163	1213	1121	968	1011	4.4
Tripura	1402	1455	1507	1584	1520	1529	0.6
West Bengal	516	554	380	312	302	380	25.6
Offshore	21757	22186	21883	21373	18286	22184	21.3
<b>Total Natural Gas Production</b>	<b>31437</b>	<b>32699</b>	<b>32612</b>	<b>32043</b>	<b>28493</b>	<b>33218</b>	<b>16.6</b>
<b>2. Entity-wise Natural Gas Production (MMSCM)</b>							
Onshore	9681	10512	10729	10670	10208	11034	8.1
of which							
ONGC-Nomination	5039	5616	5635	5372	4810	4671	-2.9
OIL-Nomination	2929	2922	2745	2708	2491	2800	12.4
Pvt/JVs-in PSC + RSC/CBM	1712	1974	2348	2590	2907	3563	22.6
Offshore	21757	22186	21883	21373	18286	22184	21.3
of which							
ONGC-Nomination	16286	17702	18559	18805	17563	16199	-7.8
Pvt/JVs-in PSC + RSC/CBM	5471	4484	3324	2568	723	5985	728.0
<b>Total Natural Gas Production</b>	<b>31437</b>	<b>32699</b>	<b>32612</b>	<b>32043</b>	<b>28493</b>	<b>33218</b>	<b>16.6</b>
of which							
ONGC-Nomination	21325	23319	24195	24177	22372	20870	-6.7
OIL-Nomination	2929	2922	2745	2708	2491	2800	12.4
Pvt/JVs-in PSC + RSC/CBM	7183	6458	5672	5158	3630	9548	163.0

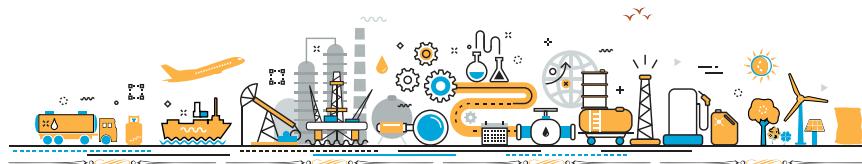
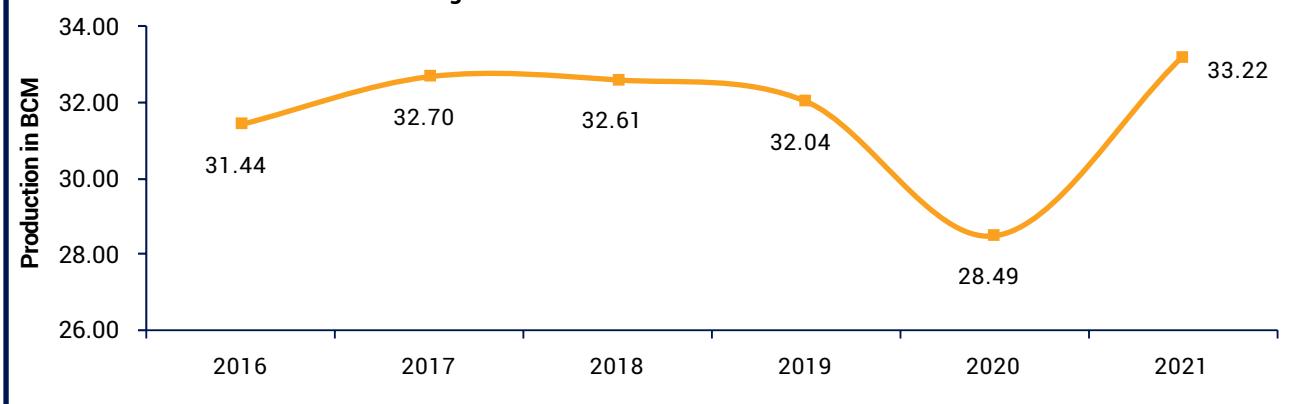
Note: Total may not tally due to rounding off

CBM: Coal Bed Methane

P. Provisional

Source: Oil &amp; Natural Gas Corporation Ltd., Oil India Ltd. and DGH

**Figure II.10: Trend in Natural Gas Production**



## II. 15: Production of Natural Gas (Financial Year-wise)

State/Region	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% variation in 2021-22 over 2020-21
	(1)	(2)	(3)	(4)	(5)	(6)	(8)
<b>1. State-wise Natural Gas Production (MMSCM)</b>							
Andhra Pradesh	868	959	1081	912	827	809	-2.3
Arunachal Pradesh	28	30	28	46	55	58	4.2
Assam	3128	3219	3289	3141	2995	3371	12.6
Gujarat	1580	1607	1402	1342	1138	1017	-10.6
Jharkhand	3	4	4	5	2	4	142.4
Madhya Pradesh	6	200	357	345	334	290	-13.1
Rajasthan	1277	1442	1483	1883	2040	2619	28.4
Tamil Nadu	983	1207	1208	1097	911	1067	17.1
Tripura	1430	1440	1554	1473	1634	1531	-6.3
West Bengal	555	531	350	306	307	389	26.8
Offshore	22038	22011	22117	20635	18429	22869	24.1
<b>Total Natural Gas Production</b>	<b>31897</b>	<b>32649</b>	<b>32873</b>	<b>31184</b>	<b>28673</b>	<b>34024</b>	<b>18.7</b>
<b>2. Entity-wise Natural Gas Production (MMSCM)</b>							
Onshore	9858	10639	10756	10549	10244	11155	8.9
of which							
ONGC-Nomination	5205	5638	5633	5170	4786	4686	-2.1
OIL-Nomination	2937	2881	2722	2668	2480	2893	16.6
Pvt/JVs-in PSC + RSC/CBM	1717	2119	2401	2710	2978	3576	20.1
Offshore	22038	22011	22117	20635	18429	22869	24.1
of which							
ONGC-Nomination	16883	17791	19042	18576	17086	15943	-6.7
Pvt/JVs-in PSC + RSC/CBM	5155	4219	3075	2059	1343	6926	415.8
<b>Total Natural Gas Production</b>	<b>31897</b>	<b>32649</b>	<b>32873</b>	<b>31184</b>	<b>28673</b>	<b>34024</b>	<b>18.7</b>
of which							
ONGC-Nomination	22088	23429	24675	23746	21872	20629	-5.7
OIL-Nomination	2937	2881	2722	2668	2480	2893	16.6
Pvt/JVs-in PSC + RSC/CBM	6872	6338	5477	4770	4321	10502	143.1

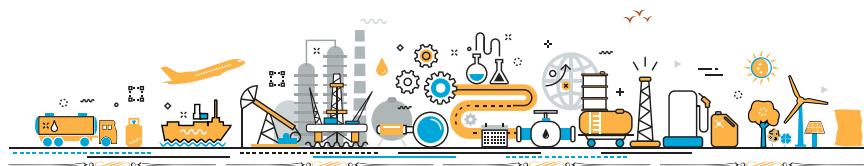
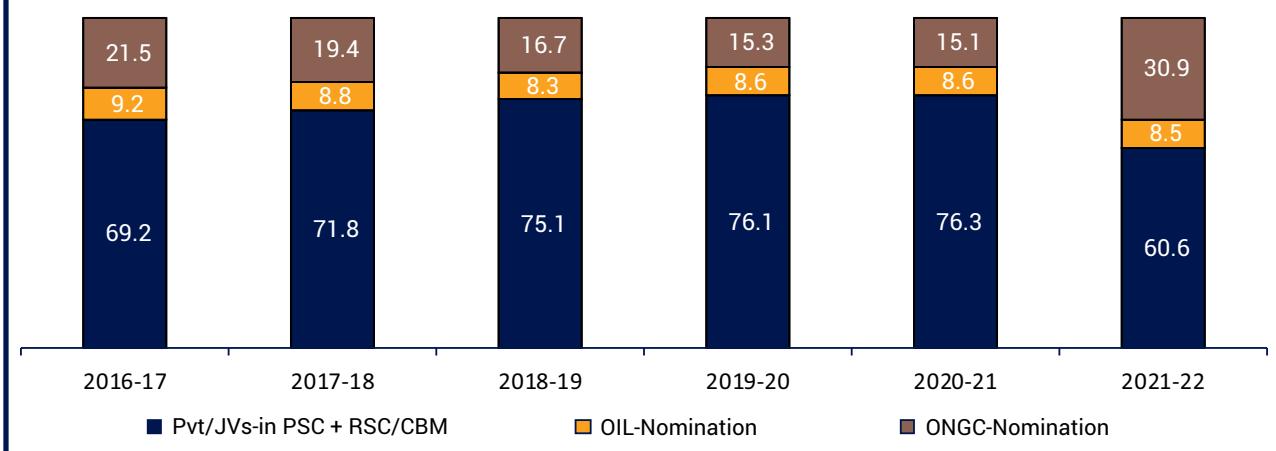
Note: Total may not tally due to rounding off

CBM: Coal Bed Methane

P. Provisional

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd. and DGH

**Figure II.11: Entity-wise Natural Gas Production Share (%)**



## II.16: Basin-wise Production of Natural Gas

(Figures in MMSCM)

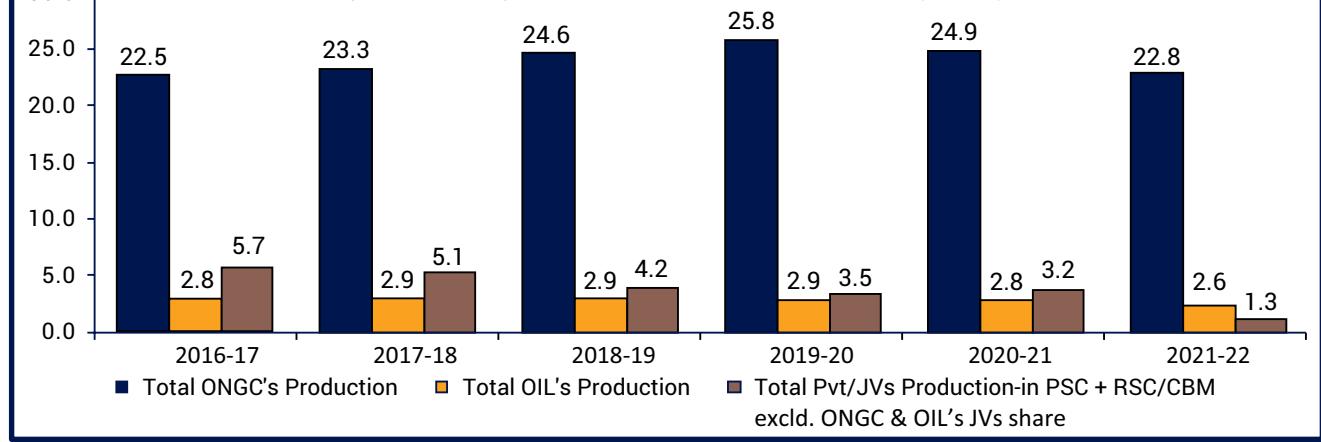
State	Basin	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)		(8)
<b>Natural Gas Production by Oil and Natural Gas Corporation</b>								
Western Offshore	Maharashtra	16413	17243	18005	17645	16660	15,681	46.1
Krishna Godavari Offshore (Eastern offshore)	Andhra Pradesh	470	548	1037	931	426	262	0.8
Western Onland	Gujarat	1490	1532	1332	1274	1074	951	2.8
Frontier	Rajasthan	5	6	4	0	0		0.0
Assam & Assam Arakan	Assam	435	508	483	460	387	373	1.1
	Tripura	1430	1440	1554	1473	1634	1531	4.5
Krishna Godavari	Andhra Pradesh	868	959	1077	897	814	794	2.3
Cauvery	Tamilnadu	977	1194	1182	1066	877	1037	3.0
<b>ONGC-Nomination</b>		<b>22088</b>	<b>23429</b>	<b>24675</b>	<b>23746</b>	<b>21872</b>	<b>20629</b>	<b>60.6</b>
ONGC-NELP/JVs Share		1182	1180	1136	1150	944	1,051	3.1
<b>Total ONGC's Production</b>		<b>23270</b>	<b>24610</b>	<b>25810</b>	<b>24896</b>	<b>22816</b>	<b>21680</b>	<b>63.7</b>
<b>Natural Gas Production by Oil India Ltd.</b>								
Assam-Arakan	Assam	2693	2659	2482	2379	2241	2620	7.7
Assam-Arakan	Arunachal Pradesh	12	12	12	38	50	53	0.2
Rajasthan	Rajasthan	232	211	228	251	188	219	0.6
<b>OIL-Nomination</b>		<b>2937</b>	<b>2881</b>	<b>2722</b>	<b>2668</b>	<b>2480</b>	<b>2893</b>	<b>8.5</b>
OIL-JVs Share		0	23	143	133	162	153	0.4
<b>Total OIL's Production</b>		<b>2937</b>	<b>2905</b>	<b>2865</b>	<b>2801</b>	<b>2642</b>	<b>3045</b>	<b>9.0</b>
<b>Natural Gas Production by Pvt/JVs-in PSC + RSC/CBM</b>								
Krishna Godavari Offshore (Eastern offshore)	Andhra Pradesh	3183	2245	1338	849	1182	6761	19.9
Cauvery Offshore (Eastern offshore)	Tamilnadu	18	24	84	43	13	2	0.0
Cambay (Offshore)	Gujarat Offshore	81	98	122	129	148	163	0.5
Mumbai Offshore (Western Offshore)	Maharashtra	1874	1853	1531	1039	0	0	0.0
KG Onshore	Andhra Pradesh			5	15	13	15	0.0
Assam-Arakan	Arunachal Pradesh	16	18	16	7	5	5	0.0
	Assam		53	324	302	367	378	1.1
Cambay	Gujarat	90	75	70	69	65	66	0.2
Rajasthan	Rajasthan	1041	1225	1251	1632	1852	2399	7.1
Cauvery	Tamilnadu	6	14	25	31	34	29	0.1
Raniganj South (CBM)	West Bengal	170	203	153	139	110	112	0.3
Raniganj East (CBM)	West Bengal	385	328	198	167	197	277	0.8
Jharia (CBM)	Jharkhand	3	4	4	5	2	4	0.0
Sohagpur East / West (CBM)	Madhya Pradesh	6	200	357	345	334	290	0.9
<b>Total Pvt/JVs Production-in PSC + RSC/CBM</b>		<b>6872</b>	<b>6338</b>	<b>5477</b>	<b>4770</b>	<b>4321</b>	<b>10502</b>	<b>31</b>
<b>Total Natural Gas Production</b>		<b>31897</b>	<b>32649</b>	<b>32873</b>	<b>31184</b>	<b>28673</b>	<b>34024</b>	<b>100</b>

Note: Total may not tally due to rounding off

CBM: Coal Bed Methane

P.Provisional

Source: Oil &amp; Natural Gas Corporation Ltd., Oil India Ltd. and DGH

**Figure II.12: Entity-wise Production Share of Natural Gas (in BCM)**

## II.17: State-wise Gross & Net Production of Natural Gas in India

(Figures in MMSCM)

State / Utilisation	2016-17 (1)	2017-18 (2)	2018-19 (3)	2019-20 (4)	2020-21 (5)	2020-21 (6)	2021-22 (P) (7)
<b>Andhra Pradesh</b>							
Gross Production	867.78	959.16	1081.31	912.32	827.47	808.64	
Flare	34.26	16.04	36.88	38.51	44.04	41.27	
Losses	0.00	0.00	0.00	0.00	0.00	0.00	
Net Availability/Net Production	833.52	943.13	1044.43	873.82	783.43	767.37	
Internal Use/Consumption	31.47	31.91	25.48	24.00	23.23	23.61	
Sales	802.05	911.21	1018.95	849.81	760.19	743.76	
<b>Arunachal Pradesh</b>							
Gross Production	27.54	29.51	27.81	45.59	55.36	57.70	
Flare	12.26	14.35	14.60	33.24	43.29	46.64	
Losses	7.36	7.31	5.14	1.45	0.02	0.02	
Net Availability/Net Production	7.92	7.86	8.07	10.91	12.04	11.04	
Internal Use/Consumption	7.92	7.86	8.07	10.91	12.05	11.04	
Sales	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Assam</b>							
Gross Production	3127.88	3219.02	3289.06	3141.23	2995.37	3371.45	
Flare	192.10	185.75	192.47	196.25	178.60	213.95	
Losses	2.21	5.07	11.53	13.30	13.84	32.77	
Net Availability/Net Production	2933.57	3028.21	3085.06	2931.68	2802.93	3124.74	
Internal Use/Consumption	584.30	617.58	585.71	569.97	537.75	638.31	
Sales	2349.27	2410.63	2499.35	2361.70	2265.18	2486.43	
<b>Gujarat</b>							
Gross Production	1580.27	1606.66	1402.22	1342.33	1138.38	1017.29	
Flare	62.87	50.81	53.52	55.48	79.77	48.31	
Losses	0.00	0.00	0.00	0.00	0.00	0.00	
Net Availability/Net Production	1517.40	1555.86	1348.71	1286.85	1058.61	968.98	
Internal Use/Consumption	470.31	422.56	382.98	419.86	381.52	333.93	
Sales	1047.09	1133.30	965.72	866.99	677.09	635.05	
<b>Rajasthan</b>							
Gross Production	1277.34	1441.93	1483.25	1882.52	2039.66	2618.83	
Flare	43.91	36.98	52.96	90.61	85.33	55.80	
Losses	43.20	66.69	52.35	19.56	16.45	21.84	
Net Availability/Net Production	1190.23	1338.27	1377.94	1772.35	1937.88	2541.19	
Internal Use/Consumption	568.92	595.16	597.46	624.31	711.01	755.31	
Sales	621.31	743.10	780.48	1148.04	1226.87	1785.88	
<b>Tamil Nadu</b>							
Gross Production	983.17	1207.22	1207.85	1096.65	910.91	1066.52	
Flare	17.76	21.32	40.45	45.69	53.92	23.20	
Losses	0.00	0.00	0.00	0.00	0.00	0.00	
Net Availability/Net Production	965.41	1185.90	1167.40	1050.96	857.00	1043.32	
Internal Use/Consumption	4.53	7.11	6.59	5.27	4.87	5.25	
Sales	960.88	1178.79	1160.81	1045.69	852.13	1038.08	
<b>Tripura</b>							
Gross Production	1429.91	1440.37	1554.30	1472.75	1633.97	1530.78	
Flare	0.21	0.26	0.27	0.29	0.29	0.30	
Losses	0.00	0.00	0.00	0.00	0.00	0.00	
Net Availability/Net Production	1429.70	1440.12	1554.04	1472.46	1633.68	1530.47	
Internal Use/Consumption	2.48	2.90	2.93	2.81	2.94	3.00	
Sales	1427.22	1437.22	1551.10	1469.65	1630.74	1527.47	

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CHAPTER I

CHAPTER II

CHAPTER III

CHAPTER IV

CHAPTER V

CHAPTER VI

CHAPTER VII

CHAPTER VIII

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CHAPTER X

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CHAPTER XII

APPENDIX

State / Utilisation	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Jharkhand</b>						
Gross Production	3.08	3.96	3.58	4.64	1.67	4.04
Flare	0.00	0.00	0.03	0.07	0.03	0.00
Losses	0.00	0.00	0.00	0.00	0.00	0.00
Net Availability/Net Production	3.08	3.96	3.55	4.57	1.64	4.04
Internal Use/Consumption	0.49	0.50	0.56	0.69	0.96	1.80
Sales	2.59	3.47	3.00	3.88	0.68	2.24
<b>Madhya Pradesh</b>						
Gross Production	6.44	199.77	356.66	344.90	333.70	290.10
Flare	0.91	0.83	0.67	0.69	0.68	0.40
Losses	0.00	0.00	0.00	0.00	0.00	0.00
Net Availability/Net Production	5.53	198.95	355.99	344.21	333.02	289.70
Internal Use/Consumption	4.65	14.82	22.82	25.01	27.63	24.60
Sales	0.87	184.13	333.17	319.20	305.39	265.11
<b>West Bengal</b>						
Gross Production	555.07	531.07	350.22	305.90	307.02	389.25
Flare	240.66	173.01	35.66	15.72	45.35	12.01
Losses	0.00	0.00	7.62	13.06	11.18	11.82
Net Availability/Net Production	314.41	358.06	306.95	277.12	250.49	365.42
Internal Use/Consumption	50.36	62.06	56.62	50.10	46.30	68.91
Sales	264.04	296.00	250.33	227.02	204.19	296.51
<b>B. Offshore</b>						
Gross Production	22038.23	22010.62	22117.11	20635.39	18429.05	22868.91
Flare	371.09	324.51	298.97	383.53	290.24	370.67
Losses	18.98	15.19	16.34	20.02	25.48	13.19
Net Availability/Net Production	21648.16	21670.92	21801.80	20231.85	18113.34	22485.05
Internal Use/Consumption	4131.61	4045.36	4325.94	4318.93	3981.92	3891.93
Sales	17516.54	17625.55	17475.85	15912.92	14131.42	18593.12
<b>Total Balance of Natural Gas</b>						
Gross Production	31896.70	32649.31	32873.37	31184.22	28672.56	34023.52
Flare	976.03	823.85	726.47	860.07	821.54	812.56
Losses	71.75	94.26	92.97	67.38	66.96	79.63
Net Availability/Net Production	30848.92	31731.21	32053.93	30256.77	27784.07	33131.33
Internal Use/Consumption	5857.05	5807.81	6015.16	6051.87	5730.18	5757.69
Sales	24991.87	25923.39	26038.77	24204.90	22053.88	27373.64
% Flared to GP	3.06	2.52	2.21	2.76	2.87	2.39

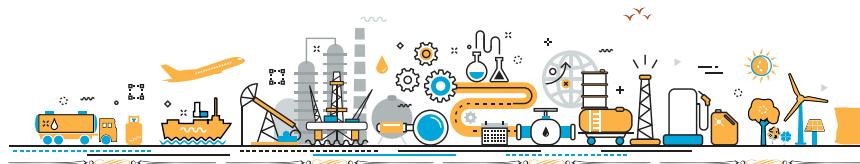
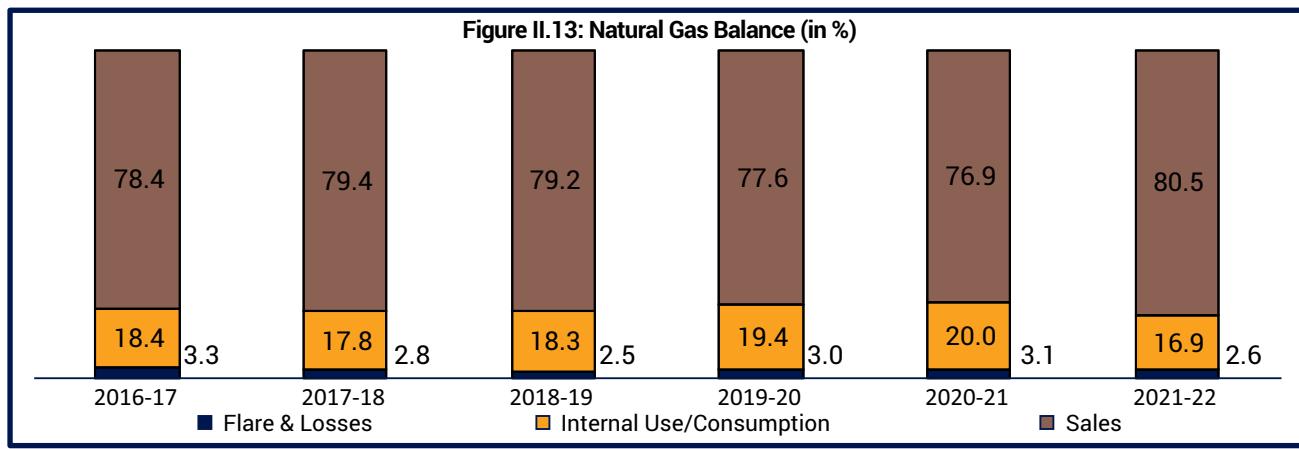
Note: P. Production

1. Total may not tally due to rounding off.

2. Net availability denotes natural gas available for consumption which is derived by deducting gas flared/losses from gross production.

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd. and DGH

Figure II.13: Natural Gas Balance (in %)



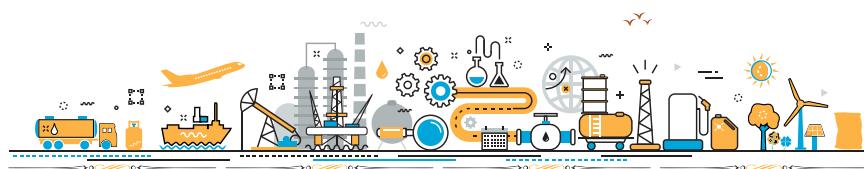
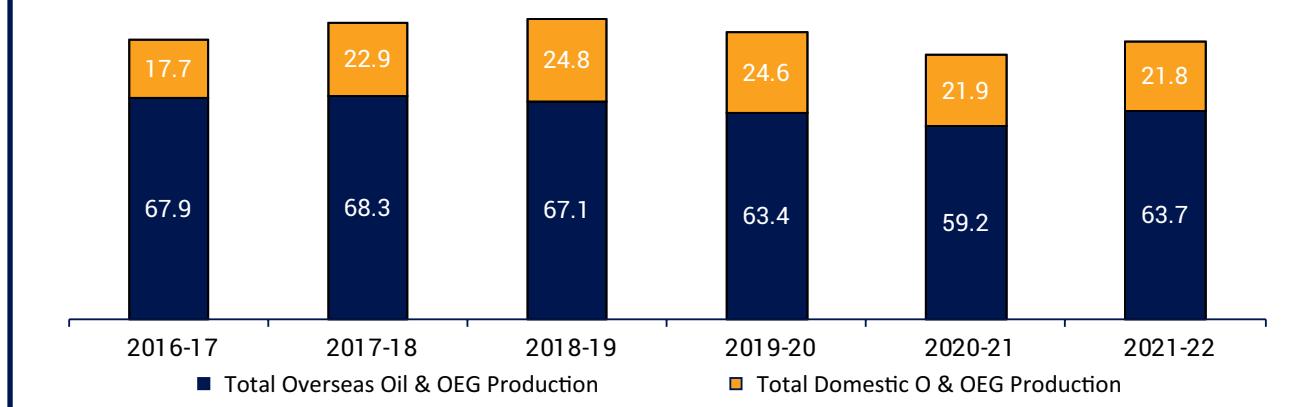
## II.18: Domestic and Overseas Production of Oil & Gas

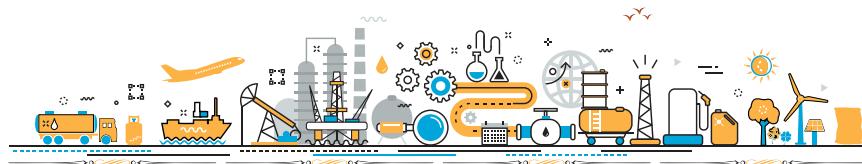
Entity/Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Domestic Production of Oil &amp; Gas</b>						
<b>Total Production of Oil &amp; Condensate (MMT)</b>	36.01	35.68	34.20	32.17	30.49	29.69
<b>Total Production of Gas (BCM)</b>	31.90	32.65	32.87	31.18	28.67	34.02
<b>Total Domestic O &amp; OEG Production (MMTOE)</b>	67.91	68.33	67.08	63.35	59.17	63.71
<b>Overseas Production of Oil &amp; Gas</b>						
<b>3. Overseas Production of Crude Oil &amp; Condensate (MMT)</b>						
1. ONGC Videsh Ltd. (OVL)	8.43	9.35	10.10	9.76	8.51	8.10
2. Bharat PetroResources Ltd. (BPRL)	0.79	1.53	2.15	2.07	1.79	1.87
3. Indian Oil Corporation Ltd. (IOCL)	1.15	2.68	3.24	3.21	2.71	2.88
4. GAIL (India) Ltd. (GAIL)	0.05	0.06	0.06	0.04	0.02	0.02
5. OIL (Oil India Ltd.)	0.91	1.63	1.69	1.58	1.42	1.40
6. HPCL-PPCL (Prize Petroleum Co. Ltd.)	0.01	0.01	0.01	0.00	0.00	0.003
<b>Total-Oil Production</b>	<b>11.34</b>	<b>15.26</b>	<b>17.25</b>	<b>16.66</b>	<b>14.45</b>	<b>14.27</b>
<b>4. Overseas Production of Natural Gas (BCM)</b>						
1. ONGC Videsh Ltd. (OVL)	4.37	4.81	4.74	5.23	4.53	4.23
2. Bharat PetroResources Ltd. (BPRL)	0.35	0.65	0.68	0.60	0.67	0.80
3. Indian Oil Corporation Ltd. (IOCL)	0.78	1.00	1.05	0.95	1.07	1.28
4. GAIL (India) Ltd. (GAIL)	0.45	0.44	0.37	0.55	0.50	0.46
5. OIL (Oil India Ltd.)	0.35	0.71	0.70	0.62	0.68	0.81
6. HPCL-PPCL (Prize Petroleum Co. Ltd.)	0.05	0.05	0.05	0.03	0.03	0.02
<b>Total Gas Production</b>	<b>6.35</b>	<b>7.66</b>	<b>7.58</b>	<b>7.98</b>	<b>7.48</b>	<b>7.60</b>
<b>Total Overseas Oil &amp; OEG Production</b>						
1. ONGC Videsh Ltd. (OVL)	12.80	14.16	14.83	14.98	13.04	12.33
2. Bharat PetroResources Ltd. (BPRL)	1.14	2.18	2.83	2.68	2.46	2.66
3. Indian Oil Corporation Ltd. (IOCL)	1.93	3.68	4.29	4.15	3.78	4.17
4. GAIL (India) Ltd. (GAIL)	0.51	0.49	0.43	0.59	0.47	0.44
5. OIL (Oil India Ltd.)	1.26	2.34	2.39	2.20	2.10	2.20
6. HPCL-PPCL (Prize Petroleum Co. Ltd.)	0.06	0.06	0.06	0.04	0.04	0.02
<b>Total Overseas Oil &amp; OEG Production (in MMTOE)</b>	<b>17.70</b>	<b>22.92</b>	<b>24.83</b>	<b>24.64</b>	<b>21.88</b>	<b>21.83</b>
Overseas production as (%) percentage of domestic production	26.06	33.55	37.02	38.89	36.99	34.26

Note: Total may not tally due to rounding off

Source: Oil & Natural Gas Corporation Ltd., Oil India Ltd. and DGH

Figure II.15: Trend of Domestic & Overseas Production of Oil & Gas (in MMTOE)





# CHAPTER - III



REFINING, TRANSPORTATION & MARKETING INFRASTRUCTURE



# Highlights of Chapter

**Public Sector Share  
60.4%**



**Private/JVs Sector Share  
39.6%**

Refining Capacity in India is 251.22 MMTPA as on 31.03.2022.

**221.77 MMT**

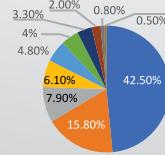


**9.0%**

**241.70 MMT**

Crude oil processing significantly increased

## Production Share %



Production of Petroleum Products saw an increase of 8.9% in the FY 2021-22 vis-a-vis 2020-21. Among which the production share was accounted highest for Diesel and lowest for Lubes & Greases.



Imported Liquefied Natural Gas (LNG) is being carried out in existing four(6) LNG terminals, each with regasification capacity of about 42.5 MMTPA.

**Crude Oil Pipelines Length  
10419 KM**

**Authorised Natural Gas Pipelines Length  
33815 KM**

As on 31.03.2022, total length of the Crude Oil Pipelines is 10419 KM and total authorised length of the Natural Gas Pipeline is 33815 KM.



**Product Pipeline (including LPG Pipeline)  
19033 KM**

As on 31.03.2022, total Product Pipeline including LPG Pipeline (3730 KM) is 19033 KM.



**17.83 Lakh KL  
PDS SKO Kerosene was allocated to states**

During FY2021-22, the total 17.83 Lakh KL PDS Kerosene was allocated to the states, with quality uplifted at (93.1%) 16.60 Lakh KL. West Bengal was allocated maximum 7.04 Lakh KL.



**28.95 crore  
31.03.2021**

**30.53 crore  
31.03.2022**

**5.5%**

The LPG active domestic consumers of Public Sector Oil Marketing Companies saw increase of 5.5%. Under Pradhan Mantri Ujjwala Yojana (PMUY), more than 9 crore connections were issued.

## Retail Outlets (ROs) in India

**77104  
Retail Outlets in India  
31.03.2021**



**7.7%**

**83027  
Retail Outlets in India  
31.03.2022**

## Compressed Natural Gas (CNG) sale

**2.59 MMT  
CNG Sale  
2020-21**



**3.97 MMT  
CNG Sale  
2021-22**

**53.3%**

**93,02,667  
Domestic PNG connection**



**34,854  
Commercial PNG connection**

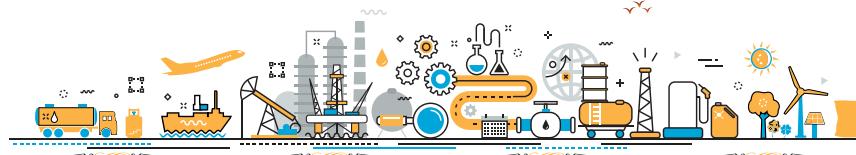


**13,215  
Industrial PNG connection**



**4433  
CNG Station**

As on 31.03.2022



### III.1: Petroleum Refining Capacity in India

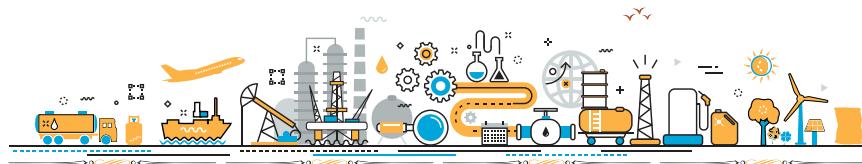
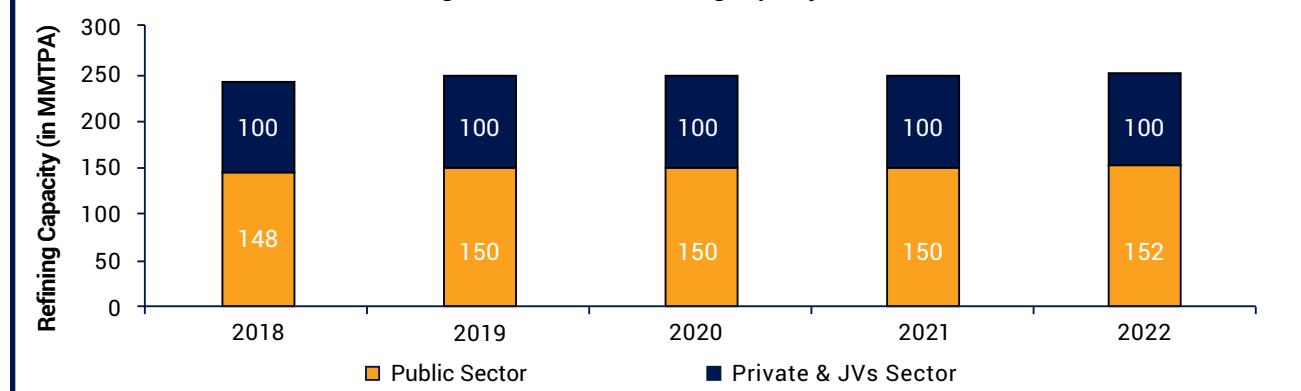
(Figures in MMTPA)

Refinery Location & Year of Commissioning	2017	2018	2019	2020	2021	2022	Expansion Plan in next 5 Year	% Share of Total 2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Public Sector</b>	<b>144.97</b>	<b>148.07</b>	<b>149.87</b>	<b>150.37</b>	<b>149.72</b>	<b>151.72</b>	<b>184.12</b>	<b>60.4</b>
1. IOCL, Digboi, Assam - 1901	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.3
2. IOCL, Guwahati, Assam - 1962	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.4
3. IOCL, Barauni, Bihar - 1964	6.00	6.00	6.00	6.00	6.00	6.00	6.00	9.00
4. IOCL, Koyali, Gujarat - 1965	13.70	13.70	13.70	13.70	13.70	13.70	18.00	5.5
5. IOCL, Haldia, West Bengal - 1975	7.50	7.50	7.50	8.00	8.00	8.00	8.00	3.2
6. Mathura, Uttar Pradesh - 1982	8.00	8.00	8.00	8.00	8.00	8.00	9.20	3.2
7. IOCL, Panipat, Haryana - 1998	15.00	15.00	15.00	15.00	15.00	15.00	25.00	6.0
8. IOCL, Bongaigaon, Assam - 1974	2.35	2.35	2.35	2.35	2.70	2.70	2.70	1.1
9. IOCL, Paradip, Odisha-2016	15.00	15.00	15.00	15.00	15.00	15.00	15.00	6.0
<b>Indian Oil Corporation Ltd.</b>	<b>69.20</b>	<b>69.20</b>	<b>69.20</b>	<b>69.70</b>	<b>70.05</b>	<b>70.05</b>	<b>88.75</b>	<b>27.9</b>
10. BPCL, Mumbai, Maharashtra - 1955	12.00	12.00	12.00	12.00	12.00	12.00	12.00	4.8
11. BPCL, Kochi, Kerala - 1963	12.40	15.50	15.50	15.50	15.50	15.50	15.50	6.2
12. BORL, Bina, Madhya Pradesh - 2011	6.00	6.00	7.80	7.80	7.80	7.80	7.80	3.1
<b>Bharat Petroleum Corporation Ltd.</b>	<b>30.40</b>	<b>33.50</b>	<b>35.30</b>	<b>35.30</b>	<b>35.30</b>	<b>35.30</b>	<b>35.30</b>	<b>14.1</b>
13. HPCL, Mumbai, Maharashtra - 1954	7.50	7.50	7.50	7.50	7.50	9.50	7.50	3.8
14. HPCL, Visakh, Andhra Pradesh - 1957	8.30	8.30	8.30	8.30	8.30	8.30	15.00	3.3
<b>Hindustan Petroleum Corporation Ltd.</b>	<b>15.80</b>	<b>15.80</b>	<b>15.80</b>	<b>15.80</b>	<b>15.80</b>	<b>17.80</b>	<b>22.50</b>	<b>7.1</b>
15. CPCL, Manali, Tamil Nadu - 1965	10.50	10.50	10.50	10.50	10.50	10.50	10.50	4.2
16. CPCL- CBR, Narimanam Tamil Nadu - 1993	1.00	1.00	1.00	1.00	0.00	0.00	9.00	0.0
<b>Chennai Petroleum Corporation Ltd.</b>	<b>11.50</b>	<b>11.50</b>	<b>11.50</b>	<b>11.50</b>	<b>10.50</b>	<b>10.50</b>	<b>19.50</b>	<b>4.2</b>
17. NRL, Numaligarh, Assam-1999	3.00	3.00	3.00	3.00	3.00	3.00	3.00	1.2
18. ONGC, Tatipaka, Andhra Pradesh - 2001	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.0
19. MRPL, Mangalore, Karnataka- 1996	15.00	15.00	15.00	15.00	15.00	15.00	15.00	6.0
<b>Private &amp; JVs Sector</b>	<b>89.00</b>	<b>99.50</b>	<b>99.50</b>	<b>99.50</b>	<b>99.50</b>	<b>99.50</b>	<b>99.50</b>	<b>39.6</b>
20. RIL, Jamnagar, Gujarat - 1999	33.00	33.00	33.00	33.00	33.00	33.00	33.00	13.1
21. RIL, Jamnagar ( SEZ), Gujarat - 2008	27.00	35.20	35.20	35.20	35.20	35.20	35.20	14.0
<b>Reliance Industries Ltd. (RIL)</b>	<b>60.00</b>	<b>68.20</b>	<b>68.20</b>	<b>68.20</b>	<b>68.20</b>	<b>68.20</b>	<b>68.20</b>	<b>27.1</b>
22. NEL, Vadinar, Gujarat - 2006	20.00	20.00	20.00	20.00	20.00	20.00	20.00	8.0
23. HMEL, Bhatinda, Punjab - 2012	9.00	11.30	11.30	11.30	11.30	11.30	11.30	4.5
<b>Total Refinery Capacity</b>	<b>233.97</b>	<b>247.57</b>	<b>249.37</b>	<b>249.87</b>	<b>249.22</b>	<b>251.22</b>	<b>283.62</b>	<b>100.0</b>

Note: Capacity expansion commissioning in IOCL-Digboi refinery by 2022-23, Guwahati refinery & Barauni refinery by 2023-24, Koyali refinery & Panipat by 2024-25; in HPCL-Visakh refinery by 2023-24; in CPCL-CBR refinery by 2025-26;

Source: Oil & Gas Companies

Figure III.1: Trends in Refining Capacity in India



CHAPTER I

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APPENDIX

### III.2: Refinery Crude Oil Processed and Production of Petroleum Products

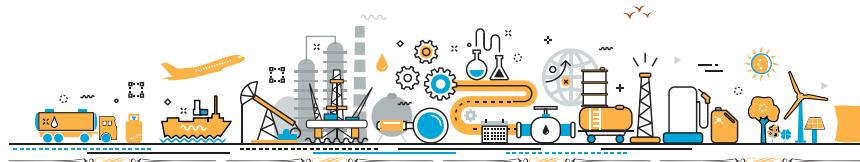
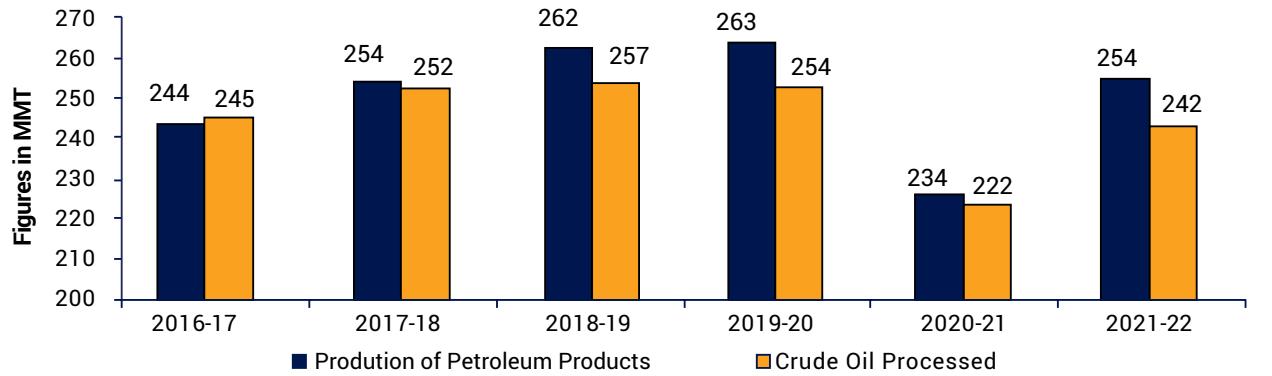
(Figures in TMT)

Year	Crude Oil Processed			Total	Production of Petroleum Products					Fractionators	Grand Total		
	Refinery				CPSEs	Pvt.	JVs	Refinery					
	CPSEs	Pvt.	JVs					CPSEs	Pvt.	JVs			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)			
(Calendar Year-wise)													
2016	137891	91428	16894	246212	129740	93973	15743	239457	4183	243640			
2017	142686	91622	15126	249435	134884	96921	14074	245879	4539	250418			
2018	150312	88675	17665	256652	142944	97819	16535	257298	4860	262158			
2019	145731	89090	20088	254909	137801	99826	18665	256292	4843	261134			
2020	126552	80101	17710	224363	120365	95361	16453	232179	4371	236550			
<b>2021</b>	<b>136772</b>	<b>82902</b>	<b>18952</b>	<b>238626</b>	<b>129824</b>	<b>98962</b>	<b>17554</b>	<b>246341</b>	<b>4109</b>	<b>250449</b>			
(Financial Year-wise)													
2016-17	137388	91093	16882	245362	129244	94285	15728	239256	4294	243551			
2017-18	145234	91163	15538	251935	137835	97498	14464	249797	4608	254405			
2018-19	150976	88041	18189	257205	143247	97273	16910	257430	4931	262361			
2019-20	144716	89515	20155	254386	137206	102155	18820	258181	4760	262940			
2020-21	127504	78008	16262	221773	121005	93223	15073	229301	4212	233513			
<b>2021-22 (P)</b>	<b>138081</b>	<b>83186</b>	<b>20437</b>	<b>241703</b>	<b>130474</b>	<b>100890</b>	<b>18890</b>	<b>250254</b>	<b>4051</b>	<b>254305</b>			

Note: Total may not tally due to rounding off

P. Provisional

Source: Oil Companies

**Figures III.2: Trend of Crude Oil Processed & Petroleum Products**

### III.3: Refinery-wise Crude Oil Processed

(Figures in TMT)

Refinery	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>(a) CPSEs Refineries</b>	<b>137388</b>	<b>145234</b>	<b>150976</b>	<b>144716</b>	<b>127504</b>	<b>138081</b>	<b>57.1</b>
IOCL, Guwahati	864	1024	863	892	849	730	0.3
IOCL, Barauni	6526	5819	6661	6516	5469	5620	2.3
IOCL, Koyali	13994	13811	13505	13075	11603	13474	5.6
IOCL, Haldia	7689	7655	7965	6463	6759	7305	3.0
IOCL, Mathura	9230	9240	9737	8948	8926	9123	3.8
IOCL, Digboi	533	666	676	664	605	708	0.3
IOCL, Panipat	15638	15654	15281	15038	13181	14849	6.1
IOCL, Bongaigaon	2486	2402	2513	2045	2450	2639	1.1
IOCL, Paradip	8230	12730	14616	15778	12508	13217	5.5
Total IOCL	65191	69001	71816	69419	62351	67665	28.0
BPCL, Mumbai	13541	14054	14773	15017	12941	14437	6.0
BPCL, Kochi	11820	14095	16051	16515	13282	15402	6.4
<b>Total BPCL</b>	<b>25362</b>	<b>28149</b>	<b>30823</b>	<b>31532</b>	<b>26222</b>	<b>29838</b>	<b>12.3</b>
HPCL, Mumbai	8510	8641	8671	8065	7374	5558	2.3
HPCL, Vishakhapatnam	9335	9635	9773	9115	9050	8410	3.5
<b>Total HPCL</b>	<b>17846</b>	<b>18276</b>	<b>18444</b>	<b>17180</b>	<b>16425</b>	<b>13968</b>	<b>5.8</b>
CPCL(MRL), Manali	9725	10289	10271	10161	8243	9040	3.7
CPCL(MRL), Narimanam	531	500	423	0	0	0	0.0
<b>Total CPCL</b>	<b>10256</b>	<b>10789</b>	<b>10695</b>	<b>10161</b>	<b>8243</b>	<b>9040</b>	<b>3.7</b>
NRL, Numaligarh	2683	2809	2900	2383	2707	2624	1.1
MRPL, Mangalore	15965	16130	16231	13953	11475	14871	6.2
ONGC, Tatipaka	86	80	66	87	81	75	0.0
<b>(b) JVs Refineries</b>	<b>16882</b>	<b>15538</b>	<b>18189</b>	<b>20155</b>	<b>16262</b>	<b>20437</b>	<b>8.5</b>
BORL, Bina	6360	6708	5716	7913	6190	7410	3.1
HMEL, Bathinda	10521	8830	12473	12242	10072	13027	5.4
<b>(c) Pvt Refineries</b>	<b>91093</b>	<b>91163</b>	<b>88041</b>	<b>89515</b>	<b>78008</b>	<b>83186</b>	<b>34.4</b>
RIL, Jamnagar	32823	33153	31752	33019	34100	34757	14.4
RIL, SEZ-Jamnagar	37351	37317	37393	35876	26841	28264	11.7
<b>Total RIL</b>	<b>70174</b>	<b>70470</b>	<b>69145</b>	<b>68895</b>	<b>60941</b>	<b>63021</b>	<b>26.1</b>
NEL, Vadinar	20919	20693	18896	20620	17067	20164	8.3
<b>Total Crude Oil Processed</b>	<b>245362</b>	<b>251935</b>	<b>257205</b>	<b>254386</b>	<b>221773</b>	<b>241703</b>	<b>100.0</b>

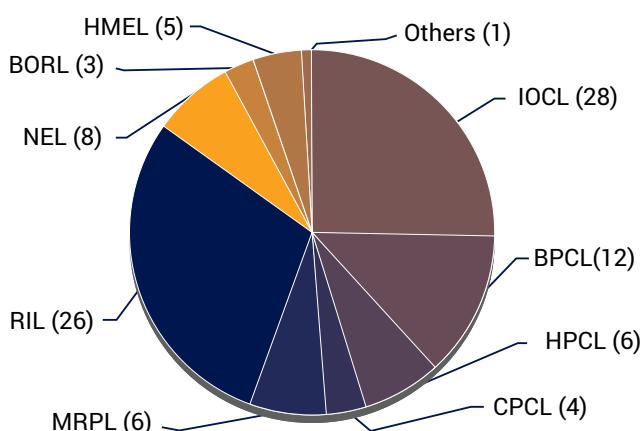
Note: 1. Total may not tally due to rounding off

P. Provisional

2. CPCL CBR refinery is under shutdown due to limitation in meeting required Product specifications with the existing configuration.

Source: Oil Companies

Figure III.3: Company-wise Crude Oil Processed during 2021-22 (%)



### III.4: Refinery-wise Production of Petroleum Products

(Figures in TMT)

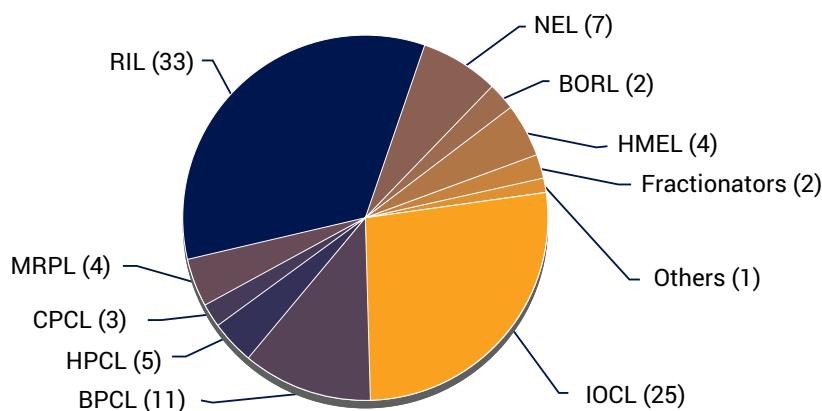
Refinery	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>CPSEs Refineries</b>	<b>129244</b>	<b>137835</b>	<b>143247</b>	<b>137206</b>	<b>121005</b>	<b>130474</b>	<b>51.8</b>
IOCL, Guwahati	1121	1142	1030	1151	1008	905	0.4
IOCL, Barauni	5881	5507	6276	6073	5166	5082	2.2
IOCL, Koyali	13106	13271	12908	12592	11071	12920	4.7
IOCL, Haldia	6982	7167	7450	5925	6206	6689	2.7
IOCL, Mathura	8916	9151	9560	8793	8747	8991	3.7
IOCL, Digboi	542	665	676	665	604	717	0.3
IOCL, Panipat	15833	15889	15777	15366	13651	15208	5.8
IOCL, Bongaigaon	2273	2241	2337	1863	2314	2428	1.0
IOCL, Paradip	6920	11447	13230	14240	11159	11860	4.8
Total IOCL	61573	66480	69244	66668	59925	64799	25.7
BPCL, Mumbai	13013	13638	14193	14514	12519	13862	5.4
BPCL, Kochi	11194	13307	15149	15726	12605	14491	5.4
Total BPCL	24206	26945	29342	30240	25124	28353	10.8
HPCL, Mumbai	7952	8126	8202	7645	6952	5114	3.0
HPCL, Vishakhapatnam	8653	8901	9095	8292	8408	7776	3.6
Total HPCL	16605	17027	17297	15937	15360	12890	6.6
CPCL(MRL), Manali	8963	9331	9254	9329	7653	8371	3.3
CPCL(MRL), Narimanam	532	502	425	1	0	0	0.0
Total CPCL	9496	9833	9679	9330	7653	8371	3.3
NRL, Numaligarh	2653	2823	2882	2300	2741	2583	1.2
MRPL, Mangalore	14629	14650	14741	12651	10124	13407	4.3
ONGC, Tatipaka	82	75	63	80	77	72	0.0
<b>JVs Refineries</b>	<b>15728</b>	<b>14464</b>	<b>16910</b>	<b>18820</b>	<b>15073</b>	<b>18890</b>	<b>6.5</b>
BORL, Bina	5767	6094	5113	7219	5456	6623	2.3
HMEL, Bathinda	9961	8370	11797	11601	9617	12267	4.1
<b>Pvt Refineries</b>	<b>94285</b>	<b>97498</b>	<b>97273</b>	<b>102155</b>	<b>93223</b>	<b>100890</b>	<b>39.9</b>
RIL, Jamnagar	32927	33561	33334	35061	35771	35979	15.3
RIL, SEZ-Jamnagar	41261	44178	45761	47313	40912	45529	17.5
<b>Total RIL</b>	<b>74188</b>	<b>77739</b>	<b>79095</b>	<b>82374</b>	<b>76683</b>	<b>81507</b>	<b>32.8</b>
NEL, Vadinar	20096	19758	18178	19780	16540	19383	7.1
<b>Total Refinery Production</b>	<b>239256</b>	<b>249797</b>	<b>257430</b>	<b>258181</b>	<b>229301</b>	<b>250254</b>	<b>98.2</b>
<b>Fractionators' Production</b>	<b>4294</b>	<b>4608</b>	<b>4931</b>	<b>4760</b>	<b>4212</b>	<b>4051</b>	<b>1.8</b>
<b>Grand Total</b>	<b>243551</b>	<b>254405</b>	<b>262361</b>	<b>262940</b>	<b>233513</b>	<b>254305</b>	<b>100.0</b>

Note: Total may not tally due to rounding off

P. Provisional

Source: Oil Companies

Figure III.4: Company-wise Production of Petroleum Products during 2021-22 (%)



### III.5: Refinery-wise and Product-wise Production of Petroleum Products during 2021-22 (P)

(Figures in TMT)

Refinery/Plant	LPG	Motor Spirit	Naphtha	ATF	SKO	HSD	LDO	Furnace Oil	Bitumen	Lube Oil	Petroleum Coke	Others	Total Production	Fuel & Losses	Total Output	Crude Processed	Total Input
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
IOCL, Guwahati	30	166	41	55	24	504	0	0	0	0	46	38	905	97	994	730	994
IOCL, Barauni	353	1098	239	0	417	2724	0	0	51	0	181	19	5082	543	5654	5620	5654
IOCL, Koyali	434	2118	832	363	146	6146	132	1304	489	0	599	356	12920	1360	14198	13474	14198
IOCL, Haldia	242	634	556	244	494	2862	119	503	357	268	294	118	6689	796	7465	7305	7465
IOCL, Mathura	478	1783	197	352	154	3758	0	982	912	0	0	376	8991	660	9655	9123	9655
IOCL, Digboi	12	132	0	0	0	395	0	104	0	0	40	33	717	84	791	708	791
IOCL, Panipat	745	2000	1598	1198	13	7279	0	172	447	0	827	930	15208	1418	16698	14849	16698
IOCL, Bongaigaon	160	451	111	12	37	1506	29	0	0	0	114	10	2428	334	2806	2639	2806
IOCL, Paradip, Odisha	612	2658	147	513	46	5278	0	0	0	0	1104	1503	11860	1477	13397	13217	13397
BPCL, Mumbai	455	2669	1209	370	14	6600	169	972	573	342	0	489	13852	630	14522	14437	14522
BPCL, Kochi	973	3672	501	313	72	7373	8	14	235	0	762	568	14491	1397	15882	15402	15882
HPCL, Mumbai	251	765	614	229	61	1390	133	698	377	368	0	227	5114	464	5658	5558	5658
HPCL, Vishakhapatnam	310	1593	212	50	95	3384	215	886	569	0	0	460	7776	680	8410	8410	8410
CPCL, Manali	296	1001	789	704	78	3973	0	191	443	195	376	325	8371	909	9368	9040	9368
NRL, Numaligarh	44	591	-5	28	49	1722	0	0	0	0	86	69	2583	180	2782	2624	2782
MRPL, Mangalore	1049	1728	1082	855	48	6396	0	59	131	0	835	1225	13407	1618	14969	14871	14969
ONGC, Tatibaka	0	0	26	0	4	18	0	0	0	0	0	23	72	3	75	75	75
BORL,Bina	257	1241	-12	404	29	4316	0	0	0	0	254	132	6623	787	7410	7410	7410
HMEL,Bathinda	983	2267	72	168	121	5990	0	0	390	0	759	1518	12267	801	13089	13027	13089
RIL,Jamnagar	796	2136	7032	2814	0	7832	0	952	0	0	3404	11014	35979	4009	41129	34757	41129
RIL, SEZ-Jamnagar	1102	7515	3208	850	0	17898	0	194	0	0	3647	11113	45529	4964	50531	28264	50531
NEL,Vadinar	1006	4023	574	740	-3	9782	0	555	136	0	2181	390	19333	1129	20521	20164	20521
<b>Total Refinery</b>	<b>10589</b>	<b>40238</b>	<b>19023</b>	<b>10261</b>	<b>1898</b>	<b>107126</b>	<b>805</b>	<b>7587</b>	<b>5111</b>	<b>1173</b>	<b>15508</b>	<b>30935</b>	<b>250254</b>	<b>24341</b>	<b>276004</b>	<b>241703</b>	<b>276004</b>
<b>Fractionators</b>	<b>1649</b>	<b>0</b>	<b>971</b>	<b>33</b>	<b>18</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1332</b>	<b>4051</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Grand Total</b>	<b>12238</b>	<b>40238</b>	<b>19994</b>	<b>10294</b>	<b>1916</b>	<b>107175</b>	<b>805</b>	<b>7587</b>	<b>5111</b>	<b>1173</b>	<b>15508</b>	<b>32266</b>	<b>254305</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

P: Provisional

- Note: 1. Total may not tally due to rounding off.  
 2. Others include Propylene, Solvents (Hexane, Benzene, Toluene, Xylene and Specialty solvents), Reformate, MTO, Carbon Black Feed Stock, Sulphur etc.  
 3. CPCL-CBR is under shutdown.

Source: Oil Companies

### III.6: Production of Petroleum Products (Calendar Year-wise)

(Figures in TMT)

Products	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
LPG	11285	12094	12751	12768	12231	12184	4.9
Motor Spirit	36421	37567	28422	38604	35383	39398	15.7
Naphtha	19699	20064	20081	19693	19676	20282	8.1
ATF	13929	14211	15506	15457	8403	9719	3.9
Kerosene	6547	4635	4180	3322	2687	1975	0.8
HSD	102718	105975	110272	110849	100869	106072	42.4
LDO	527	592	711	652	651	870	0.3
<b>Total Fuel Oils</b>	<b>10275</b>	<b>9439</b>	<b>9566</b>	<b>8997</b>	<b>7445</b>	<b>8281</b>	<b>3.3</b>
of which							
a) Furnace Oil	10025	9172	8971	8579	7081	7531	3.0
b) LSHS/HHS/RFO	250	267	595	418	364	750	0.3
Lube Oils	1060	994	1008	919	977	1183	0.5
Bitumen	5394	5076	5735	5461	4949	5229	2.1
Petroleum Coke	13952	14483	14998	14860	12655	14568	5.8
Paraffin Wax	81	101	92	94	96	102	0.0
Others	21751	25188	38838	29459	30529	30510	12.2
<b>Total Production of Petroleum Products</b>	<b>243640</b>	<b>250418</b>	<b>262158</b>	<b>261134</b>	<b>236550</b>	<b>250372</b>	<b>100.0</b>
of which							
<b>Refineries</b>	<b>239457</b>	<b>245879</b>	<b>257298</b>	<b>256292</b>	<b>232179</b>	<b>246341</b>	<b>98.4</b>
<b>Fractionators</b>	<b>4183</b>	<b>4539</b>	<b>4860</b>	<b>4843</b>	<b>4371</b>	<b>4109</b>	<b>1.6</b>

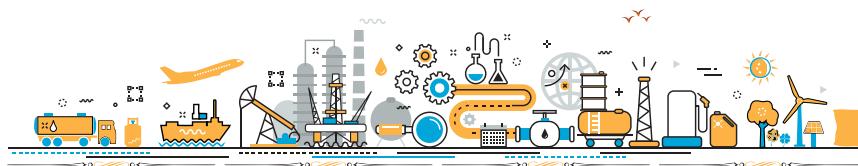
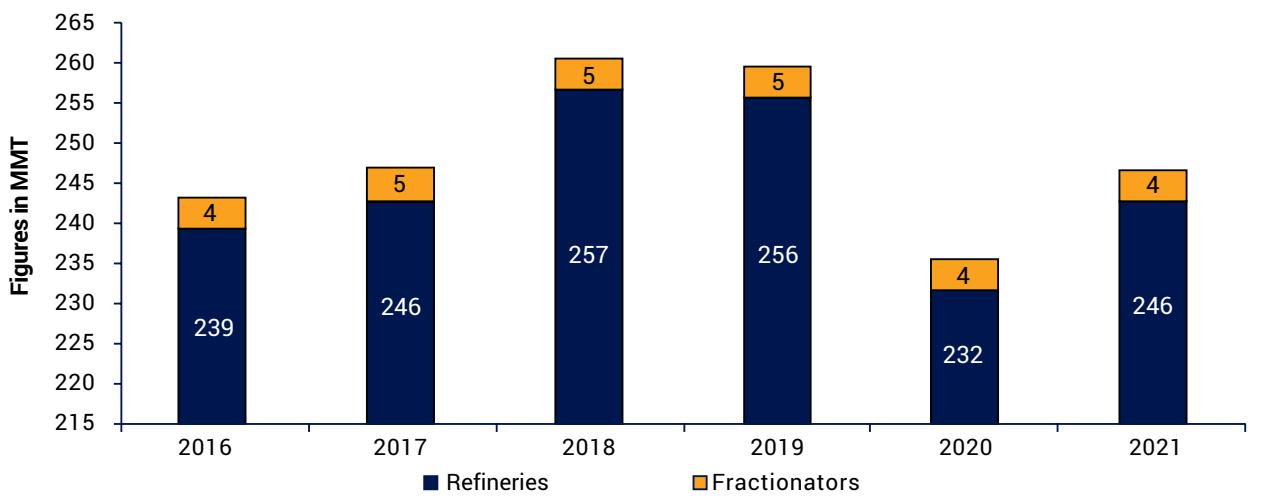
Note: 1. Total may not tally due to rounding off.

P. Provisional

2. Others include Propylene, Solvents (Hexane, Benzene, Toluene, Xylene and Specialty solvents), Reformate, MTO, Carbon Black Feed Stock, Sulphur etc.

Source: Oil Companies

Figure III.5: Production of Petroleum Products (in MMT)



### III.7: Production of Petroleum Products (Financial Year-wise)

(Figures in TMT)

Products	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
LPG	11326	12380	12786	12823	12072	12238	4.8
Motor Spirit	36593	37784	38039	38616	35779	40238	15.8
Naphtha	19946	20006	19786	20679	19403	19994	7.9
ATF	13831	14594	15479	15238	7092	10294	4.0
Kerosene	6041	4408	4072	3211	2393	1916	0.8
HSD	102484	107904	110535	111221	100441	107175	42.1
LDO	629	562	702	620	729	805	0.3
<b>Total Fuel Oils</b>	<b>9962</b>	<b>9486</b>	<b>10032</b>	<b>8609</b>	<b>7242</b>	<b>8327</b>	<b>3.3</b>
of which							
a) Furnace Oil	9694	9019	9598	8214	6882	7587	3.0
b) LSHS/HHS/RFO	268	468	434	395	360	741	0.3
Lube Oils	1029	1036	949	932	1069	1173	0.5
Bitumen	5185	5277	5803	5244	5245	5111	2.0
Petroleum Coke	13936	14754	14676	15528	12655	15508	6.1
Paraffin Wax	85	104	90	96	97	101	0.0
Others	22504	26111	29413	30124	29296	31424	12.4
<b>Total Production of Petroleum Products</b>	<b>243551</b>	<b>254405</b>	<b>262361</b>	<b>262940</b>	<b>233513</b>	<b>254305</b>	<b>100.0</b>
of which							
<b>Refineries</b>	<b>239256</b>	<b>249797</b>	<b>257430</b>	<b>258181</b>	<b>229301</b>	<b>250254</b>	<b>98.4</b>
<b>Fractionators</b>	<b>4294</b>	<b>4608</b>	<b>4931</b>	<b>4760</b>	<b>4212</b>	<b>4051</b>	<b>1.6</b>

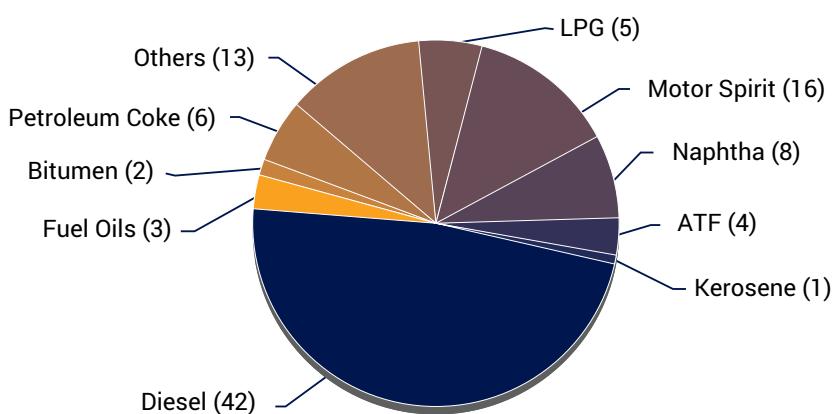
Note: 1. Total may not tally due to rounding off.

P. Provisional

2. Others include Propylene, Solvents (Hexane, Benzene, Toluene, Xylene and Specialty solvents), Reformate, MTO, Carbon Black Feed Stock, Sulphur etc.

Source: Oil Companies

Figure III.6: Distribution of Petroleum Products Produced during 2021-22 (%)



CHAPTER I

CHAPTER II

CHAPTER III

CHAPTER IV

CHAPTER V

CHAPTER VI

CHAPTER VII

CHAPTER VIII

CHAPTER IX

CHAPTER X

CHAPTER XI

CHAPTER XII

APPENDIX

### III.8: Gross Refining Margins (GRM) of Oil Refineries

(Figures in \$/bbl)]

Refinery	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>PSUs Refineries</b>						
IOCL, Guwahati**	22.14	21.88	16.35	14.22	31.87	35.95
IOCL, Barauni	6.52	6.60	3.86	-1.24	3.98	11.80
IOCL, Koyali	7.55	9.44	4.87	1.90	2.83	7.20
IOCL, Haldia	6.80	6.86	5.36	-2.44	4.10	8.10
IOCL, Mathura	7.01	7.09	4.65	-1.03	5.03	10.30
IOCL, Digboi**	24.49	24.86	22.74	17.52	28.62	34.96
IOCL, Panipat	7.95	7.74	4.66	-0.25	3.23	8.20
IOCL, Bongaigaon**	20.15	20.62	16.94	10.49	28.89	33.51
IOCL, Paradip	4.22	7.02	4.46	-1.80	5.35	9.30
Total IOCL	7.77	8.49	5.41	0.08	5.64	10.30
BPCL, Mumbai	5.36	7.26	4.92	2.88	3.76	8.70
BPCL, Kochi	5.16	6.44	4.27	2.17	4.36	9.50
Total BPCL	5.26	6.85	4.58	2.51	4.06	9.10
HPCL, Mumbai	6.95	8.35	5.79	3.63	4.10	7.60
HPCL, Vishakhapatnam	5.51	6.55	4.31	-1.30	3.67	6.92
Total HPCL	6.20	7.40	5.01	1.02	3.86	7.19
CPCL	6.05	6.42	3.70	-1.18	7.14	7.60
NRL, Numaligarh**	28.56	31.92	28.11	24.33	37.23	43.46
MRPL, Mangalore	7.75	7.54	4.06	-0.23	3.71	8.50
<b>Private Refineries</b>						
RIL	11.00	11.60	9.20	8.90	*	*
NEL, Vadinar	9.14	8.95	6.97	5.88	*	*
<b>Joint Venture Refineries</b>						
BORL, Bina	11.80	11.70	9.80	5.60	6.20	11.00
HMEL, Bhatinda	13.09	12.07	9.42	*	*	*

\*: Not available

P. Provisional

\*\*: GRM of North Eastern refineries are including excise duty benefit

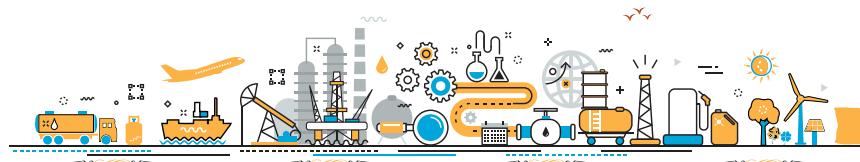
Source: Centre for High Technology

### III.9: GRM of NE refineries without Excise Duty benefit

(Figures in \$/bbl)

Refinery	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
IOCL, Guwahati	1.12	3.70	0.63	(3.34)	2.13	11.43
IOCL, Digboi	7.73	8.27	8.84	3.35	3.71	10.78
IOCL, Bongaigaon	6.03	6.22	4.21	(1.84)	3.15	9.33
NRL, Numaligarh	8.50	11.43	11.8	7.99	4.09	14.33

Source: Centre for High Technology



### III.10: Specific Energy Consumption (MBN number) of Oil Refineries

Refinery	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>PSUs Refineries</b>						
IOCL, Guwahati	113.8	108.0	112.3	121.2	123.7	122.6
IOCL, Barauni	80.7	77.7	77.9	75.9	78.1	76.7
IOCL, Koyali	75.2	72.4	75.3	77.4	82.6	79.5
IOCL, Haldia	83.0	80.8	76.6	88.3	89.3	88.5
IOCL, Mathura	72.2	68.3	63.9	65.8	63.1	62.2
IOCL, Digboi	114.3	105.5	101.8	101.7	98.1	99.6
IOCL, Panipat	64.9	63.2	64.1	64.5	68.0	63.9
IOCL, Bongaigaon	90.2	91.7	88.6	96.8	108.5	111.5
IOCL, Paradip	117.8	72.8	66.8	64.1	69.0	68.3
<b>Total IOCL</b>	<b>81.8</b>	<b>72.6</b>	<b>71.0</b>	<b>71.8</b>	<b>75.5</b>	<b>73.9</b>
BPCL, Mumbai	70.6	66.7	64.7	63.0	64.4	64.4
BPCL, Kochi	85.8	79.2	71.6	68.2	71.7	66.9
<b>Total BPCL</b>	<b>77.1</b>	<b>73.2</b>	<b>68.8</b>	<b>66.1</b>	<b>68.5</b>	<b>65.9</b>
HPCL, Mumbai	85.7	84.4	82.8	84.8	98.2	106.7
HPCL, Vishakhapatnam	78.1	77.3	77.3	84.4	81.2	85.0
<b>Total HPCL</b>	<b>81.9</b>	<b>80.8</b>	<b>80.0</b>	<b>84.6</b>	<b>89.1</b>	<b>93.7</b>
CPCL(MRL), Manali	92.5	88.6	83.0	81.5	86.7	82.6
CPCL(MRL), Narimanam	117.8	123.7	118.1	-	-	-
<b>Total CPCL</b>	<b>93.2</b>	<b>89.4</b>	<b>83.7</b>	<b>81.5</b>	<b>86.7</b>	<b>82.6</b>
NRL, Numaligarh	72.3	64.7	65.9	64.8	64.4	63.5
MRPL, Mangalore	79.6	76.7	74.2	75.3	81.4	73.5
<b>Private Refineries</b>						
RIL, Jamnagar	51.3	50.0	49.0	50.4	48.1	*
RIL, SEZ-Jamnagar	49.0	48.6	48.2	49.1	47.2	*
<b>Total RIL</b>	<b>50.0</b>	<b>49.2</b>	<b>48.6</b>	<b>49.7</b>	<b>47.6</b>	
NEL, Vadinar	58.6	58.9	61.1	59.7	65.2	*
<b>Joint Venture Refineries</b>						
BORL, Bina	68.4	66.9	69.2	64.8	74.1	70.4
HMEL, Bathinda	62.5	61.1	59.2	59.9	65.7	*
<b>Grand Total</b>	<b>65.9</b>	<b>63.3</b>	<b>62.6</b>	<b>63.0</b>	<b>64.9</b>	

\*: Not Available

P: Provisional

Source: Centre for High Technology



### III.11: Distillate Yield of PSU Refineries

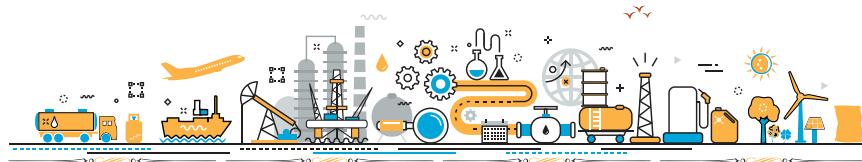
(Distillate %)

Refinery	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
IOCL, Guwahati	83.50	82.70	81.00	83.50	82.11	81.89
IOCL, Barauni	85.30	89.00	87.90	86.90	87.15	85.59
IOCL, Koyali	81.00	82.50	81.00	79.50	72.08	73.24
IOCL, Haldia	66.70	66.90	69.90	69.00	72.24	72.34
IOCL, Mathura	73.60	75.40	76.10	75.60	72.30	71.66
IOCL, Digboi	75.30	77.90	75.80	72.50	67.89	72.32
IOCL, Panipat	84.10	84.90	82.80	84.80	80.20	79.55
IOCL, Bongaigaon	83.80	84.30	84.80	80.80	84.81	81.47
IOCL, Paradip	75.30	79.40	80.80	80.70	79.18	78.69
<b>Total IOCL</b>	<b>78.81</b>	<b>80.36</b>	<b>80.36</b>	<b>80.20</b>	<b>77.18</b>	<b>76.81</b>
BPCL, Mumbai	86.15	84.30	82.20	84.90	83.66	82.90
BPCL, Kochi	85.17	83.90	82.50	84.20	83.77	83.50
<b>Total BPCL</b>	<b>85.69</b>	<b>84.10</b>	<b>82.36</b>	<b>84.50</b>	<b>83.72</b>	<b>83.20</b>
HPCL, Mumbai	77.60	77.40	77.60	77.00	76.23	69.10
HPCL, Vishakhapatnam	74.00	74.50	74.50	72.10	74.38	70.50
<b>Total HPCL</b>	<b>75.70</b>	<b>75.90</b>	<b>76.00</b>	<b>74.40</b>	<b>75.21</b>	<b>69.80</b>
CPCL(MRL), Manali	71.60	72.30	75.30	77.60	78.41	77.20
CPCL(MRL), Narimanam	78.20	79.10	77.30	-	-	-
<b>Total CPCL</b>	<b>71.92</b>	<b>72.62</b>	<b>75.38</b>	<b>77.60</b>	<b>78.41</b>	<b>77.20</b>
NRL, Numaligarh	90.52	86.68	87.10	83.00	86.36	85.70
MRPL, Mangalore	77.30	76.50	76.80	76.70	78.09	78.60
<b>Grand Total (PSUs)</b>	<b>79.30</b>	<b>79.70</b>	<b>79.70</b>	<b>80.00</b>	<b>78.63</b>	<b>78.10</b>

Since FY 2020-21 Distillate reported is CHT Distillate

P. Provisional

Source: Centre for High Technology



### III.12: Status of LNG Terminals in India

Terminal	Promoters	Capacity (MMT-PA) as on 31.03.2022	Capacity Utilization (%)					
			2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
<b>Operational LNG Terminal</b>								
Dahej (Gujarat)	Petronet LNG Ltd. (PLL)	17.50	105.31	105.30	106.50	102.08	93.69	87.50
Kochi (Kerala)		5.00	5.46	12.20	9.30	16.59	18.03	20.72
Hazira (Gujarat)	Hazira LNG Pvt. Ltd. (HLPL)	5.00	69.63	58.90	79.90	94.59	76.80	47.20
Dabhol (Maharashtra)1	Ratnagiri Gas and Power Pvt. Ltd. (RGPL- JV of GAIL & NTPC)	2.9*	57.07	64.90	72.10	97.40	75.44	85.15
Ennore (Tamilnadu)	IndianOil LNG Pvt. Ltd. (IOLPL)	5.00	-	-	-	9.00	13.00	14.00
Mundra (Gujarat)	GSPC LNG Limited (GLL)	5.00	-	-	-	29.63	34.80	19.30
<b>Planned/Under-Construction LNG Terminals</b>								
Dhamra (Odisha)	Adani LNG Pvt Ltd	5.00	-	-	-	-	-	-
Dhabol Expansion2	GAIL(KLPL)	3.30	-	-	-	-	-	-
Jaigarh (Maharashtra)	H-Energy	4.00	-	-	-	-	-	-
Jafrabad (Gujarat)	Swan Energy	5.00	-	-	-	-	-	-
Chhara (Guajrat)	HSEPL	5.00	-	-	-	-	-	-

Note: 1. To increase to 5 MMTPA with breakwater. Only HP stream of capacity of 2.9 MMTPA is commissioned.

P:Provisional

2. Additional Capacity to be available after construction of breakwater

Source: CPSEs/Gas Project Division, MoPNG

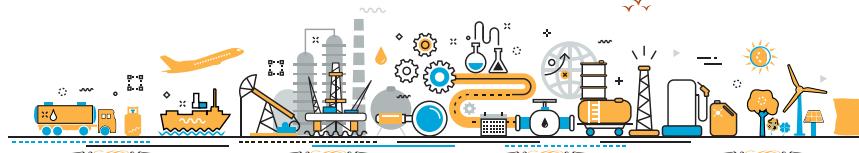


### III.13: Existing Major Crude Oil Pipelines in India- As on 31.03.2022

Type of Pipeline / Owner/Name of Pipeline	Entity	Length (KM)	Capacity (MMT)	Throughput (MMT)		Capacity Utilisation in 2021-22 (%)
				2020-21	2021-22	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Salaya Mathura Pipeline	IOCL	2646.00	25.00	23.14	25.89	103.57
Mundra Panipat Pipeline		1194.00	8.40	6.09	7.03	83.71
Paradip Haldia Barauni Pipeline		1355.00	15.20	14.90	15.61	102.69
Salaya Mathura Pipeline	ONGC	14.00	-	-	-	-
Paradip Haldia Barauni Pipeline		92.00	-	-	-	-
CTF Kalol to CTF Nawagam - New		62.50	3.14	1.07	1.08	34.33
Nawagam-Koyali (18" New)		79.70	5.40	3.49	3.63	67.28
Nawagam-Koyali (14" Old)		78.40	3.30	0.00	0.00	0.00
Mehsana-Nawagam trunk line - New		77.00	2.27	1.97	2.08	91.83
CTF, Ankleshwar to Koyali pipeline		94.77	2.20	0.76	0.65	29.33
CTF, Ankleshwar to CPF, Gandhar		44.30	0.39	0.00	0.00	0.00
CPF, Gandhar to Saraswani 'T' point		56.70	1.81	0.62	0.52	28.98
Akholauni- Koyali oil pipe line		65.50	0.48	0.27	0.35	73.39
Lakwa-Moran oil line (New)		14.50	1.50	0.44	0.50	33.40
Lakwa-Moran oil line (Old)		17.50	1.50	0.00	0.00	0.00
Geleki-Jorhat oil line (old)		48.50	1.50	0.00	0.00	0.00
Geleki-Jorhat oil line (new)		48.01	1.50	0.30	0.27	18.20
Borholla- Jorhat (old)		42.80	0.60	0.00	0.00	0.00
Borholla- Jorhat (New)		43.40	0.60	0.23	0.22	37.33
NRM (Narimanam) to CPCL		4.90	0.74	0.40	0.36	48.38
KSP-WGGS to TPK Refinery		13.50	0.08	0.07	0.06	73.49
GMAA EPT		3.50	0.09	0.02	0.03	33.33
Mumbai High - Uran Trunk Pipeline		204.00	15.63	7.84	6.41	40.97
Heera-Uran Trunk Pipeline		81.00	11.50	3.58	4.38	38.05
Bombay-Uran Trunk 30" Pipeline		203.00	18.00	0.07	0.02	0.12
Duliajan-Digboi-Barauni-Bongaigaon Pipeline	OIL	1192.60	8.95	6.02	6.16	68.78
Mundra - Bhatinda Pipeline	HTEL	1017.00	11.25	10.00	13.07	116.17
Vadinar - Bina Pipeline	BORL	937.00	7.80	6.22	7.42	95.14
Mangala- Bhogat Pipeline	CAIRN	660.00	8.71	5.93	5.91	67.86
Bhogat- Marine		28.00	2.00	1.25	1.41	70.65
<b>Total Crude Oil Pipeline</b>		<b>10419.08</b>	<b>159.54</b>	<b>94.66</b>	<b>103.06</b>	<b>64.60</b>

Source: Oil &amp; Gas Companies

P.Provisional



### III.14: Authorized Major Gas Pipelines in India As on 31.03.2022

Entity	Operational		Partially Commissioned Length (KM)	Total Operational Length (KM)	Under Construction		Total Length (KM)
	Length (KM)	Capacity (in MMSCMD)			Length (KM)	Capacity (in MMSCMD)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GAIL	9602	167.2	4519.00	14121	5404	-	19525
GSPL	2695	43	-	2695	100	3.0	2795
PIL	1459	85	-	1459	-	-	1459
IOCL	143	20	166.00	309	1265	-	1574
AGCL	107	2.4	-	107	-	-	107
RGPL	304	3.5	-	304	-	-	304
GGGL	73	5.1	-	73	-	-	73
DFPCL	42	0.7	-	42	-	-	42
ONGC	24	6	-	24	-	-	24
GIGL	-	-	1131.00	1131	1201	-	2332
GITL	-	-	365.00	365	1666	-	2031
IGGL	-	-	-	-	1656	4.8	1656
Others	-	-	-	-	1894	144.3	1894
<b>Total</b>	<b>14449</b>	<b>332.9</b>	<b>6180</b>	<b>20629</b>	<b>13186</b>	<b>152.0</b>	<b>33815</b>

- Note:** 1. The sum of operational and under construction length of natural gas pipeline may be more than the total authorised length, as the entities are allowed to lay additional pipeline within tariff zone in the line with the provisions of the NGPL Authorisation regulations.  
 2. The above operational and under construction length of pipelines includes the available length of Sub-Transmission Pipelines owned by the CGD entities.

P:Provisional \*: Others includes APGDC, HEPL, IMC, Consortium of h Energy

Source: PNGRB & Gas Companies



### III.15: Existing Major LPG & Petroleum Products Pipelines in India - As on 31.03.2022

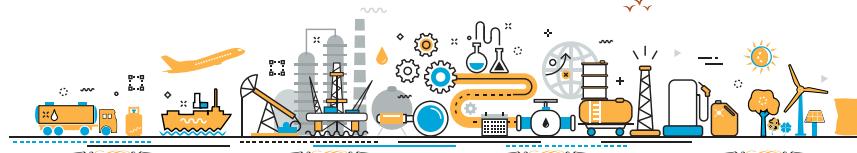
Type of Pipeline / Owner/Name of Pipeline	Entity	Length (KM)	Capacity (MMT)	Throughput (MMT)		Capacity Utilisation in 2021-22 (%)
				2020-21	2021-22	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Total LPG Pipeline</b>		<b>3730</b>	<b>9.54</b>	<b>8.52</b>	<b>8.77</b>	<b>91.91</b>
Jamnagar-Loni Pipeline	GAIL	1414	2.50	2.85	2.88	115.04
Vizag-Secunderabad Pipeline	GAIL	610	1.33	1.31	1.32	99.47
Panipat Jalandhar Pipeline	IOCL	280	0.70	0.59	0.67	96.00
Paradip Haldia Durgapur Pipeline	IOCL	873	1.27	1.13	1.21	94.88
Uran LPG Pipeline	BPCL	28	0.80	0.68	0.62	77.63
Mangalore-Hassan-Mysore-Solur Pipeline	HPCL	356	1.94	1.08	1.16	59.64
Uran-Chakan-Shikrapur LPG Pipeline	HPCL	169	1.00	0.88	0.91	91.40
<b>Total Product Pipelines (Excl. LPG Pipelines)</b>		<b>15303</b>	<b>106.16</b>	<b>66.40</b>	<b>72.07</b>	<b>67.89</b>
Koyali Ahmedabad Pipeline	IOCL	79	1.10	0.45	0.68	61.82
Koyali Sanganer Pipeline	IOCL	1644	5.00	4.04	4.52	90.36
Koyali Ratlam Pipeline	IOCL	265	2.00	0.78	0.69	34.55
Koyali Dahej Pipeline	IOCL	197	2.60	0.63	0.82	31.38
Barauni Kanpur Pipeline	IOCL	1227	3.50	2.96	3.08	87.86
Haldia Mourigram Rajbandh Pipeline	IOCL	277	1.35	1.53	1.76	130.44
Haldia Barauni Pipeline	IOCL	526	1.25	1.47	1.44	114.88
Guwahati Siliguri Pipeline	IOCL	435	1.40	1.68	1.83	130.36
Panipat Bhatinda Pipeline	IOCL	219	3.00	1.30	1.48	49.23
Panipat Rewari Pipeline	IOCL	155	2.10	1.47	1.48	70.62
Panipat Ambala Jalandhar Pipeline	IOCL	495	3.50	2.60	2.87	82.03
Panipat Delhi Pipeline	IOCL	189	3.00	0.76	0.94	31.20
Panipat Bijwasan ATF Pipeline	IOCL	111				
Mathura Delhi Pipeline	IOCL	147	3.70	1.76	2.00	53.97
Mathura Tundla Pipeline	IOCL	56	1.20	0.43	0.48	40.00
Mathura Bharatpur Pipeline	IOCL	21		0.16	0.15	#DIV/0!
Chennai Trichy Madurai Pipeline	IOCL	683	2.30	2.46	2.51	108.91
Chennai Bangalore Pipeline	IOCL	290	2.45	1.76	1.88	76.90
Chennai Meenambakkam ATF Pipeline	IOCL	95	0.18	0.12	0.15	85.00
Devangonhi Devanhalli Pipeline	IOCL	36	0.66	0.30	0.37	55.91
Paradip Raipur Ranchi Pipeline	IOCL	1073	5.00	3.46	3.63	72.64
Kolkata ATF Pipeline	IOCL	27	0.20	0.06	0.10	48.50
Mumbai-Manmad-Bijwasan pipeline	BPCL	1600	6.00	6.78	7.07	117.85
Bina-Kota pipeline (BKPL)	BPCL	259	4.40	3.36	3.83	86.95
ATF P/L Mumbai Refinery (MR)-Santacruz	BPCL	15	1.44	0.28	0.35	24.44
ATF P/L Kochi Refinery (KR)-Kochi Airport	BPCL	34	0.60	0.17	0.24	40.67
Kota - Jobner branch pipeline1	BPCL	211	1.70	-	-	-
Mumbai Refinery- Wadilube Pipeline	BPCL	12	1.30	0.29	0.32	24.54
Cochin-Coimbatore-Karur (CCK) pipeline	BPCL	293	3.30	3.29	3.64	110.33
Bina-Panki Multiproduct Pipeline	BPCL	356	3.50	0.00	0.47	13.29
Mumbai-Pune-Solapur pipeline	HPCL	508	4.30	3.14	2.76	64.26
Visakh-Vijaywada-Secunderabad pipeline	HPCL	572	7.70	4.56	4.69	60.87
Mundra-Delhi pipeline2	HPCL	1054	6.90	3.62	2.53	36.72
Branchline: Awa-Salawas pipeline2	HPCL	93	-	-	-	-
Branchline: Palanpur-Vadodara Pipeline2	HPCL	235	-	-	-	-
Branchline: Rewari- Kanpur Pipeline2	HPCL	443	-	-	-	-
Branchline Bahadurgarh-Tikrikan pipeline2	HPCL	14	-	-	-	-
Branchline: Barwala - Hisar Pipeline2	HPCL	9	-	-	-	-
Ramanmandi-Bahadurgarh	HPCL	243	7.11	4.93	6.72	94.47
Ramanmandi-Bathinda pipeline	HPCL	30	2.10	1.03	1.13	53.67
Mumbai - Vashi Black Oil Pipeline	HPCL	21	1.50	0.33	0.52	34.39
Mumbai Refinery to Mumbai Airport ATF Pipeline	HPCL	20	0.50	0.18	0.23	45.00
Trombay to Wadibundar Lube Oil Pipeline	HPCL	17	1.00	0.43	0.39	38.65
Petronet Mangalore-Hassan-Bangalore Pipeline	HPCL	363	5.60	2.14	2.84	50.73
OIL: Numaligarh - Siliguri Pipeline	OIL	654	1.72	1.70	1.52	88.09
<b>Total Petroleum Products Pipeline</b>		<b>19033</b>	<b>115.70</b>	<b>74.93</b>	<b>80.84</b>	<b>69.87</b>

Note: 1. Kota-Jobner Pipeline is a branch pipeline of Mumbai Manmad Bijwasan pipeline with annual capacity of 1.7 MMTPA. Throughput of this pipeline is included in MMBPL & BKPL pipelines.

2. ASPL, PVPL and RKPL are branch lines of MDPL. BTPL is a Spurline of RBPL. MDPL End-Section Rewari-Bahadurgarh can operate in reverse direction. Thus RKPL is fed from MDPL and RBPL Mainlines. Capacities/ Throughputs of Branch/ Spurline form part of their respective Mainlines.

Source: Oil & Gas Companies

P. Provisional

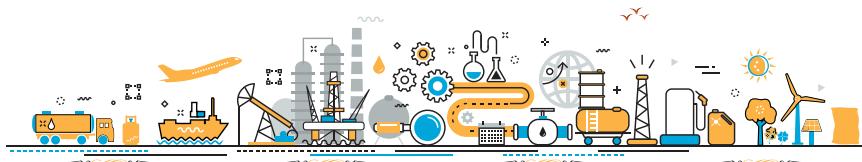


### III.16: Tonnage of Indian Tankers Fleet (as on 31<sup>st</sup> March)

	2017 (1)	2018 (2)	2019 (3)	2020 (4)	2021 (5)	2022 (P) (6)	
<b>A. Coastal Trade (Oil Tankers)</b>							
<b>1. Product Carriers</b>							
No. of tankers/Ships	15	16	16		17	18	20
Dead Weight Tonnage (in TMT)	46	47	46		48	94	50
Gross Registered Tonnage (in TMT)	43	44	44		46	74	49
<b>2. Crude Oil Carriers</b>							
No. of tankers/Ships	4	4	4		5	4	4
Dead Weight Tonnage (in TMT)	403	403	403		477	432	432
Gross Registered Tonnage (in TMT)	219	219	219		263	234	234
<b>3. Offshore Supply Vessels</b>							
No. of tankers/Ships	106	101	101		101	104	110
Dead Weight Tonnage (in TMT)	119	114	117		121	126	141
Gross Registered Tonnage (in TMT)	138	133	137		137	143	154
<b>4. Specialized vessels for offshore</b>							
No. of tankers/Ships	36	37	37		38	38	37
Dead Weight Tonnage (in TMT)	49	49	49		48	48	46
Gross Registered Tonnage (in TMT)	87	87	87		86	86	83
<b>Total (1+2+3+4)</b>							
No. of tankers/Ships	161	158	158		161	164	171
Dead Weight Tonnage (in TMT)	617	613	615		694	700	669
Gross Registered Tonnage (in TMT)	488	484	488		531	536	520
<b>B. Overseas Trade (Oil Tankers)</b>							
<b>5. Ore Oil Bulk Carriers</b>							
No. of tankers/Ships	1	1	1		1	0	0
Dead Weight Tonnage (in TMT)	46	46	46		46	0	0
Gross Registered Tonnage (in TMT)	28	28	28		28	0	0
<b>6. Crude Oil Carriers</b>							
No. of tankers/Ships	65	71	69		70	67	65
Dead Weight Tonnage (in TMT)	6231	7246	7005		7052	6704	6469
Gross Registered Tonnage (in TMT)	3459	3989	3857		3889	3708	3582
<b>7. Product Carriers</b>							
No. of tankers/Ships	53	56	63		66	68	69
Dead Weight Tonnage (in TMT)	3555	3660	3939		3974	3919	4126
Gross Registered Tonnage (in TMT)	2088	2150	2326		2345	2322	2447
<b>8. LPG Carriers</b>							
No. of tankers/Ships	14	19	19		17	16	23
Dead Weight Tonnage (in TMT)	451	696	808		736	723	1049
Gross Registered Tonnage (in TMT)	431	640	683		622	607	886
<b>Total Overseas (5+6+7+8)</b>							
No. of tankers/Ships	133	147	152		154	151	157
Dead Weight Tonnage (in TMT)	10283	11648	11798		11808	11346	11644
Gross Registered Tonnage (in TMT)	6006	6807	6894		6885	6636	6915
<b>Total Oil Tankers (A+B)</b>							
No. of tankers/Ships	294	305	310		315	315	328
Dead Weight Tonnage (in TMT)	10899	12260	12413		12502	12046	12313
Gross Registered Tonnage (in TMT)	6493	7292	7382		7416	7172	7435

Note: Total may not tally due to rounding off

Source: Directorate General of Shipping, Mumbai.



**III.17: Share of Petroleum Products in the Total Traffic Handled at Major Ports**

(in Million Tonnes)

Name of the port	Year	Total Traffic	POL Traffic	POL as %age of total traffic at the port
(1)	(2)	(3)	(4)	(5)
Kolkata/Haldia	2019-20	63.98	10.33	16.15
	2020-21	61.37	9.36	15.25
	2021-22	58.17	10.40	17.88
Mumbai	2019-20	60.69	38.14	62.84
	2020-21	53.32	34.28	64.29
	2021-22	59.89	36.85	61.53
Chennai	2019-20	46.76	13.42	28.70
	2020-21	43.55	10.23	23.49
	2021-22	48.56	11.85	24.40
Cochin	2019-20	34.04	23.24	68.27
	2020-21	31.50	19.52	61.97
	2021-22	34.55	22.09	63.94
Deendayal (Kandla)	2019-20	122.61	63.89	52.11
	2020-21	117.57	53.26	45.30
	2021-22	127.10	58.85	46.30
Visakhapatnam	2019-20	72.72	18.91	26.00
	2020-21	69.84	16.02	22.94
	2021-22	69.03	14.25	20.64
Mormugao	2019-20	16.02	0.66	4.12
	2020-21	21.99	0.41	1.86
	2021-22	18.46	0.50	2.71
J.N.P.T.	2019-20	68.45	3.87	5.65
	2020-21	64.81	3.60	5.55
	2021-22	76.00	3.16	4.16
Paradip	2019-20	112.69	37.33	33.13
	2020-21	114.55	33.12	28.91
	2021-22	116.13	35.12	30.24
Tuticorin (V.O. Chidambaranar)	2019-20	36.08	0.53	1.47
	2020-21	31.79	0.45	1.42
	2021-22	34.12	0.35	1.03
New Mangalore	2019-20	39.14	22.61	57.77
	2020-21	36.50	21.89	59.97
	2021-22	39.30	23.74	60.41
Kamarajar (Ennore)	2019-20	31.75	5.07	15.97
	2020-21	25.89	4.62	17.84
	2021-22	38.74	4.93	12.73
<b>Grand Total</b>	<b>2019-20</b>	<b>704.93</b>	<b>238.00</b>	<b>33.76</b>
	<b>2020-21</b>	<b>672.68</b>	<b>206.76</b>	<b>30.74</b>
	<b>2021-22</b>	<b>720.05</b>	<b>222.09</b>	<b>30.84</b>

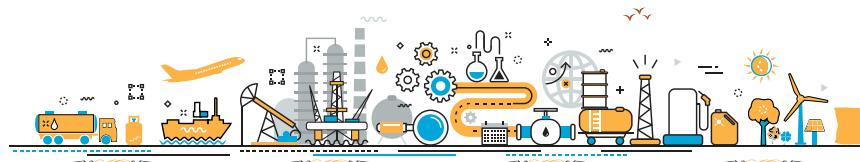
Source : Ministry of Shipping.

**III.18: Movement of POL Traffic on Railways**

Year	Tonnes Originating (TMT)	Earnings ( in ₹ crore )	Average Lead (Kms)	Earnings (Paisa/Tonnes/Kms)	Average Freight (₹/Tonne)
(1)	(2)	(3)	(4)	(5)	(6)
2014-15	41095	5516	662	203	1342
2015-16	43238	5927	678	202	1371
2016-17	42422	5686	672	199	1340
2017-18	43108	5668	685	192	1315
2018-19	43010	5632	682	192	1309
2019-20	44680	5928	689	193	1327
2020-21	42477	5727	706	191	1348
2021-22 (P)	45050	6097	657	206	1353

Source : Ministry of Railways

P. Provisional



### III.19: State-wise PDS Kerosene Allocated and Quantity Uplifted

(Figures in Kilolitre)

State	2019-20		2020-21		2021-22	
	Allocation	Sales	Allocation	Sales	Allocation	Sales
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andaman & Nicobar Islands*	1944	1458	0	0	0	0
Andhra Pradesh*	0	0	0	0	0	0
Arunachal Pradesh	6444	5239	4752	3699	3312	2892
Assam	181920	176867	155568	153143	124464	117299
Bihar	263028	243927	212736	212355	170208	169771
Chandigarh*	0	0	0	0	0	0
Chhattisgarh	82404	69140	58272	56095	46608	43924
Dadra & Nagar Haveli and Daman & Diu*	0	0	0	0	0	0
<b>Delhi*</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Goa	816	648	384	384	288	288
Gujarat	138832	120837	84000	83059	55800	53709
Haryana*	0	0	0	0	0	0
Himachal Pradesh	11436	10791	9792	6756	6864	2328
Jammu and Kashmir*	44988	38417	44988	36523	38256	29222
Ladakh*	3528	3428	3528	3518	3528	3346
Jharkhand	135216	107170	90000	83196	72000	68900
Karnataka	84324	66395	42480	38748	29760	17796
Kerala	41700	41700	37056	37056	25920	25920
Lakshadweep	768	624	768	912	576	576
Madhya Pradesh	260736	238544	213408	187132	160032	116757
Maharashtra	106528	52938	46528	21558	27936	15552
Manipur	13260	12656	11088	11252	9984	9984
Meghalaya	19260	18936	18864	17892	16992	15960
Mizoram	3612	3600	3216	3192	2880	2688
Nagaland	9300	8928	8592	8439	7728	7719
Odisha	210568	208283	194304	190291	155424	150313
Puducherry*	0	0	0	0	0	0
Punjab*	0	0	0	0	0	0
Rajasthan*	40000	16204	14150	936	0	0
Sikkim	2556	2535	2256	2109	2016	1971
Tamil Nadu	145320	145319	129168	129167	90432	90431
Telangana	56592	29800	16032	2880	4992	420
Tripura	26352	26166	25152	25089	22656	22490
Uttar Pradesh*	517888	449490	181702	26526	0	0
Uttrakhand*	7992	498	2208	374	672	0
West Bengal	704016	692683	704016	696512	704016	689651
<b>All India</b>	<b>3121328</b>	<b>2793217</b>	<b>2315008</b>	<b>2038790</b>	<b>1783344</b>	<b>1659906</b>

Note: \*: Zero represent PDS kerosene free State/UTs.

Source: Distribution Section, MoPNG



### III.20: Marketing Infrastructure of PNG Industry in India

	Period	Unit	IOCL	HPCL	BPCL	RIL	NEL	SHELL	Others	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Retail Outlets	31.03.2019	Nos.	27702	15440	14805	1400	5128	145	5	64625
	31.03.2020	Nos.	29085	16476	16234	1400	5702	189	7	69093
	31.03.2021	Nos.	32062	18634	18637	1420	6059	18	274	77104
	31.03.2022	Nos.	34559	20025	20063	1450	6568	32	330	83027
		%	41.6	24.1	24.2	1.7	7.9	0.0	0.4	100
LPG Active Domestic Consumers	31.03.2019	Nos. in Lakh	1240	732	681	-	-	-	-	2654
	31.03.2020	Nos. in Lakh	1311	767	709	-	-	-	-	2787
	31.03.2021	Nos. in Lakh	1358	792	744	-	-	-	-	2895
	31.03.2022	Nos. in Lakh	1424	842	787	-	-	-	-	3053
		%	46.6	27.6	25.8	-	-	-	-	100
LPG Distributors	31.03.2019	Nos.	11964	5866	5907	-	-	-	-	23737
	31.03.2020	Nos.	12450	6110	6110	-	-	-	-	24670
	31.03.2021	Nos.	12726	6192	6165	-	-	-	-	25083
	31.03.2022	Nos.	12813	6243	6213	-	-	-	-	25269
		%	50.7	24.7	24.6	-	-	-	-	100
SKO/LDO Dealerships	31.03.2019	Nos.	3889	1638	1001	-	-	-	-	6528
	31.03.2020	Nos.	3882	1638	1001	-	-	-	-	6521
	31.03.2021	Nos.	3871	1638	930	-	-	-	-	6439
	31.03.2022	Nos.	3871	1638	927	-	-	-	-	6436
		%	60.1	25.5	14.4	-	-	-	-	100
POL Terminal/Depots <sup>1</sup>	31.03.2019	Nos.	125	82	78	18	2	-	6	311
	31.03.2020	Nos.	118	81	79	17	2	-	6	303
	31.03.2021	Nos.	118	80	80	18	3	-	6	305
	31.03.2022	Nos.	119	81	82	18	3	-	6	309
		%	38.5	26.2	26.5	5.8	1.0	-	1.9	100
Aviation Fuelling Station <sup>2</sup>	31.03.2019	Nos.	116	43	57	30	-	-	1	247
	31.03.2020	Nos.	119	44	61	30	-	-	1	255
	31.03.2021	Nos.	121	46	60	30	-	-	1	258
	31.03.2022	Nos.	126	47	61	30	-	-	1	265
		%	47.5	17.7	23.0	11.3	-	-	0	100
LPG Bottling Plants <sup>3</sup>	31.03.2019	Nos.	91	49	51	12	-	-	3	206
	31.03.2020	Nos.	93	50	52	14	-	-	3	212
	31.03.2021	Nos.	94	51	53	13	-	-	3	214
	31.03.2022	Nos.	94	53	54	13	-	-	3	217
		%	43.3	24.4	24.9	6.0	-	-	1.4	100

Note: 1. Others of POL terminal/depot includes 6 (MRPL 4 & NRL 2)

2. Others of AFS includes 1 from MRPL.

3. Others of LPG bottling plants includes 3 ( CPCL 1, NRL 1 & OIL 1)

Source: Oil Companies



### III.21: State-wise Number of Retail Outlets (as on 1<sup>st</sup> April)

States/UT's	2017	2018	2019	2020	2021	2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andaman & Nicobar Islands	12	14	14	16	16	19
Andhra Pradesh	3197	3336	3430	3721	4048	4230
Arunachal Pradesh	74	85	94	116	152	178
Assam	828	871	897	979	1104	1312
Bihar	2604	2695	2860	2968	3158	3341
Chandigarh	41	41	42	42	47	47
Chhattisgarh	1176	1249	1280	1462	1808	1969
Dadra & Nagar Haveli and Daman & Diu	63	63	62	61	61	64
<b>Delhi</b>	<b>396</b>	<b>397</b>	<b>398</b>	<b>398</b>	<b>400</b>	<b>400</b>
Goa	115	116	118	118	122	127
Gujarat	3765	4025	4159	4573	5151	5502
Haryana	2726	2862	2933	3060	3412	3660
Himachal Pradesh	414	432	439	494	563	638
Jammu and Kashmir	494	500	504	530	542	581
Jharkhand	1189	1207	1216	1358	1535	1634
Karnataka	4027	4215	4385	4811	5503	5929
Kerala	2048	2100	2140	2238	2396	2559
Ladakh	0	3	3	3	22	27
Lakshadweep	0	0	0	0	0	1
Madhya Pradesh	3528	3711	3832	4230	4981	5566
Maharashtra	5684	5970	6148	6457	7048	7667
Manipur	85	97	104	136	160	178
Meghalaya	198	203	208	225	239	270
Mizoram	37	41	43	45	55	72
Nagaland	70	73	79	94	120	150
Odisha	1639	1681	1704	1894	2070	2246
Puducherry	160	165	165	164	174	179
Punjab	3380	3427	3453	3551	3772	3920
Rajasthan	4116	4476	4661	4967	5615	6028
Sikkim	50	51	51	55	57	63
Tamil Nadu	5039	5387	5638	5804	6357	6745
Telangana	2434	2625	2767	3078	3571	3798
Tripura	68	71	72	79	94	108
Uttar Pradesh	7069	7473	7762	8210	9315	10162
Uttarakhand	570	590	601	629	686	763
West Bengal	2299	2333	2363	2523	2750	2894
<b>TOTAL</b>	<b>59595</b>	<b>62585</b>	<b>64625</b>	<b>69093</b>	<b>77104</b>	<b>83027</b>

Source: Oil Companies



### III.22: State-wise Number of Active LPG Domestic Consumers (as on 1<sup>st</sup> April)

States/UT's	2017	2018	2019	2020	2021	2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andaman & Nicobar Islands	77048	77818	95216	111914	116534	120005
Andhra Pradesh	11628019	13164722	13400938	13698139	14288832	14710846
Arunachal Pradesh	196643	212424	247144	265723	284368	298196
Assam	3290532	4626873	6380250	7114327	7368622	7932550
Bihar	9943156	12958952	16405554	17586885	18649169	20689619
Chandigarh	270006	272930	274506	278565	281659	286442
Chhattisgarh	3112980	4017727	4787168	5204320	5320754	5731143
Dadra & Nagar Haveli and Daman & Diu	138552	140829	148710	159187	162637	164889
<b>Delhi</b>	<b>4780716</b>	<b>4824565</b>	<b>4942352</b>	<b>4955648</b>	<b>5053091</b>	<b>5153568</b>
Goa	454979	469977	481802	501716	518919	537733
Gujarat	7757798	8587610	10059531	10534513	10895030	11584089
Haryana	5413035	5952169	6614281	6901299	7210546	7475277
Himachal Pradesh	1407236	1527088	1726749	1966911	2053143	2114690
Jammu and Kashmir	1964174	2266050	2983661	3147033	3242616	3475859
Jharkhand	2583493	3365159	5172328	5615407	5766773	6070506
Karnataka	11529133	13080566	15412792	16016923	16702757	17335893
Kerala	8015385	8287720	8608602	8794625	9100272	9340572
Ladakh				79971	84215	92308
Lakshadweep	3956	5390	7691	8267	10076	10610
Madhya Pradesh	9425246	10792567	14114369	14963370	15372920	16316422
Maharashtra	22192528	24102724	26928428	27628751	28757177	29854482
Manipur	334555	400301	503977	550390	593423	624068
Meghalaya	143813	189129	298297	318746	332316	360904
Mizoram	243837	249976	283205	300109	321037	330601
Nagaland	180406	196934	246597	264534	280710	310838
Odisha	4497851	5928365	7977388	8588263	8886588	9469153
Puducherry	344318	355032	369483	370003	380597	388291
Punjab	6901373	7353947	8307357	8549514	8850563	9160891
Rajasthan	11052001	12285550	15446522	16251372	16702775	17173885
Sikkim	115544	122969	136529	146170	159701	167321
Tamil Nadu	17170554	18428977	20691449	21114555	21687145	22177395
Telangana	8921099	9436266	10555226	10895927	11363991	11731495
Tripura	440158	505271	698279	738083	759240	769638
Uttar Pradesh	27547819	30212427	37597958	40379541	42319240	45232099
Uttarakhand	2116878	2239506	2521811	2650520	2786682	2916891
West Bengal	14569049	17627457	20939075	22058515	22819027	25214925
<b>TOTAL</b>	<b>198763870</b>	<b>224265967</b>	<b>265365225</b>	<b>278709736</b>	<b>289483145</b>	<b>305324094</b>

Source: Central Public Sector Enterprises



### III.23: State-wise Number of LPG Distributors (as on 1<sup>st</sup> April)

States/UT's	2017	2018	2019	2020	2021	2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andaman & Nicobar Islands	5	5	9	9	9	9
Andhra Pradesh	876	940	1015	1057	1062	1083
Arunachal Pradesh	59	66	83	83	85	85
Assam	447	468	522	559	590	596
Bihar	1076	1109	1799	1938	1993	2009
Chandigarh	27	27	27	27	26	26
Chhattisgarh	374	443	523	534	534	534
Dadra & Nagar Haveli and Daman & Diu	5	6	6	6	6	6
<b>Delhi</b>	<b>321</b>	<b>321</b>	<b>323</b>	<b>322</b>	<b>321</b>	<b>319</b>
Goa	51	52	54	55	55	55
Gujarat	759	774	901	968	1006	1020
Haryana	479	540	614	621	623	625
Himachal Pradesh	166	168	196	203	206	207
Jammu and Kashmir	246	253	282	269	265	267
Jharkhand	392	401	491	536	572	582
Karnataka	1007	1043	1171	1238	1261	1270
Kerala	594	610	659	675	691	698
Ladakh			0	18	22	24
Lakshadweep	1	1	1	1	1	1
Madhya Pradesh	1240	1268	1450	1507	1528	1543
Maharashtra	1756	1827	2134	2184	2206	2219
Manipur	82	84	99	99	101	101
Meghalaya	49	51	62	62	64	64
Mizoram	54	54	58	59	59	59
Nagaland	60	61	78	81	83	83
Odisha	576	753	912	938	955	960
Puducherry	25	27	27	27	28	27
Punjab	759	808	851	856	857	861
Rajasthan	1063	1099	1333	1372	1385	1387
Sikkim	15	16	22	24	26	27
Tamil Nadu	1245	1353	1567	1623	1632	1642
Telangana	694	715	764	777	785	791
Tripura	62	63	73	74	77	80
Uttar Pradesh	2959	3395	4052	4110	4126	4134
Uttarakhand	253	268	306	313	314	315
West Bengal	1009	1077	1273	1445	1529	1560
<b>TOTAL</b>	<b>18786</b>	<b>20146</b>	<b>23737</b>	<b>24670</b>	<b>25083</b>	<b>25269</b>

Note: Total LPG Distributors as on 01.04.2022 includes Sheheri Vitruk 7894, Rurban Vitruk (3720), Gramin Vitruk (11452), Durgam Kshetriya Virak (2203)

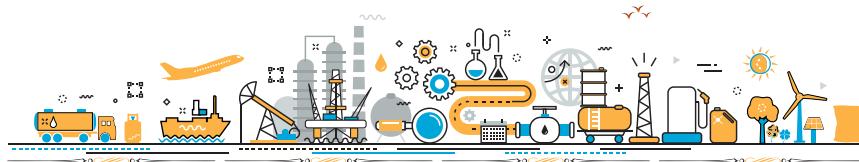
Source: Central Public Sector Enterprises



### III.24: State-wise Number of SKO/LDO Dealerships (as on 1<sup>st</sup> April)

States/UT's	2017	2018	2019	2020	2021	2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andaman & Nicobar Islands	2	2	2	2	2	2
Andhra Pradesh	413	413	394	394	384	384
Arunachal Pradesh	33	33	33	33	33	33
Assam	359	359	359	359	359	359
Bihar	372	372	371	371	362	362
Chandigarh	12	12	12	12	12	12
Chhattisgarh	108	108	108	108	108	108
Dadra & Nagar Haveli and Daman & Diu	7	7	7	7	7	7
<b>Delhi</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>	<b>111</b>	<b>111</b>
Goa	22	22	22	22	22	22
Gujarat	478	476	473	473	470	470
Haryana	141	141	141	141	139	139
Himachal Pradesh	26	26	26	26	26	26
Jammu and Kashmir	45	45	47	45	45	45
Jharkhand	87	87	87	87	87	87
Karnataka	323	318	315	315	311	309
Kerala	237	237	237	237	234	234
Ladakh	2	2	0	2	2	2
Lakshadweep	0	0	0	0	0	0
Madhya Pradesh	284	284	284	284	284	284
Maharashtra	767	767	767	766	752	752
Manipur	36	36	36	36	36	36
Meghalaya	35	35	35	35	35	35
Mizoram	19	19	19	19	19	19
Nagaland	19	19	19	19	19	19
Odisha	177	177	177	177	176	176
Puducherry	8	8	8	8	8	8
Punjab	237	237	237	237	237	237
Rajasthan	250	250	250	250	248	248
Sikkim	12	12	12	12	12	12
Tamil Nadu	466	466	466	465	458	458
Telangana	183	183	202	202	202	202
Tripura	40	40	40	40	40	40
Uttar Pradesh	696	696	695	691	675	674
Uttarakhand	73	73	73	73	69	69
West Bengal	458	458	458	457	455	455
<b>All India</b>	<b>6543</b>	<b>6536</b>	<b>6528</b>	<b>6521</b>	<b>6439</b>	<b>6436</b>

Source: Central Public Sector Enterprises



### III.25: State-wise Number of PMUY Connections (as on 1<sup>st</sup> April)

State / UT	2017	2018	2019	2020	2021	2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andaman & Nicobar Islands	1189	1711	7889	12436	12602	13403
Andhra Pradesh	63428	80044	342598	391860	391625	416861
Arunachal Pradesh	0	6362	39315	44699	44670	47818
Assam	2	1128139	2835940	3484901	3474326	3979854
Bihar	2476953	4913150	7894786	8537893	8523573	10094557
Chandigarh	0	0	88	88	87	92
Chhattisgarh	1105441	1952120	2692704	2989440	2988523	3351181
Dadra & Nagar Haveli and Daman & Diu	3284	11640	14530	15174	15166	15050
<b>Delhi</b>	<b>516</b>	<b>677</b>	<b>73797</b>	<b>76855</b>	<b>76190</b>	<b>98756</b>
Goa	954	984	1072	1082	1081	1081
Gujarat	752354	1269014	2521066	2901059	2899233	3438252
Haryana	278751	357112	680456	730928	726751	738980
Himachal Pradesh	1601	29741	112918	135966	135960	138382
Jammu and Kashmir	265787	372920	1053018	1230997	1230134	1238847
Jharkhand	536912	1203543	2904575	3261556	3258502	3474963
Karnataka	15840	909014	2822822	3146300	3143099	3466468
Kerala	11241	38393	209923	256302	256136	300498
Ladakh	-	-	-	11083	11072	11099
Lakshadweep	0	134	290	290	292	302
Madhya Pradesh	2239821	3315172	6445785	7154600	7143875	7938596
Maharashtra	858808	1877378	4063804	4428682	4419772	4698339
Manipur	25	32617	130377	156598	156398	178392
Meghalaya	0	36844	140311	150744	150526	173142
Mizoram	0	902	25781	28118	28122	29645
Nagaland	0	9225	49402	55140	54096	77111
Odisha	1011955	2300335	4226289	4740385	4736666	5188279
Puducherry	760	2621	13374	13577	13568	14218
Punjab	245008	382351	1208962	1224218	1219883	1235939
Rajasthan	1722694	2625634	5695525	6368525	6359564	6620356
Sikkim	0	687	7798	8752	8752	12457
Tamil Nadu	272749	1018051	3141843	3242217	3237695	3450256
Telangana	41	41	923841	1072321	1071393	1111322
Tripura	0	46379	238393	271888	271530	271904
Uttar Pradesh	5531159	6486116	12963097	14756494	14733034	16718454
Uttarakhand	113866	137440	352921	404566	403234	449877
West Bengal	2520479	5056785	8062319	8856695	8839050	10908400
<b>All India</b>	<b>20031618</b>	<b>35603276</b>	<b>71897609</b>	<b>80162429</b>	<b>80036180</b>	<b>89903131</b>

Source: LPG Section, MoPNG & IOCL



### III.26: State-wise Number of Operational POL Terminal/Depots (as on 1<sup>st</sup> April)

State / UT (1)	2019 (2)	2020 (3)	2021 (4)	2022 (5)
Andaman & Nicobar Islands	1	1	1	1
Andhra Pradesh	23	22	20	21
Arunachal Pradesh	1	1	1	1
Assam	7	7	7	8
Bihar	9	9	9	9
Chandigarh	1	1	1	0
Chhattisgarh	5	3	3	3
Dadra & Nagar Haveli and Daman & Diu	2	0	0	0
Delhi	4	4	4	4
Goa	3	2	3	3
Gujarat	17	18	19	19
Haryana	9	9	9	10
Himachal Pradesh	4	2	2	3
Jammu and Kashmir	7	7	7	7
Jharkhand	8	7	7	7
Karnataka	22	22	22	23
Kerala	9	9	9	9
Ladakh	0	2	2	2
Lakshadweep	0	0	0	0
Madhya Pradesh	17	18	18	18
Maharashtra	33	33	34	34
Manipur	1	1	1	1
Meghalaya	0	0	0	0
Mizoram	1	1	1	1
Nagaland	1	1	1	1
Odisha	10	10	10	10
Puducherry	0	0	0	0
Punjab	11	10	10	10
Rajasthan	14	14	14	14
Sikkim	2	2	2	2
Tamil Nadu	22	22	22	21
Telangana	8	8	9	9
Tripura	1	1	1	1
Uttar Pradesh	32	31	31	32
Uttarakhand	7	7	7	7
West Bengal	19	18	18	18
<b>All India</b>	<b>311</b>	<b>303</b>	<b>305</b>	<b>309</b>

Source: Oil Companies



### III.27: State-wise Number of Aviation Fuelling Station (as on 1<sup>st</sup> April)

State / UT (1)	2019 (2)	2020 (3)	2021 (4)	2022 (5)
Andaman & Nicobar Islands	2	2	2	3
Andhra Pradesh	12	12	13	14
Arunachal Pradesh	3	4	7	7
Assam	12	12	13	14
Bihar	6	6	7	7
Chandigarh	1	1	1	1
Chhattisgarh	6	6	6	6
Dadra & Nagar Haveli and Daman & Diu	2	2	2	2
Delhi	8	8	6	6
Goa	4	4	4	4
Gujarat	18	18	19	20
Haryana	2	2	2	2
Himachal Pradesh	3	3	3	3
Jammu and Kashmir	9	7	7	7
Jharkhand	4	5	5	5
Karnataka	15	16	15	15
Kerala	13	13	12	12
Ladakh	0	2	2	2
Lakshadweep	0	1	1	1
Madhya Pradesh	9	8	8	10
Maharashtra	20	21	22	25
Manipur	2	2	2	2
Meghalaya	2	2	2	2
Mizoram	1	1	1	1
Nagaland	2	2	2	2
Odisha	8	9	8	8
Puducherry	1	1	1	1
Punjab	11	12	12	11
Rajasthan	13	13	13	11
Sikkim	1	1	1	1
Tamil Nadu	20	21	20	20
Telangana	6	6	6	6
Tripura	2	2	2	2
Uttar Pradesh	17	18	17	18
Uttarakhand	2	2	3	3
West Bengal	11	11	11	11
<b>All India</b>	<b>248</b>	<b>256</b>	<b>258</b>	<b>265</b>

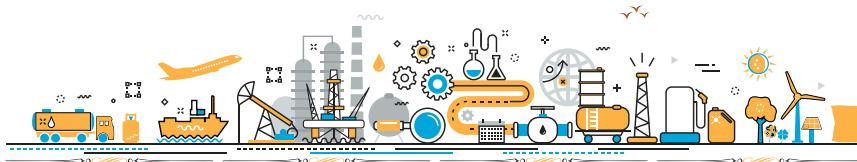
Source: Oil & Gas Companies



### III.28: Oil industry Alternate fuel infrastructure at retail outlets as on 01.04.2022 (P)

State/UT	CNG/CBG/LNG	EV CHARGING	AUTO LPG	TOTAL
(1)	(2)	(3)	(4)	(5)
Andaman & Nicobar Islands	0	2	0	2
Andhra Pradesh	122	192	14	328
Arunachal Pradesh	2	8	0	10
Assam	1	56	0	57
Bihar	66	75	0	141
Chandigarh	11	15	5	31
Chhattisgarh	4	106	6	116
Dadra & Nagar Haveli and Daman & Diu	5	1	0	6
<b>Delhi</b>	<b>248</b>	<b>85</b>	<b>3</b>	<b>336</b>
Goa	15	31	3	49
Gujarat	717	218	30	965
Haryana	192	176	5	373
Himachal Pradesh	15	29	0	44
Jammu and Kashmir	0	25	3	28
Jharkhand	58	43	1	102
Karnataka	179	219	146	544
Kerala	87	107	72	266
Ladakh	0	0	0	0
Lakshadweep	0	1	0	1
Madhya Pradesh	191	241	28	460
Maharashtra	534	175	83	792
Manipur	0	16	0	16
Meghalaya	0	8	0	8
Mizoram	0	0	0	0
Nagaland	0	6	0	6
Odisha	45	111	4	160
Puducherry	0	2	2	4
Punjab	182	113	15	310
Rajasthan	179	254	32	465
Sikkim	0	0	0	0
Tamil Nadu	117	224	108	449
Telangana	112	232	69	413
Tripura	18	15	0	33
Uttar Pradesh	609	300	36	945
Uttarakhand	23	41	5	69
West Bengal	39	157	46	242
<b>All India</b>	<b>3771</b>	<b>3284</b>	<b>716</b>	<b>7771</b>

Source: Oil companies (Includes dealers of private oil companies)



### III.29: LPG Bottling Plants in the Country (as on 1<sup>st</sup> April)

State / UT	No. of LPG Bottling Plants				Capacity (in MMTPA)			
	2019	2020	2021	2022	2019	2020	2021	2022
(1)	(2)	(3)	(4)					
Andaman & Nicobar Islands	1	1	1	1	0.01	0.01	0.01	0.01
Andhra Pradesh	9	9	9	9	0.90	1.02	1.02	1.02
Arunachal Pradesh	1	1	0	0	0.01	0.01	0.00	0.00
Assam	8	9	7	9	0.65	0.64	0.64	0.67
Bihar	6	8	8	8	0.87	1.05	1.11	1.11
Chandigarh	0	0	0	0	0.00	0.00	0.00	0.00
Chhattisgarh	3	3	3	3	0.21	0.27	0.27	0.27
Dadra & Nagar Haveli and Daman & Diu	0	0	0	0	0.00	0.00	0.00	0.00
<b>Delhi</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>0.42</b>	<b>0.48</b>	<b>0.48</b>	<b>0.48</b>
Goa	2	2	2	2	0.09	0.09	0.09	0.09
Gujarat	17	17	17	17	1.04	1.16	1.22	1.24
Haryana	6	6	6	6	0.84	0.84	0.90	0.90
Himachal Pradesh	2	2	2	2	0.09	0.09	0.09	0.09
Jammu and Kashmir	4	3	3	3	0.16	0.15	0.18	0.18
Jharkhand	4	4	4	5	0.31	0.31	0.31	0.37
Karnataka	11	11	11	11	1.51	1.51	1.57	1.57
Kerala	7	7	7	7	0.69	0.69	0.69	0.69
Ladakh	0	0	1	1	0.00	0.01	0.01	0.01
Lakshadweep	0	0	0	0	0.00	0.00	0.00	0.00
Madhya Pradesh	10	10	10	10	0.82	0.88	0.94	0.94
Maharashtra	24	25	25	25	2.27	2.39	2.39	2.39
Manipur	1	1	1	1	0.03	0.03	0.03	0.03
Meghalaya	0	0	0	0	0.00	0.00	0.00	0.00
Mizoram	1	1	1	0	0.00	0.00	0.00	0.00
Nagaland	1	1	1	1	0.01	0.01	0.01	0.01
Odisha	4	4	6	6	0.36	0.42	0.51	0.51
Puducherry	1	1	1	1	0.05	0.05	0.05	0.06
Punjab	6	7	8	8	0.72	0.84	0.90	0.90
Rajasthan	12	13	12	12	0.99	1.00	1.06	1.06
Sikkim	1	1	1	1	0.01	0.01	0.01	0.01
Tamil Nadu	18	19	20	20	1.61	1.79	1.68	1.74
Telangana	5	5	5	5	0.66	0.66	0.66	0.66
Tripura	1	1	1	1	0.02	0.02	0.02	0.06
Uttar Pradesh	25	24	26	27	2.56	2.64	2.91	3.03
Uttarakhand	3	3	3	3	0.18	0.18	0.18	0.18
West Bengal	10	10	10	10	1.21	1.27	1.39	1.39
<b>All India</b>	<b>206</b>	<b>211</b>	<b>214</b>	<b>217</b>	<b>19.29</b>	<b>20.52</b>	<b>21.32</b>	<b>21.67</b>

Source: Oil & Gas Companies



### III.30: CNG Activities (Sales) in India

State/UT (s)	Company name	(Figures in TMT)					
		2016-17 (3)	2017-18 (4)	2018-19 (5)	2019-20 (6)	2020-21 (7)	2021-22 (P) (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh*	AGP City Gas Pvt Ltd, Bhagyanagar Gas Ltd, Godavari Gas Pvt Ltd, Indian Oil Corporation Ltd, Megha Engineering & Infrastructure Ltd	5	32	31	21	13	33
Andhra Pradesh, Karnataka and Tamil Nadu	AGP City Gas Pvt Ltd	1	0	0	0	0	0.1
Assam	Assam Gas Company Ltd	1	0	0	0.02	0.05	0.06
Bihar	GAIL (India) Ltd, Indian Oil-Adani Gas Pvt Ltd, Think Gas Begusarai Pvt Ltd, Indian Oil	4	0.0	0.0	2	5	15
Chandigarh, Haryana, Punjab & Himachal Pradesh	Indian Oil-Adani Gas Pvt Ltd	1	5	15	21	14	25
Dadra & Nagar Haveli**	Gujarat Gas Ltd	1	0	0	3	2	3
Daman and Diu	Indian Oil-Adani Gas Pvt Ltd	1	1	2	2	1.37	3
Delhi NCT***	Indraprastha Gas Ltd	1	1016	1144	1033	785	1015
Goa	Goa Natural Gas Pvt Ltd., Indian Oil-Adani Gas Pvt Ltd	2	0	0	0.03	0.15	1.05
Gujarat **	Adani Total Gas Ltd, Charotar Gas Sahakari Mandali Ltd, Gujarat Gas Ltd, Hindustan Petroleum Corporation Ltd, IRM Energy Pvt Ltd, Sabarmati Gas Ltd, Torrent Gas Pvt Ltd, Vadodara Gas Ltd	8	612	662	745	649	945
Gujarat & UT of Daman and Diu	IRM Energy Pvt Ltd	1	0	0	0.07	1.36	3.82
Haryana	Adani Total Gas Ltd, Bharat Petroleum Corporation Ltd, GAIL Gas Ltd, Haryana City Gas (KCE) Pvt Ltd, Haryana City Gas Distribution (Bhiwadi) Ltd, Haryana City Gas Distribution Ltd., Hindustan Petroleum Corporation Ltd, HPOIL Gas Pvt Ltd, Indian Oil-Adani Gas Pvt Ltd, Indraprastha Gas Ltd	10	144	179	197	173	303
Haryana & Himachal Pradesh	Indian Oil-Adani Gas Pvt Ltd	1	0	0	0	0.08	0.7
Haryana & Punjab	Gujarat Gas Ltd	1	0	0	0	1.4	5
Himachal Pradesh	Bharat Gas Resources Ltd	1	0	0	0	0	0.2
Jharkhand	GAIL (India) Ltd, GAIL Gas Ltd, Indian Oil Corporation Ltd, Bharat Gas Resources Ltd	4	0	0	0.34	1.2	4
Karnataka	Adani Total Gas Ltd, AGP City Gas Pvt Ltd, GAIL Gas Ltd, Indian Oil-Adani Gas Pvt Ltd, Maharashtra Natural Gas Ltd, Megha Engineering & Infrastructure Ltd, Unison Enviro Pvt Ltd, Bharat Gas Resources Ltd	8	0	0.3	1	3	15
Kerala	AGP City Gas Pvt Ltd, Indian Oil-Adani Gas Pvt Ltd	2	0	1	6	4	12
Kerala & Puducherry	Indian Oil-Adani Gas Pvt Ltd	1	0	0	0	0	0.2
Madhya Pradesh	Avantika Gas Ltd, GAIL Gas Ltd, Gujarat Gas Ltd, Indian Oil Corporation Ltd, Naveriya Gas Pvt Ltd, Rajasthan State Gas Ltd, Think Gas Bhopal Pvt Ltd, Bharat Gas Resources Ltd	8	25	31	34	24	45



State/UT (s)	Company name	2016-17 (3)	2017-18 (4)	2018-19 (5)	2019-20 (6)	2020-21 (7)	2021-22 (P) (8)
(1)	(2)						
Madhya Pradesh & Rajasthan	Gujarat Gas Ltd	1	0	0	0	0.26	3
Maharashtra	Bharat Gas resources Ltd, Bharat Petroleum Corporation Ltd, Gujarat Gas Ltd, HPOIL Gas Pvt Ltd, Mahanagar Gas Ltd, Maharashtra Natural Gas Ltd, Torrent Gas Pune Ltd, Unison Enviro Pvt Ltd	8	630	702	738	504	812
Maharashtra & Gujarat	Maharashtra Natural Gas Ltd	1	0	0	0	1.4	5.6
Odisha	Adani Total Gas Ltd, GAIL (India) Ltd, GAIL Gas Ltd	3	0	1	3	2	4
Puducherry (UT) & Tamil Nadu	Torrent Gas Pvt Ltd	1	0	0	0	0.001	0.04
Punjab	Bharat Petroleum Corporation Ltd, Gujarat Gas Ltd, IRM Energy Pvt Ltd, Think Gas Ludhiana Pvt Ltd, Torrent Gas Pvt Ltd	5	0	1	7	14	43
Rajasthan	Adani Total Gas Ltd, AGP City Gas Pvt Ltd, Dholpur CGD Pvt Ltd, Gujarat Gas Ltd, Indraprastha Gas Ltd, Rajasthan State Gas Ltd, Torrent Gas Jaipur Pvt Ltd, Torrent Gas Pct Ltd, Haryana City Gas Distribution (Bhiwadi) Ltd	9	5	7	9	15	47
Tamil Nadu	Adani Total Gas Ltd, AGP CGD India Pvt Ltd, Indian Oil Corporation Ltd, Torrent Gas Chennai Pvt Ltd	4	0	0	0	0.004	2
Telangana*	Bhagyanagar Gas Ltd, Megha Engineering & Infrastructure Ltd, Torrent Gas Pvt Ltd	3	0	0	13	9	33
Tripura	Tripura Natural Gas Company Ltd	1	13	15	16	18	20
Uttar Pradesh	Adani Total Gas Ltd, Bagpat Green Energy Pvt Ltd, Bharat Petroleum Corporation Ltd, Central UP Gas Ltd, GAIL (India) Ltd, GAIL Gas Ltd, Green Gas Ltd, Hindustan Petroleum Corporation Ltd, Indian Oil-Adani Gas Pvt Ltd, Indraprastha Gas Ltd, Sanwariya Gas Ltd, Torrent Gas Moradabad Ltd, Torrent Gas Pvt Ltd, Bharat Gas Resources Ltd	14	153	282	392	339	545
Uttar Pradesh & Uttarakhand	Hindustan Petroleum Corporation Ltd	1	0	0	0	0.359	2
Uttar Pradesh & Madhya Pradesh	Adani Total Gas Ltd	1	0	0	0.001	0.402	8
Uttarakhand	GAIL Gas Ltd, Haridwar Natural Gas Pvt Ltd, Indian Oil-Adani Gas Pvt Ltd	3	0	0.1	1	5	12
West Bengal	Bengal Gas Company Ltd, IndianOil-Adani Gas Pvt Ltd, Hindustan Petroleum Corporation Ltd	3	2	3	2	2	4
<b>Total</b>		<b>2638</b>	<b>3076</b>	<b>3247</b>	<b>2589</b>	<b>3968</b>	

Notes: "From the FY 2019-20 entries for

P. Provisional

\* Andhra Pradesh &amp; Telangana are reported separately. Prior to this AP &amp; Telangana were taken together.

\*\* Dadra &amp; Nagar Haveli are reported separately from Gujarat State

\*\*\* Delhi contains information for Delhi NCT only. Remaining entries of the NCR GAs are added into respective State."

Source : CGD companies



### III.31: Connection of Piped Natural Gas (PNG) and Compressed Natural Gas (CNG) Stations in the Country - (as on 31.03.2022)

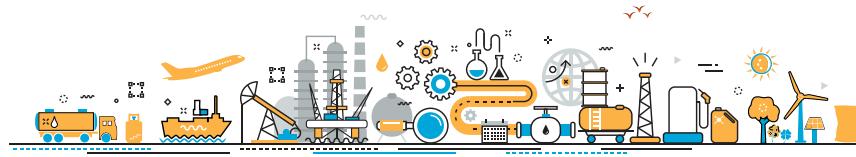
State/Union Territory	"Geographical Area/CGD Networks"	PNG Connections				"CNG Stations"
		Domestic	Commercial	Industrial	Total	
Andhra Pradesh	Kakinada, East Godavari District (EAAA), West Godavari District, Krishna District (EAAA), Srikakulam, Visakhapatnam & Vizianagaram Districts, Vijaywada, Anantapur and YSR (Kadapa) Districts, Sri Potti Sriramulu Nellore District	228606	366	28	229000	128
Andhra Pradesh, Karnataka & Tamil Nadu	Chittoor, Kolar and Vellore Districts	0	0	1	1	15
Assam	Cachar, Hailakandi & Karimganj Districts, Kamrup & Kamrup Metropolitan Districts, Upper Assam	42448	1265	418	44131	1
Bihar	Aurangabad, Kaimur & Rohtas Districts, Begusarai District, Gaya & Nalanda Districts, Patna District, Araria, Purnia, Katihar and Kishanganj Districts, Arwal, Jehanabad, Bhojpur and Buxar Districts, Khagaria, Saharsa and Madhepura Districts, Lakhisarai, Munger and Bhagalpur Districts, Muzaffarpur, Vaishali, Saran and Samastipur Districts	73738	34	1	73773	47
Bihar & Jharkhand	Nawada and Koderma Districts, Sheikhpura, Jamui and Deoghar Districts	5139	0	0	5139	0
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	Chandigarh	22603	85	17	22705	23
Dadra & Nagar Haveli (UT)	UT of Dadra & Nagar Haveli	8787	51	53	8891	7
Daman & Diu (UT)	UT of Daman	4889	32	37	4958	4
Daman and Diu & Gujarat	Diu & Gir Somnath Districts	452	1	0	453	13
Goa	North Goa District, South Goa District	9890	11	22	9923	10
Gujarat	Bhavnagar, Jamnagar, Kutch (West), Kutch (East), Amreli District, Patan District, Dahej Vagra Taluka, Dahod District, Banaskantha District, Anand District (EAAA), Panchmahal District, Ahmedabad District (EAAA), Surendranagar District (EAAA) & Morbi District (EAAA), Barwala & Ranpur Talukas, Navsari District (EAAA), Surat District (EAAA), Tapi District (EAAA) & the Dangs District, Junagadh District, Kheda District (EAAA) & Mahisagar District, Narmada (Rajpipla) District, Porbandar District, Surat, Bharuch, Ankleshwar, Nadiad, Navsari, Rajkot, Surendranagar, Ahmedabad City and Daskroi Area, Hazira, Valsad, Anand area including Kanjari & Vadtal Villages (in Kheda District), Gandhinagar Mehsana Sabarkantha, Vadodara,	2540647	20652	5575	2566874	893



Haryana	Sonipat, Panipat District, Yamunanagar District, Rewari District, Rohtak District, Karnal District, Ambala & Kurukshetra Districts, Bhiwani, Charkhi Dadri & Mahendragarh Districts, Hisar District, Jhajjar District, Sonipat District (EAAA) & Jind District, Nuh and Palwal Districts, Kaithal District.	128907	109	384	129400	190
Haryana & Himachal Pradesh	Panchkula District (EAAA), Sirmaur, Shimla & Solan (EAAA) Districts	0	0	0	0	9
Haryana & Punjab	Sirs, Fatehabad and Mansa (Punjab) Districts	0	0	0	0	16
Himachal Pradesh	Bilaspur, Hamirpur & Una Districts	2260	0	0	2260	7
Jharkhand	East Singhbhum District, Ranchi District, Bokaro, Hazaribagh & Ramgarh Districts, Giridih & Dhanbad Districts, Chatra and Palamu Districts, Seraikela-Kharsawan District, West Singhbhum District,	80745	1	0	080746	49
Karnataka	Bengaluru Rural and Urban Districts, Tumkur District, Dharwad District, Belgaum District, Chitradurga & Davangere Districts, Ballari & Gadag Districts, Udupi District, Bidar District, Dakshina Kannada District*, Ramanagara District, Bagalkot, Koppal and Raichur Districts, Chikkamagaluru, Hassan and Kodagu Districts, Kalaburagi and Vijayapura Districts, Mysuru, Mandya and Chamrajnagar Districts, Uttara Kannada, Haveri and Shivamogga Districts,	331516	402	235	332153	182
Kerala	Ernakulam District, Kozhikode & Wayanad Districts, Malappuram Districts, Palakkad & Thrissur Districts, Alappuzha, Kollam and Thiruvananthapuram Districts,	17734	15	12	17761	80
Kerala & Puducherry	Kannur, Kasaragod & Mahe Districts	0	0	0	0	9
Madhya Pradesh	Dewas, Dhar District, Bhopal & Rajgarh Districts, Guna District, Rewa District, Satna & Shandol Districts, Indore (including Ujjain City), Gwalior, Ashoknagar District, Gwalior (EAAA) District and Sheopur District, Morena District, Shivpuri District, Sidhi and Singrauli Districts, Ujjain (EAAA) District, Dewas (EAAA) District and Indore (EAAA) District	155038	232	341	155611	162
Madhya Pradesh and Chhattisgarh	Anuppur, Bilaspur and Korba Districts	0	0	0	0	3
Madhya Pradesh and Rajasthan	Jhabua, Banswara, Ratlam and Dungarpur Districts	0	0	0	0	21
Madhya Pradesh and Uttar Pradesh	Jhansi (EAAA) District, Bhind, Jalaun, Lalitpur and Datia Districts	0	0	0	0	13



Maharashtra	Palghar District & Thane Rural, Raigarh District (EAAA), Pune District (EAAA), Ratnagiri District, Solapur District, Kolhapur District, Ahmednagar & Aurangabad Districts, Latur & Osmanabad Districts, Sangli & Satara Districts, Sindhudurg District, Mumbai & Greater Mumbai, Pune City including Pimpri - Chinchwad & adjoining contiguous areas Hinjewadi, Chakan, Talegaon, Thane urban and adjoining Municipalities,	2327389	4713	508	2332610	571
Maharashtra & Gujarat	Valsad (EAAA), Dhule & Nashik Districts	105051	2	5	105058	48
National Capital Territory of Delhi (UT)	National Capital Territory of Delhi	1261605	3134	1708	4842	456
Odisha	Angul & Dhekanal Districts, Sundargarh & Jharsuguda Districts, Balasore, Bhadrak & Mayurbhanj Districts, Baragarh, Debagarh & Sambalpur Districts, Ganjam, Nayagarh & Puri Districts, Jagatsinghpur & Kendrapara Districts, Jajpur & Kendujhar Districts, Khordha District, Cuttack District,	60596	2	0	60598	34
Puducherry	Puducherry District	0	0	0	0	0
Puducherry & Tamil Nadu	Karaikal & Nagapattinam Districts	0	0	0	0	7
Punjab	Jalandhar, Ludhiana, Amritsar District, Bhatinda District, Rupnagar District, Fatehgarh Sahib District, SAS Nagar District (EAAA), Patiala & Sangrur Districts, Ludhiana District (EAAA), Barnala & Moga Districts, Jalandhar District (EAAA), Kapurthala & SBS Nagar Districts, Ferozepur, Faridkot and Sri Muktsar Sahib Districts, Hoshiarpur and Gurdaspur Districts,	36965	142	109	37216	156
Rajasthan	Kota, Barmer, Jaisalmer & Jodhpur Districts, Alwar (Other than Bhiwadi) & Jaipur Districts, Kota District (EAAA), Baran & Chittorgarh (Only Rawatbhata Taluka) Districts, Bhilwara & Bundi Districts, Chittorgarh (Other than Rawatbhata Taluka) & Udaipur Districts, Dholpur District, Bhiwadi (in Alwar District), Ajmer, Pali and Rajsamand Districts, Jalore and Sirohi Districts,	139338	26	153	139517	168
Tamil Nadu	Kanchipuram District, Chennai & Tiruvallur Districts, Coimbatore District, Cuddalore, Nagapattinam & Tiruvarur Districts, Ramanathapuram District, Salem District, Tiruppur District,	0	0	2	2	108
Telangana	Bhadradri Kothagudem & Khamman Districts, Jagtial, Peddapalli, Karimnagar & Rajanna Sircilla Districts, Jangaon, Jayashankar Bhupalpally, Mahabubabad, Warangal Urban & Warangal Rural Districts, Medak, Siddipet & Sangareddy Districts, Medchal-Malkajgiri, Ranga Reddy & Vikarabad Districts, Nalgonda Suryapet & Yadadri Bhuvanagiri Districts, Hyderabad.	162257	60	83	162400	117



Tripura	Gomati District, West Tripura (EAAA) District, Agartala	54124	501	62	54687	18
Uttar Pradesh	Mathura, Meerut, Allahabad, Jhansi, Saharanpur District, Bulandshahr (part) District, Bulandshahr District (EAAA), Aligarh & Hathras Districts, Allahabad District (EAAA), Bhadohi & Kaushambi Districts, Amethi, Pratapgarh & Rae-bareli Districts, Auraiya, Kanpur Dehat & Etawah Districts, Faizabad & Sultanpur Districts, Gorakhpur, Sant Kabir Nagar & Kushinagar Districts, Meerut District (EAAA), Muzaffarnagar & Shamli Districts, Moradabad (EAAA) District, Unnao (EAAA) District, Varanasi District, Khurja, Moradabad, Bareilly, Kanpur, Agra, Lucknow, Ghaziabad & Hapur Districts, Azamgarh, Mau and Ballia Districts, Bareilly (EAAA) District, Pilibhit and Rampur Districts, Basti and Ambedkar-nagar Districts, Farrukhabad, Etah and Hardoi Districts, Gonda and Barabanki Districts, Jaunpur and Ghazipur Districts, Kanpur (EAAA) District, Fatehpur and Hamirpur Districts, Mainpuri and Kannauj Districts, Mirzapur, Chandauli and Sonbhadra Districts, Shahjahanpur and Budaun Districts.	874857	1141	1112	877110	583
Uttar Pradesh & Rajasthan	Firozabad (Taj Trapezium Zone)	18958	9	339	19306	36
Uttar Pradesh and Uttrakhand	Bijnor and Nainital Districts	4872	0	0	4872	16
Uttrakhand	Dehradun District, Udhampur Singh Nagar District, Haridwar District	60134	40	65	60239	26
West Bengal	Burdwan District, Kolkata Municipal Corporation and Parts of Adjoining Districts, Darjeeling, Jalpaiguri and Uttar Dinajpur Districts, Howrah (EAAA) District and Hoogly (EAAA) District, Nadia (EAAA) District and North 24 Parganas (EAAA) District, South 24 Parganas (EAAA) District	0	0	0	0	37
<b>Total (A) - CGD Networks authorized by PNGRB</b>		<b>8759545</b>	<b>33026</b>	<b>11270</b>	<b>8803841</b>	<b>4263</b>
Gujarat	Ahmedabad City (Only for CNG), Vadodara, Gandhinagar	136416	568	111	137095	44
Haryana	Gurugram, Faridabad	117972	557	758	119287	73
Uttar Pradesh	Gautam Budh Nagar District	288734	703	1076	290513	53
<b>Total (B) - CGD Networks Operational based on Court Orders or NOC</b>		<b>543122</b>	<b>1828</b>	<b>1945</b>	<b>546895</b>	<b>170</b>
<b>Total (A+B)</b>		<b>9302667</b>	<b>34854</b>	<b>13215</b>	<b>9350736</b>	<b>4433</b>

- Note:**
- All the GAs where PNG connections/CNG Stations have been established is considered as Operational.
  - Under normal conditions, Operation of any particular GA commences within around one year of authorization.
  - EAAA stands for Excluding/Except Area Already Authorized | \* stands for Sub-Judice | # stands for authorization of GA cancelled
  - As on March 2022, there are 291 GAs authorized by PNGRB for development of CGD Networks across the country (228 GAs upto 10<sup>th</sup> CGD Bidding Round + 53 GAs in 11<sup>th</sup> CGD bidding Round).

Source: PNGRB





# CHAPTER - IV



PRICES AND TAXES & DUTIES



# Highlights of Chapter



WPI inflation for all commodities stood at 13% in 2021-22 as compared to 1.3% in 2020-21. The WPI growth during 2020-21, in Crude Petroleum, Natural Gas and Petroleum Products stood at (-) 15.8%, (-) 21.5% and (-) 14.2%.



Index of Eight Core Industries stood at 10.4% in 2021-22 as compared to (-) 6.4% in 2020-21



Domestic price of Natural Gas increased



Highest and the least increase in international FOB Price. 2021-22 vis-à-vis 2020-21.



Contribution by Oil and Gas major 16 companies of Petroleum Sector to the Central Exchequer is ₹ 4,92,303 crore and contribution to the State exchequer is ₹ 2,82,122 crores.



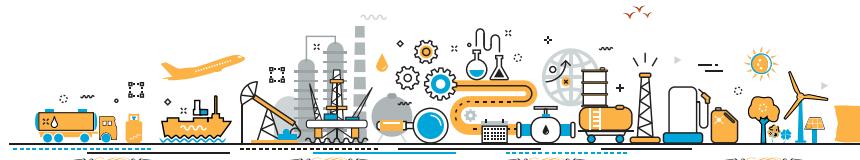
Sales tax/VAT paid by 16 major Oil & Gas companies saw an increase of 26.3%



GST paid by 16 major Oil & Gas companies increased by 80%



Sales tax paid by CPSE's payment method observed an increase in FY 2021-22



## IV.1: Indices of Selected Oil & Gas Products (Base Year 2011-12=100)

Items	Weight (%)	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Wholesale Price Index</b>							
All commodities	100.00	111.60	114.90	119.80	121.80	123.40	139.40
Crude Petroleum & Natural Gas	2.41	73.10	73.00	92.40	85.30	70.40	110.30
Crude Petroleum	1.95	63.80	65.00	84.30	73.60	62.00	110.30
Natural Gas	0.46	112.30	106.40	126.20	134.50	105.60	110.10
Total Petroleum Products (Mineral Oils)	7.95	73.30	82.50	96.70	92.30	79.20	126.20
LPG	0.64	72.00	82.20	92.10	84.50	82.20	117.80
Petrol	1.60	72.40	80.30	88.40	85.60	75.50	123.00
Naphtha	0.87	94.30	117.80	152.40	172.80	116.80	221.90
Kerosene	0.19	69.30	78.70	102.80	97.20	62.50	112.40
Aviation Turbine Fuel	0.32	74.40	84.40	97.10	93.70	80.20	128.20
High Speed Diesel Oil	3.10	66.50	74.50	92.60	82.30	65.10	115.80
Furnace Oil	0.67	68.00	71.30	85.60	82.80	77.90	113.20
Lube Oil	0.29	58.10	68.80	94.70	81.00	67.90	108.20
Bitumen	0.23	116.80	114.00	124.80	131.70	137.20	162.00
Petroleum Coke	0.05	93.00	117.20	149.70	128.60	132.40	220.10
<b>Index of Eight Core Industries</b>							
Overall Index	100.00	120.53	125.69	131.18	131.65	123.24	136.08
Index of Coal	10.33	121.75	124.88	134.10	133.62	131.13	142.27
Index of Crude Oil	8.98	94.54	93.68	89.80	84.46	80.06	77.95
Index of Natural Gas	6.88	66.52	68.42	68.98	65.09	59.78	71.28
Index of Petroleum Refinery Products	28.04	119.71	125.20	129.11	129.40	114.88	125.14
Index of Fertilizers	2.63	106.58	106.61	106.98	109.83	111.65	112.42
Index of Steel	17.92	133.09	140.51	147.67	152.62	139.40	163.15
Index of Cement	5.37	121.99	129.72	146.98	145.69	129.96	156.95
Index of Electricity	19.85	141.64	149.18	156.87	158.35	157.57	170.12

Source: Office of Economic Adviser, Ministry of Commerce & Industry



## IV.2: Consumer and Producer Prices of Natural Gas

Effective Date	Consumer Prices		Producer Prices			Calorific Value (K. Cal / SCM)	Domestic Price of Natural Gas	Gas Price Ceiling
	Off-shore (Landfall point) and On-shore	For North-East States	ONGC	ONGC (North-East States)	OIL (North-East States)			
	(in ₹/'000' cubic metre)						(USD/ MMBTU)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
01.04.2016	8138	4883	8138	8138	8138	10000	3.06	6.61
01.10.2016	6621	3973	6621	6621	6621	10000	2.50	5.30
01.04.2017	6483	3890	6483	6483	6483	10000	2.48	5.56
01.10.2017	7390	4434	7390	7390	7390	10000	2.89	6.30
01.04.2018	7895	4737	7895	7895	7895	10000	3.06	6.78
01.10.2018	9629	5789	9629	9629	9629	10000	3.36	7.67
01.04.2019	10174	6093	10174	10174	10174	10000	3.69	9.32
01.10.2019	9143	5491	9143	9143	9143	10000	3.23	8.43
01.04.2020	7052	4219	7052	7052	7052	10000	2.39	5.61
01.10.2020	5219	3120	5219	5219	5219	10000	1.79	4.06
01.04.2021	5170	3091	5170	5170	5170	10000	1.79	3.62
01.10.2021	8465	5079	8465	8465	8465	10000	2.90	6.13
<b>01.04.2022</b>	<b>18455</b>	<b>11073</b>	<b>18455</b>	<b>18455</b>	<b>18455</b>	<b>10000</b>	<b>6.10</b>	<b>9.92</b>

**Notes:**

1. GOI has issued the New Domestic Gas Pricing Guidelines on 25.10.2014. In line with these guidelines, PPAC declared the price of natural gas half yearly.
2. Producer Price as well as Consumer price of natural gas produced by the NOCs including ONGC is fixed by the MoPNG, Government of India from time to time. Till 31.10.2014, different gas prices were applicable for APM (Administrative Price Mechanism) and non-APM customers. MoPNG has notified "New Domestic Natural Gas Pricing Guidelines, 2014" on 25 Oct'14. These guidelines are effective from 01 Nov'14.
3. The above guidelines shall not be applicable to:
  - i) The Gas to be produced from Discoveries in Deepwater, Ultra Deepwater, and High Pressure-High Temperature areas, in terms of MoPNG letter dated 21.03.16 (Marketing including pricing freedom).
  - ii) CBM gas, in terms of Government Notification dt. 11.04.17.
  - iii) New discoveries in Nomination blocks whose FDP will be approved by DGH as per notifications dated 28.02.19
  - iv) Existing and Future discoveries in Pre-NELP and NELP fields in North East which will commence production on 01.07.18 and after.
  - v) Adhoc/ Test Gas as per guidelines dated 22.11.21

Source: ONGC, OIL and PPAC



### IV.3: Weighted Average Crude Oil Prices

(in ₹/MT)

Year	Particulars	Basic Price	Royalty	OID Cess	Sales Tax / VAT / CST
(1)	(2)	(3)	(4)	(5)	(6)
2016-17	Offshore crude	26078	2157	4105	820
	Onshore crude	23831	3578	3778	1113
	Offshore and Onshore crude	25433	2565	4011	904
2017-18	Offshore crude	28378	2395	4541	931
	Onshore crude	26648	4027	4227	1237
	Offshore and Onshore crude	27866	2878	4448	1022
2018-19	Offshore crude	36494	3232	6074	1253
	Onshore crude	34579	5555	5755	1707
	Offshore and Onshore crude	35886	3968	5973	1397
2019-20	Offshore crude	31604	2819	5254	1077
	Onshore crude	30488	4781	5157	1570
	Offshore and Onshore crude	31237	3464	5222	1239
2020-21	Offshore crude	24187	2105	4018	783
	Onshore crude	23081	3806	3897	1151
	Offshore and Onshore crude	23832	2651	3979	901
2021-22	Offshore crude	43745	3738	7268	1270
	Onshore crude	41088	6278	6937	2042
	Offshore and Onshore crude	42874	4571	7160	1523

**Notes:**

1. Basic Price is all inclusive gross (pre-discount) price and linked to international crude price, though ONGC net price realization has been lower due to sharing of under-recoveries of OMCs by extending discount, as per the directives of MoPNG.
2. Basic Price up to 2017-18 is inclusive of VAT/CST.
3. VAT/CST and Royalty are worked out based on Gross (Pre-discount) Price. However, the above levies are actually paid on post- discount price. From the Second Quarter of 2015-16 onwards, no subsidy discount has been extended by ONGC to refineries /OMCs.
4. Royalty and OID Cess are production levies and are part of cost.
5. NCCD @ ₹ 50/MT & Excise Duty @ ₹ 1/MT is also paid on crude oil & Education Cess @ 3% on OID Cess and NCCD were paid till 2014-15.
6. OID Cess in ₹/MT has been paid considering specific rate of 4,500/MT from 17.03.12 till Feb'16 and "20% ad-valorem" w.e.f. 01.03.2016

Source: ONGC

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APPENDIX



#### IV.4: Month-wise & Year-wise Average International Crude Oil Prices (Indian Basket)

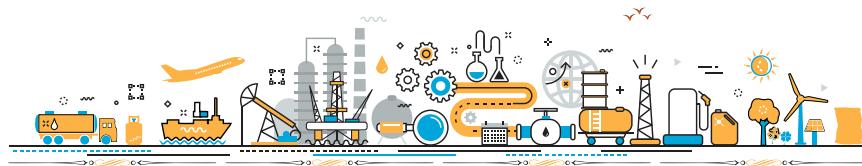
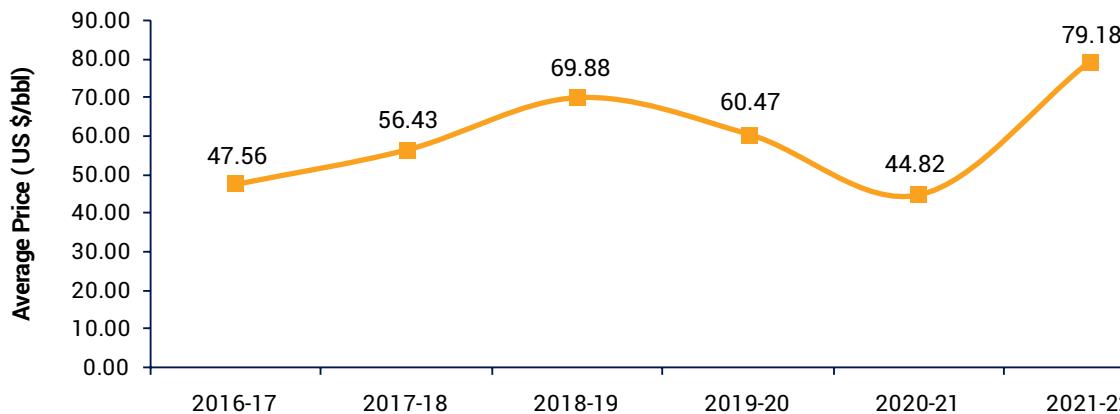
(in US\$/bbl.)

Year/Month	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	% Growth in 2021-22 over 2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
April	39.88	52.49	69.22	71.00	19.90	63.40	218.55
May	45.01	50.57	75.25	70.01	30.61	66.95	118.76
June	46.96	46.56	73.83	62.37	40.63	71.98	77.15
July	43.52	47.86	73.47	63.63	43.35	73.54	69.65
August	44.38	50.63	72.53	59.35	44.19	69.80	57.96
September	44.48	54.52	77.88	61.72	41.35	73.13	76.84
October	49.25	56.06	80.08	59.70	40.66	82.11	101.95
November	44.46	61.32	65.40	62.53	43.34	80.64	86.05
December	52.74	62.29	57.77	65.50	49.84	73.30	47.07
January	54.08	67.06	59.27	64.31	54.79	84.67	54.52
February	54.86	63.54	64.53	54.63	61.22	94.07	53.66
March	51.47	63.80	66.74	33.36	64.73	112.87	74.38
<b>Year Average</b>	<b>47.56</b>	<b>56.43</b>	<b>69.88</b>	<b>60.47</b>	<b>44.82</b>	<b>79.18</b>	<b>76.66</b>
<b>Ratio</b>	<b>71.03:28.97</b>	<b>72.38:27.62</b>	<b>74.77:25.23</b>	<b>75.50:24.50</b>	<b>75.62:24.38</b>	<b>75.62:24.38</b>	<b>-</b>

**Notes:** The composition of Indian Basket of Crude represents Average of Oman & Dubai for sour grades and Brent (Dated) for sweet grade in the ratio of crude processed during previous financial year, e.g. ratio of crude processed as indicated in the table above.

Source: IOCL &amp; PPAC

Figure IV.1: Year-wise Average International Crude Oil Prices (Indian Basket)



## IV.5: International FOB Prices of Crude Oil & Major Petroleum Products

Period	Crude Oil (Indian Basket)	Petrol	Diesel	Kerosene	FO	Naphtha	LPG	
	(\$/BBL)					(\$/MT)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2016-17	47.56	58.10	56.59	56.81	258.92	415.17	393.17	
2017-18	56.43	67.83	68.19	67.65	327.50	494.73	485.92	
2018-19	69.88	75.58	82.51	82.24	420.93	573.72	526.00	
2019-20	60.47	66.94	71.78	70.56	321.19	471.08	453.75	
2020-21	44.82	47.68	47.86	43.60	259.30	378.93	415.17	
<b>2021-22</b>	<b>79.18</b>	<b>89.66</b>	<b>88.45</b>	<b>85.31</b>	<b>445.25</b>	<b>698.25</b>	<b>692.67</b>	
% Growth in 2021-22 over 2020-21	76.66	88.05	84.81	95.67	71.71	84.27	66.84	

**Notes:** FOB: Freight on Board

1. Price of kerosene, Diesel, Naphtha & FO is for Arab Gulf Market. LPG Price is Monthly Saudi Aramco CP based on 60:40 butane / propane ratio.
2. From 01.04.2017, the Diesel price is for 0.005% Sulphur, From 02.01.2013 the Diesel price in Arab Gulf Market is for 0.05% Sulphur, and for earlier years the price is for 0.5% Sulphur. Price of Petrol is 92 RON unleaded for Singapore market.
3. FOB prices does not include Trade premium/discounts.

Source: IOCL & PPAC

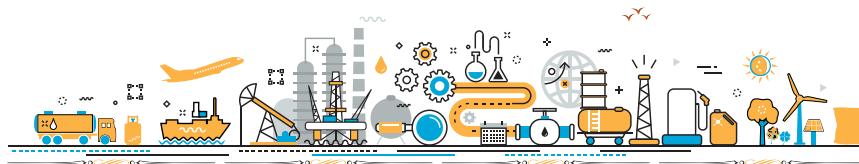


#### IV.6: Rates of Dealers' Commission for MS, HSD and LPG in India

Effective	MS	HSD	Effective	LPG (Packed Domestic)		
				14.2 Kg	5Kg	Additional commission for sale at market determined price
				(₹/Kilolitre)	(₹/Cylinder)	( /14.2 KG cyl.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
01.04.2017	₹ 2020.38/KL + 0.859% of Product Billable Price	₹ 1502.13/KL + 0.267% of Product Billable Price	01.04.2017	47.48	23.74	0.40
			01.05.2017	47.48	23.74	0.27
			01.06.2017	47.48	23.74	0.15
01.07.2017	₹ 2025.97/KL + 0.859% of Product Billable Price	₹ 1506.81/KL + 0.267% of Product Billable Price	01.07.2017	47.48	23.74	0.13
01.08.2017	₹ 2674.74/KL + 0.859% of Product Billable Price	₹ 2031.38/KL + 0.257% of Product Billable Price	01.08.2017	47.48	23.74	0.06
			01.09.2017	47.48	23.74	0.16
			30.09.2017	48.89	24.20	0.16
			01.10.2017	48.89	24.20	0.23
			01.11.2017	48.89	24.20	0.36
			01.01.2018	48.89	24.20	0.35
			01.02.2018	48.89	24.20	0.34
			01.03.2018	48.89	24.20	0.28
			01.04.2018	48.89	24.20	0.23
			01.06.2018	48.89	24.20	0.29
			01.07.2018	48.89	24.20	0.36
			01.08.2018	48.89	24.20	0.42
			01.09.2018	48.89	24.20	0.46
			01.10.2018	48.89	24.20	0.54
			01.11.2018	48.89	24.20	0.63
			07.11.2018	50.58	25.29	0.63
			01.12.2018	50.58	25.29	0.45
			01.01.2019	50.58	25.29	0.28
			01.02.2019	50.58	25.29	0.24
19.02.2019	₹ 2637.80/KL + 0.859% of Product Billable Price	₹ 2000.60/KL + 0.257% of Product Billable Price	01.03.2019	50.58	25.29	0.30
01.04.2019	₹ 2637.80/KL + 0.859% of Product Billable Price	₹ 2000.60/KL + 0.257% of Product Billable Price	01.04.2019	50.58	25.29	0.31
			01.06.2019	50.58	25.29	0.35
			01.07.2019	50.58	25.29	0.21
			01.08.2019	56.20	28.10	-
			01.09.2019	59.02	29.51	-
			01.10.2019	61.84	30.92	-
01.04.2020 to 01.04.2022	₹ 2637.80/KL + 0.859% of Product Billable Price	₹ 2000.60/KL + 0.257% of Product Billable Price	01.04.2020	61.84	30.92	-

Note:- In addition to above, for Petrol and Diesel effective 1<sup>st</sup> August 2017, slab based incentive is also given to eligible dealers through credit notes, The applicable average slab based incentive effective 01.04.2022 is ₹ 351.48/KL for both petrol and diesel

Source: PPAC



#### IV.7: Subsidy Provided by the Government & Oil Companies on Petroleum Products

(in ₹ crore)

Particulars	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Under recovery on Diesel	-	-	-	-	-	-
Under recovery on PDS Kerosene	7,595	4,672	5,950	1,833	-	-
Under recovery on Domestic LPG	-	-	-	-	-	-
<b>Total Under-recoveries (A)</b>	<b>7,595</b>	<b>4,672</b>	<b>5,950</b>	<b>1,833</b>	<b>-</b>	<b>-</b>
DBTL subsidy	12,052	20,880	31,447	22,635	3,559	-
Permanent Advance <sup>1</sup>	853	-	-	-	-	-
Project Management Expenditure <sup>1</sup>	-	25	92	91	99	242
<b>Total DBTL related subsidies (B)</b>	<b>12,905</b>	<b>20,905</b>	<b>31,539</b>	<b>22,726</b>	<b>3,658</b>	<b>242</b>
PMUY	2,999	2,496	5,636	1,403	(34)	-
PME & IEC under PMUY <sup>1</sup>	-	63	34	43	110	-
<b>Total PMUY related subsidy (C)</b>	<b>2,999</b>	<b>2,559</b>	<b>5,670</b>	<b>1,446</b>	<b>76</b>	<b>-</b>
<b>DBTK subsidy (D)<sup>2</sup></b>	<b>11</b>	<b>113</b>	<b>98</b>	<b>42</b>	<b>-</b>	<b>-</b>
PDS Kerosene and Domestic LPG Subsidy Scheme, 2002 <sup>1</sup>	SKO4 LPG4	860 2,433	- -	- -	- -	- -
Freight Subsidy (For Far- Flung Areas) Scheme, 2002 <sup>1</sup>	SKO LPG	- -	- -	- -	- -	- -
<b>Natural Gas Subsidy for North East</b>	<b>498</b>	<b>435</b>	<b>557</b>	<b>574</b>	<b>336</b>	<b>405</b>
<b>Other Subsidies (E)</b>	<b>3,791</b>	<b>435</b>	<b>557</b>	<b>574</b>	<b>336</b>	<b>405</b>
<b>PMGKY 3 (F)</b>	-	-	-	-	<b>8,162</b>	-
<b>Total Subsidy/ Under-recovery on Petroleum Products &amp; Natural Gas (A+B+C+D+E+F)</b>	<b>27,300</b>	<b>28,684</b>	<b>43,814</b>	<b>26,620</b>	<b>12,231</b>	<b>647</b>
<b>Compensation</b>						
By the Government	27,300	28,684	43,814	26,620	12,231	647
Upstream/Midstream Oil/Gas Companies	-	-	-	-	-	-
Borne by the OMCs	-	-	-	-	-	-

Note: on payment basis.

Source: PPAC



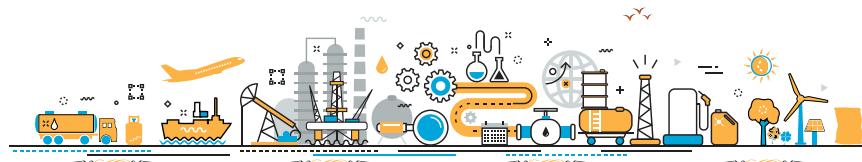
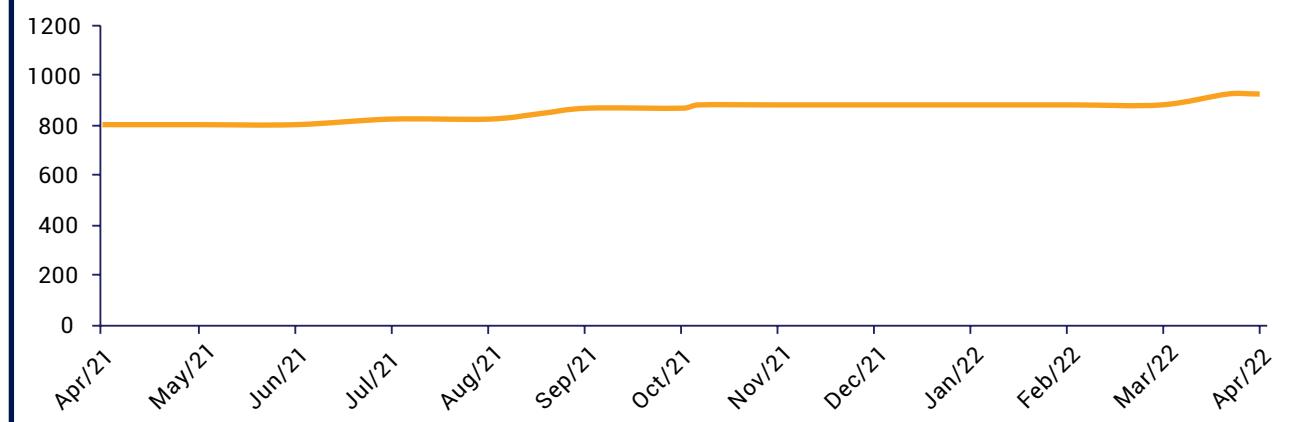
## IV.8: Price Build-up and Retail Selling Prices of Liquefied Petroleum Gas in Metropolitan Cities in India

Elements / State (1)	Delhi (2)	Kolkata (3)	Mumbai (4)	Chennai (5)
<b>Trends in Retail Selling Prices of Liquefied Petroleum Gas (₹/14.2 Kg Cylinder)</b>				
01.04.2016	419.13	421.13	455.99	406.63
01.04.2017	440.90	442.90	476.50	428.40
01.04.2018	491.35	494.33	489.04	479.44
01.04.2019	706.50	732.50	678.50	722.00
01.04.2020	744.00	774.50	714.50	761.50
01.04.2021	809.00	835.50	809.00	825.00
<b>01.04.2022</b>	<b>949.50</b>	<b>976.00</b>	<b>949.50</b>	<b>965.50</b>
<b>Price Build-up of Retail Selling Prices of Liquefied Petroleum Gas (₹/14.2 Kg Cylinder) as on 01.04.2022</b>				
Market Determined Price (as per PAHAL Scheme)	842.45	867.68	842.45	857.68
Add : GST (including GST on Distributor Commission)	45.21	46.48	45.21	45.98
Add : Distributor Commission	61.84	61.84	61.84	61.84
<b>Retail Selling Price</b>	<b>949.50</b>	<b>976.00</b>	<b>949.50</b>	<b>965.50</b>
Retail Selling Price (Rounded)	949.50	976.00	949.50	965.50
Less: Cash Compensation to Consumer under DBTL	0.00	19.57	0.00	24.95
<b>Effective Cost to Consumer after Subsidy</b>	<b>949.50</b>	<b>956.43</b>	<b>949.50</b>	<b>940.55</b>

**Note:** Effective 22<sup>nd</sup> May 2022, Government vide its notification dated 21<sup>st</sup> May 2022 has increased the cash compensation released to PMUY beneficiaries by ₹ 200 per 14.2 Kg Cylinder

Source: IOCL

**Figure IV.4: Trends in Retail Selling Prices of LPG (₹/14.2 Kg Cylinder) in Delhi**

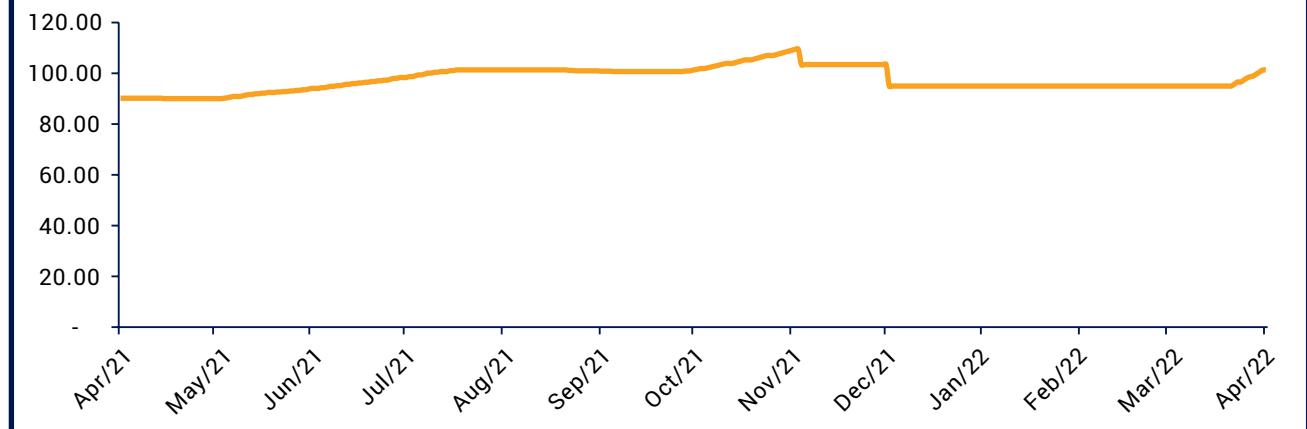


#### IV.9: Price Build-up and Retail Selling Prices of Motor Spirit in Metropolitan Cities in India

Elements / State	Delhi	Kolkata	Mumbai	Chennai
(1)	(2)	(3)	(4)	(5)
<b>Trends in Retail Selling Prices of Motor Spirit (₹/Litre)</b>				
01.04.2016	59.68	63.76	65.79	59.13
01.04.2017	66.29	68.97	72.66	69.28
01.04.2018	73.73	76.44	81.59	76.48
01.04.2019	72.86	74.88	78.43	75.62
01.04.2020	69.59	73.30	76.31	72.28
01.04.2021	90.56	90.77	96.98	92.58
<b>01.04.2022</b>	<b>101.81</b>	<b>111.35</b>	<b>116.72</b>	<b>107.45</b>
<b>Price Build-up of Retail Selling Prices of Motor Spirit (₹/Litre) as on 01.04.2022</b>				
Base Price	53.34	53.34	53.34	53.34
Freight etc	0.20	4.63	0.15	0.18
Price Charged to Dealers (excluding Excise Duty and VAT)	53.54	57.97	53.49	53.52
<b>Add : Excise Duty</b>	<b>27.90</b>	<b>27.90</b>	<b>27.90</b>	<b>27.90</b>
Add : Dealer Commission (Average)	3.83	3.92	3.96	3.88
Add : VAT (including VAT on Dealer Commission)	16.54	21.56	31.37	22.15
<b>Retail Selling Price (₹/Litre)</b>	<b>101.81</b>	<b>111.35</b>	<b>116.72</b>	<b>107.45</b>

Source: IOCL

**Figure IV.5: Trends in Retail Selling Prices of Motor Spirit (₹/Litre) in Delhi**

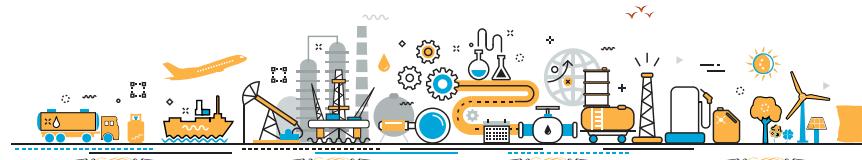
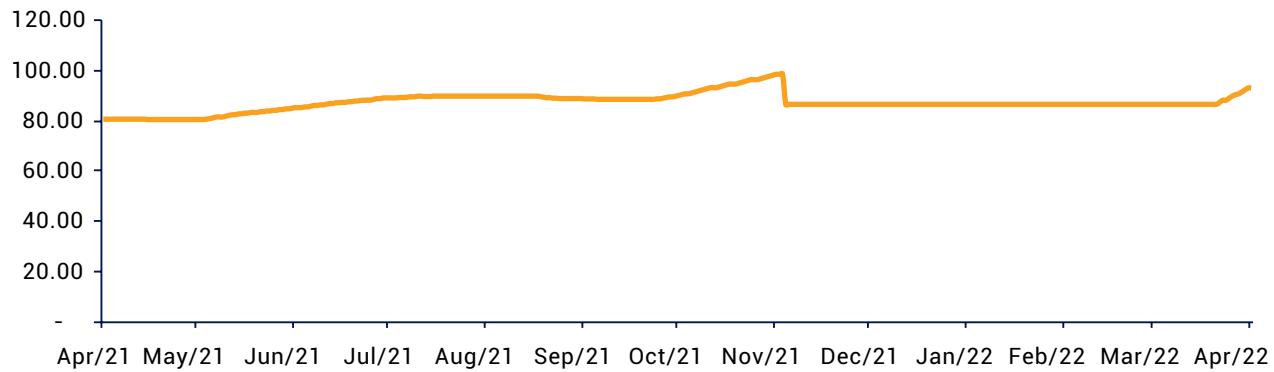


#### IV.10: Price Build-up and Retail Selling Prices of High Speed Diesel Oil in Metropolitan Cities in India

Elements / State (1)	Delhi (2)	Kolkata (3)	Mumbai (4)	Chennai (5)
<b>Trends in Retail Selling Prices of High Speed Diesel Oil (₹/Litre)</b>				
01.04.2016	48.33	50.75	55.06	49.09
01.04.2017	55.61	57.86	61.27	58.82
01.04.2018	64.58	67.27	68.77	68.12
01.04.2019	66.09	67.83	69.17	69.78
01.04.2020	62.29	65.62	66.21	65.71
01.04.2021	80.87	83.75	87.96	85.88
<b>01.04.2022</b>	<b>93.07</b>	<b>96.22</b>	<b>100.94</b>	<b>97.52</b>
<b>Price Build-up of Retail Selling Prices of High Speed Diesel Oil (₹/Litre) as on 01.04.2022</b>				
Base Price	54.87	54.87	54.87	54.87
Freight etc	0.22	3.31	0.14	0.14
Price Charged to Dealers (excluding Excise Duty and VAT)	55.09	58.18	55.01	55.01
<b>Add : Excise Duty</b>	<b>21.80</b>	<b>21.80</b>	<b>21.80</b>	<b>21.80</b>
Add : Dealer Commission (Average)	2.58	2.59	2.61	2.60
Add : VAT (including VAT on Dealer Commission)	13.60	13.65	21.52	18.11
<b>Retail Selling Price (₹/Litre)</b>	<b>93.07</b>	<b>96.22</b>	<b>100.94</b>	<b>97.52</b>

Source: IOCL

**Figure IV.6: Trends in Retail Selling Prices of High Speed Diesel Oil (₹/Litre) in Delhi**



#### IV.11: Price Build-up and Retail Selling Prices of Superior Kerosene Oil in Metropolitan Cities in India

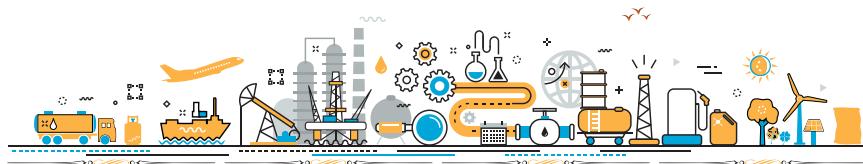
Elements / State	Delhi	Kolkata	Mumbai	Chennai
(1)	(2)	(3)	(4)	(5)
<b>Trends in Retail Selling Prices of Superior Kerosene Oil (₹/Litre)</b>				
01.04.2016	14.96	16.00	15.42	13.70
01.04.2017	-	20.19	19.03	13.60
01.04.2018	-	26.30	23.96	13.60
01.04.2019	-	32.79	30.87	13.60
01.04.2020	-	27.85	25.72	13.60
01.04.2021	-	39.18	36.78	15.00
<b>01.04.2022</b>	<b>-</b>	<b>79.62</b>	<b>76.36</b>	<b>15.00</b>
<b>Price Build-up of Retail Selling Prices of Superior Kerosene Oil (₹/Litre) as on 01.04.2022</b>				
Ex-Storage Price		70,048.00	70,048.00	70,048.00
Siding Charge		19.37	-	-
Ass. Value		70,067.37	70,048.00	70,048.00
Other State Levies/ State Govt Subsidy		-	-	(57,689.00)
Sub Total		70,067.37	70,048.00	12,359.00
GST %		5.00	5.00	5.00
Sales/GST Tax Amount		3,503.37	3,502.40	617.95
Sub Total		73,570.74	73,550.40	12,976.95
Ex-Mi/ Depot Price/KL-Oil Co.		73,570.74	73,550.40	12,976.95
Ex-Mi/ Depot Price/KL-St. Govt.		73,570.74	73,550.40	12,976.95
Wholesales Margin		1,341.88	1,341.88	1,341.88
Transport Charges		816.60	481.25	216.80
Toll		-	70.00	-
Handling Charges		750.67	99.00	-
Rounding Up		-	8.68	-
GST On Wholesale Margin			100.04	67.09
Wholesales Price/KL		76,479.89	75,651.25	14,602.72
Retailer Margin		1,048.30	675.00	360.00
Handling Charges		1,709.53	-	-
Retailer Transportation		386.60	-	40.00
GST On Retailer Margin			33.75	18.00
Retail Selling Price/KL		79,624.32	76,360.00	15,020.72
<b>Retail Selling Price (₹/Litre)</b>		<b>79.62</b>	<b>76.36</b>	<b>15.00</b>

**Note:**

- (a) Selling price for Superior Kerosene Oil is for Public Distribution System (PDS)
- (b) Delhi is declared as Kerosene free city, hence no PDS SKO rate declared.

Source: IOCL

Kerosene free state

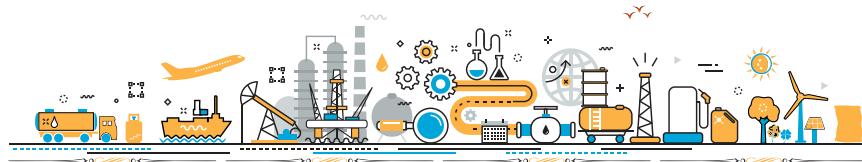
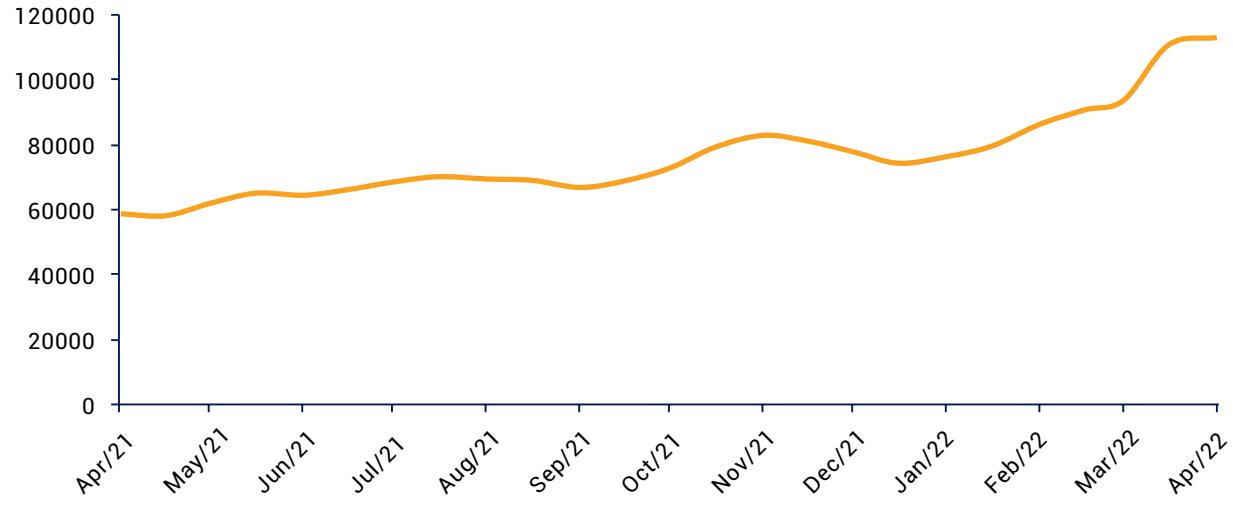


#### IV.12: Price Build-up and Retail Selling Prices of ATF Domestic prices in Metropolitan Cities in India

Elements / State (1)	Delhi (2)	Kolkata (3)	Mumbai (4)	Chennai (5)
<b>Trends in Retail Selling Prices of ATF Domestic prices (₹/KL)</b>				
01.04.2016	42,157.01	47094.08	41768.99	44821.08
01.04.2017	51,481.85	56267.50	50895.90	54323.54
01.04.2018	61,449.97	65985.36	61024.61	64615.19
01.04.2019	63,472.22	69242.21	63447.54	64713.18
01.04.2020	35,490.12	40902.59	35068.56	36923.17
01.04.2021	58,374.16	62732.69	56479.02	59541.72
<b>01.04.2022</b>	<b>112,924.83</b>	<b>117,353.71</b>	<b>111,690.61</b>	<b>116,583.70</b>
<b>Price Build-up of Retail Selling Prices of ATF Domestic prices (₹/KL) as on 01.04.2022</b>				
Base Price	74,480.00	75660.00	74050.00	74380.00
Freight & Cost etc	6,907.27	8919.25	6447.74	7038.88
Excise Duty and Cess	8,952.60	9303.72	8854.75	8956.08
State Taxes & Levies	22,584.97	23470.74	22338.12	26208.74
<b>Retail Selling Price (₹/KL)</b>	<b>112,924.83</b>	<b>117,353.71</b>	<b>111,690.61</b>	<b>116,583.70</b>

Source: IOCL

**Figure IV.7: Trends in Retail Selling Prices of ATF Domestic prices (₹/KL) in Delhi**



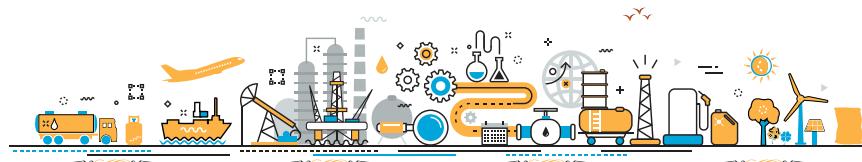
#### IV.13: Central Excise and Customs Tariff (as on 01.04.2022)

Particulars	Customs			Central excise			
	Basic Customs Duty	Additional Customs Duty (CVD)	Additional Customs Duty	Basic Excise Duty	Special Additional Excise Duty	Agriculture Infrastructure & Development Cess (AIDC)	Additional Excise Duty (Road and infrastructure Cess)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Petroleum Products on which GST is not levied (Non GST Products)</b>							
Crude Petroleum	₹ 1/MT + ₹ 50/ MT as NCCD	₹ 1/MT	-	₹ 1/MT+ Cess @ 20% + ₹ 50/ MT as NCCD	-	-	-
Petrol	2.50%	₹ 1.40/ltr. + ₹ 11.00/ltr SAD+ ₹ 2.50/ ltr AIDC	₹ 13.00/ ltr.	₹ 1.40/ltr	₹ 11.00/ ltr	₹ 2.50/ltr	₹ 13.00/ltr.
Petrol (branded)	2.50%	₹ 2.60/ltr. + ₹ 11.00/ltr SAD+ ₹ 2.50/ ltr AIDC	₹ 13.00/ ltr.	₹ 2.60/ltr	₹ 11.00/ ltr	₹ 2.50/ltr	₹ 13.00/ltr.
High Speed Diesel	2.50%	₹ 1.80/ltr. + ₹ 8.00/ltr SAD+ ₹ 4.00/ ltr AIDC	₹ 8.00/ltr.	₹ 1.80/ltr	₹ 8.00/ltr	₹ 4.00/ltr	₹ 8.00/ltr.
High Speed Diesel (branded)	2.50%	₹ 4.20/ltr. + ₹ 8.00/ltr SAD + ₹ 4.00/ltr AIDC	₹ 8.00/ltr.	₹ 4.20/Ltr	₹ 8.00/ltr	₹ 4.00/ltr	₹ 8.00/ltr.
Aviation Turbine Fuel 2	5.00%	11%	-	11%	-	-	-
Liquefied Natural Gas	2.50%	Nil	-	Nil	-	-	-
Natural Gas [Gaseous state]	5.00%	Nil	-	Nil	-	-	-
Natural Gas [Compressed]	5.00%	14.00%	-	14.0%	-	-	-
<b>Petroleum Products on which GST is levied</b>							
Particulars		Customs			CVD (in lieu of IGST)		
		Basic Customs Duty		CVD (in lieu of IGST)			
LPG		Domestic <sup>3</sup>		Nil		5.00%	
		Non - Domestic		5.00%		18.00%	
Kerosene		PDS		5.00%		5.00%	
		Non PDS		5.00%		18.00%	
Naphtha		Fertilizer		Nil		18.00%	
		Non- Fertilizer		2.50%		18.00%	
Butane / Propane		Domestic		Nil		5.00%	
		Non-Domestic		2.50%		18.00%	
Bitumen & Asphalt				5.00%		18.00%	
Furnace Oil		Fertilizer		Nil		18.00%	
		Non- Fertilizer		2.50%		18.00%	
Light Diesel Oil				5.00%		18.00%	
Low Sulphur Heavy Stock/ HPS & other Res.		Fertilizer		Nil		18.00%	
		Non- Fertilizer		5.00%		18.00%	
Lube oil/greases				5.00%		18.00%	
Petroleum Coke				10.00%		18.00%	
Petroleum Jelly				5.00%		18.00%	
Transformer Oil				5.00%		18.00%	
Waxes all types				5.00%		18.00%	

**NOTE:**

- In addition to the above , 10% Social Welfare Surcharge is also applicable on the total duties of Customs (excluding CVD in lieu of IGST).
- In case of ATF , Basic Excise Duty /Additional Customs Duty (CVD) is 2% in place of 11%, for supply to schedule commuter airlines(SCA) from the regional connectivity scheme (RCS)airports.
- Basic Customs duty is Nil for import of domestic LPG sold to household consumers (including NDEC) by PSU OMCs. Basic Customs duty rate is 5% for other importers of domestic LPG.

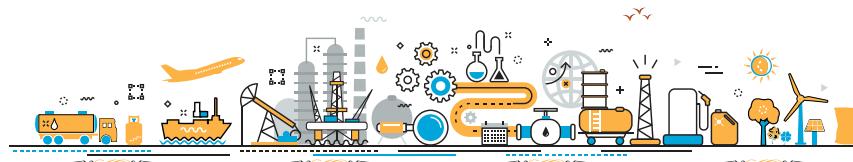
Source: PPAC



## IV.14: Sales Tax Rates Applicable on Crude Oil, Natural Gas and Select Petroleum Products (as on 01.04.2022)

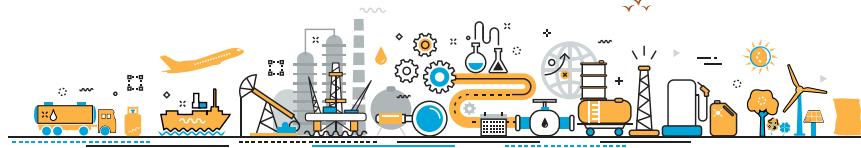
State / U.T	Crude Oil	Natural Gas	MS	HSD	ATF Domestic
(1)	(2)	(3)	(4)	(5)	(6)
Andaman & Nicobar Islands	6.00%	10.00%	1.00%	1% (HSD for Ship @ 8%)	1.00%
Andhra Pradesh	5.00%	24.50%	31% + ₹ 4 per Litre + ₹ 1 Per Litre Road Development Cess	22.25% + ₹ 4 per Litre + ₹ 1 Per Litre Road Development Cess - 0.5% VAT on HSD supplied to Foreign going Vessel	1.00%
Arunachal Pradesh	4.00%	20.00%	14.50%	7.00%	20.00%
Assam	5.00%	14.50%	32.66% or ₹ 22.63/Litr, Whichever is higher. Rebate of ₹ 5/per litre & variable rebate max to ₹ 5.3 per litre	23.66% or ₹ 17.45/Litr, Whichever is higher. Rebate of ₹ 5/per litre & Variable Rebate max to ₹ 5.1 per litre	23.65%
Bihar	6.00%	20.00%	23.58% or ₹ 16.65 per litre, Which ever is higher. Plus 30% Surcharge	16.37% or ₹ 12.33 per litre, Which ever is higher. plus 30% Surcharge	29.00% (ATF (Sch.Airlines):- 5%
Chandigarh	12.50%	5.00%	15.24% or ₹ 12.42 per liter whichever is higher + (MST ₹ 10/-per KL)	6.66% or ₹ 5.07 per liter whichever is higher + (MST ₹ 10/- per KL)	20.00% (MST:- ₹ 10/- per KL)
Chhattisgarh	5.00%	25.00%	24% + ₹ 2 per ltr	23% + ₹ 1 per ltr	4.00%
Dadra & Nagar Haveli and Daman & Diu	20.00%	20.00%	12.75%	13.50%	3.00%
Delhi	5.00%	0.00%	19.40%	16.75% + ₹ 250 per KL Air Ambience Cess	25.00%
Goa	20%	Goa Green Cess- 0.50% on Turnover excluding VAT	20% (Sold by PSU OMC to Auth RO), Other 20% Goa Green Cess - 0.50% on Turnover excluding VAT	17% (Sold by PSU OMC to Auth RO), Others 17% Goa Green Cess - 0.50% on Turnover excluding VAT	18% , Goa Green Cess- 0.50% on Turnover excluding VAT
Gujarat	5.00%	15.00%	13.70%, Motor Spirit Cess-4% on Turnover	14.90%, Motor Spirit Cess-4% on Turnover	ATF duty paid:-5%
Haryana	12.50%, Additional Tax on VAT 5%	PNG for domestic use 6%, Additional Tax on VAT 5% otherwise 12.50%, Additional Tax on VAT 5%	18.20% or Fixed rate of ₹ 14.50 per litre, whichever is greater + 5% surcharge on tax	16% or Fixed rate of ₹ 11.86 per litre, whichever is greater + 5% surcharge on tax	20%, Additional Tax on VAT 5%
Himachal Pradesh	13.75%	4.00%	17.5% or ₹ 13.5 per liter which ever is greater	6% or ₹ 4.40 per liter which ever is greater	17.5% or ₹13.5 per liter which ever is greater for defence and 2% for scheduled Airlines & non scheduled airlines
Jammu & Kashmir	14.50%	21.00%	MST 24.00%, Rebate ₹ 4.5 per liter, Motor Spirit CESS ₹ 2/- PER LTR, ₹ 50 per kl on MS leaving from Jammu depot only	MST 16.00%, Rebate of ₹ 6.5 per liter, Motor Spirit CESS ₹ 1/- per ltr, ₹ 50 per kl on MS leaving from Jammu depot only	MST 1%
Jharkhand	5.00%	14.00%	22% on the sale price or ₹ 17.00 per litre, which ever is higher + Road Development Cess of ₹ 1.00 per Ltr.	22% on the sale price or ₹ 12.50 per litre, which ever is higher + Road Development Cess of ₹ 1.00 per Ltr.	20% (Sch.Airlines):-5.00%
Karnataka	0.00%	14.5%, PNG IS 5.5%	25.92%	14.34%, 4% for captive power, 1% for foreign going vessel, Exempt up to 1,12,500 KL towards Supply to Fishermen for the period 01.07.21 to 31.03.22	18.00%

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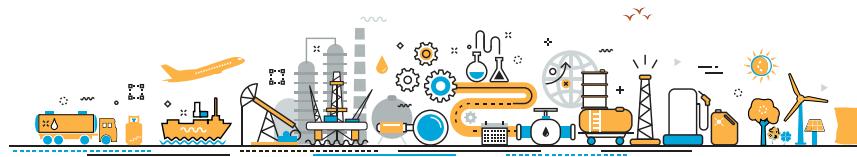
State / U.T	Crude Oil	Natural Gas	MS	HSD	ATF Domestic
(1)	(2)	(3)	(4)	(5)	(6)
Kerala	5.00%	5.00%	30.08%, Additional Sales Tax ₹ 1/- per litre, SSC 1% on total tax	22.76%, Additional Sales Tax ₹ 1/- per litre, SSC 1% on total tax	5%, cess 1% on tax, Tiruvananthapuram AFS; Sales Tax 1% and Cess @ 1% on Sales Tax (w.e.f 01.04.2020 for 10 years), ATF to domestic airlines Ex-Nedumbassery AFS and Calicut AFS; Sales Tax 1% and Cess @ 1% effective from 14.08.2020 for 10 years, Ex-Kannur AFS is with Sales tax 1% + 1% cess (w.e.f 03.11.2018 for 10 years)
Ladakh	14.50%	21.00%	MST 15.00%, Rebate ₹ 2.5 per liter, Motor Spirit CESS ₹ 5/- per ltr.	MST 6.00%, Rebate of ₹ 0.5 per liter, Motor Spirit Cess ₹ 1/- per ltr.	MST 1 % for Civil Flights, 26.25 % for Defence and Others
Madhya Pradesh	5.00%	14.00%	29% + ₹ 2.50 per ltr Additional Tax + Cess 1% over Turnover inc VAT & Addl tax	19% + ₹ 1.50 per ltr Additional Tax + Cess 1% over Turnover inc VAT & Addl tax	4.00%
Maharashtra	5.00%	3.00%	Within Municipal Limits of Thane, Mumbai, Navi Mumbai, Aurangabad, 26.00% + ₹ 10.12/ltr, Others 25% + ₹ 10.12/ltr	Within Municipal Limits of Thane, Mumbai, Navi Mumbai, Aurangabad, 24.00% + ₹ 3/ltr, Others 21% + ₹ 3/ltr	ATF - duty paid Mumbai Pune, Raigad:-25.00%, ATF - duty paid, except Mumbai Pune, Raigad 5.00%
Manipur	5.00%	13.50%	25.00%	13.50%	20.00%
Meghalaya	4.00%	14.50%	13.5% or ₹ 11 whichever is higher + ₹ 0.1/ltr surcharge on tax payable at ad valorem rate only	5% or ₹ 4 whichever is higher + ₹ 0.1/ltr surcharge on tax payable at ad valorem rate only	EXEMPT
Mizoram	5.00%	13.50%	16.35%	5.23%	10.00%
Nagaland	5.00%, surcharge on tax 5% (16.07.15)	5.00%, surcharge on tax 5%	25% or ₹ 16.04 per litre whichever is higher Surcharge on tax 5% . Road Maintenance Cess ₹ 2 /Ltr. Variable Rebate max to ₹ 5.5 per litre	16.5% or ₹ 10.51 per litre whichever is higher Surcharge on tax 5%. Road Maintenance Cess ₹ 2 /Ltr. Variable Rebate max to ₹ 5.1 per litre effective 04.11.2021	1%, Surcharge on tax 5%
Odisha	5.00%	15%, 5% when used for Industrial Purpose, piped or Domestic use	28.00%	24.00%	5.00%
Puducherry	14.50%	14.50%	Puducherry & Karaikal- 14.55% Maher- Yanam- 13.32%, Yanam- 15.26%	Puducherry & Karaikal- 8.65%, Maher- Yanam- 8.91%	14.50%
Punjab	13% Surcharge on Tax 10%	3%, Surcharge on Tax 10%	13.77% plus surcharge on tax 10% or ₹12.5 per ltr whichever is higher, infrastructure Development Cess ₹ 2.05 per ltr, special Infrastructure Development fee 25 paise per ltr, 10 paise per ltr additional cess on sale of Urban Area	9.92 % plus surcharge on tax 10% or ₹12.5 per ltr whichever is higher, infrastructure Development Cess ₹ 1.05 per ltr, Special Infrastructure Development Fee 25 paise Ltr, 10 Paise per ltr additional cess on sale of Urban Area	A) 4.00% + 10 % SURCHARGE ON TAX - when sold at the MOHALI & AMRITSAR Airport in Punjab to Scheduled & Non-Scheduled Airlines carrying passengers, B) For others residual Rate is @13% + surcharge on tax 10.00%,
Rajasthan	5.00%	10% w.e.f 10.07.2019	31.04%, Road Development Cess ₹ 1500/- per KL	19.30%, Road Development Cess ₹ 1750/- per KL	A) 26%, B) 5.50% when airlines maintain hub or connect two cities of Rajasthan C) 10.00% on Sale of ATF to any airline for use in aircraft which connects any city of Rajasthan (other than Jaipur) by a scheduled commercial flight
Sikkim	4.50%	4.50%	25% to other & 20% for retailer in sikkim, Infrastructure Development Cess ₹ 3000 per KL	15% to other & 10% for retailer in sikkim , Infrastructure Development Cess ₹ 2500 per KL	1.00%
Tamil Nadu	5.00%	5.00%	13% + ₹ 11.52 per litre	11% + ₹ 9.62 per litre	29.00%
Telangana	5.00%	14.50%	35.20%	27.00%	1.00%

Contd. ...



State / U.T	Crude Oil	Natural Gas	MS	HSD	ATF Domestic
(1)	(2)	(3)	(4)	(5)	(6)
Tripura	5.00%	4% & 19.5% Cess on Turnover (Taxable Value+VAT)	17.50% & 3% Road Development Cess on Turnover (Taxable Value +VAT)	10.00% & 3% Road Development Cess on Turnover (Taxable Value+VAT)	1.00%
Uttar Pradesh	4.00%	Sold to industrial unit for use in process of chemical fertilizer- 14.5% and for greater other cases - 10%	19.36% or ₹ 14.85 per litre whichever is greater"	17.08% or ₹ 10.41 per litre whichever is greater"	1.00%
Uttarakhand	5.00%	20%	16.97% or ₹ 13.14 per liter whichever is greater	17.15% or ₹ 10.41 per liter whichever is greater	2.00%
West Bengal	5.00%	25% or ₹ 13.12/Ltr whichever is higher, Infrastructure Development Cess ₹1000 per Kl, Additional Tax on tax 20%, Rebate Available ₹ 1000/Kl-Extended upto 30.06.2022 (Nil rebate for Inter State Sales)	17% or ₹ 7.70/Lite whichever is higher, Infrastructure Development Cess ₹1000 per Kl,Additional Tax on tax 20%, Rebate Available ₹ 1000/Kl Extended upto 30.06.2022 (Nil rebate for Inter State Sales)	25.00% + 20% Add. Tax on tax. For Bagdogra AFS- nil (No tax). 0.84% + 20% Add. Tax on Tax for Flights under RCS	

Source: IOCL



#### IV.15: GST Rates applicable on Select Petroleum Products (as on 01.04.2022)

Product	For intra-state supply		For inter-state supply
	Central Tax	State / UT tax	Integrated Tax
Naphtha	9.00%	9.00%	18.00%
Superior Kerosene Oil - PDS	2.50%	2.50%	5.00%
Superior Kerosene Oil - Others	9.00%	9.00%	18.00%
LPG - Domestic	2.50%	2.50%	5.00%
LPG - Non-Domestic	9.00%	9.00%	18.00%
Fuel Oil	9.00%	9.00%	18.00%
IFO 180 CST & IFO 380 CST <sup>1</sup>	2.50%	2.50%	5.00%
Low Sulphur Heavy Stock	9.00%	9.00%	18.00%
Light Diesel Oil	9.00%	9.00%	18.00%
Lubes/Greases	9.00%	9.00%	18.00%
Mineral Turpentine Oil	9.00%	9.00%	18.00%
Sulphur <sup>2</sup>	2.50%	2.50%	5.00%
Asphalt / Bitumen	9.00%	9.00%	18.00%

IFO: Intermediate Fuel Oil (For use in Bunker fuel)

**Note:**

1. Bunker fuel for use in ships or vessels- (i) IFO 180 CST, (ii) IFO 380 CST, (iii) Marine Fuel 0.5% (Fo).
2. GST Rate for Sulphur is 5%, Relevant entry abstract is as under—"Sulphur of all kinds, other than sublimed sulphur, precipitated sulphur and colloidal sulphur"

Source: Indian Oil Corporation Ltd.



**IV.16: Contribution of Petroleum Sector to exchequer**

(Value in ₹ Crore)

Particulars	2016-17 (1)	2017-18 (2)	2018-19 (3)	2019-20 (4)	2020-21 (5)	2021-22 (P) (6)
<b>1. Contribution to Central Exchequer</b>						
<b>A. Tax/ Duties on Crude oil &amp; Petroleum products</b>						
Cess on Crude Oil	13,081.77	14,514.19	17,740.83	14,788.62	10,676.31	19,213.62
Royalty on Crude Oil / Gas	4,649.30	4,746.66	6,061.88	5,602.02	3,589.83	5,638.72
Customs Duty	8,798.53	11,171.07	16,035.33	22,927.17	13,514.17	11,423.44
NCCD on Crude Oil	926.38	968.41	1,180.00	1,130.22	1,016.43	1,120.94
Excise Duty	242,690.52	229,715.87	214,369.40	223,057.33	372,969.96	363,305.01
Service tax	2,955.88	1,228.18	339.73	16.88	0.25	0.00
IGST		9,211.18	16,478.77	13,098.62	11,594.12	19,726.27
CGST		4,487.74	7,436.86	6,831.11	6,157.66	10,843.27
Others	122.17	125.17	203.87	88.30	365.23	337.63
<b>Sub Total (A)</b>	<b>273,224.55</b>	<b>276,168.47</b>	<b>279,846.67</b>	<b>287,540.27</b>	<b>419,883.96</b>	<b>431,608.90</b>
<b>B. Dividend to Government/ Income tax etc.</b>						
Corporate/ Income Tax	32,511.18	33,598.70	38,560.65	23,133.56	21,908.93	29,219.33
Dividend income to Central Govt.	17,500.79	14,575.30	15,524.88	12,270.07	10,392.67	22,612.21
Dividend distribution tax	6,196.61	5,981.18	6,415.25	5,461.86	0.00	0.00
Profit Petroleum on exploration of Oil/ Gas	5,741.80	5,839.13	7,693.61	5,909.07	2,883.47	8,862.09
Sub Total (B)	<b>61,950.38</b>	<b>59,994.31</b>	<b>68,194.39</b>	<b>46,774.56</b>	<b>35,185.07</b>	<b>60,693.63</b>
<b>Total Contribution to Central Exchequer (A+B)</b>	<b>335,174.93</b>	<b>336,162.78</b>	<b>348,041.06</b>	<b>334,314.83</b>	<b>455,069.03</b>	<b>492,302.53</b>
<b>2. Contribution to State Exchequer</b>						
<b>A. Tax/ Duties on Crude &amp; Petroleum products</b>						
Royalty on Crude Oil / Gas	11,942.24	9,370.44	13,370.63	11,881.62	7,178.61	13,525.53
Sales Tax/ VAT on POL Products	166,414.37	185,849.83	201,264.80	200,492.71	202,937.08	256,247.95
SGST/UTGST		4,973.67	7,961.41	7,345.33	6,120.90	11,016.88
Octroi, Duties Incl. Electricity Duty	3,524.11	1,662.66	685.17	715.94	705.89	826.81
Entry Tax / Others	7,705.96	4,744.87	4,114.24	405.10	328.70	354.48
<b>Sub Total (A)</b>	<b>189,586.68</b>	<b>206,601.47</b>	<b>227,396.25</b>	<b>220,840.70</b>	<b>217,271.18</b>	<b>281,971.65</b>
<b>B. Dividend to Government/ Direct tax etc.</b>						
Dividend Income to State Govt.	183.15	261.59	194.53	214.88	378.55	150.84
Sub Total (B)	<b>183.15</b>	<b>261.59</b>	<b>194.53</b>	<b>214.88</b>	<b>378.55</b>	<b>150.84</b>
Total Contribution to State Exchequer (A+B)	<b>189,769.83</b>	<b>206,863.06</b>	<b>227,590.78</b>	<b>221,055.58</b>	<b>217,649.73</b>	<b>282,122.49</b>
<b>Total Contribution of Petroleum Sector to Exchequer (1+2)</b>	<b>524,944.76</b>	<b>543,025.84</b>	<b>575,631.84</b>	<b>555,370.41</b>	<b>672,718.76</b>	<b>774,425.02</b>

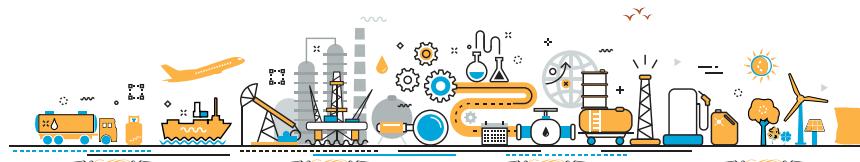
Note: Totals may not tally due to round off.

(P) Provisional

1. As GST was implemented w.e.f 01.07.2017, data for 2017-18 is for a period of nine months.

2. As the amounts have been rounded off to the nearest crore, hence some amounts are zero.

Source: PPAC (Based on 16 major oil &amp; gas companies)



## IV.17: Sales Tax / VAT Payments by Oil & Gas Companies

(Value in ₹ Crore)

State & UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andaman & Nicobar Islands	-	51	92	94	74	80	0.0
Andhra Pradesh	8,908	9,693	10,784	10,168	11,014	14,724	5.7
Arunachal Pradesh	62	67	49	26	104	136	0.1
Assam	2,571	3,108	3,879	3,641	3,747	3,901	1.5
Bihar	4,501	5,447	6,584	6,238	5,854	6,867	2.7
Chandigarh	54	54	62	60	60	87	0.0
Chhattisgarh	3,200	3,682	3,986	3,877	4,107	5,178	2.0
Dadra & Nagar Haveli and Daman & Diu	156	42	2	2	1	2	0.0
Delhi	3,589	3,944	4,379	3,833	2,653	3,659	1.4
Goa	650	657	694	754	682	994	0.4
Gujarat	15,958	15,593	16,229	15,337	15,141	20,697	8.1
Haryana	7,000	7,647	8,286	7,648	7,923	10,067	3.9
Himachal Pradesh	317	344	364	440	882	1,313	0.5
Jammu & Kashmir	1,110	1,329	1,449	1,459	1,444	1,859	0.7
Jharkhand	2,967	3,224	2,796	3,296	3,619	4,392	1.7
Karnataka	11,103	13,306	14,417	15,381	15,476	18,310	7.1
Kerala	6,899	7,300	7,995	8,074	6,924	9,265	3.6
Ladakh				14	49	81	0.0
Lakshadweep	-	-	-	-	-	-	0.0
Madhya Pradesh	9,160	9,380	9,485	10,720	11,908	14,157	5.5
Maharashtra	23,160	25,256	27,191	26,791	25,430	34,002	13.3
Manipur	117	162	181	192	265	319	0.1
Meghalaya	1	0	-	-	-	-	0.0
Mizoram	48	55	88	91	84	120	0.0
Nagaland	78	86	97	116	148	180	0.1
Odisha	4,283	6,870	5,660	5,495	6,224	7,656	3.0
Puducherry	22	15	8	5	10	11	0.0
Punjab	5,833	6,062	6,576	5,548	6,291	7,890	3.1
Rajasthan	10,591	12,094	12,714	13,319	15,119	17,401	6.8
Sikkim	105	110	134	129	111	155	0.1
Tamil Nadu	12,563	15,507	18,143	18,175	17,063	20,586	8.0
Telangana	7,552	8,776	10,037	10,045	8,691	13,171	5.1
Tripura	168	205	277	384	445	474	0.2
Uttar Pradesh	15,850	17,420	19,168	20,112	21,956	26,333	10.3
Uttarakhand	1,414	1,323	1,595	1,495	1,524	1,847	0.7
West Bengal	6,427	7,042	7,866	7,534	7,916	10,335	4.0
<b>TOTAL</b>	<b>166,414</b>	<b>185,850</b>	<b>201,265</b>	<b>200,493</b>	<b>202,937</b>	<b>256,248</b>	<b>100</b>

**Note:** Totals may not tally due to round off.

(P) Provisional

- As GST was implemented w.e.f 01.07.2017, data for 2017-18 is for a period of nine months.
- As the amounts have been rounded off to the nearest crore, hence some amounts are zero.

Source: PPAC (Based on 16 major oil & gas companies)



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APPENDIX

## IV.18: GST Payment by Oil &amp; Gas Companies

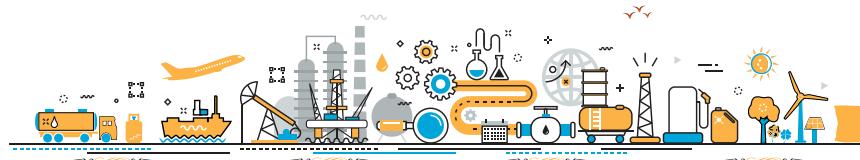
(Value in ₹ Crore)

State/UT	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andaman & Nicobar islands	1.01	0.19	0.31	0.31	1.00	0.0
Andhra Pradesh	172.13	257.13	155.93	111.79	203.52	1.8
Arunachal Pradesh	0.84	6.19	0.11	0.33	0.34	0.0
Assam	116.42	559.07	475.27	331.84	413.99	3.8
Bihar	90.55	158.90	144.54	121.77	146.88	1.3
Chandigarh	0.51	1.19	1.02	0.98	1.22	0.0
Chhattisgarh	38.55	18.01	9.41	14.29	26.08	0.2
Dadra & Nagar Haveli and Daman & Diu	9.61	11.93	20.08	20.45	14.65	0.1
Delhi	114.32	51.55	51.02	36.73	53.75	0.5
Goa	4.83	2.87	9.16	10.58	14.55	0.1
Gujarat	1,021.61	2,059.61	1,800.77	1,566.17	3,179.87	28.9
Haryana	379.26	658.95	684.78	528.76	1,064.13	9.7
Himachal Pradesh	14.51	3.46	4.25	5.78	7.97	0.1
Jammu & Kashmir	38.37	20.45	16.66	39.50	35.21	0.3
Jharkhand	56.97	12.55	15.76	11.90	10.28	0.1
Karnataka	329.16	355.88	268.51	260.23	461.16	4.2
Kerala	135.98	145.90	170.85	136.48	254.72	2.3
Ladakh			0.76	0.68	1.04	0.0
Lakshadweep	0.00	0.00	0.16	0.00	0.67	0.0
Madhya Pradesh	73.23	86.74	98.39	67.55	116.94	1.1
Maharashtra	797.02	1,271.76	1,126.37	932.48	1,822.35	16.5
Manipur	1.81	1.28	1.48	1.60	1.80	0.0
Meghalaya	0.20	0.70	0.35	0.10	0.24	0.0
Mizoram	0.82	0.52	1.29	0.45	0.44	0.0
Nagaland	0.83	0.54	0.56	0.45	0.55	0.0
Odisha	51.95	92.53	192.40	194.96	420.71	3.8
Other territory (Offshore areas of India beyond 12 Nautical Miles)	7.64	10.74	10.73	6.83	9.20	0.1
Puducherry	2.47	0.88	0.98	1.18	1.33	0.0
Punjab	156.58	115.83	128.15	43.24	345.79	3.1
Rajasthan	87.84	204.75	175.60	144.51	196.32	1.8
Sikkim	2.89	2.08	0.39	0.30	0.45	0.0
Tamil Nadu	517.26	642.12	561.92	439.19	640.32	5.8
Telangana	88.23	18.78	20.63	22.40	44.75	0.4
Tripura	6.34	20.30	17.47	38.29	16.91	0.2
Uttar Pradesh	362.17	616.29	619.17	602.96	826.78	7.5
Uttarakhand	19.89	6.33	6.85	8.22	7.39	0.1
West Bengal	271.87	545.41	553.25	417.62	673.58	6.1
<b>TOTAL</b>	<b>4,973.67</b>	<b>7,961.41</b>	<b>7,345.33</b>	<b>6,120.90</b>	<b>11,016.88</b>	<b>100</b>

**Note:** Totals may not tally due to round off. (P) Provisional

- As GST was implemented w.e.f 01.07.2017, data for 2017-18 is for a period of nine months
- As the amounts have been rounded off to the nearest crore, hence some amounts are zero.

Source: PPAC (Based on 16 major oil &amp; gas companies)



#### IV.19: Sales Tax/VAT Payments on Crude Oil & Natural Gas by CPSEs

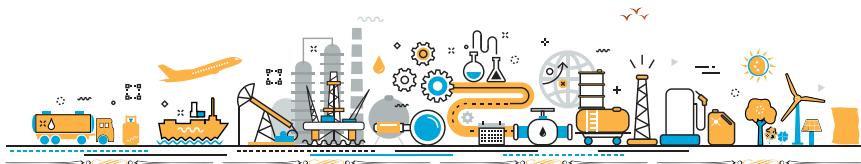
(Value in ₹ Crore)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Sales Tax / VAT on Crude Oil</b>							
Andhra Pradesh	24.82	13.63	47.66	16.36	9.75	16.85	0.5
Assam	462.11	578.26	719.80	619.77	418.77	767.04	24.9
Gujarat	487.19	548.71	747.91	713.53	476.41	831.48	27.0
Maharashtra	<b>1,197.22</b>	<b>1,304.57</b>	<b>1,581.91</b>	<b>1,355.82</b>	<b>889.52</b>	<b>1,390.80</b>	<b>45.1</b>
Rajasthan	0.02	0.05	0.13	0.29	0.23	0.49	0.0
Tamil Nadu	32.95	42.72	74.54	65.96	46.63	76.75	2.5
West Bengal	-	-	-	-	0.01	0.01	0.0
<b>Total VAT/Sales Tax</b>	<b>2,204.31</b>	<b>2,487.94</b>	<b>3,171.95</b>	<b>2,771.73</b>	<b>1,841.32</b>	<b>3,083.42</b>	<b>100.0</b>
<b>Sales Tax /VAT on Natural Gas</b>							
Andhra Pradesh	137.45	190.80	347.83	267.18	174.81	225.98	2.4
Assam	188.93	178.20	237.70	236.39	118.70	127.27	1.3
Bihar	-	-	-	0.62	5.26	24.80	0.3
Chandigarh	0.04	0.03	0.14	0.01	0.77	3.09	0.0
Dadra Nagar Haveli & Daman & Diu	0.00	0.02	0.07	0.87	1.14	2.09	0.0
Delhi	11.94	11.20	11.51	15.38	13.10	20.19	0.2
Goa	0.00	0.00	0.00	0.00	0.02	0.50	0.0
<b>Gujarat</b>	<b>1,678.38</b>	<b>2,084.29</b>	<b>2,544.13</b>	<b>2,635.66</b>	<b>2,157.40</b>	<b>3,433.35</b>	<b>36.1</b>
Haryana	93.11	113.66	147.48	148.79	89.40	973.25	10.2
Himachal Pradesh	0.40	0.38	0.87	0.98	1.01	1.60	0.0
Jharkhand	0.34	0.44	0.34	0.89	1.35	9.93	0.1
Karnataka	-	-	-	-	-	0.04	0.0
Kerala	10.72	147.54	8.49	22.57	36.93	18.60	0.2
Madhya Pradesh	132.52	120.68	161.69	162.21	118.73	318.49	3.4
Maharashtra	805.63	672.49	580.35	658.99	412.29	850.75	9.0
Odisha	0.00	0.00	0.29	0.15	1.94	2.86	0.0
Punjab	13.04	1.97	5.65	33.36	58.05	113.36	1.2
Rajasthan	122.99	147.41	232.70	435.72	424.97	671.01	7.1
Tamil Nadu	35.90	42.72	52.35	119.90	108.39	216.38	2.3
Telangana	4.73	4.57	4.81	9.30	4.33	12.47	0.1
Tripura	41.68	43.72	79.23	150.21	205.34	210.46	2.2
Uttar Pradesh	947.52	1,263.12	1,846.15	2,170.57	1,572.36	2,120.98	22.3
Uttarakhand	3.90	6.41	10.31	14.29	8.39	18.11	0.2
West Bengal	0.23	0.20	0.04	0.26	0.12	128.22	1.3
<b>Total VAT/Sales Tax</b>	<b>4,229.45</b>	<b>5,029.85</b>	<b>6,272.13</b>	<b>7,084.30</b>	<b>5,514.80</b>	<b>9,503.78</b>	<b>100.0</b>

Note: Totals may not tally due to round off. P. Provisional

1. As the amounts have been rounded off to the nearest crore, hence some amounts are zero.

Sources: CPSEs (ONGC, OIL, GAIL, IOCL, BPCL, HPCL, CPCL, MRPL, NRL)



**IV.20: Sales Tax/VAT Payments on Petrol by CPSEs**

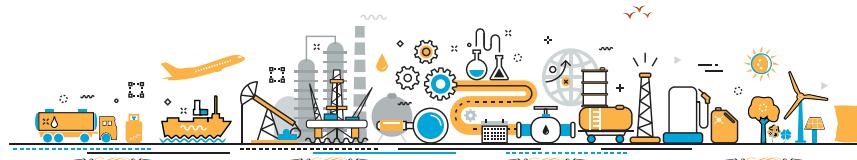
(Value in ₹ Crore)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andaman & Nicobar Islands	0.00	6.18	8.84	9.21	7.00	5.91	0.0
Andhra Pradesh	2,793.90	2,826.55	3,098.35	3,147.41	3,724.87	5,172.41	6.1
Arunachal Pradesh	9.47	22.63	15.31	7.55	36.37	46.80	0.1
Assam	610.11	796.59	962.40	1,024.08	1,224.41	1,201.00	1.4
Bihar	1,146.18	1,476.32	2,232.55	2,280.92	1,839.08	2,255.81	2.7
Chandigarh	16.04	19.64	20.88	20.30	18.62	27.30	0.0
Chhattisgarh	833.24	904.13	1,157.40	1,266.86	1,377.74	1,733.88	2.1
Delhi	1,708.87	1,766.33	2,003.64	1,876.97	1,645.29	1,980.81	2.4
Goa	158.48	200.86	231.22	294.39	292.72	422.44	0.5
Gujarat	1,716.87	1,702.77	2,655.85	2,547.55	2,419.13	3,270.59	3.9
Haryana	1,559.08	1,746.73	2,051.30	2,092.26	2,146.62	2,765.31	3.3
Himachal Pradesh	98.58	119.10	133.27	172.15	371.57	559.58	0.7
Jammu & Kashmir	380.55	473.60	626.35	685.14	555.98	770.92	0.9
Jharkhand	751.83	805.35	845.86	934.87	1,086.93	1,287.78	1.5
Karnataka	3,669.30	4,442.66	4,880.05	5,010.70	5,349.34	6,505.78	7.7
Kerala	2,820.99	2,998.10	3,522.85	3,716.50	3,353.78	4,520.09	5.4
Ladakh	-	-	0.00	6.07	17.30	28.06	0.0
Madhya Pradesh	2,360.20	2,442.07	3,326.85	3,752.75	4,345.40	5,391.36	6.4
<b>Maharashtra</b>	<b>7,302.21</b>	<b>9,937.35</b>	<b>10,073.80</b>	<b>9,643.62</b>	<b>9,640.07</b>	<b>9,698.77</b>	<b>11.52</b>
Manipur	56.33	83.39	89.37	91.70	134.96	162.03	0.2
Mizoram	22.30	25.75	37.35	38.68	37.73	49.35	0.1
Nagaland	38.20	45.25	49.62	58.00	49.65	68.30	0.1
Odisha	1,019.38	1,246.41	1,510.00	1,579.07	1,993.24	2,675.65	3.2
Puducherry	4.14	6.11	5.37	3.16	6.78	7.29	0.0
Punjab	1,462.10	1,669.82	2,402.59	1,860.78	2,254.54	2,991.89	3.6
Rajasthan	2,563.15	2,854.23	3,294.84	3,725.89	4,628.19	5,654.48	6.7
Sikkim	28.03	31.17	43.92	48.25	34.77	47.16	0.1
Tamil Nadu	4,098.32	5,583.79	6,536.77	6,669.34	6,991.61	7,987.15	9.5
Telangana	2,354.75	2,655.35	3,204.93	3,212.20	3,118.90	4,620.94	5.5
Tripura	55.83	67.07	92.47	113.77	104.01	111.59	0.1
Uttar Pradesh	5,389.92	5,999.97	6,334.73	6,829.57	7,652.30	8,698.57	10.3
Uttarakhand	526.12	546.44	687.27	667.36	713.08	769.74	0.9
West Bengal	1,513.65	1,788.22	2,268.47	2,334.76	2,273.28	2,704.19	3.2
<b>Total VAT/Sales Tax</b>	<b>47,068.12</b>	<b>55,289.93</b>	<b>64,404.48</b>	<b>65,721.82</b>	<b>69,445.24</b>	<b>84,192.92</b>	<b>100.0</b>

Note: Totals may not tally due to round off. P. Provisional

1. As the amounts have been rounded off to the nearest crore, hence some amounts are zero.

Sources: CPSEs (ONGC, OIL, GAIL, IOCL, BPCL, HPCL, CPCL, MRPL, NRL)



## IV.21: Sales Tax/VAT Payments on Diesel by CPSEs

(Value in ₹ Crore)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andaman & Nicobar Islands	0.00	23.41	66.33	70.32	62.24	70.62	0.1
Andhra Pradesh	5,144.48	5,886.53	6,506.66	5,806.15	5,924.49	7,405.04	5.9
Arunachal Pradesh	14.65	37.82	31.10	17.43	66.10	86.65	0.1
Assam	975.91	1,260.57	1,421.78	1,424.94	1,689.99	1,421.84	1.1
Bihar	2,266.15	2,769.49	3,820.85	3,720.03	2,730.25	2,641.45	2.1
Chandigarh	7.73	9.67	12.41	10.99	13.87	14.57	0.0
Chhattisgarh	1,980.39	2,229.48	2,694.08	2,483.68	2,625.66	3,179.95	2.6
Delhi	1,133.31	1,229.17	1,254.17	979.91	663.34	916.16	0.7
Goa	392.19	360.17	375.22	383.06	358.95	487.70	0.4
Gujarat	3,157.48	3,533.46	5,630.29	5,419.45	5,215.68	6,996.55	5.6
Haryana	4,496.64	4,998.65	5,638.98	4,974.93	5,215.58	6,595.09	5.3
Himachal Pradesh	164.40	187.82	205.50	248.00	492.32	724.80	0.6
Jammu & Kashmir	496.62	622.12	726.31	698.33	659.74	847.44	0.7
Jharkhand	1,617.24	1,763.21	1,705.02	2,118.43	2,135.51	2,540.96	2.0
Karnataka	6,185.60	7,719.25	8,271.14	8,763.46	8,649.68	9,964.32	8.0
Kerala	3,400.36	3,482.26	4,005.98	3,944.11	3,088.02	4,002.80	3.2
Ladakh	-	-	0.00	5.36	17.60	33.48	0.0
Madhya Pradesh	4,368.95	4,278.25	4,781.66	4,901.96	5,368.51	6,027.32	4.8
<b>Maharashtra</b>	<b>10,401.79</b>	<b>11,429.66</b>	<b>13,013.21</b>	<b>12,672.08</b>	<b>12,927.78</b>	<b>15,283.54</b>	<b>12.26</b>
Manipur	50.97	70.46	78.46	80.89	125.54	150.94	0.1
Mizoram	23.53	27.97	48.10	49.90	45.87	69.68	0.1
Nagaland	32.29	38.53	46.78	57.44	63.85	87.88	0.1
Odisha	2,876.48	2,939.77	3,975.91	3,838.72	4,178.21	4,893.54	3.9
Puducherry	2.85	3.16	2.83	1.63	2.87	3.28	0.0
Punjab	2,170.27	2,470.11	3,374.24	2,901.04	3,957.73	4,788.29	3.8
Rajasthan	5,434.74	5,899.11	6,820.31	7,043.87	7,377.59	8,298.01	6.7
Sikkim	44.13	48.94	84.37	80.88	61.85	78.79	0.1
Tamil Nadu	6,958.56	8,620.05	10,104.06	9,676.63	8,452.61	10,284.14	8.3
Telangana	4,708.09	5,449.11	6,432.93	5,896.88	4,805.19	7,612.85	6.1
Tripura	62.58	73.65	92.97	110.43	98.76	104.43	0.1
Uttar Pradesh	7,811.68	8,651.16	9,203.53	9,249.89	10,741.64	13,443.88	10.8
Uttarakhand	739.92	663.37	811.40	706.34	729.64	971.62	0.8
West Bengal	3,160.17	3,726.93	5,004.68	4,466.97	3,873.74	4,590.79	3.7
<b>Total VAT/Sales Tax</b>	<b>80,280.15</b>	<b>90,503.31</b>	<b>106,241.26</b>	<b>102,804.13</b>	<b>102,420.40</b>	<b>124,618.38</b>	<b>100.00</b>

Note: Totals may not tally due to round off. P. Provisional

1. As the amounts have been rounded off to the nearest crore, hence some amounts are zero.

Sources: CPSEs (ONGC, OIL, GAIL, IOCL, BPCL, HPCL, CPCL, MRPL, NRL)

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CHAPTER VII

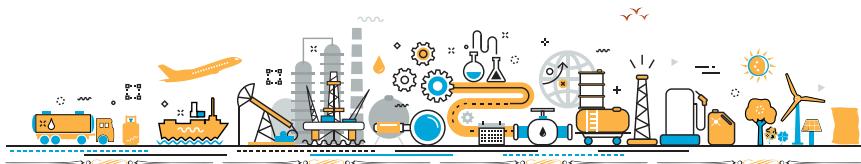
CHAPTER VIII

CHAPTER IX

CHAPTER X

CHAPTER XI

APPENDIX



**IV.22: Sales Tax/VAT Payments on ATF by CPSEs**

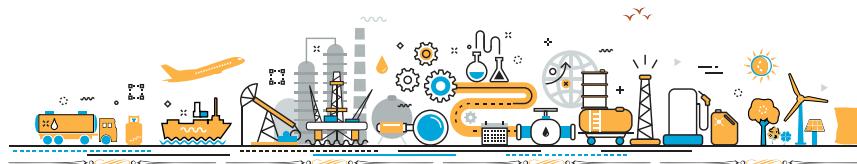
(Value in ₹ Crore)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andaman & Nicobar Islands	0.00	11.12	16.02	14.36	4.32	3.80	0.1
Andhra Pradesh	4.57	6.61	9.26	6.97	2.64	4.70	0.2
Arunachal Pradesh	0.09	5.11	2.05	1.46	1.72	2.45	0.1
Assam	122.13	142.92	224.84	201.75	99.06	179.64	6.0
Bihar	23.38	33.69	48.72	57.09	22.50	33.11	1.1
Chandigarh	27.49	23.87	28.43	28.75	27.54	44.70	1.5
Chhattisgarh	3.77	6.86	8.95	9.22	3.34	4.74	0.2
Dadra Nagar Haveli & Daman & Diu	0.79	0.96	1.71	1.49	1.18	1.51	0.1
<b>Delhi</b>	<b>702.17</b>	<b>860.18</b>	<b>1,198.78</b>	<b>1,030.51</b>	<b>321.92</b>	<b>759.49</b>	<b>25.19</b>
Goa	50.95	54.43	80.63	75.86	18.73	61.81	2.1
Gujarat	134.61	154.59	215.05	169.36	72.72	135.28	4.5
Haryana	38.43	60.31	51.81	32.53	22.70	39.30	1.3
Himachal Pradesh	7.70	9.62	12.47	10.15	8.64	7.46	0.2
Jammu & Kashmir	49.17	60.55	96.74	75.31	32.24	34.16	1.1
Jharkhand	5.59	8.27	9.78	11.70	10.39	33.00	1.1
Karnataka	201.05	347.06	383.92	536.29	185.05	339.78	11.3
Kerala	104.44	137.42	197.01	46.85	4.07	6.63	0.2
Ladakh	-	-	0.00	2.76	6.03	7.08	0.2
Madhya Pradesh	9.07	20.47	32.13	28.22	11.44	24.41	0.8
Maharashtra	609.83	720.79	848.93	657.56	180.56	423.07	14.0
Manipur	3.43	5.50	12.93	19.75	4.07	5.58	0.2
Meghalaya	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Mizoram	1.15	1.03	2.63	2.26	0.83	0.64	0.0
Nagaland	2.75	0.60	0.67	0.20	0.09	0.32	0.0
Odisha	10.77	17.57	28.45	23.16	9.10	19.06	0.6
Puducherry	0.00	0.00	0.11	0.02	0.01	0.04	0.0
Punjab	30.72	35.58	54.55	55.08	30.05	61.53	2.0
Rajasthan	89.97	101.99	142.86	97.53	65.39	137.12	4.5
Sikkim	0.00	0.00	0.01	0.00	0.00	0.07	0.0
Tamil Nadu	173.02	223.67	341.02	402.17	116.56	213.87	7.1
Telangana	89.48	51.40	28.31	16.18	6.88	13.92	0.5
Tripura	3.98	6.53	11.87	9.62	2.34	3.86	0.1
Uttar Pradesh	118.22	156.41	211.34	191.63	101.41	167.61	5.6
Uttarakhand	4.98	11.36	16.77	18.37	5.92	7.72	0.3
West Bengal	137.64	179.89	249.35	314.90	98.15	237.05	7.9
<b>VAT/Sales Tax</b>	<b>2,761.34</b>	<b>3,456.36</b>	<b>4,568.10</b>	<b>4,149.04</b>	<b>1,477.58</b>	<b>3,014.51</b>	<b>100.00</b>

Note: Totals may not tally due to round off. P. Provisional

2. As the amounts have been rounded off to the nearest crore, hence some amounts are zero.

Sources: CPSEs (ONGC, OIL, GAIL, IOCL, BPCL, HPCL, CPCL, MRPL, NRL)



# CHAPTER - V



CONSUMPTION



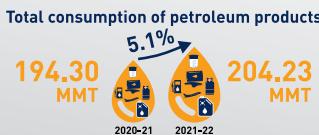
# Highlights of Chapter



The Sectorial sale of Natural Gas was 61.49 BCM during 2021-22 which was 9.6% higher than the 2020-21 (56.12 BCM). Consumption of Natural gas for non-energy purpose is 35.9% as feedstock.



Natural Gas consumption in 2021-22



Positive growth rate in consuming of LPG (2.8%), Petrol/Motor Spirit (10.3%), Naphtha (1.2%), ATF (35.4%), HSD (5.5%), LDO (19.3%), Fuel Oil (12%) Bitumen (4.6%), Petroleum Coke (1.1%) and Lubes & Greases (11.5%) and only SKO (16.9%) and other petroleum products (5.6%), negative growth rate in FY 2021-22 vis-à-vis FY 2020-21.



During FY 2021-22, Diesel (HSD+LDO) accounted for the highest consumption share (38%) followed by Petrol/Motor Spirit (15.1%), LPG (13.9%), Petroleum Coke (7.7%), Naphtha (7%), Bitumen (3.9%), Fuel Oil (3.1%), ATF (2.5%), Lubes & Greases (2.2%) and Kerosene (0.7%).



During FY 2021-22, the share of Public and Private sector consumption stood at 78.3% and 21.7% respectively.



Highest consumption of LPG in FY 2021-22 was in Domestic Distribution sector (90%).



Across various States/UTs, highest Naphtha consumption share contributed by Gujarat with 7.87 MMT (55.1%) followed by Haryana (24.1%) and West Bengal (5.5%) during 2021-22.



Across various States/UTs, highest kerosene consumption share contributed by West Bengal (36.1%) followed by Bihar (8.9%) and Odisha (7.8%) during 2021-22.



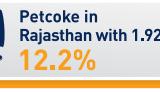
Across various States/UTs, Uttar Pradesh holds the highest share in consumption of Petrol (12.0%) and High Speed Diesel with 9.50 MMT (12.4%) during 2021-22.



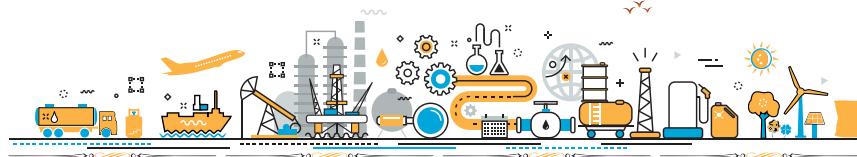
During FY 2021-22, highest consumption of ATF was in Indian Airlines Sector (79.9%).



During FY 2021-22, highest consumption in Manufacturing Industry.



Highest consumption during FY 2021-22.



## V.1: Consumption of Natural Gas

(Figures in MMSCM)

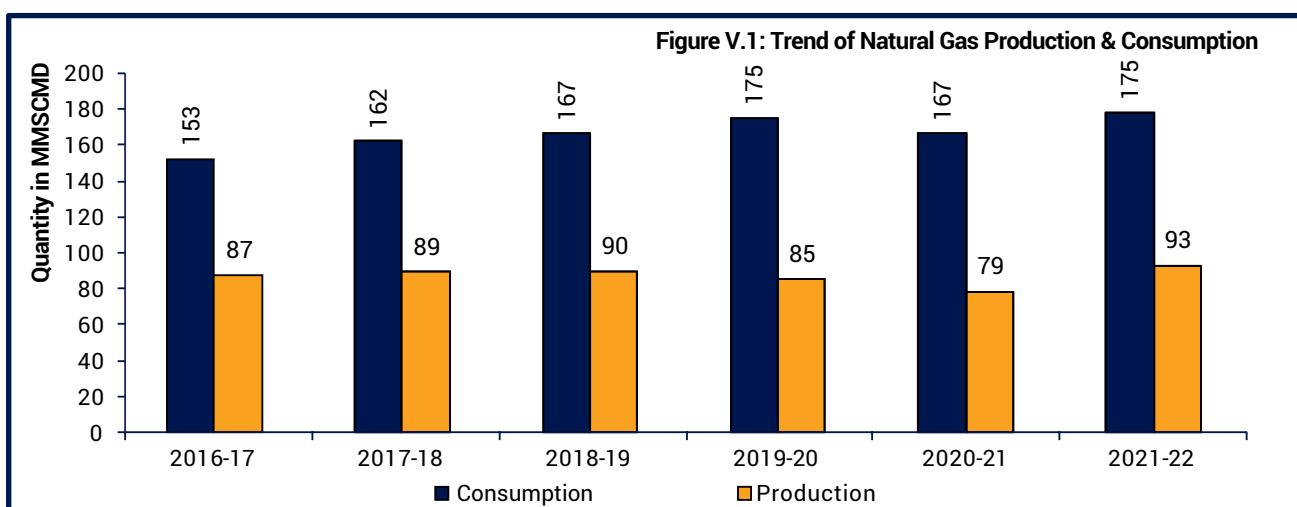
Sector	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>(a) Energy Purpose</b>							
Power	11616	12028	12005	11080	10836	10157	16.5
Industrial & Manufacturing	794	999	1086	701	555	829	1.3
City or Local Natural Gas Distribution Network	7350	8585	9206	10883	9230	12175	19.8
Agriculture (Tea Plantation)	183	189	192	200	177	156	0.3
Internal Consumption for Pipeline System	471	496	541	525	439	486	0.8
Refinery	5374	6533	7047	7786	7911	5312	8.6
LPG Shrinkage	759	798	874	858	900	1070	1.7
Miscellaneous	3929	3226	3393	4209	4569	9229	15.0
<b>Total (a)</b>	<b>30478</b>	<b>32854</b>	<b>34343</b>	<b>36241</b>	<b>34617</b>	<b>39414</b>	<b>64.1</b>
<b>(b) Non-Energy Purpose</b>							
Fertilizer Industry	15429	14676	14987	16115	17781	18079	29.4
Petrochemical	4170	4024	3386	3569	3072	2864	4.7
Sponge Iron	885	1278	1124	567	647	1134	1.8
<b>Total (b)</b>	<b>20484</b>	<b>19978</b>	<b>19497</b>	<b>20251</b>	<b>21500</b>	<b>22077</b>	<b>35.9</b>
<b>Total Sectoral Sales (a+b)</b>	<b>50961</b>	<b>52832</b>	<b>53840</b>	<b>56492</b>	<b>56117</b>	<b>61491</b>	<b>100.0</b>
<b>Total Consumption **</b>	<b>55697</b>	<b>59170</b>	<b>60796</b>	<b>64144</b>	<b>60815</b>	<b>63907</b>	<b>-</b>
<b>Total Consumption in MMSCMD</b>	<b>153</b>	<b>162</b>	<b>167</b>	<b>175</b>	<b>167</b>	<b>175</b>	<b>-</b>

Note: \*\*: Availability Basis (Net Production + LNG Imports)

P. Provisional

1. Re-classification among the sectors of consumption of natural gas under energy and non-energy sectors, has been done depending on usage. Sectors where natural gas is being used as feedstock are classified as consumption of gas under non-energy purpose whereas those sectors where natural gas is being used as fuel are classified as consumption of gas under energy purpose.
2. As per IRES, LPG shrinkage is a transformation process and LPG produced is further used for energy purposes to meet domestic / household energy requirements. Therefore, it has been shifted from 'non energy flow' to 'energy flow'.
3. Sector-wise Sales/consumption of natural gas includes RLNG.
4. Total may not tally due to rounding off.
5. The reasons for the variation between the consolidated availability and the consumption can be attributed to stock changes, conversion factor (volume/energy) and the provisional data reported by the companies.

Source: PPAC



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APPENDIX

## V.2: Product-wise Consumption of Petroleum Products (Calendar Year-wise)

(Figures in MMSCM)

Products	2016	2017	2018	2019	2020	2021 (P)	% Share to Total 2021	% Growth <sup>2</sup>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LPG	21231	22942	24207	26276	27384	27899	13.8	1.9
Motor Spirit	23660	25393	27665	30061	27268	30742	15.2	12.7
Naphtha	13493	12538	14146	13805	14346	14284	7.1	-0.4
SKO	5931	4086	3541	2725	1861	1574	0.8	-15.4
ATF	6807	7449	8222	8182	4262	4921	2.4	15.5
HSDO	76740	79298	82801	84092	71891	76698	38.0	6.7
LDO	458	476	580	639	737	1040	0.5	41.1
Furnace Oil	7382	6646	6244	5858	5379	5678	2.8	5.6
LSHS	113	64	339	396	373	412	0.2	10.7
Lubes/Greases	3664	3569	3802	3902	3891	4516	2.2	16.1
Bitumen/Asphalt	6108	5839	6541	6797	6975	7901	3.9	13.3
Petroleum Coke	24414	25784	21164	22443	17572	13716	6.8	-21.9
Waxes	176	193	259	300	218	237	0.1	8.7
Others	6223	7501	10815	11394	11980	12107	6.0	1.1
<b>Total Consumption</b>	<b>196398</b>	<b>201778</b>	<b>210326</b>	<b>216870</b>	<b>194136</b>	<b>201726</b>	<b>100</b>	<b>3.9</b>
Refinery Boiler Fuel and Losses (RBF)	20197	20910	21359	22809	23110	23817	-	3.1
<b>Grand Total</b>	<b>216595</b>	<b>222688</b>	<b>231686</b>	<b>239679</b>	<b>217247</b>	<b>225543</b>	<b>-</b>	<b>3.8</b>

Note: Total may not tally due to rounding off.

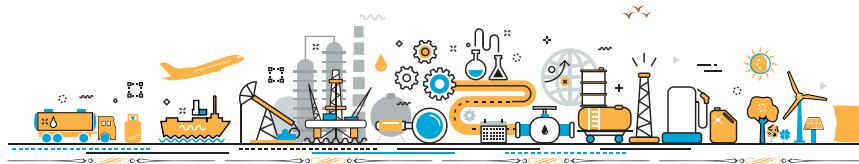
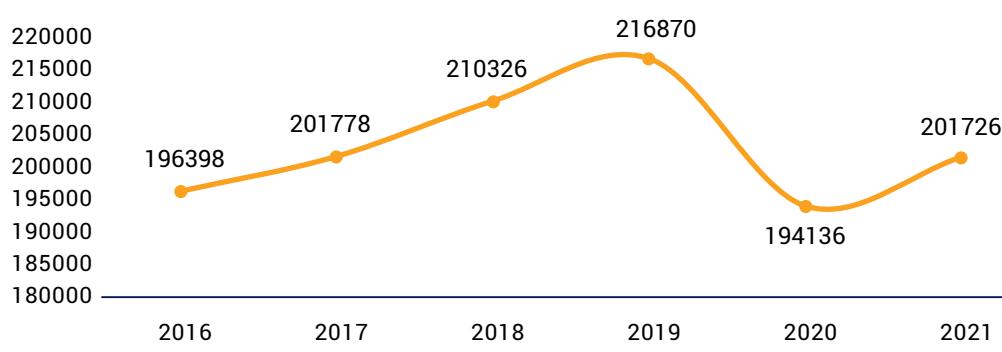
P. Provisional

1. Consumption includes sales by oil companies, own consumption &amp; direct private imports.

2. Growth rate in 2021 over 2020.

Source: Petroleum Planning &amp; Analysis Cell.

Figure V.2: Trend of Consumption of Petroleum Products (in TMT)



### V.3: Product-wise Consumption of Petroleum Products (Financial Year-wise)

(Figures in TMT)

Products	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% to Total Cons. 2021-22	% Growth <sup>2</sup>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LPG	21608	23342	24907	26330	27558	28330	13.9	2.8
Motor Spirit	23765	26174	28284	29975	27969	30849	15.1	10.3
Naphtha	13241	12889	14131	14268	14100	14277	7.0	1.2
SKO	5397	3845	3459	2397	1798	1494	0.7	-16.9
ATF	6999	7635	8302	7999	3698	5008	2.5	35.4
HSDO	76027	81073	83528	82602	72713	76687	37.5	5.5
LDO	449	524	598	628	855	1020	0.5	19.3
Furnace Oil (FO)	7046	6605	6195	5912	5208	5808	2.8	11.5
LSHS	104	116	369	390	378	447	0.2	18.1
Fuel Oil (FO+LSHS)	7150	6721	6564	6302	5586	6255	3.1	12.0
Lubes/Greases	3470	3884	3668	3833	4097	4570	2.2	11.5
Bitumen	5936	6086	6708	6720	7524	7874	3.9	4.6
Petroleum Coke	23964	25657	21346	21708	15605	15772	7.7	1.1
Waxes	184	200	286	278	223	239	0.1	7.4
Others	6408	8137	11435	11087	12568	11860	5.8	-5.6
<b>Total Consumption</b>	<b>194597</b>	<b>206166</b>	<b>213216</b>	<b>214127</b>	<b>194295</b>	<b>204233</b>	<b>100</b>	<b>5.1</b>
Refinery fuel and losses (RBF)	20070	21164	21454	23613	22806	24341	-	6.7
<b>Grand Total</b>	<b>214667</b>	<b>227330</b>	<b>234670</b>	<b>237739</b>	<b>217101</b>	<b>228574</b>	<b>-</b>	<b>5.3</b>

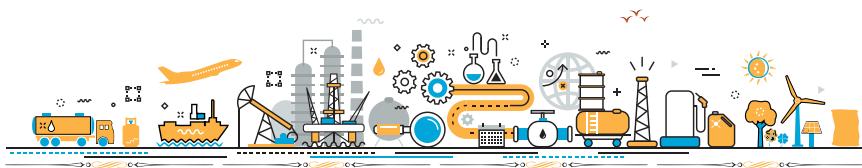
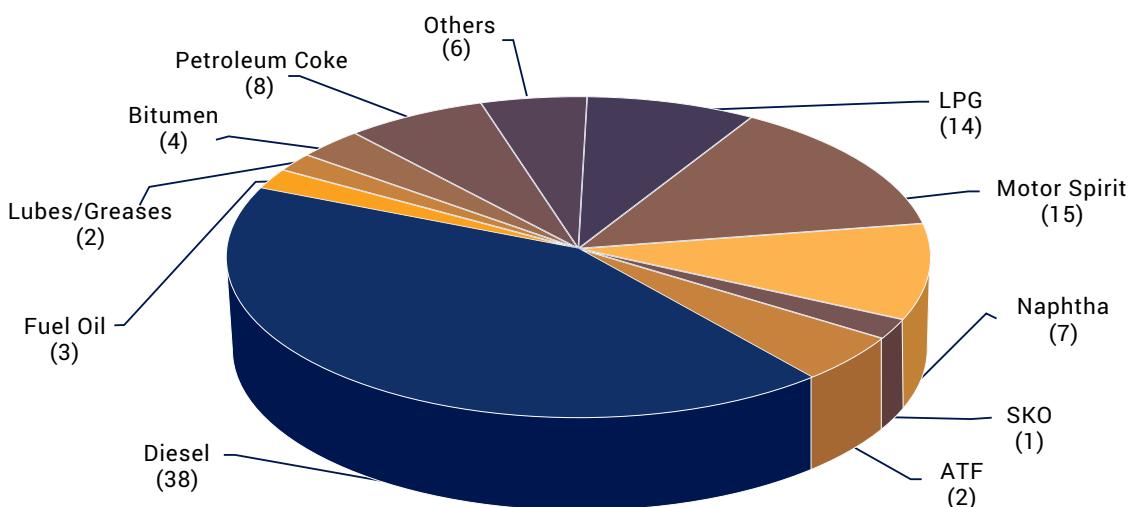
Note: Total may not tally due to rounding off.

P. Provisional

1. Consumption includes sales by oil companies, own consumption & direct private imports.
2. Growth rate in 2021-22 over 2020-21.

Source: Petroleum Planning &amp; Analysis Cell.

Figure V.3: Share of different Petroleum Products in total consumption during 2021-22 (%)



#### V.4: Product-wise Consumption of Petroleum Products Across Public & Private Sector

(Figures in TMT)

Products	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% to Total Cons. 2021-22	% Growth <sup>2</sup>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>A. PUBLIC SECTOR</b>								
LPG	21179	22977	24591	26126	27494	28253	13.8	2.8
Motor Spirit	22518	24329	25959	27179	25168	27905	13.7	10.9
Naphtha	4905	5207	5583	6479	6050	6426	3.1	6.2
SKO	5397	3845	3459	2397	1795	1493	0.7	-16.8
ATF	6188	6990	7685	7598	3525	4707	2.3	33.5
HSDO	71450	74382	75775	73825	64504	68410	33.5	6.1
LDO	449	519	577	602	713	765	0.4	7.4
Furnace Oil	5905	5566	5278	4834	4594	5115	2.5	11.3
LSHS	104	99	318	338	330	376	0.2	14.0
Lubes/Greases	1339	1345	1313	1317	1475	1545	0.8	4.7
Bitumen/Asphalt	4721	4883	5683	4995	5356	5093	2.5	-4.9
Petroleum Coke	3952	5176	5770	5634	4415	5329	2.6	20.7
Paraffin Wax	90	95	91	90	99	99	0.0	0.4
Others	2707	3324	4095	4291	3858	4304	2.1	11.6
<b>Total (A)</b>	<b>150904</b>	<b>158739</b>	<b>166178</b>	<b>165704</b>	<b>149378</b>	<b>159822</b>	<b>78.3</b>	<b>7.0</b>
<b>B. PRIVATE SECTOR</b>								
LPG	429	364	316	204	64	76	0.0	18.9
Motor Spirit	1247	1846	2326	2797	2801	2944	1.4	5.1
Naphtha	8335	7681	8548	7789	8051	7851	3.8	-2.5
SKO	0	0	0	0	3	0	0.0	-89.7
ATF	812	645	617	400	172	301	0.1	74.4
HSDO	4577	6692	7753	8777	8208	8277	4.1	0.8
LDO	0	4	21	25	142	255	0.1	79.4
Furnace Oil	1142	1038	917	1078	614	693	0.3	12.9
LSHS	0	17	51	52	48	70	0.0	46.6
Lubes/Greases	2131	2539	2355	2517	2622	3025	1.5	15.4
Bitumen/Asphalt	1214	1202	1024	1725	2168	2781	1.4	28.3
Petroleum Coke	20012	20480	15576	16074	11190	10442	5.1	-6.7
Paraffin Wax	92	104	194	188	123	77	0.0	-37.4
Others	3703	4813	7340	6796	8711	7619	3.7	-12.5
<b>Total (B)</b>	<b>43693</b>	<b>47427</b>	<b>47038</b>	<b>48422</b>	<b>44918</b>	<b>44411</b>	<b>21.7</b>	<b>-1.1</b>
<b>Total (A+B)</b>	<b>194597</b>	<b>206166</b>	<b>213216</b>	<b>214127</b>	<b>194295</b>	<b>204233</b>	<b>100.0</b>	<b>5.1</b>

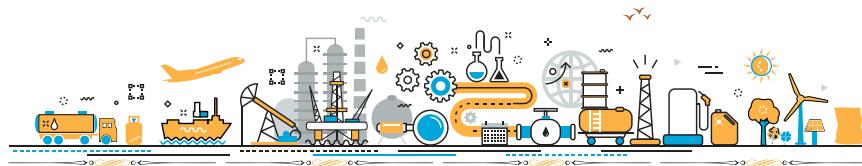
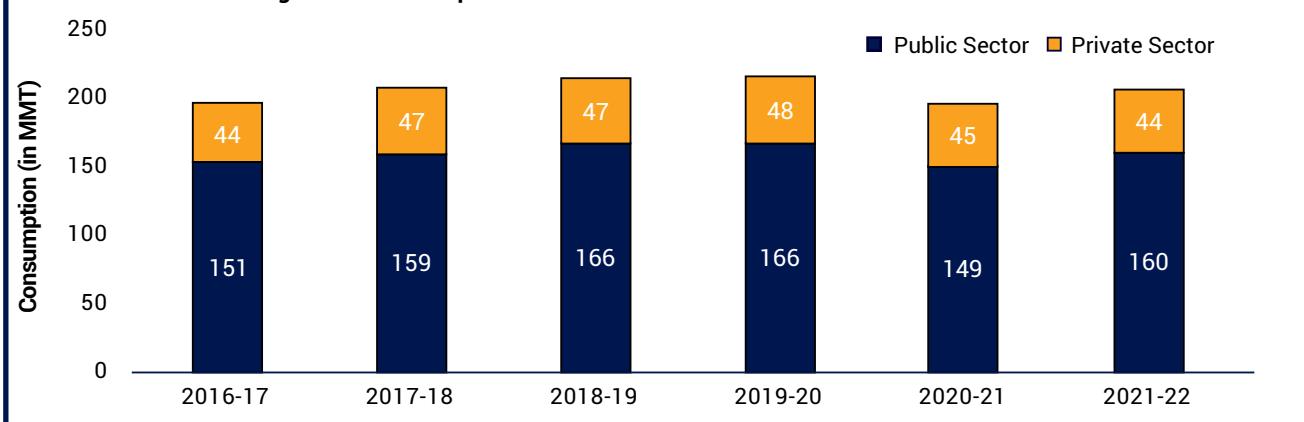
Note: Total may not tally due to rounding off.

P. Provisional

- Consumption includes sales by oil companies, own consumption & direct private imports.
- Growth rate in 2021-22 over 2020-21.

Source: Petroleum Planning &amp; Analysis Cell.

Figure V.4: Consumption of Petroleum Products Across Public &amp; Private Sector



## V.5: State-wise Consumption of Total Petroleum Products

(Figures in TMT)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andaman & Nicobar Islands	186	202	212	217	171	190	0.1
Andhra Pradesh	6585	6953	7820	7699	7266	7547	3.7
Arunachal Pradesh	225	242	248	263	276	302	0.1
Assam	2243	2517	2744	2823	2710	2923	1.4
Bihar	4759	4972	5242	5397	5518	5363	2.6
Chandigarh	388	427	435	436	312	369	0.2
Chhattisgarh	2910	3587	4110	3667	3421	3598	1.8
Dadra & Nagar Haveli And Daman & Diu	658	637	619	570	542	522	0.3
Delhi	4882	4999	4890	4621	2911	3405	1.7
Goa	780	779	798	790	556	680	0.3
<b>Gujarat</b>	<b>18963</b>	<b>19134</b>	<b>21216</b>	<b>22536</b>	<b>21940</b>	<b>24220</b>	<b>11.9</b>
Haryana	10721	10974	10523	10223	9853	10546	5.2
Himachal Pradesh	1707	1578	1559	1694	1528	1924	0.9
Jammu & Kashmir	1259	1444	1503	1487	1301	1500	0.7
Jharkhand	2921	3184	3409	3416	3139	3092	1.5
Karnataka	11459	12548	13206	13067	11121	12222	6.0
Kerala	5724	6145	6339	6533	5461	5879	2.9
Ladakh					13	141	0.1
Lakshadweep	14	15	15	17	18	18	0.0
Madhya Pradesh	6962	7398	8006	7860	7283	7533	3.7
Maharashtra	19333	20618	21017	20797	17849	19019	9.3
Manipur	163	207	241	255	237	254	0.1
Meghalaya	428	484	492	550	409	473	0.2
Mizoram	117	125	139	141	130	146	0.1
Nagaland	132	143	154	172	163	191	0.1
Odisha	5177	5687	5930	6030	5927	6154	3.0
Puducherry	543	554	542	517	413	531	0.3
Punjab	6346	6788	7063	7114	5964	6578	3.2
Rajasthan	10984	11267	11403	10921	9179	10241	5.0
Sikkim	104	117	126	130	108	130	0.1
Tamil Nadu	13284	13939	14421	14116	12195	13057	6.4
Telangana	6133	6562	7000	6953	6223	6858	3.4
Tripura	215	235	235	232	230	237	0.1
Uttar Pradesh	15930	16891	18180	18407	18090	18789	9.2
Uttarakhand	1486	1526	1725	1656	1534	1619	0.8
West Bengal	7505	8249	8789	9308	8491	8666	4.2
<b>Total Sales</b>	<b>171225</b>	<b>181126</b>	<b>190352</b>	<b>190627</b>	<b>172610</b>	<b>184931</b>	<b>90.5</b>
PVT	23372	20866	16920	19284	18280	15215	7.4
SEZ	-	4174	5945	4216	3405	4088	2.0
<b>Total Consumption</b>	<b>194597</b>	<b>206166</b>	<b>213216</b>	<b>214127</b>	<b>194295</b>	<b>204233</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.



**V.6: State-wise & Product-wise Per Capita Consumption of Petroleum Products**

(Figures in Kg)

State/UT & Product	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>State-wise Per Capita Consumption of Petroleum Products</b>						
Andaman & Nicobar Islands	489.5	530.9	558.0	571.5	451.3	474.5
Andhra Pradesh	133.3	140.8	158.4	155.9	147.2	143.0
Arunachal Pradesh	162.7	175.3	179.7	190.5	199.5	197.1
Assam	72.0	80.8	88.0	90.6	86.9	83.4
Bihar	45.8	47.9	50.5	52.0	53.2	43.6
Chandigarh	367.9	404.5	412.6	413.3	295.9	305.9
Chhattisgarh	113.9	140.4	160.9	143.6	133.9	122.0
Dadra & Nagar Haveli And Daman & Diu	1123.2	1086.7	1056.5	973.7	924.7	484.3
Delhi	291.4	298.4	291.9	275.9	173.8	165.5
Goa	534.8	534.5	547.1	541.9	381.1	436.2
Gujarat	314.0	316.9	351.4	373.2	363.3	347.0
Haryana	422.9	432.9	415.0	403.2	388.6	357.7
Himachal Pradesh	249.0	230.2	227.4	247.0	222.8	260.2
Jammu & Kashmir	93.6	108.1	112.3	111.9	106.1	111.8
Jharkhand	88.6	96.6	103.4	103.6	95.2	80.4
Karnataka	187.5	205.3	216.0	213.8	181.9	182.8
Kerala	171.5	184.1	189.9	195.7	163.6	165.7
Ladakh	383.5	409.0	435.9	441.8	484.1	534.9
Lakshadweep	213.8	225.7	235.0	256.6	274.6	258.8
Madhya Pradesh	95.9	101.9	110.3	108.3	100.3	89.1
Maharashtra	172.0	183.5	187.0	185.1	158.8	152.8
Manipur	59.9	76.2	88.5	93.6	86.9	80.2
Meghalaya	144.4	163.4	166.0	185.7	138.1	143.7
Mizoram	107.5	114.1	127.2	129.2	119.5	120.1
Nagaland	66.8	72.2	77.9	86.6	82.1	87.0
Odisha	123.4	135.6	141.4	143.7	141.3	134.7
Puducherry	436.0	445.5	435.6	415.2	331.7	337.5
Punjab	229.1	245.0	255.0	256.8	215.3	216.8
Rajasthan	160.1	164.2	166.2	159.1	133.8	129.2
Sikkim	171.7	192.7	207.1	214.1	178.0	191.5
Tamil Nadu	184.1	193.2	199.9	195.7	169.0	170.9
Telangana	173.8	186.0	198.4	197.0	176.3	181.8
Tripura	58.5	64.0	64.0	63.1	62.6	58.3
Uttar Pradesh	79.8	84.6	91.1	92.2	90.6	81.4
Uttarakhand	146.9	150.8	170.6	163.7	151.6	142.0
West Bengal	82.2	90.3	96.2	101.9	92.9	88.3
<b>Grand Total</b>	<b>141.5</b>	<b>149.7</b>	<b>157.3</b>	<b>157.5</b>	<b>142.6</b>	<b>149.8</b>
<b>Product-wise Per Capita Consumption of Petroleum Products</b>						
Naphtha	8.9	9.0	9.4	9.8	10.2	10.5
MS	19.6	21.6	23.4	24.8	23.1	22.6
SKO	4.5	3.2	2.9	2.0	1.5	1.1
HSDO	62.8	66.9	68.9	68.2	60.0	56.3
LDO	0.4	0.4	0.5	0.5	0.7	0.7
F.O ( Regular )	5.2	4.9	4.6	4.2	4.0	4.3
LSHS/HHS	0.1	0.1	0.3	0.3	0.3	0.3
<b>All India</b>	<b>141.5</b>	<b>149.7</b>	<b>157.3</b>	<b>157.5</b>	<b>142.6</b>	<b>149.8</b>

**Note:**

Total may not tally due to rounding off. (Consumption data is excluding Pvt. Imports &amp; SEZ sales) P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.



## V.7: Consumption of Petroleum Products and Market Share of Oil Companies in India

(Figures in TMT)

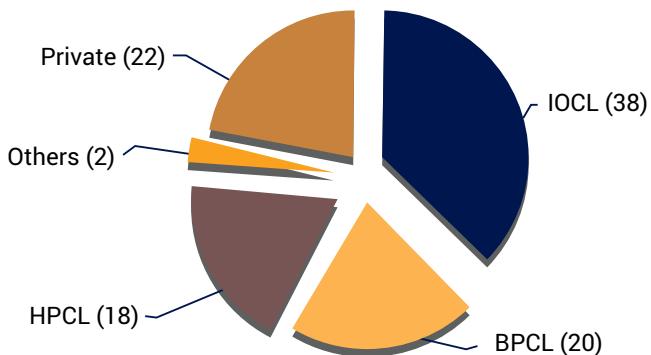
Year	Consumption	IOCL	BPCL	HPCL	Other	Private	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2016-17	in TMT	77324	36376	34441	2763	43693	194597
	in %	39.7	18.7	17.7	1.4	22.5	100
2017-18	in TMT	80207	39524	35979	3029	47427	206166
	in %	38.9	19.2	17.5	1.5	23.0	100
2018-19	in TMT	83184	41338	37678	3978	47038	213216
	in %	39.0	19.4	17.7	1.9	22.1	100
2019-20	in TMT	81935	41851	37416	4502	48422	214127
	in %	38.3	19.5	17.5	2.1	22.6	100
2020-21 (P)	in TMT	72740	37552	34942	4144	44918	194295
	in %	37.4	19.3	18.0	2.1	23.1	100
2021-22 (P)	in TMT	77523	41036	36696	4568	44411	204233
	in %	38.0	20.1	18.0	2.2	21.7	100

Note: P. Provisional

1. Other companies include CPCL, GAIL, MRPL, NRL & ONGC
2. Private includes sales by private oil companies, own consumption & direct private imports
3. Total may not tally due to rounding off.

Source: Petroleum Planning &amp; Analysis Cell.

Figure V.5: Market share of oil companies in India during 2021-22 (%)



## V.8: Deliveries made to International/Coastal Bunkers

(Figures in TMT)

Items	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% to Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>INTERNATIONAL BUNKERS</b>							
F.O	257	248	247	319	555	659	42.6
H.S.D	21	27	35	55	53	43	2.8
L.D.O	0	0	0	0	0	0	0.0
<b>Total</b>	<b>279</b>	<b>275</b>	<b>282</b>	<b>374</b>	<b>609</b>	<b>702</b>	<b>45.4</b>
<b>COASTAL BUNKERS</b>							
F.O	143	330	422	401	313	300	19.4
H.S.D	135	502	635	701	558	542	35.0
L.D.O	7	4	5	2	2	4	0.2
<b>Total</b>	<b>284</b>	<b>836</b>	<b>1062</b>	<b>1104</b>	<b>873</b>	<b>846</b>	<b>54.6</b>
<b>TOTAL BUNKERS</b>							
F.O	400	578	669	721	869	960	62.0
H.S.D	156	528	670	756	611	585	37.8
L.D.O	7	4	5	2	2	4	0.2
<b>Total</b>	<b>563</b>	<b>1110</b>	<b>1343</b>	<b>1479</b>	<b>1482</b>	<b>1548</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.



## V.9: Sector-wise Consumption (end use) of Liquefied Petroleum Gas (LPG)

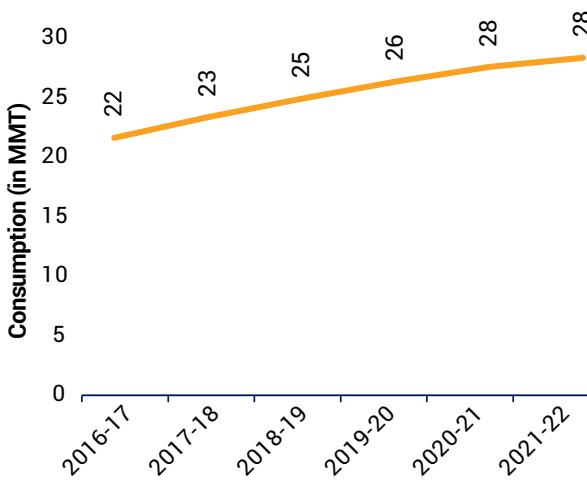
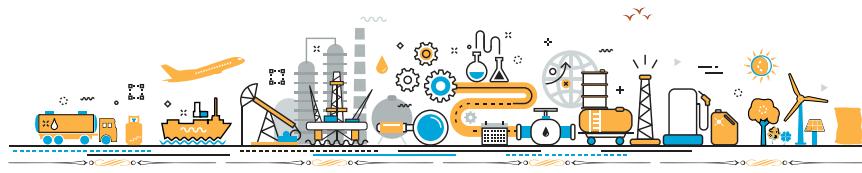
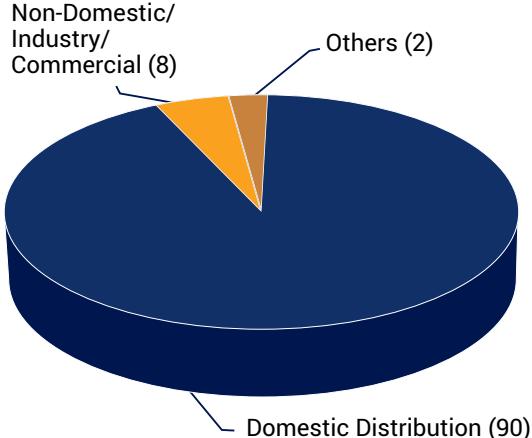
(Figures in TMT)

Sector	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. Domestic Distribution</b>	<b>18871</b>	<b>20352</b>	<b>21728</b>	<b>23076</b>	<b>25128</b>	<b>25502</b>	<b>90.0</b>
2. Non-Domestic/ Industry/Commercial	1776	2086	2364	2614	1886	2239	7.9
3. Transport	168	185	181	173	119	123	0.4
(i) Auto LPG	167	184	180	172	118	122	0.4
(ii) Railways	1	1	1	1	1	1	0.0
4. Power Generation	2	1	2	1	0	0	0.0
5. Agriculture Sector	8	7	22	26	28	30	0.1
6. Mining	0	0	0	0	2	3	0.0
7. Manufacturing (Bulk LPG)	220	205	204	153	215	180	0.6
(i) Chemicals	12	6	24	21	36	42	0.1
(ii) Engineering	2	3	3	3	3	2	0.0
(iii) Electronics	4	4	6	5	5	2	0.0
(iv) Mechanical	13	14	19	15	12	10	0.0
(v) Metallurgical	139	132	94	61	109	75	0.3
(vi) Textiles	2	2	2	3	2	2	0.0
(vii) Other Consumer/ Industrial Goods	46	44	57	45	48	46	0.2
8. Resellers/Retail	67	74	0	0	1	2	0.0
9. Miscellaneous (Bulk)	67	67	89	82	115	174	0.6
<b>Total Sales</b>	<b>21179</b>	<b>22977</b>	<b>24591</b>	<b>26126</b>	<b>27494</b>	<b>28253</b>	<b>99.7</b>
10. Pvt Imports	429	364	316	204	64	76	0.3
<b>Total Consumption</b>	<b>21608</b>	<b>23342</b>	<b>24907</b>	<b>26330</b>	<b>27558</b>	<b>28330</b>	<b>100</b>

Note: Total may not tally due to rounding off.

P. Provisional

Source: Petroleum Planning &amp; Analysis Cell.

**Figure V.6: Trend of LPG Consumption****Figures V.7: Sector-wise Consumption of LPG during 2021-22 (%)**

## V.10: State-wise Consumption of Liquefied Petroleum Gas (LPG)

(Figures in TMT)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andaman & Nicobar Islands	9.5	10.2	11.0	12.2	12.1	13.1	0.0
Andhra Pradesh	1014.4	1098.5	1150.2	1190.0	1293.0	1325.5	4.7
Arunachal Pradesh	17.8	19.9	21.6	23.2	23.8	25.4	0.1
Assam	325.0	372.6	420.9	450.9	505.7	486.3	1.7
Bihar	943.9	1127.6	1234.8	1404.4	1643.0	1625.0	5.7
Chandigarh	52.2	55.1	55.7	56.4	46.5	52.6	0.2
Chhattisgarh	232.4	257.4	272.5	294.8	344.2	332.0	1.2
Dadra & Nagar Haveli And Daman & Diu	26.7	29.1	29.2	31.3	30.5	29.2	0.1
Delhi	797.8	807.6	824.9	822.6	733.0	771.1	2.7
Goa	62.6	66.0	69.7	71.1	65.4	71.1	0.3
Gujarat	970.9	1041.7	1105.2	1173.6	1186.3	1282.0	4.5
Haryana	674.7	740.3	805.0	858.2	869.4	930.8	3.3
Himachal Pradesh	142.4	153.0	165.1	180.1	183.8	194.2	0.7
Jammu & Kashmir	172.2	188.8	204.7	210.6	210.0	215.8	0.8
Jharkhand	249.8	294.1	340.6	378.0	424.7	399.3	1.4
Karnataka	1448.5	1573.7	1687.3	1769.7	1840.7	1927.9	6.8
Kerala	852.3	931.9	989.2	1033.3	1071.7	1111.4	3.9
Ladakh	0.0	0.0	0.0	1.7	6.5	8.0	0.0
Lakshadweep	0.3	0.4	0.5	0.6	0.8	0.8	0.0
Madhya Pradesh	838.8	914.4	995.3	1068.2	1137.0	1140.2	4.0
Maharashtra	2634.6	2799.1	2989.6	3123.6	3089.1	3307.0	11.7
Manipur	23.7	28.4	35.7	40.8	48.6	51.9	0.2
Meghalaya	18.8	21.3	25.1	26.6	27.4	27.7	0.1
Mizoram	22.1	21.7	25.1	27.0	29.0	29.6	0.1
Nagaland	19.9	22.2	22.6	24.2	24.8	27.5	0.1
Odisha	476.8	533.6	548.5	553.1	692.0	638.4	2.3
Puducherry	41.5	43.0	44.2	44.9	47.2	47.8	0.2
Punjab	823.9	873.9	937.5	980.7	991.5	1027.1	3.6
Rajasthan	1107.9	1193.8	1292.5	1389.9	1412.7	1494.1	5.3
Sikkim	12.9	14.0	15.6	16.8	16.2	18.2	0.1
Tamil Nadu	1910.3	2019.0	2114.3	2178.1	2292.5	2375.6	8.4
Telangana	836.5	891.7	963.5	1001.4	1027.5	1086.9	3.8
Tripura	37.6	44.1	49.2	52.9	60.0	57.7	0.2
Uttar Pradesh	2703	2924	3166	3532	3819	3855.4	13.6
Uttarakhand	249.7	268.5	288.1	308.2	304.5	321.8	1.1
West Bengal	1427.1	1597.2	1689.7	1794.9	1983.9	1945.1	6.9
<b>Total Sales</b>	<b>21179</b>	<b>22977</b>	<b>24591</b>	<b>26126</b>	<b>27494</b>	<b>28253.4</b>	<b>99.7</b>
Pvt Imports	429.3	364.5	316.0	204.0	64.2	76.3	0.3
<b>Total Consumption</b>	<b>21608</b>	<b>23342</b>	<b>24907</b>	<b>26330</b>	<b>27558</b>	<b>28329.7</b>	<b>100</b>

Note: Total may not tally due to rounding off.

P. Provisional

Source: Petroleum Planning & Analysis Cell.



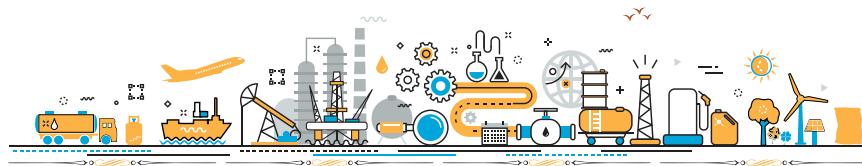
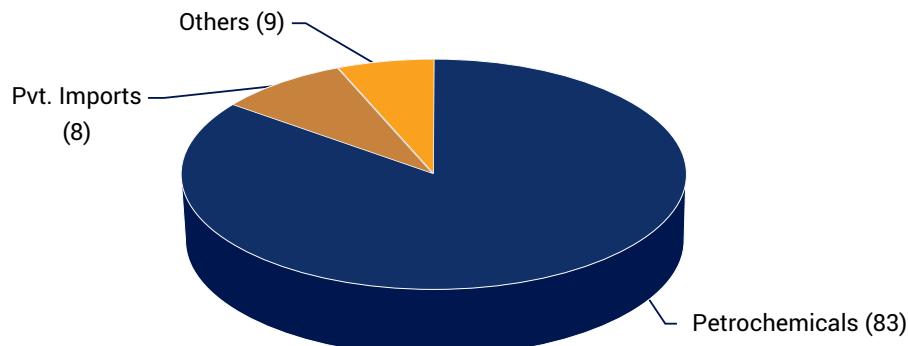
## V.11: Sector-wise/State-wise Consumption (end use) of Naphtha

(Figures in TMT)

Sector & State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Sector-wise Consumption (end use) of Naphtha</b>							
Fertilizers	349.3	367.7	351.6	149.7	65.7	0.0	0.0
Petrochemicals	10209.8	10010.9	10601.6	10874.5	11339.4	11903.7	83.4
Power	60.2	66.5	5.3	0.4	70.2	5.9	0.0
Steel Plants	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Others	198.7	404.9	461.7	879.6	885.2	799.5	5.6
<b>Total Sales</b>	<b>10818.0</b>	<b>10850.1</b>	<b>11420.2</b>	<b>11904.2</b>	<b>12360.4</b>	<b>12709.1</b>	<b>89.0</b>
Pvt Imports	2422.8	1768.9	1727.5	1305.5	1133.5	1191.8	8.3
SEZ data		269.6	983.6	1058.0	606.5	375.6	2.6
<b>Total Consumption</b>	<b>13240.8</b>	<b>12888.6</b>	<b>14131.2</b>	<b>14267.8</b>	<b>14100.4</b>	<b>14276.6</b>	<b>100.0</b>
<b>State-wise Consumption (end use) of Naphtha</b>							
Andhra Pradesh	29.4	30.1	24.7	26.1	26.5	27.7	0.2
Assam	58.3	152.5	204.6	303.2	320.1	297.4	2.1
Gujarat	5854.9	5683.0	6107.4	6710.8	7791.7	7867.7	55.1
Haryana	3459.0	3340.1	3444.1	3199.0	3003.9	3446.6	24.1
Jharkhand	0.0	0.0	0.6	1.5	2.6	0.9	0.0
Karnataka	315.6	300.5	146.4	157.5	65.7	0.0	0.0
Kerala	0.0	4.0	0.0	0.4	3.0	0.1	0.0
Madhya Pradesh	0.0	0.0	0.0	1.2	2.8	0.4	0.0
Maharashtra	401.2	370.8	363.1	344.7	290.9	279.4	2.0
Odisha	0.1	0.1	0.1	0.1	0.3	0.1	0.0
Punjab	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rajasthan	0.3	1.5	1.6	0.0	0.0	2.7	0.0
Sikkim	0.0	0.0	0.0	1.4	0.0	0.1	0.0
Tamil Nadu	248.6	198.2	179.1	1.7	3.7	1.7	0.0
Telangana	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Uttar Pradesh	1.1	2.0	1.3	0.0	0.0	1.2	0.0
West Bengal	449.5	767.3	947.2	1156.8	849.2	783.2	5.5
<b>Total Sales</b>	<b>10818.0</b>	<b>10850.1</b>	<b>11420.2</b>	<b>11904.2</b>	<b>12360.4</b>	<b>12709.1</b>	<b>89.0</b>
Pvt Imports	2422.8	1768.9	1727.5	1305.5	1133.5	1191.8	8.3
SEZ data	-	269.6	983.6	1058.0	606.5	375.6	2.6
<b>Total Consumption</b>	<b>13240.8</b>	<b>12888.6</b>	<b>14131.2</b>	<b>14267.8</b>	<b>14100.4</b>	<b>14276.6</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

Source: Petroleum Planning &amp; Analysis Cell.

**Figure V.8 : Sector-wise Consumption of Naphtha**

## V.12: Sector-wise/State-wise Consumption (end use) of Kerosene

(Figures in TMT)

Sector & State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Sector-wise Consumption (end use) of Kerosene</b>							
Domestic PDS	5197.2	3633.6	3231.2	2173.7	1586.6	1291.8	86.5
Commercial/Industry	84.0	97.0	97.3	86.5	68.6	63.8	4.3
Others	115.6	114.5	131.0	136.6	142.6	138.1	9.2
<b>Grand Total</b>	<b>5396.8</b>	<b>3845.1</b>	<b>3459.5</b>	<b>2396.8</b>	<b>1797.9</b>	<b>1493.7</b>	<b>100.0</b>
<b>State-wise Consumption (end use) of Kerosene</b>							
Andaman & Nicobar Islands	3.8	3.2	3.0	1.2	0.1	0.0	0.0
Andhra Pradesh	151.3	23.4	1.6	0.9	0.7	0.8	0.1
Arunachal Pradesh	13.2	11.7	12.0	10.0	10.5	9.7	0.6
Assam	225.4	192.0	190.1	138.8	120.3	92.3	6.2
Bihar	549.0	381.7	256.6	189.9	165.4	132.2	8.9
Chandigarh	0.1	0.2	0.2	0.1	0.1	0.1	0.0
Chhattisgarh	94.8	72.3	71.5	54.1	43.8	34.4	2.3
Dadra & Nagar Haveli And Daman & Diu	1.7	0.4	0.2	0.1	0.0		0.0
Delhi	0.8	0.8	1.0	0.7	0.1	0.1	0.0
Goa	2.0	1.1	1.1	0.5	0.3	0.2	0.0
Gujarat	387.1	266.8	197.3	97.6	68.2	44.4	3.0
Haryana	31.4	2.4	3.2	2.5	1.5	0.9	0.1
Himachal Pradesh	17.6	14.5	14.7	11.9	8.7	5.4	0.4
Jammu & Kashmir	136.3	126.9	124.4	118.6	79.0	67.1	4.5
Jharkhand	170.5	137.2	117.0	83.5	64.8	53.7	3.6
Karnataka	205.7	104.3	99.8	64.5	41.4	26.3	1.8
Kerala	80.0	66.7	70.2	58.1	53.1	44.6	3.0
Ladakh	0.0	0.0	0.0	1.4	47.3	48.0	3.2
Lakshadweep	0.7	0.6	0.6	0.5	0.7	0.5	0.0
Madhya Pradesh	333.5	262.5	254.0	185.9	145.9	91.0	6.1
Maharashtra	413.1	305.0	200.2	54.0	23.8	14.9	1.0
Manipur	12.2	14.6	14.2	10.3	9.1	7.9	0.5
Meghalaya	17.8	15.2	15.1	14.9	14.0	12.5	0.8
Mizoram	4.7	3.7	3.7	2.8	2.5	2.1	0.1
Nagaland	7.2	7.5	7.8	7.1	6.7	6.1	0.4
Odisha	220.3	190.2	192.9	162.1	148.1	117.0	7.8
Puducherry	3.0	0.5	0.0	0.0	0.00	0.0	0.0
Punjab	50.9	1.9	2.3	4.5	1.2	0.7	0.0
Rajasthan	279.0	87.8	56.6	14.2	2.5	1.9	0.1
Sikkim	10.1	10.5	10.1	8.8	10.2	10.2	0.7
Tamil Nadu	281.8	204.7	196.4	153.9	130.4	104.9	7.0
Telangana	105.2	79.3	74.3	23.9	2.7	0.7	0.0
Tripura	26.9	22.9	22.8	20.4	19.5	17.5	1.2
Uttar Pradesh	915.2	707.4	686.4	353.5	23.8	2.5	0.2
Uttarakhand	27.7	13.8	11.5	3.8	4.1	3.5	0.2
West Bengal	616.6	511.4	546.7	541.7	544.5	539.2	36.1
<b>Total Sales</b>	<b>5396.8</b>	<b>3845.1</b>	<b>3459.5</b>	<b>2396.8</b>	<b>1795.1</b>	<b>1493.4</b>	<b>100.0</b>
Pvt Imports	-	-	-	-	2.8	0.3	-
<b>Total Consumption</b>	<b>5396.8</b>	<b>3845.1</b>	<b>3459.5</b>	<b>2396.8</b>	<b>1797.9</b>	<b>1493.7</b>	<b>-</b>

Note: Total may not tally due to rounding off.

P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.



**V.13: Sector-wise/State-wise Consumption (end use) MS (Petrol)**

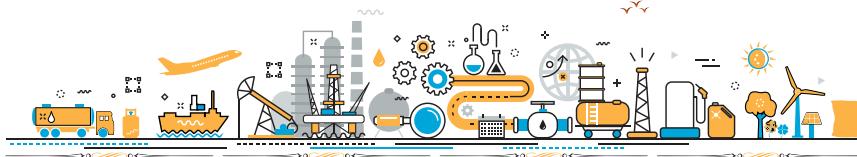
(Figures in TMT)

Sector & State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Sector-wise Consumption (end use) of MS (Petrol)</b>							
Retail/Resellers	23642.0	26050.2	28156.2	29849.3	27847.1	30729.3	99.6
Others	123.0	124.2	128.2	126.1	121.8	119.6	0.4
<b>Grand Total</b>	<b>23764.9</b>	<b>26174.5</b>	<b>28284.4</b>	<b>29975.5</b>	<b>27969.0</b>	<b>30848.9</b>	<b>100.0</b>
<b>State-wise Consumption (end use) of MS (Petrol)</b>							
Andaman & Nicobar Islands	15.1	16.8	18.1	18.9	13.8	15.7	0.1
Andhra Pradesh	944.5	1061.8	1161.9	1278.4	1321.9	1419.4	4.6
Arunachal Pradesh	35.4	39.9	46.2	51.8	50.6	55.4	0.2
Assam	307.8	356.7	411.6	445.1	431.9	510.0	1.7
Bihar	610.1	697.0	793.0	852.1	848.9	926.7	3.0
Chandigarh	96.9	104.6	122.6	126.8	91.4	110.0	0.4
Chhattisgarh	452.8	517.8	559.6	613.1	604.3	660.9	2.1
Dadra & Nagar Haveli And Daman & Diu	40.2	42.9	42.8	38.9	30.0	38.6	0.1
Delhi	906.1	926.7	903.1	876.0	668.8	693.3	2.2
Goa	162.2	174.6	183.6	186.1	145.1	167.0	0.5
Gujarat	1665.6	1817.2	1976.0	2066.8	1860.2	2134.0	6.9
Haryana	873.3	937.9	978.5	1029.4	1011.6	1113.7	3.6
Himachal Pradesh	183.1	207.9	224.6	238.0	233.1	272.3	0.9
Jammu & Kashmir	209.6	249.3	274.7	300.4	273.1	316.3	1.0
Jharkhand	375.1	425.2	487.0	526.5	512.5	574.1	1.9
Karnataka	1799.1	1974.3	2142.7	2270.5	2123.9	2235.0	7.2
Kerala	1238.0	1380.9	1462.6	1558.8	1371.1	1495.8	4.8
Ladakh	-	-	-	3.6	12.5	16.8	0.1
Lakshadweep	-	-	-	-	-	0.0	0.0
Madhya Pradesh	1109.5	1257.4	1372.1	1463.7	1461.1	1542.7	5.0
Maharashtra	3025.0	3225.6	3358.1	3462.0	3014.4	3387.6	11.0
Manipur	41.8	54.0	61.2	68.2	62.1	67.5	0.2
Meghalaya	73.0	85.5	93.7	99.8	81.3	95.5	0.3
Mizoram	24.9	25.4	28.2	31.2	26.0	26.0	0.1
Nagaland	34.4	37.3	36.8	39.2	31.9	40.9	0.1
Odisha	614.9	703.8	775.9	834.5	782.4	863.9	2.8
Puducherry	120.1	129.9	132.9	133.8	108.4	128.5	0.4
Punjab	805.9	847.3	879.2	960.2	888.4	1015.8	3.3
Rajasthan	1298.3	1440.3	1550.7	1657.0	1549.4	1621.5	5.3
Sikkim	16.5	17.5	19.7	21.1	15.8	19.4	0.1
Tamil Nadu	2254.7	2420.7	2602.0	2735.4	2580.6	2758.1	8.9
Telangana	976.8	1092.3	1198.8	1288.3	1199.5	1357.4	4.4
Tripura	41.5	47.6	54.1	57.7	53.7	57.5	0.2
Uttar Pradesh	2423.4	2759.5	3119.2	3319.9	3210.1	3696.1	12.0
Uttarakhand	263.8	286.9	309.2	326.3	293.0	338.4	1.1
West Bengal	725.5	812.1	904.1	996.1	997.5	1076.9	3.5
<b>Total Sales</b>	<b>23764.9</b>	<b>26174.5</b>	<b>28284.4</b>	<b>29975.5</b>	<b>27960.3</b>	<b>30848.9</b>	<b>100.0</b>
Pvt Imports	-	-	-	-	8.7	0.0	-
<b>Total Consumption</b>	<b>23764.9</b>	<b>26174.5</b>	<b>28284.4</b>	<b>29975.5</b>	<b>27969.0</b>	<b>30848.9</b>	<b>-</b>

Note: Total may not tally due to rounding off.

P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.



## V.14: Sector-wise/State-wise Consumption (end use) of Aviation Turbine Fuel (ATF)

(Figures in TMT)

Sector & State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Sector-wise Consumption (end use) of ATF</b>							
Foreign airlines	1433.5	1524.5	1815.8	1853.4	733.3	994.3	19.9
<b>Indian airlines</b>	<b>4317.8</b>	<b>4768.7</b>	<b>6216.2</b>	<b>6136.1</b>	<b>2955.3</b>	<b>4002.1</b>	<b>79.9</b>
Others	910.5	1041.6	11.3	9.1	8.3	10.7	0.2
<b>Total Sales</b>	<b>6661.8</b>	<b>7334.8</b>	<b>8043.3</b>	<b>7998.6</b>	<b>3696.9</b>	<b>5007.1</b>	<b>100.0</b>
Pvt Imports	337.5	300.1	258.8	0.0	0.9	0.9	0.02
<b>Total Consumption</b>	<b>6999.4</b>	<b>7634.9</b>	<b>8302.1</b>	<b>7998.6</b>	<b>3697.8</b>	<b>5008.0</b>	<b>100.0</b>
<b>State-wise Consumption (end use) ATF</b>							
Andaman & Nicobar Islands	23.6	26.7	25.1	22.3	7.9	12.1	0.2
Andhra Pradesh	75.6	70.2	79.6	73.7	38.3	58.1	1.2
Arunachal Pradesh	1.2	1.2	1.5	1.2	1.6	1.5	0.0
Assam	146.5	139.4	167.8	159.3	105.1	122.6	2.4
Bihar	25.7	34.0	38.3	38.5	19.8	26.6	0.5
Chandigarh	28.6	23.4	21.1	23.1	31.1	28.8	0.6
Chhattisgarh	32.0	35.7	42.8	42.3	21.8	28.5	0.6
Dadra & Nagar Haveli And Daman & Diu	0.9	0.9	1.3	1.3	1.2	1.2	0.0
<b>Delhi</b>	<b>1725.5</b>	<b>1941.5</b>	<b>2064.8</b>	<b>2047.7</b>	<b>982.0</b>	<b>1314.4</b>	<b>26.2</b>
Goa	137.8	142.0	154.0	159.5	48.6	87.7	1.8
Gujarat	230.8	241.5	274.8	250.1	117.1	172.0	3.4
Haryana	40.2	60.1	40.6	26.0	25.0	27.8	0.6
Himachal Pradesh	6.8	7.6	7.8	6.7	4.7	4.4	0.1
Jammu & Kashmir	44.1	45.0	50.0	46.0	29.8	53.4	1.1
Jharkhand	32.6	47.0	49.5	51.0	15.5	26.7	0.5
Karnataka	479.0	543.1	631.8	698.6	376.1	453.1	9.0
Kerala	428.1	473.7	475.1	533.1	181.1	302.0	6.0
Ladakh	0.0	0.0	0.0	1.1	4.1	3.8	0.1
Lakshadweep	0.0	0.0	0.0	0.0	0.06	0.1	0.0
Madhya Pradesh	78.2	63.6	65.6	78.4	49.6	75.9	1.5
Maharashtra	1466.2	1618.4	1639.0	1399.5	550.6	699.3	14.0
Manipur	3.2	4.8	9.4	10.5	3.6	3.3	0.1
Meghalaya	0.0	0.003	0.2	0.3	0.1	0.8	0.0
Mizoram	1.1	1.2	1.8	1.8	0.5	0.9	0.0
Nagaland	2.9	2.6	3.1	2.9	1.9	5.0	0.1
Odisha	61.9	76.7	102.1	92.0	54.2	63.3	1.3
Puducherry	0.0	0.5	0.7	0.5	0.0	0.0	0.0
Punjab	106.3	135.2	165.4	163.9	97.6	131.8	2.6
Rajasthan	151.3	156.6	194.5	171.4	93.2	141.4	2.8
Sikkim	0.0	0.0	0.1	0.1	0.2	0.8	0.0
Tamil Nadu	474.8	530.0	614.3	638.5	250.6	340.6	6.8
Telangana	311.7	365.6	531.0	541.1	242.3	314.9	6.3
Tripura	4.2	6.8	9.5	9.2	2.8	4.4	0.1
Uttar Pradesh	190.4	214.6	243.7	256.3	165.4	211.1	4.2
Uttarakhand	8.7	11.9	13.4	15.6	5.6	15.5	0.3
West Bengal	342.2	313.2	323.5	435.6	168.2	273.4	5.5
<b>Total Sales</b>	<b>6661.8</b>	<b>7334.8</b>	<b>8043.3</b>	<b>7998.6</b>	<b>3696.9</b>	<b>5007.1</b>	<b>100.0</b>
Pvt Imports	337.5	300.1	258.8	0.0	0.9	0.9	0.02
<b>Total Consumption</b>	<b>6999.4</b>	<b>7634.9</b>	<b>8302.1</b>	<b>7998.6</b>	<b>3697.8</b>	<b>5008.0</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.



## V.15: Sector-wise Consumption (end use) of High Speed Diesel (HSD) Oil

(Figures in TMT)

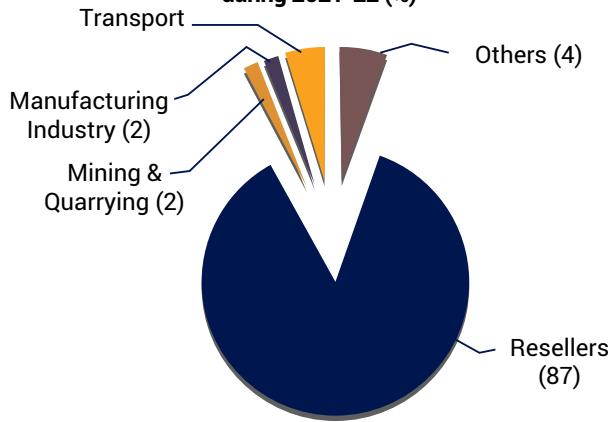
Sector	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. Transport</b>	<b>5658</b>	<b>5999</b>	<b>6210</b>	<b>6011</b>	<b>3257</b>	<b>4089</b>	<b>5.3</b>
(i) Road Transport	2709	2731	2727	2660	1374	1694	2.2
(ii) Aviation	2	3	3	3	2	3	0.0
(iii) Shipping	296	629	763	808	658	644	0.8
(iv) Railways	2651	2636	2716	2539	1222	1748	2.3
<b>2. Agriculture</b>	<b>607</b>	<b>618</b>	<b>639</b>	<b>616</b>	<b>571</b>	<b>530</b>	<b>0.7</b>
<b>3. Power Generation</b>	<b>208</b>	<b>223</b>	<b>222</b>	<b>214</b>	<b>204</b>	<b>213</b>	<b>0.3</b>
<b>4. Mining &amp; Quarrying</b>	<b>1224</b>	<b>1255</b>	<b>1465</b>	<b>1542</b>	<b>1642</b>	<b>1540</b>	<b>2.0</b>
<b>5. Manufacturing Industry</b>	<b>1033</b>	<b>1155</b>	<b>1264</b>	<b>1334</b>	<b>1355</b>	<b>1291</b>	<b>1.7</b>
(i) Iron & Steel (Metallurgy)	159	153	148	135	126	136	0.18
(ii) Textile	35	32	25	20	16	16	0.02
(iii) Cement	159	185	255	266	266	235.5	0.3
(iv) Ceramic & Glass	8	8	8	7	5	5.4	0.01
(v) Chemicals & Allied	110	122	120	123	106	97.6	0.1
(vi) Aluminium	24	16	16	13	15	20.3	0.03
(vii) Civil Engineering	317	416	480	582	655	605.0	0.8
(viii) Elec./Electronics	15	13	15	13	9	9.5	0.01
(ix) Mechanical	144	138	135	117	106	114.6	0.1
(x) Fertilizers	6	5	5	6	5	4.6	0.01
(xi) Other Consumer/Industrial Goods	56	65	57	52	47	45.8	0.1
<b>6. Resellers/Retail</b>	<b>65071.8</b>	<b>69846.4</b>	<b>71697.2</b>	<b>70704.1</b>	<b>63373.6</b>	<b>66404.1</b>	<b>86.6</b>
<b>7. Miscellaneous</b>	<b>2179</b>	<b>1887</b>	<b>1938</b>	<b>2064</b>	<b>2232</b>	<b>2552.0</b>	<b>3.3</b>
<b>Total Sales</b>	<b>75980.3</b>	<b>80983.2</b>	<b>83434.7</b>	<b>82485.4</b>	<b>72634.2</b>	<b>76619.6</b>	<b>99.9</b>
<b>Pvt Imports</b>	<b>46</b>	<b>90</b>	<b>93</b>	<b>117</b>	<b>79</b>	<b>67.3</b>	<b>0.1</b>
<b>Total Consumption</b>	<b>76026.6</b>	<b>81073.4</b>	<b>83528.1</b>	<b>82602.0</b>	<b>72712.7</b>	<b>76686.9</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

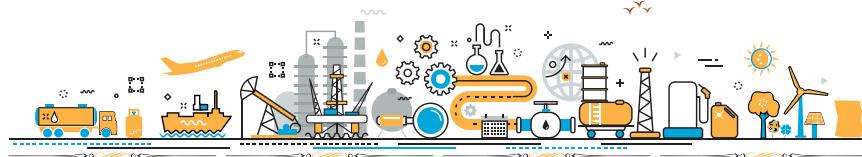
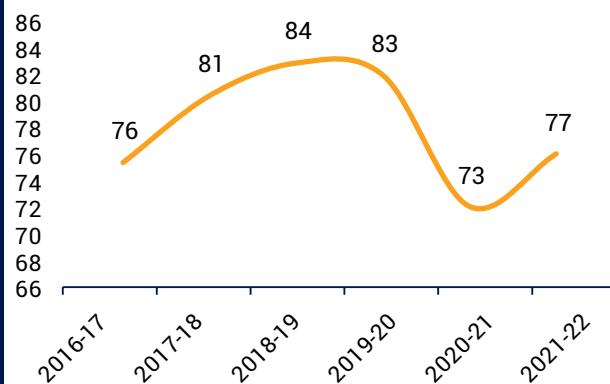
P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.

**V.9: Sector-wise Consumption of HSD during 2021-22 (%)**



**Figure V.10: Trend of HSD Consumption (in MMT)**



## V.16: State-wise Consumption of High Speed Diesel (HSD) Oil

(Figures in TMT)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Andaman &amp; Nicobar Islands</b>	<b>126.7</b>	<b>140</b>	<b>149</b>	<b>157</b>	<b>132</b>	<b>142</b>	<b>0.2</b>
Andhra Pradesh	3467.4	3664	3947	3834	3405	3432	4.5
Arunachal Pradesh	132.4	146	150	161	175	192	0.3
Assam	860.7	926	985	1024	904	1123	1.5
Bihar	2184.0	2278	2442	2367	2137	2055	2.7
Chandigarh	102	130	192	198	127	171	0.2
Chhattisgarh	1495	1649	1699	1648	1608	1657	2.2
Dadra & Nagar Haveli And Daman & Diu	309	312	291	234	162	175	0.2
Delhi	1267	1194	1021	835	499	597	0.8
Goa	344	329	316	306	233	276	0.4
Gujarat	4994	5278	5430	5608	5090	5780	7.5
Haryana	4952	5147	4847	4717	4435	4450	5.8
Himachal Pradesh	586	616	646	668	610	777	1.0
Jammu & Kashmir	585	685	697	676	576	698	0.9
Jharkhand	1633	1766	1901	1968	1742	1661	2.2
Karnataka	5937	6610	6905	6602	5574	6204	8.1
Kerala	2537	2609	2576	2557	1923	2101	2.7
Ladakh	0	0	0	5	56	68	0.1
Lakshadweep	13	13	14	15	16	16	0.0
Madhya Pradesh	3212	3562	3797	3655	3369	3375	4.4
Maharashtra	8071	8672	9292	9529	8031	8322	10.9
Manipur	80	103	116	118	109	119	0.2
Meghalaya	299	326	344	356	281	331	0.4
Mizoram	61	68	73	75	69	83	0.1
Nagaland	64	70	77	90	89	101	0.1
Odisha	2331	2506	2613	2662	2535	2593	3.4
Puducherry	338	333	314	290	211	300	0.4
Punjab	3348	3363	3217	3214	2742	3113	4.1
Rajasthan	5212	5477	5440	5272	4337	4452	5.8
Sikkim	61	69	78	78	60	74	0.1
Tamil Nadu	6468	6448	6354	6191	5007	5371	7.0
Telangana	3295	3685	3753	3622	3253	3556	4.6
Tripura	90	100	94	87	89	95	0.1
<b>Uttar Pradesh</b>	<b>7706</b>	<b>8608</b>	<b>9453</b>	<b>9485</b>	<b>9385</b>	<b>9496</b>	<b>12.4</b>
<b>Uttarakhand</b>	<b>722</b>	<b>713</b>	<b>762</b>	<b>744</b>	<b>657</b>	<b>700</b>	<b>0.9</b>
West Bengal	3096	3391	3449	3439	3008	2962	3.9
<b>Total Sales</b>	<b>75980</b>	<b>80983</b>	<b>83435</b>	<b>82485</b>	<b>72634</b>	<b>76620</b>	<b>99.9</b>
Pvt Imports	46	90	93	117	79	67	0.1
<b>Total Consumption</b>	<b>76027</b>	<b>81073</b>	<b>83528</b>	<b>82602</b>	<b>72713</b>	<b>76687</b>	<b>100</b>

Note: Total may not tally due to rounding off.

P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.



## V.17: Sector-wise Consumption (end use) of Light Diesel Oil (LDO)

(Figures in TMT)

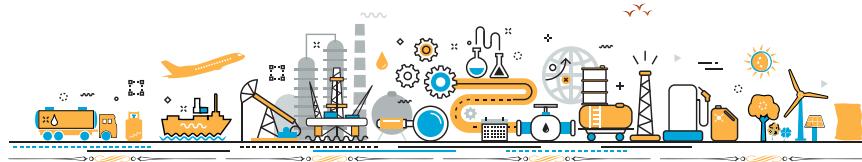
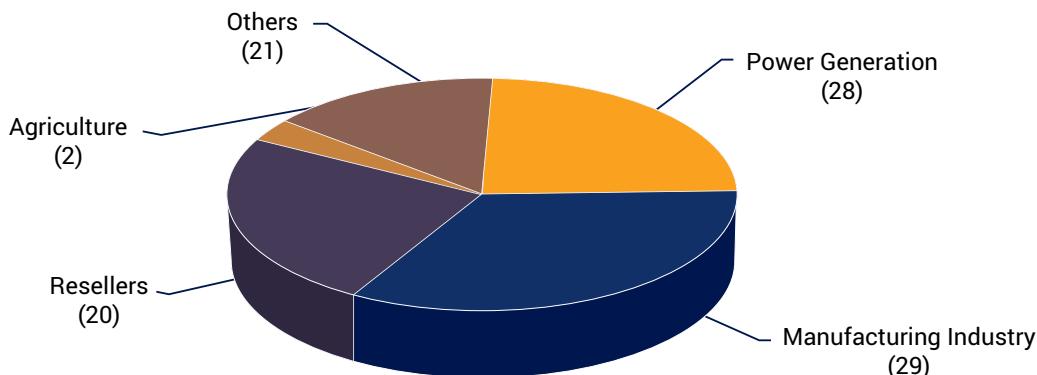
Sector	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Transport</b>	<b>7.2</b>	<b>7.2</b>	<b>10.0</b>	<b>4.6</b>	<b>5.0</b>	<b>6.0</b>	<b>0.6</b>
Road Transport	0.0	2.6	4.5	1.9	1.5	1.6	0.2
Shipping	6.7	4.1	5.0	2.2	3.2	4.2	0.4
Railways	0.6	0.5	0.5	0.4	0.3	0.3	0.0
<b>Agriculture</b>	<b>2.0</b>	<b>9.3</b>	<b>15.6</b>	<b>12.5</b>	<b>15.3</b>	<b>17.7</b>	<b>1.7</b>
<b>Power Generation</b>	<b>174.3</b>	<b>142.9</b>	<b>276.5</b>	<b>342.1</b>	<b>252.3</b>	<b>288.6</b>	<b>28.3</b>
<b>Mining &amp; Quarrying</b>	<b>2.3</b>	<b>6.1</b>	<b>22.4</b>	<b>14.4</b>	<b>7.7</b>	<b>10.3</b>	<b>1.0</b>
<b>Manufacturing Industry</b>	<b>59.5</b>	<b>148.8</b>	<b>174.8</b>	<b>153.3</b>	<b>308.7</b>	<b>296.8</b>	<b>29.1</b>
Civil Engineering	20.2	33.2	41.9	43.1	136.6	101.6	10.0
Metallurgical	19.3	54.7	67.7	64.0	78.2	91.8	9.0
Textile & Fibre	1.4	2.1	2.4	1.9	3.9	3.1	0.3
Cement	1.7	8.0	4.8	11.7	17.0	23.7	2.3
Ceramic & Glass	0.1	0.4	0.4	0.5	0.9	6.2	0.6
Chemicals & Allied	8.9	10.8	17.4	16.5	50.4	33.5	3.3
Aluminium	3.9	31.7	28.4	5.4	5.7	6.9	0.7
Elec./Electronics	0.1	0.7	1.0	0.1	1.1	1.8	0.18
Mechanical	2.1	2.9	6.1	6.2	8.6	13.7	1.3
Other Consumer/ Industrial Goods	1.8	4.3	4.6	3.8	6.0	14.5	1.4
Resellers	1.0	2.6	33.3	37.5	124.8	206.0	20.2
Miscellaneous	202.5	206.9	65.3	63.3	128.9	187.2	18.3
<b>Total Sales</b>	<b>449.0</b>	<b>523.8</b>	<b>598.0</b>	<b>627.8</b>	<b>842.7</b>	<b>1012.6</b>	<b>99.2</b>
Pvt Imports	0.0	0.0	0.0	0.0	12.4	7.9	0.8
<b>Total Consumption</b>	<b>449.0</b>	<b>523.8</b>	<b>598.0</b>	<b>627.8</b>	<b>855.1</b>	<b>1020.5</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.

### V.11: Sector-wise Consumption of LDO during 2021-22 (%)



## V.18: State-wise Consumption (end use) of Light Diesel Oil (LDO)

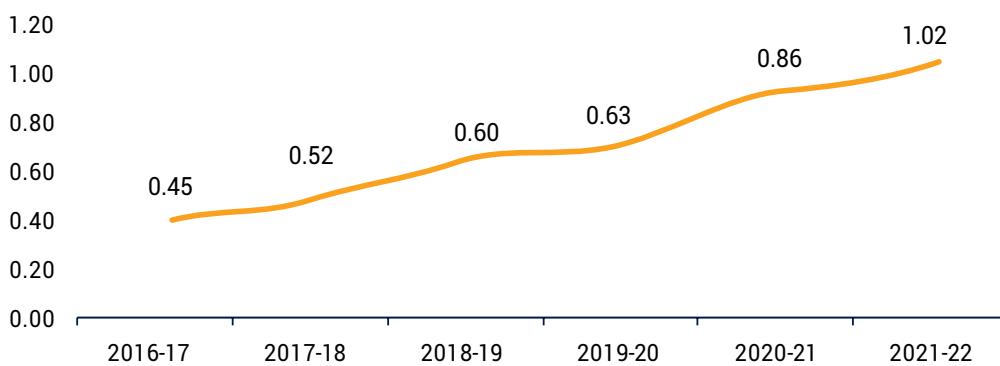
(Figures in TMT)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	21.1	17.8	21.9	20.4	35.5	36.2	3.5
Arunachal Pradesh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Assam	3.8	3.1	5.1	3.6	3.8	5.0	0.5
Bihar	20.7	30.5	23.7	42.8	40.4	33.7	3.3
Chandigarh	0.6	0.7	0.5	0.4	0.4	0.5	0.0
Chhattisgarh	27.2	35.6	42.4	42.5	43.2	42.4	4.2
Dadra&Nagar Haveli And Daman&Diu	0.2	0.3	0.3	0.6	0.6	1.6	0.2
Delhi	0.5	6.5	2.2	0.7	2.1	2.4	0.2
Goa	0.3	0.3	0.6	0.2	0.3	1.5	0.1
Gujarat	23.6	20.3	34.5	29.4	108.4	146.2	14.3
Haryana	8.4	24.2	35.0	25.4	23.1	25.1	2.5
Himachal Pradesh	0.2	0.6	0.3	0.2	1.3	1.3	0.1
Jammu & Kashmir	0.8	1.8	1.1	0.9	2.7	1.9	0.2
Jharkhand	18.1	15.4	19.1	18.9	38.9	49.4	4.8
Karnataka	29.6	31.0	17.3	20.2	22.3	24.3	2.4
Kerala	0.3	0.8	2.0	5.8	16.5	12.8	1.3
Ladakh					0.1	0.0	0.0
Madhya Pradesh	13.1	23.2	34.0	55.2	34.3	28.5	2.8
Maharashtra	98.2	88.6	77.8	80.7	140.5	213.4	20.9
Manipur	0.0	0.0	0.0	0.1	0.2	0.3	0.0
Meghalaya	0.0	0.0	0.0	0.1	0.3	0.4	0.0
Mizoram	0.0	0.0	0.0	0.0	0.4	0.2	0.0
Nagaland	0.0	0.0	0.1	0.1	0.4	0.7	0.1
Odisha	18.1	26.0	48.5	55.9	48.7	59.9	5.9
Puducherry	0.0	0.0	0.3	0.1	0.6	0.9	0.1
Punjab	6.1	8.2	9.4	9.2	12.3	11.5	1.1
Rajasthan	20.0	32.7	61.6	48.6	70.2	82.2	8.1
Sikkim	0.0	0.0	0.1	1.7	3.7	5.9	0.6
Tamil Nadu	4.3	5.9	14.4	19.5	35.4	35.8	3.5
Telangana	19.1	6.2	16.5	14.2	28.8	22.1	2.2
Tripura	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uttar Pradesh	51.0	86.5	83.9	85.9	82.0	99.5	9.7
Uttarakhand	0.4	2.1	2.3	1.0	7.1	2.9	0.3
West Bengal	63.1	55.4	43.4	43.6	38.5	64.2	6.3
<b>Total Sales</b>	<b>449.0</b>	<b>523.8</b>	<b>598.0</b>	<b>627.8</b>	<b>842.7</b>	<b>1012.6</b>	<b>99.2</b>
Pvt Imports	0.0	0.0	0.0	0.0	12.4	7.9	0.8
<b>Total Consumption</b>	<b>449.0</b>	<b>523.8</b>	<b>598.0</b>	<b>627.8</b>	<b>855.1</b>	<b>1020.5</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

Source: Petroleum Planning &amp; Analysis Cell.

Figure V.12: Trend of LDO Consumption (in MMT)



## V.19: Sector-wise Consumption (end use) of Furnace Oil

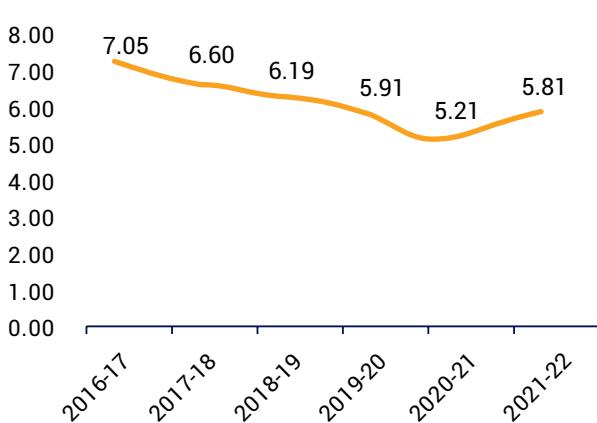
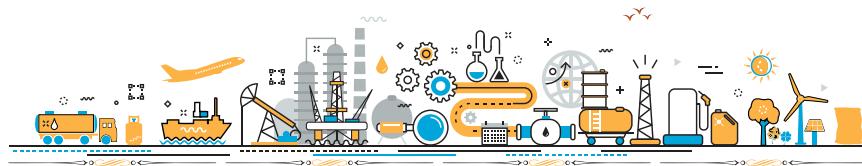
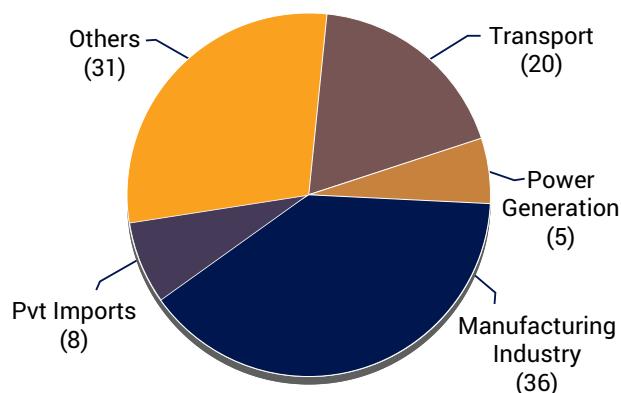
(Figures in TMT)

Sector	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. Transport</b>	<b>444.1</b>	<b>600.8</b>	<b>786.3</b>	<b>849.2</b>	<b>1022.4</b>	<b>1158.6</b>	<b>19.9</b>
(i) Road Transport	37.0	20.2	110.0	120.5	132.1	172.4	3.0
(ii) Shipping	407.2	580.6	676.3	728.7	890.3	985.8	17.0
(iii) Railways	0.0	0.0	0.1	0.0	0.0	0.4	0.0
Other Transport (incl. Agri. Retail Trade)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>2. Agriculture</b>	<b>51.4</b>	<b>49.8</b>	<b>78.5</b>	<b>70.9</b>	<b>80.0</b>	<b>64.8</b>	<b>1.1</b>
<b>3. Power Generation</b>	<b>361.0</b>	<b>313.8</b>	<b>338.8</b>	<b>302.7</b>	<b>226.1</b>	<b>311.5</b>	<b>5.4</b>
<b>4. Mining &amp; Quarrying</b>	<b>71.5</b>	<b>67.9</b>	<b>54.3</b>	<b>84.0</b>	<b>91.7</b>	<b>127.4</b>	<b>2.2</b>
<b>5. Manufacturing Industry</b>	<b>2491.8</b>	<b>2345.9</b>	<b>2577.4</b>	<b>2142.5</b>	<b>1874.5</b>	<b>2091.8</b>	<b>36.0</b>
(i) Civil Engineering	49.6	43.0	52.1	48.8	58.0	52.8	0.9
(ii) Metallurgical	981.7	930.6	885.2	778.5	666.2	758.4	13.1
(iii) Textile & Fibre	74.1	45.7	48.6	41.0	35.7	26.9	0.5
(iv) Cement	12.0	13.7	20.3	25.3	22.1	23.2	0.4
(v) Ceramic & Glass	171.0	134.2	202.5	79.0	59.9	99.3	1.7
(vi) Chemicals & Allied	238.9	242.7	295.2	240.4	226.5	232.7	4.0
(vii) Aluminium	258.3	238.3	386.4	338.6	348.8	390.3	6.7
(viii) Electrical	1.6	2.4	3.3	1.4	1.9	1.5	0.03
(ix) Mechanical	16.6	13.6	27.5	23.0	16.8	15.6	0.3
(x) Fertilizers	487.7	518.4	460.4	386.9	294.9	341.3	5.9
(xi) Other Consumer/ Industrial Goods)	200.1	163.3	196.0	179.7	143.6	149.7	2.6
<b>6. Resellers</b>	<b>357.3</b>	<b>321.2</b>	<b>298.4</b>	<b>289.6</b>	<b>267.8</b>	<b>211.2</b>	<b>3.6</b>
<b>7. Miscellaneous</b>	<b>2485.4</b>	<b>2233.5</b>	<b>1449.5</b>	<b>1398.1</b>	<b>1329.9</b>	<b>1388.0</b>	<b>23.9</b>
<b>Total Sales</b>	<b>6262.3</b>	<b>5933.0</b>	<b>5583.1</b>	<b>5137.1</b>	<b>4892.3</b>	<b>5353.3</b>	<b>92.2</b>
<b>8. Pvt Imports</b>	<b>783.9</b>	<b>671.7</b>	<b>611.4</b>	<b>774.9</b>	<b>316.0</b>	<b>454.8</b>	<b>7.8</b>
<b>Total Consumption</b>	<b>7046.2</b>	<b>6604.7</b>	<b>6194.5</b>	<b>5912.0</b>	<b>5208.3</b>	<b>5808.2</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

P. Provisional

Source: Petroleum Planning &amp; Analysis Cell.

**Figure V.13: Trend of Furnace Oil Consumption (in MMT)****Figure V.14: Sector-wise consumption of Furnace Oil during 2021-22 (%)**

## V.20: State-wise Consumption of Furnace Oil

(Figures in TMT)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andaman & Nicobar Islands	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Andhra Pradesh	236.3	289.1	283.0	258.5	242.7	239.4	4.1
Arunachal Pradesh	0.0	0.3	0.3	0.0	0.0	0.0	0.0
Assam	3.1	4.1	4.7	4.9	6.7	6.5	0.1
Bihar	18.7	22.9	27.2	28.6	25.9	28.5	0.5
Chandigarh	11.9	8.9	4.4	2.0	1.3	1.0	0.0
Chhattisgarh	176.6	170.8	199.6	161.4	149.9	165.6	2.9
Dadra & Nagar Haveli And Daman & Diu	128.9	107.9	115.6	104.8	124.8	89.2	1.5
Delhi	81.1	45.7	0.0	0.0	0.0	0.0	0.0
Goa	42.2	35.5	43.7	39.2	30.6	28.1	0.5
Gujarat	776.2	781.6	685.4	748.3	823.0	1021.7	17.6
Haryana	165.6	82.7	0.0	0.0	0.0	0.0	0.0
Himachal Pradesh	38.0	52.7	47.7	40.4	43.6	40.8	0.7
Jammu & Kashmir	3.8	2.7	2.5	4.2	3.5	4.0	0.1
Jharkhand	143.9	142.8	141.5	112.2	106.9	122.2	2.1
Karnataka	357.8	377.5	354.4	291.8	259.0	271.4	4.7
Kerala	305.7	251.9	258.9	278.0	332.7	322.9	5.6
Ladakh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lakshadweep	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Madhya Pradesh	109.5	111.3	120.9	93.8	85.8	88.2	1.5
Maharashtra	858.1	844.8	815.3	766.3	666.6	687.6	11.8
Manipur	0.0	0.0	0.1	0.6	0.5	0.5	0.0
Meghalaya	0.6	0.6	0.0	0.0	0.0	0.0	0.0
Mizoram	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nagaland	0.0	0.0	0.0	0.2	0.1	0.0	0.0
<b>Odisha</b>	<b>763.8</b>	<b>761.8</b>	<b>856.1</b>	<b>921.8</b>	<b>901.1</b>	<b>1017.7</b>	<b>17.5</b>
Puducherry	28.2	36.6	39.6	38.9	35.1	37.0	0.6
Punjab	216.9	215.4	209.1	171.0	146.7	160.7	2.8
Rajasthan	177.6	114.3	8.8	0.0	0.0	0.0	0.0
Sikkim	1.2	1.9	0.7	0.0	0.0	0.0	0.0
Tamil Nadu	699.2	676.4	655.3	502.7	382.7	433.0	7.5
Telangana	111.7	113.4	129.3	109.6	102.2	117.2	2.0
Tripura	0.0	0.0	0.0	0.0	0.6	0.1	0.0
Uttar Pradesh	326.7	187.9	7.2	0.0	0.0	0.0	0.0
Uttarakhand	85.3	93.2	146.0	67.9	72.7	99.0	1.7
West Bengal	393.8	398.3	426.0	390.0	347.5	371.2	6.4
<b>Total Sales</b>	<b>6262.3</b>	<b>5933.0</b>	<b>5583.1</b>	<b>5137.1</b>	<b>4892.3</b>	<b>5353.3</b>	<b>92.2</b>
Imports & SEZ State	783.9	671.7	611.4	774.9	316.0	454.8	7.8
<b>Grand Total</b>	<b>7046.2</b>	<b>6604.7</b>	<b>6194.5</b>	<b>5912.0</b>	<b>5208.3</b>	<b>5808.2</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

P. Provisional

Source: Petroleum Planning &amp; Analysis Cell.



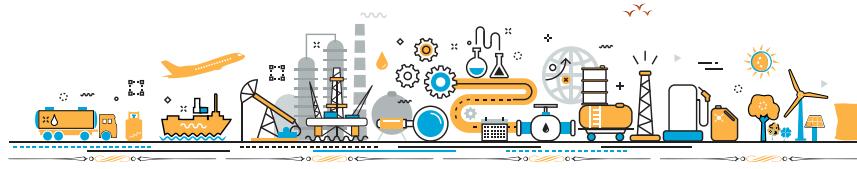
## V.21: Sector-wise/State-wise Consumption (end use) of Low Sulphur Heavy Stock

Sector & State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Sector-wise Consumption of Low Sulphur Heavy Stock</b>							
1. Agriculture	0.0	1.2	7.9	6.4	6.8	6.5	1.5
2. Power Generation	16.4	0.0	9.3	17.9	10.7	29.7	6.6
3. Mining	0.0	0.3	0.0	0.0	0.0	0.0	0.0
<b>4. Manufacturing Industry</b>	<b>50.9</b>	<b>53.8</b>	<b>175.1</b>	<b>201.9</b>	<b>196.2</b>	<b>191.3</b>	<b>42.8</b>
(i) Civil Engineering	0.0	1.1	3.1	6.1	7.4	7.4	1.7
(ii) Metallurgical	0.0	2.4	60.3	78.7	66.2	66.8	15.0
(iii) Iron & Steel	45.9	37.9	71.9	86.3	93.9	88.3	19.8
(iv) Textile & Fibre	0.0	0.3	2.7	2.5	3.5	6.5	1.4
(v) Cement	0.0	0.4	0.9	0.8	0.9	0.7	0.2
(vi) Chemicals & Allied	3.7	5.7	13.6	12.4	10.2	6.5	1.5
(vii) Electrical	0.0	0.1	0.0	0.7	0.1	0.4	0.1
(viii) Mechanical	0.0	0.1	0.5	0.8	2.3	2.0	0.4
(ix) Fertilizers	1.3	0.5	0.5	1.0	0.5	0.6	0.1
(x) Other Consumer/ Industrial Goods)	0.0	5.3	21.5	12.7	11.3	12.0	2.7
5. Miscellaneous	36.9	46.3	128.7	113.0	116.0	151.9	34.0
6. Resellers	0.0	14.7	48.0	50.3	48.5	67.4	15.1
<b>Total Sales</b>	<b>104.2</b>	<b>116.3</b>	<b>369.0</b>	<b>389.5</b>	<b>378.2</b>	<b>446.7</b>	<b>100.0</b>
7. Pvt Imports	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total Consumption</b>	<b>104.2</b>	<b>116.3</b>	<b>369.0</b>	<b>389.5</b>	<b>378.2</b>	<b>446.7</b>	<b>100.0</b>
<b>State-wise Consumption of Low Sulphur Heavy Stock</b>							
Andhra Pradesh	49.7	39.1	59.6	69.1	82.0	74.4	16.6
Bihar	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chandigarh	0.0	0.1	0.6	0.0	0.0	0.0	0.0
Chhattisgarh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dadra&NagarHaveliAndDaman&Diu	0.0	0.0	0.0	0.0	0.0	0.5	0.1
Delhi	0.0	8.5	38.2	13.5	0.0	0.0	0.0
Goa	0.0	0.0	0.0	0.0	0.0	4.1	0.9
Gujarat	0.9	0.9	0.6	1.3	1.7	20.6	4.6
Haryana	0.0	10.1	49.1	57.1	59.1	77.5	17.3
Himachal Pradesh	0.0	0.1	0.7	1.3	3.3	4.0	0.9
Jammu & Kashmir	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Karnataka	4.9	1.4	0.1	0.0	0.0	0.0	0.0
Kerala	10.0	0.0	1.3	2.1	0.1	5.2	1.2
Madhya Pradesh	0.0	0.0	0.1	0.0	1.6	4.8	1.1
Maharashtra	26.5	12.8	3.8	6.2	14.2	47.6	10.7
Odisha	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Puducherry	2.4	0.2	1.4	1.0	0.0	0.4	0.1
Punjab	0.0	10.3	4.3	2.9	2.0	0.9	0.2
Rajasthan	0.0	13.5	67.7	78.9	68.0	72.1	16.1
Tamil Nadu	3.9	1.7	1.6	0.9	0.7	0.0	0.0
Telangana	5.8	2.1	0.6	0.6	0.0	0.0	0.0
Uttar Pradesh	0.0	13.0	130.4	148.0	138.1	130.7	29.2
Uttarakhand	0.0	2.6	9.1	6.5	7.3	3.8	0.8
West Bengal	0.0	0.0	0.0	0.0	0.0	0.1	0.0
<b>Grand Total</b>	<b>104.2</b>	<b>116.3</b>	<b>369.0</b>	<b>389.5</b>	<b>378.2</b>	<b>446.7</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

P. Provisional

Source: Petroleum Planning & Analysis Cell.



## V.22: State-wise Consumption of Lubes & Greases

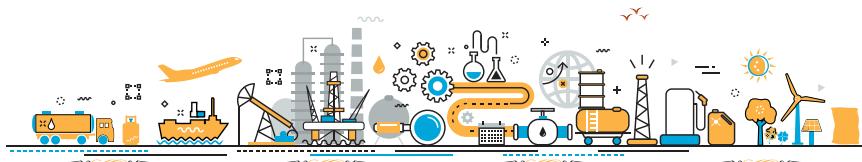
(Figures in TMT)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andaman & Nicobar Islands	0.9	0.7	0.7	0.7	0.8	0.6	0.0
Andhra Pradesh	29.6	30.7	30.8	27.2	31.3	35.5	0.8
Arunachal Pradesh	0.7	0.6	0.6	0.5	0.5	0.5	0.0
Assam	23.0	30.3	22.3	28.5	39.2	37.6	0.8
Bihar	13.3	13.2	14.5	13.7	13.4	13.1	0.3
Chandigarh	1.7	1.7	1.7	4.4	2.4	2.7	0.1
Chhattisgarh	18.9	19.3	20.5	20.3	20.3	22.3	0.5
Dadra & Nagar Haveli And Daman & Diu	138.8	133.0	123.5	147.2	181.2	164.2	3.6
Delhi	16.4	16.9	17.2	15.6	13.9	13.6	0.3
Goa	4.2	3.7	4.7	4.6	4.6	4.7	0.1
Gujarat	98.5	89.0	96.6	96.4	109.3	126.4	2.8
Haryana	47.5	50.5	49.9	53.1	50.5	54.5	1.2
Himachal Pradesh	30.6	22.8	15.6	12.5	15.1	10.5	0.2
Jammu & Kashmir	9.8	8.6	8.8	7.5	7.3	9.2	0.2
Jharkhand	32.1	33.5	33.3	30.5	30.1	30.1	0.7
Karnataka	53.9	55.6	51.8	46.0	55.0	59.5	1.3
Kerala	42.7	40.8	43.6	41.2	45.5	43.4	0.9
Ladakh				0.0	0.3	0.3	0.0
Lakshadweep	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Madhya Pradesh	37.6	39.5	44.8	42.6	41.5	41.1	0.9
<b>Maharashtra</b>	<b>306.6</b>	<b>328.7</b>	<b>285.5</b>	<b>303.3</b>	<b>330.2</b>	<b>378.1</b>	<b>8.3</b>
Manipur	0.3	0.3	0.4	0.4	0.4	0.5	0.0
Meghalaya	1.2	1.1	1.0	0.7	0.8	0.9	0.0
Mizoram	0.2	0.1	0.2	0.2	0.1	0.2	0.0
Nagaland	0.5	0.5	0.5	0.5	0.6	0.6	0.0
Odisha	24.5	23.7	24.2	21.0	22.1	24.7	0.5
Puducherry	1.8	2.0	2.0	2.1	1.9	3.0	0.1
Punjab	43.4	43.6	49.2	40.9	40.6	42.3	0.9
Rajasthan	42.8	48.1	52.5	49.9	59.1	56.8	1.2
Sikkim	0.3	0.2	0.1	0.1	0.1	0.1	0.0
Tamil Nadu	115.3	111.6	111.1	99.1	132.7	141.9	3.1
Telangana	40.0	38.2	40.7	46.3	52.8	43.3	0.9
Tripura	0.9	1.0	1.1	0.8	0.9	0.9	0.0
Uttar Pradesh	71.6	68.7	76.7	76.4	82.8	87.4	1.9
Uttarakhand	20.4	19.9	18.0	17.0	21.9	14.4	0.3
West Bengal	69.2	66.8	68.9	65.2	66.5	79.8	1.7
<b>Total Sales</b>	<b>1339.2</b>	<b>1345.1</b>	<b>1312.8</b>	<b>1316.6</b>	<b>1475.4</b>	<b>1544.8</b>	<b>33.8</b>
Pvt Imports	2130.9	2538.8	2355.1	2516.8	2621.9	3025.2	66.2
<b>Total Consumption</b>	<b>3470.1</b>	<b>3883.9</b>	<b>3667.9</b>	<b>3833.4</b>	<b>4097.3</b>	<b>4570.0</b>	<b>100.0</b>

Note: Total may not tally due to rounding off

P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.



**V.23: State-wise Consumption of Petcoke**

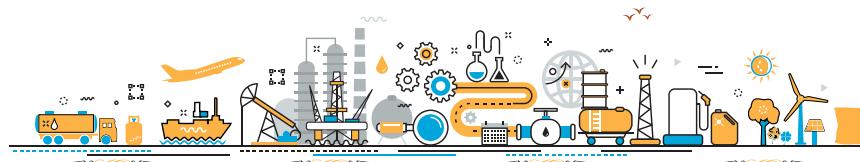
(Figures in TMT)

<b>State/UT</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22 (P)</b>	<b>% Share of Total Cons. 2021-22</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>	<b>(8)</b>
Andhra Pradesh	206.3	279.2	587.7	541.3	402.1	520.9	3.3
Assam	239.8	289.6	267.0	183.4	205.9	182.3	1.2
Bihar	168.0	188.6	188.6	194.4	198.0	155.0	1.0
Chandigarh	88.3	94.3	28.4	21.8	10.3	1.8	0.0
Chhattisgarh	213.3	602.2	927.0	634.0	395.5	442.1	2.8
Dadra & Nagar Haveli And Daman & Diu	0.5	0.0	0.0	0.0	0.0	0.0	-
Delhi	49.2	17.6	0.0	0.0	0.0	0.0	-
Goa	0.3	11.9	4.0	6.5	12.6	6.3	0.0
Gujarat	1380.0	1216.4	1480.9	1594.1	904.5	1161.8	7.4
Haryana	252.1	324.7	0.2	0.0	0.0	0.0	-
Himachal Pradesh	632.8	432.6	356.3	463.0	343.7	532.3	3.4
Jammu & Kashmir	59.8	76.9	72.4	73.4	75.3	87.9	0.6
Jharkhand	27.2	81.8	96.1	65.2	30.6	9.2	0.1
Karnataka	518.2	646.2	833.9	865.2	518.3	801.8	5.1
Kerala	8.7	28.9	14.7	15.3	26.7	15.3	0.1
Madhya Pradesh	825.2	769.0	869.5	822.2	580.0	725.7	4.6
Maharashtra	64.1	93.6	187.3	125.9	69.6	93.0	0.6
Meghalaya	3.9	21.7	3.2	48.1	0.0	0.0	0.0
Odisha	404.6	485.5	407.8	356.4	406.5	424.8	2.7
Puducherry	0.5	0.1	0.0	0.0	0.0	0.0	-
Punjab	659.7	1092.4	1317.6	1249.3	783.8	801.8	5.1
<b>Rajasthan</b>	<b>2408.8</b>	<b>2338.5</b>	<b>2211.1</b>	<b>1835.5</b>	<b>1197.7</b>	<b>1924.6</b>	<b>12.2</b>
Tamil Nadu	143.5	623.0	824.9	815.6	538.7	733.5	4.7
Telangana	152.6	42.2	44.7	77.0	75.8	160.9	1.0
Uttar Pradesh	619.7	392.2	43.3	108.8	105.0	38.4	0.2
Uttarakhand	45.0	68.0	121.2	111.3	73.4	77.8	0.5
West Bengal	24.1	33.6	53.8	67.0	115.9	214.7	1.4
<b>Total Sales</b>	<b>9196.2</b>	<b>10250.9</b>	<b>10941.8</b>	<b>10274.7</b>	<b>7070.1</b>	<b>9112.0</b>	<b>57.8</b>
Pvt Imports	14767.8	12777.4	7925.6	10674.1	8256.3	5738.8	36.4
SEZ data	-	2628.4	2478.5	759.4	278.8	920.9	5.8
<b>Total Consumption</b>	<b>23964.0</b>	<b>25656.7</b>	<b>21345.9</b>	<b>21708.2</b>	<b>15605.2</b>	<b>15771.7</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.



## V.24: State-wise Consumption of Bitumen

(Figures in TMT)

State/UT	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share of Total Cons. 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andaman & Nicobar Islands	6.3	4.1	4.9	4.7	4.4	6.4	0.1
Andhra Pradesh	235.1	206.5	250.0	190.6	207.2	184.3	2.3
Arunachal Pradesh	24.1	22.3	16.2	15.0	14.0	17.2	0.2
Assam	22.7	30.0	46.5	30.3	23.1	20.6	0.3
Bihar	219.1	192.3	217.5	260.1	421.2	361.6	4.6
Chandigarh	4.0	5.8	7.3	3.2	1.8	0.8	0.0
Chhattisgarh	142.3	198.2	244.9	130.5	162.5	180.5	2.3
Dadra & Nagar Haveli And Daman & Diu	3.2	3.6	8.5	5.2	2.4	1.7	0.0
Delhi	5.9	1.7	0.7	1.4	3.1	3.5	0.0
Goa	20.7	11.9	16.4	12.9	9.0	27.3	0.3
Gujarat	461.2	592.2	524.7	374.7	391.2	537.7	6.8
Haryana	126.8	156.1	146.1	135.4	253.8	279.5	3.5
Himachal Pradesh	62.8	63.0	71.3	64.9	74.4	74.7	0.9
Jammu & Kashmir	30.7	52.7	59.8	43.4	37.7	39.8	0.5
Jharkhand	218.4	223.5	212.5	170.2	160.3	153.5	1.9
Karnataka	238.0	250.4	228.8	190.8	156.5	127.5	1.6
Kerala	173.2	234.1	245.1	242.7	269.5	239.0	3.0
Ladakh	0.0	0.0	0.0	0.1	13.8	14.3	0.2
Lakshadweep	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Madhya Pradesh	276.5	262.1	308.8	227.9	259.9	249.0	3.2
Maharashtra	500.4	531.9	711.7	653.2	663.3	560.6	7.1
Manipur	1.7	2.9	4.1	5.4	3.0	2.4	0.0
Meghalaya	12.4	12.0	9.8	4.0	4.3	3.6	0.0
Mizoram	2.8	4.8	7.1	3.1	3.1	4.3	0.1
Nagaland	3.1	3.1	6.0	7.0	7.3	8.8	0.1
Odisha	155.5	116.3	89.8	99.9	112.1	113.0	1.4
Puducherry	3.6	3.2	1.6	1.1	1.6	1.2	0.0
Punjab	215.3	118.0	168.6	232.2	153.2	149.7	1.9
Rajasthan	219.9	294.9	403.0	335.8	309.4	325.1	4.1
Sikkim	2.6	3.9	1.8	2.1	1.7	1.4	0.0
Tamil Nadu	450.3	424.7	493.7	464.8	517.5	428.0	5.4
Telangana	243.1	205.0	202.5	188.2	197.0	153.7	2.0
Tripura	13.1	12.6	4.5	4.0	3.5	4.4	0.1
<b>Uttar Pradesh</b>	<b>644.5</b>	<b>660.7</b>	<b>854.0</b>	<b>721.9</b>	<b>776.2</b>	<b>770.3</b>	<b>9.8</b>
Uttarakhand	51.0	35.2	33.5	44.2	78.6	32.3	0.4
West Bengal	207.6	195.9	228.7	227.2	194.9	163.5	2.1
<b>Total Sales</b>	<b>4998.1</b>	<b>5135.6</b>	<b>5830.4</b>	<b>5097.7</b>	<b>5492.4</b>	<b>5241.0</b>	<b>66.6</b>
Pvt Imports	937.4	950.3	877.3	1622.6	2031.5	2632.6	33.4
<b>Total Consumption</b>	<b>5935.5</b>	<b>6085.9</b>	<b>6707.7</b>	<b>6720.4</b>	<b>7523.9</b>	<b>7873.6</b>	<b>100.0</b>

Note: Total may not tally due to rounding off.

P : Provisional

Source: Petroleum Planning &amp; Analysis Cell.





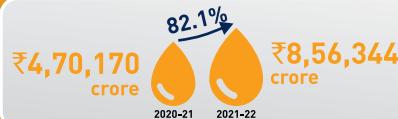
# CHAPTER - VI



TRADE-IMPORT & EXPORTS



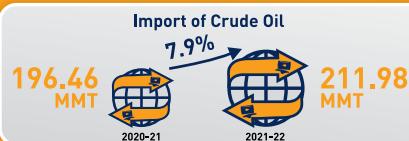
# Highlights of Chapter



India's trade deficit in the Oil & Gas Trade was higher by 82.1%



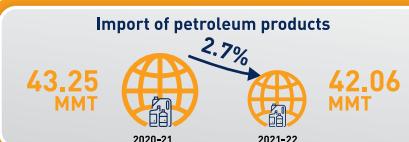
India's import of Crude Oil, LNG and Petroleum Products increased by 4.8% from 264.64 MMT in 2020-21 to 277.27 MMT during 2021-22.



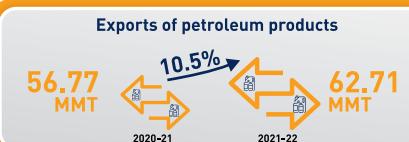
Import of Crude Oil has led to increase of 95.6% in ₹ value terms in 2021-22 vis-a-vis 2020-21.



However, it increased by 72% in ₹ value terms in 2021-22 vis-a-vis 2020-21.



Import of petroleum products increased 72.4% in ₹ value terms in 2021-22 vis-a-vis 2020-21.



Exports of petroleum products in the country increased of 111% in ₹ value terms in 2021-22 vis-a-vis 2020-21.



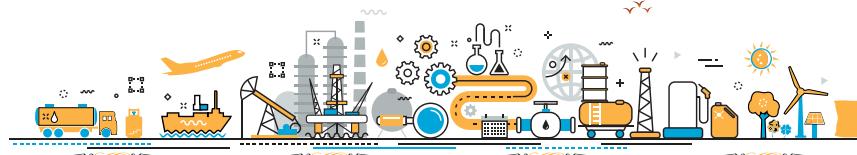
Exports of petroleum products by the public sector accounted for 22.6% during 2021-22.



India's O+OEG import dependency was reduced from 77.6% during 2020-21 to 77.2% during 2021-22.



FDI inflow received was ₹ 4202 million in the P&NG Sector contributing 0.1% of total FDI inflow (₹ 43,71,881 million) in the economy during 2021-22.



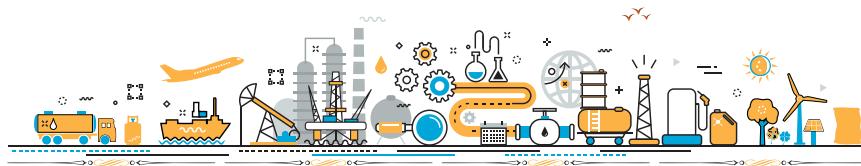
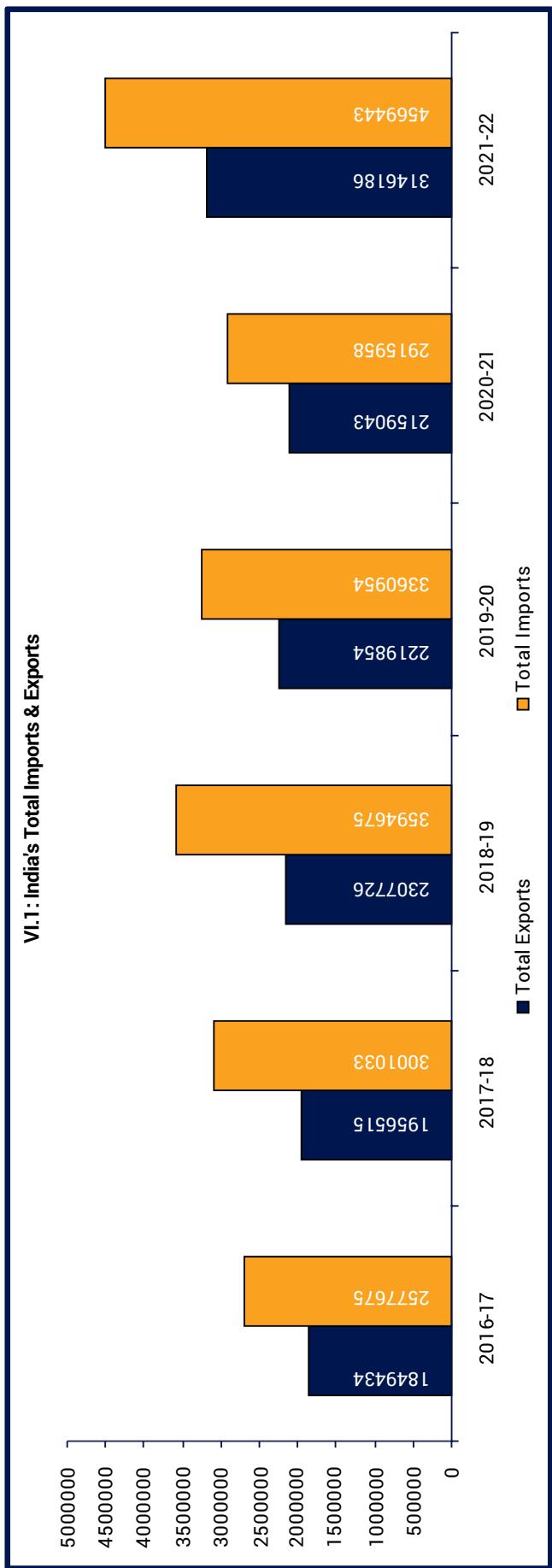
## VI.1: India's Oil & Gas Trade and India's overall Trade Balance

Year	India's Oil & Gas Trade				India's Overall Trade				% of Oil & Gas trade to India's total trade	
	Exports	Imports	Trade Balance	% variation over preceding year	Exports	Imports	Trade Balance	% variation over preceding year	Exports	Imports
				Exports				(9)		
2016-17	194893	582809	-387916	10.2	10.6	1849434	2577675	-728242	7.8	3.5
2017-18	225388	706946	-481558	15.6	21.3	1956515	3001033	-1044519	5.8	16.4
2018-19	267797	968716	-701019	18.8	37.0	2307726	3594675	-1286948	18.0	19.8
2019-20	254018	910125	-656108	-5.1	-6.0	2219854	3360954	-1141100	-3.8	-6.5
2020-21	157168	627338	-470170	-38.1	-31.1	2159043	2915958	-756914	-2.7	-13.2
<b>2021-22 (P)</b>	<b>331615</b>	<b>1187959</b>	<b>-856344</b>	<b>111.0</b>	<b>89.4</b>	<b>3146186</b>	<b>4569443</b>	<b>-1423256</b>	<b>45.7</b>	<b>56.7</b>

P: Provisional

Source: PPAC & RBI/Ministry of Commerce

VI.1: India's Total Imports & Exports



## VI.2: Import / Export of Crude Oil and Petroleum Products (Calendar Year-wise)

ITEM	2016			2017			2018			2019			2020			2021 (P)		
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
	TMT	Rs. Crore	Mil. USD	TMT	Rs. Crore	Million USD	TMT	Rs. Crore	Million USD	TMT	Rs. Crore	Million USD	TMT	Rs. Crore	Million USD	TMT	Rs. Crore	Million USD
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)			
<b>Crude Oil Import</b>	<b>215376</b>	<b>415672</b>	<b>61889</b>	<b>216445</b>	<b>528350</b>	<b>81347</b>	<b>226626</b>	<b>775881</b>	<b>112969</b>	<b>224627</b>	<b>726039</b>	<b>103314</b>	<b>201672</b>	<b>460868</b>	<b>62613</b>	<b>209331</b>	<b>778284</b>	<b>105127</b>
<b>Product Import</b>																		
LPG	10197	26139	3870	11888	40241	6155	12192	46758	6833	14521	47000	6672	16196	50818	6867	17273	85174	11474
Petrol	549	1854	274	174	581	91	355	1783	255	2127	9567	1359	1346	4812	657	1010	5397	724
Naphtha	2926	8243	1218	1832	6414	977	2697	12126	1789	1628	6449	913	1350	4490	608	1070	5452	737
Aviation Turbine	333	1010	149	288	1089	166	327	1675	244	76	358	52	0	0	0	0	0	0
Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene	975	2685	399	1441	4491	690	324	1484	219	1990	8472	1205	1673	6138	843	155	627	85
Diesel	2257	8601	1270	2233	10185	1554	2552	13934	2045	2699	12407	1759	2596	10859	1471	3151	19677	2658
Lubes	1150	1980	293	957	2325	356	1645	5428	807	2624	7340	1036	6350	13233	1794	8475	26933	3630
Fuel Oil	887	1443	213	911	1725	263	887	2133	316	1290	2997	424	1907	3627	492	2711	7411	1003
Bitumen	14710	7220	1066	13731	10811	1652	7011	9364	1386	11388	11623	1649	9735	6806	917	4627	8623	1161
Petcoke	2033	4810	712	2268	6609	1011	3619	15443	2252	3312	12294	1743	3779	6690	902	2794	12622	1707
Others <sup>1</sup>																		
<b>Product Import</b>	<b>36016</b>	<b>63984</b>	<b>9465</b>	<b>35722</b>	<b>84472</b>	<b>12914</b>	<b>31608</b>	<b>110127</b>	<b>16147</b>	<b>41654</b>	<b>118507</b>	<b>16812</b>	<b>44935</b>	<b>107485</b>	<b>14552</b>	<b>41265</b>	<b>171918</b>	<b>23180</b>
<b>Total Import</b>	<b>251392</b>	<b>479657</b>	<b>71354</b>	<b>252167</b>	<b>612823</b>	<b>94261</b>	<b>258234</b>	<b>886008</b>	<b>129116</b>	<b>266281</b>	<b>844546</b>	<b>120126</b>	<b>246607</b>	<b>568353</b>	<b>77165</b>	<b>250596</b>	<b>950202</b>	<b>128307</b>
<b>Product Export</b>																		
LPG	291	1023	151	348	1430	218	396	1919	280	455	1861	264	443	1745	235	517	2953	397
MS/ Petrol	16150	51224	7625	14262	53591	8226	13287	62539	9150	12956	57570	8178	11524	33771	4608	12647	65356	8826
Naphtha/ NGL	8417	21683	3220	8907	27885	4280	7916	32561	4770	7930	28931	4101	6865	18031	2458	7074	33576	4535
Aviation Turbine	7489	20813	3096	6968	23209	3564	7527	34316	5016	7244	30891	4382	3905	10626	1462	4856	21237	2898
Fuel	SKO/Kerosene	15	48	7	17	65	10	18	95	14	39	174	24	151	436	60	16	76
HSD/ Diesel	27892	73678	10963	288683	92690	14248	28509	124329	18095	30543	125273	17768	30563	79532	10856	31552	1355801	18389
LDO	20	52	8	149	384	57	99	364	50	-	-	-	-	-	-	0	0	0
LOBS/ Lube Oil	13	110	16	13	111	17	8	104	15	9	107	15	15	94	13	5	77	10
Fuel Oil/LSHS	3786	560	2363	4757	732	2259	6566	943	1747	4432	626	1008	1688	228	1755	6053	819	
Bitumen	57	52	9	61	109	17	23	75	11	25	83	12	13	43	6	7	30	4
Petcoke/CBFS	608	830	124	692	688	106	924	2509	359	768	1969	279	598	295	39	139	508	68
Others <sup>2</sup>	2551	6631	986	3954	10396	1586	2486	8695	1276	2562	7674	1089	2639	6845	925	2133	9165	1239
<b>Total Product Export</b>	<b>65942</b>	<b>179930</b>	<b>26765</b>	<b>66603</b>	<b>215316</b>	<b>33061</b>	<b>63454</b>	<b>274071</b>	<b>39979</b>	<b>64278</b>	<b>258966</b>	<b>36738</b>	<b>57723</b>	<b>153106</b>	<b>20889</b>	<b>60701</b>	<b>274832</b>	<b>37195</b>
<b>Net Import</b>	<b>185451</b>	<b>299727</b>	<b>44559</b>	<b>185565</b>	<b>397507</b>	<b>61200</b>	<b>194780</b>	<b>611937</b>	<b>89137</b>	<b>202003</b>	<b>585580</b>	<b>83388</b>	<b>188884</b>	<b>415247</b>	<b>56275</b>	<b>189895</b>	<b>675370</b>	<b>91112</b>

**Note:**

1: Other imports include Paraffin Wax, Petroleum Jelly, LSWR, Aviation Gas, MTBE, Reformate, etc.

2: Other exports include VGO, Benzene, MTO, Sulphur, etc.

Source: Petroleum Planning &amp; Analysis Cell.



### VI.3: Import / Export of Crude Oil and Petroleum Products

(Figures in TMT)

Import/Export	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Growth in 2021-22 over 2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Crude Oil Import	213932	220433	226498	226955	196461	211980	7.9
2. LNG Imports	18754	20709	21691	25575	24929	23227	-6.8
3. Petroleum Product Import	36287	35461	33348	43788	43248	42062	-2.7
<b>Product Imports</b>							
LPG	11097	11380	13235	14809	16476	17120	3.9
Petrol	476	174	670	2146	1351	671	-50.4
Naphtha	2777	2212	2082	1662	1199	1268	5.7
Aviation Turbine Fuel	338	300	259	65	0	0	960.4
Kerosene	0	0	0	0	3	0	-89.7
Diesel	1008	1361	555	2796	648	75	-88.4
Lubes	2131	2539	2457	2675	2693	3106	15.4
Fuel Oil	925	1213	1419	4583	6454	9024	39.8
Bitumen	951	950	877	1630	2055	2638	28.4
Petcoke	14416	12777	7926	10674	8256	5739	-30.5
Others <sup>1</sup>	2169	2556	3869	2749	4112	2421	-41.1
<b>Total Import (1+2+3)</b>	<b>268973</b>	<b>276602</b>	<b>281537</b>	<b>296317</b>	<b>264638</b>	<b>277269</b>	<b>4.8</b>
<b>Product Export</b>							
LPG	317	359	417	463	452	513	13.5
Petrol	15417	14036	12885	12710	11606	13482	16.2
Naphtha	8727	8951	6963	8897	6509	6861	5.4
Aviation Turbine Fuel	7271	7183	7389	6906	3544	5186	46.3
Kerosene	15	17	19	176	15	14	-5.3
Diesel	27453	29735	27931	31653	30576	32407	6.0
Lubes	13	13	8	8	15	10	-30.3
Fuel Oil	2248	2525	2197	1527	1177	1716	45.7
Bitumen	38	64	23	25	7	6	-11.1
Petcoke/CBFS	673	561	1124	465	577	187	-67.6
Others <sup>2</sup>	3344	3387	2140	2854	2290	2330	1.8
<b>Export of Petroleum Products</b>	<b>65513</b>	<b>66833</b>	<b>61096</b>	<b>65685</b>	<b>56769</b>	<b>62713</b>	<b>10.5</b>
<b>Net Import</b>	<b>203460</b>	<b>209770</b>	<b>220441</b>	<b>230632</b>	<b>207869</b>	<b>214556</b>	<b>3.2</b>
<b>Net Petroleum Product Export</b>	<b>29226</b>	<b>31372</b>	<b>27747</b>	<b>21898</b>	<b>13521</b>	<b>20651</b>	<b>52.7</b>

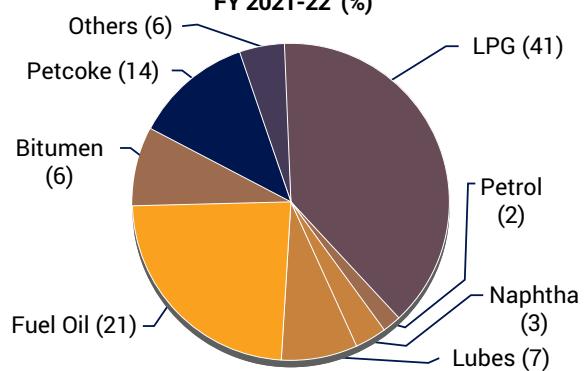
P : Provisional

1: Other imports include Paraffin Wax, Petroleum Jelly, LSWR, Aviation Gas, MTBE &amp; Reformate.

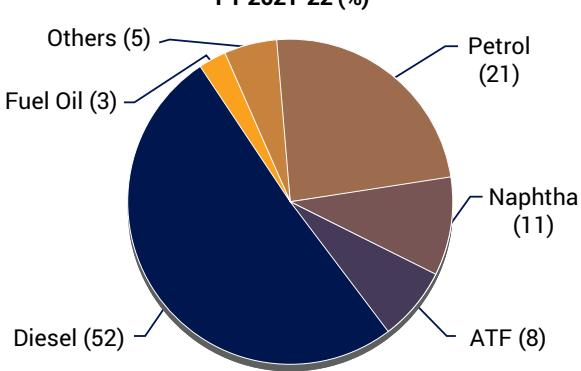
2: Other exports include VGO, Benzene, MTO &amp; Sulphur.

Source: Petroleum Planning &amp; Analysis Cell.

VI.2: Share of Imports of Major Pet. Products in FY 2021-22 (%)



VI.3: Share of Exports of Major Pet. Products in FY 2021-22 (%)



## VI.4: Import / Export of Crude Oil and Petroleum Products

(Value in ₹ Crore)

Import/Export	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Growth in 2021-22 over 2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. Crude Oil Import</b>	<b>470159</b>	<b>566450</b>	<b>783183</b>	<b>717001</b>	<b>459779</b>	<b>899312</b>	<b>95.6</b>
2. LNG Imports	41084	52122	71867	67383	58129	100011	72.0
<b>3. Petroleum Product Import</b>	<b>71566</b>	<b>88374</b>	<b>113665</b>	<b>125742</b>	<b>109430</b>	<b>188636</b>	<b>72.4</b>
<b>Product Import</b>							
LPG	32124	37875	49939	50347	53752	91899	71.0
Petrol	1617	581	3104	9610	4950	3895	-21.3
Naphtha	8374	8161	9665	6678	3844	7137	85.7
Aviation Turbine Fuel	1109	1159	1392	309	0	0	804.7
Kerosene	0	0	0	0	12	1	-90.0
Diesel	2959	4269	2486	11619	1960	425	-78.3
Lubes	8625	12075	13349	11869	12170	20166	65.7
Fuel Oil	1848	3231	4782	11791	14312	32958	130.3
Bitumen	1638	1902	2149	3634	4325	7850	81.5
Petcoke	7929	11100	10350	9713	6410	11741	83.2
Others <sup>1</sup>	5342	8020	16449	10172	7695	12564	63.3
<b>Total Import (1+2+3)</b>	<b>582809</b>	<b>706946</b>	<b>968716</b>	<b>910125</b>	<b>627338</b>	<b>1187959</b>	<b>89.4</b>
<b>Product Export</b>							
LPG	1168	1501	1976	1970	1797	3214	78.9
Petrol	52920	54580	60419	54512	36530	81649	123.5
Naphtha	24616	29075	28893	31509	18643	37231	99.7
Aviation Turbine Fuel	22294	25348	34030	28458	9377	27112	189.1
Kerosene	54	68	98	560	48	77	58.9
Diesel	80256	99492	123882	123919	81611	164741	101.9
Lubes	104	118	106	96	93	114	23.1
Fuel Oil	3930	5291	6537	3811	2318	6448	178.1
Bitumen	37	119	72	89	23	28	18.6
Petcoke/CBFS	804	687	3255	1096	292	553	89.4
Others <sup>2</sup>	8710	9110	8429	7998	6436	10449	62.4
<b>Export of Petroleum Products</b>	<b>194893</b>	<b>225388</b>	<b>267697</b>	<b>254018</b>	<b>157168</b>	<b>331615</b>	<b>111.0</b>
<b>Net Import</b>	<b>387916</b>	<b>481558</b>	<b>701019</b>	<b>656108</b>	<b>470170</b>	<b>856344</b>	<b>82.1</b>
<b>Net Petroleum Product Export</b>	<b>123327</b>	<b>137014</b>	<b>154031</b>	<b>128276</b>	<b>47738</b>	<b>142979</b>	<b>199.5</b>

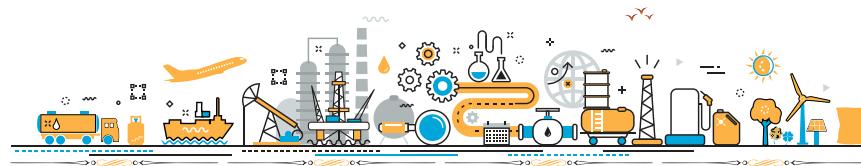
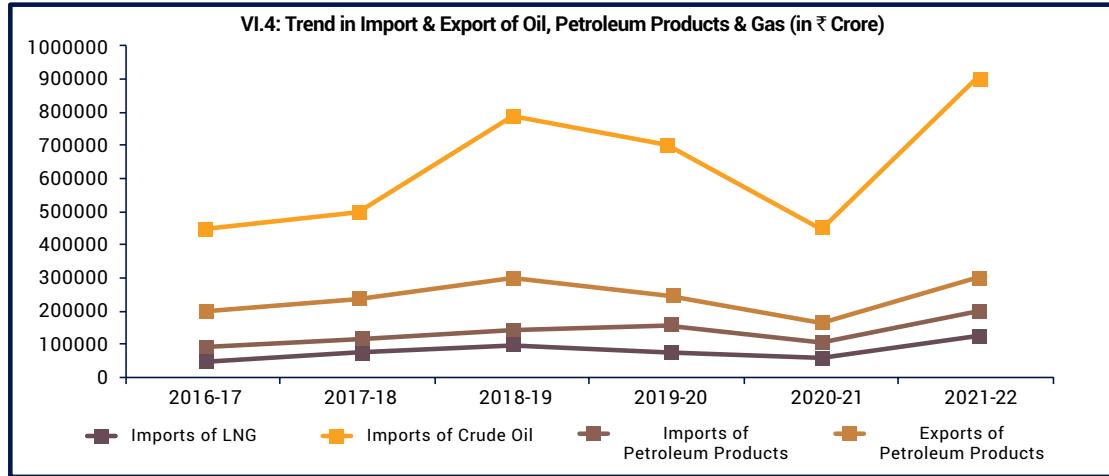
P : Provisional

1: Other imports include Paraffin Wax, Petroleum Jelly, LSWR, Aviation Gas, MTBE &amp; Reformate.

2: Other exports include VGO, Benzene, MTO &amp; Sulphur.

Source: Petroleum Planning &amp; Analysis Cell.

VI.4: Trend in Import &amp; Export of Oil, Petroleum Products &amp; Gas (in ₹ Crore)



## VI.5: Import / Export of Crude Oil and Petroleum Products

(Value in ₹ Crore)

Import/Export	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Growth in 2021-22 over 2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>1. Crude Oil Import</b>	<b>70196</b>	<b>87803</b>	<b>111915</b>	<b>101376</b>	<b>62248</b>	<b>120445</b>	<b>93.5</b>
2. LNG Imports	6128	8051	10253	9489	7864	<b>13382</b>	70.2
<b>3. Petroleum Product Import</b>	<b>10614</b>	<b>13637</b>	<b>16341</b>	<b>17689</b>	<b>14770</b>	<b>25240</b>	<b>70.9</b>
<b>Product Import</b>							
LPG	4775	5849	7178	7070	7242	<b>12293</b>	69.7
Petrol	239	91	445	1357	674	<b>519</b>	-22.9
Naphtha	1240	1261	1391	941	518	<b>959</b>	85.0
Aviation Turbine Fuel	163	178	200	45	0	<b>0</b>	797.5
Kerosene	0	0	0	0	2	<b>0</b>	-89.9
Diesel	438	660	360	1632	265	<b>57</b>	-78.5
Lubes	1276	1860	1910	1673	1647	<b>2704</b>	64.1
Fuel Oil	273	499	696	1650	1936	<b>4398</b>	127.2
Bitumen	242	293	309	510	586	<b>1052</b>	79.4
Petcoke	1174	1709	1494	1374	861	<b>1570</b>	82.3
Others <sup>1</sup>	793	1237	2358	1438	1038	<b>1688</b>	62.6
<b>Total Import (1+2+3)</b>	<b>86938</b>	<b>109491</b>	<b>138508</b>	<b>128554</b>	<b>84883</b>	<b>159067</b>	<b>87.4</b>
<b>Product Export</b>							
LPG	173	231	283	277	241	<b>430</b>	78.5
Petrol	7895	8464	8641	7708	4977	<b>10879</b>	118.6
Naphtha	3666	4505	4137	4439	2530	<b>4984</b>	97.0
Aviation Turbine Fuel	3324	3931	4867	4021	1287	<b>3661</b>	184.4
Kerosene	8	10	14	78	7	<b>10</b>	57.8
Diesel	11964	15426	17675	17481	11132	<b>22088</b>	98.4
Lubes	15	18	15	13	12	<b>15</b>	22.4
Fuel Oil	583	817	923	537	313	<b>866</b>	176.5
Bitumen	6	18	10	13	3	<b>4</b>	17.6
Petcoke/CBFS	121	107	463	155	39	<b>74</b>	92.0
Others <sup>2</sup>	1294	1412	1208	1128	865	<b>1402</b>	62.1
<b>Total Export</b>	<b>29049</b>	<b>34940</b>	<b>38236</b>	<b>35848</b>	<b>21406</b>	<b>44413</b>	<b>107.5</b>
<b>Net Import</b>	<b>57888</b>	<b>74551</b>	<b>100272</b>	<b>92706</b>	<b>63476</b>	<b>114654</b>	<b>80.6</b>
<b>Net Product Export</b>	<b>18436</b>	<b>21303</b>	<b>21895</b>	<b>18159</b>	<b>6636</b>	<b>19173</b>	<b>188.9</b>

P : Provisional

1: Other imports include Paraffin Wax, Petroleum Jelly, LSWR, Aviation Gas, MTBE &amp; Reformate.

2: Other exports include VGO, Benzene, MTO &amp; Sulphur.

Source: Petroleum Planning &amp; Analysis Cell.



## VI.6: Product-wise Volume of Imports by Public & Private Sector

(Figures in TMT)

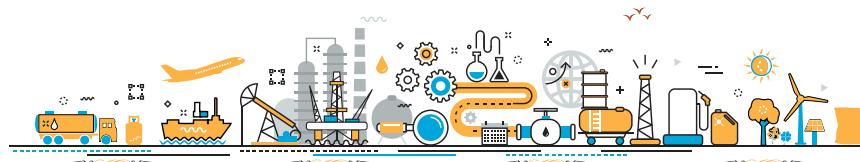
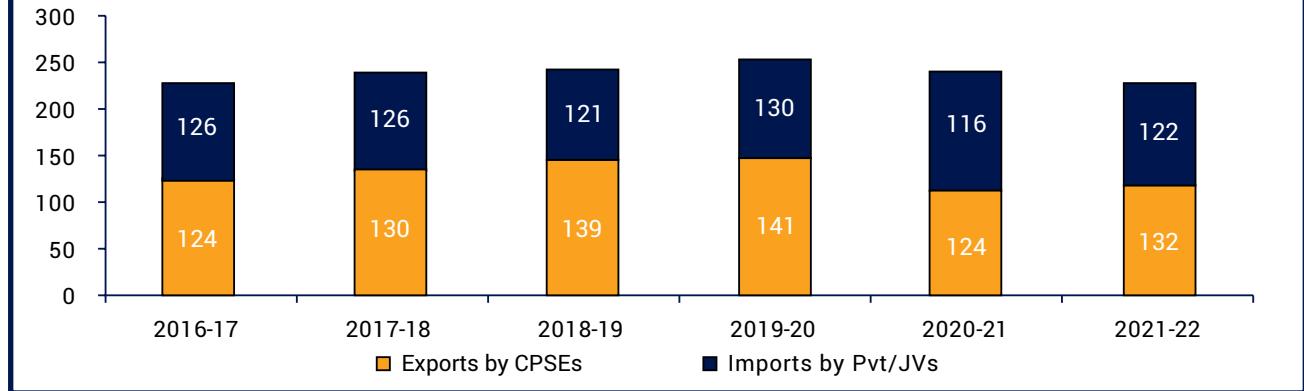
Products	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>A. PUBLIC SECTOR</b>						
Crude Oil Imports	111467	117371	124665	121102	105506	113916
LPG	10668	11015	12919	14605	16412	17043
Petrol	476	174	670	2146	1343	671
Naphtha	142	162	140	145	66	0
ATF	0	0	0	65	0	0
Kerosene	0	0	0	0	0	0
Diesel	962	1270	462	2679	557	0
Lubes	0	0	102	158	71	81
Fuel Oil	106	116	225	122	188	114
Bitumen	13	0	0	7	23	5
Petcoke	0	0	0	0	0	0
Others <sup>1</sup>	177	50	62	43	18	155
<b>Total Product Import</b>	<b>12544</b>	<b>12786</b>	<b>14580</b>	<b>19969</b>	<b>18677</b>	<b>18069</b>
<b>Total Imports (A)</b>	<b>124012</b>	<b>130157</b>	<b>139245</b>	<b>141071</b>	<b>124184</b>	<b>131986</b>
<b>B. PRIVATE/JVs SECTOR</b>						
Crude Oil Imports	102464	103062	101832	105852	90955	98063
LPG	429	364	316	204	64	76
Petrol	0	0	0	0	9	0
Naphtha	2635	2050	1941	1517	1133	1268
ATF	338	300	259	0	0	0
Kerosene	0	0	0	0	3	0
Diesel	46	90	93	117	91	75
Lubes	2131	2539	2355	2517	2622	3025
Fuel Oil	819	1097	1195	4461	6267	8910
Bitumen	937	950	877	1623	2032	2633
Petcoke	14416	12777	7926	10674	8256	5739
Others <sup>1</sup>	1992	2506	3807	2706	4094	2266
<b>Total Product Import</b>	<b>23743</b>	<b>22675</b>	<b>18769</b>	<b>23819</b>	<b>24570</b>	<b>23993</b>
<b>Total Imports (B)</b>	<b>126207</b>	<b>125737</b>	<b>120601</b>	<b>129671</b>	<b>115525</b>	<b>122056</b>
<b>Total (A+B)</b>	<b>250219</b>	<b>255894</b>	<b>259846</b>	<b>270742</b>	<b>239709</b>	<b>254042</b>

P : Provisional

1: Other imports include Paraffin Wax, Petroleum Jelly, LSWR, Aviation Gas, MTBE &amp; Reformate.

Source: Petroleum Planning &amp; Analysis Cell.

**VI. 5 Trend in Imports ( Crude Oil + Petroleum Products) by Public & PVTs/JVs Sector (in MMT)**



## VI.7: Product-wise Volume of Exports by Public & Private Sector

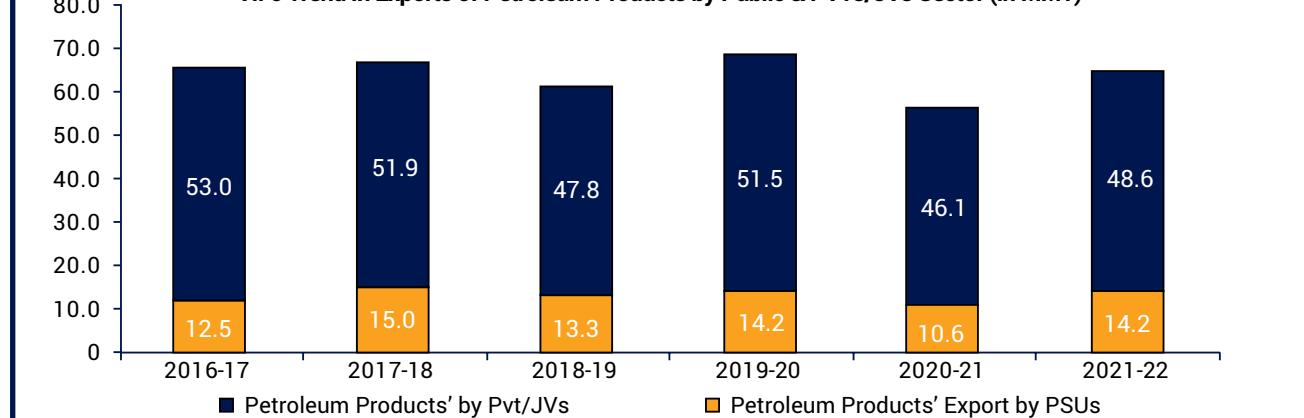
(Figures in TMT)

Products	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>A. PUBLIC SECTOR</b>						
LPG	317	359	417	463	452	513
MS/ Petrol	658	794	873	690	842	1809
Naphtha/ NGL	4651	4466	3101	4089	2537	2422
Aviation Turbine Fuel	1363	1641	1585	1228	575	903
SKO/ Kerosene	15	17	19	176	15	14
HSD/ Diesel	2348	4211	4845	5667	4720	6551
LDO	151	18	99	0	0	0
LOBS/ Lube Oil	13	13	8	8	15	10
Fuel Oil/LSHS	2203	2525	1849	1492	951	1105
Bitumen	38	64	23	25	7	6
Petcoke/CBFS	0	0	0	0	0	44
Others <sup>1</sup>	759	854	494	329	537	778
<b>Total (A)</b>	<b>12514</b>	<b>14962</b>	<b>13312</b>	<b>14168</b>	<b>10649</b>	<b>14155</b>
<b>B. PRIVATE/JVs SECTOR</b>						
LPG	0	0	0	0	0	0
MS/ Petrol	14759	13242	12012	12020	10764	11674
Naphtha/ NGL	4075	4485	3862	4808	3972	4439
Aviation Turbine Fuel	5907	5542	5804	5678	2970	4283
SKO/ Kerosene	0	0	0	0	0	0
HSD/ Diesel	24955	25506	22988	25986	25856	25856
LDO	0	0	0	0	0	0
LOBS/ Lube Oil	0	0	0	0	0	0
Fuel Oil/LSHS	45		348	35	227	610
Bitumen	0	0	0	0	0	0
Petcoke/CBFS	673	561	1124	465	577	143
Others <sup>1</sup>	2585	2533	1646	2525	1753	1553
<b>Total (B)</b>	<b>52999</b>	<b>51870</b>	<b>47783</b>	<b>51517</b>	<b>46119</b>	<b>48557</b>
<b>Total Exports (A+B)</b>	<b>65513</b>	<b>66833</b>	<b>61096</b>	<b>65685</b>	<b>56769</b>	<b>62713</b>

P : Provisional

1 : Other exports include VGO, Benzene, MTO &amp; Sulphur.

Source: Petroleum Planning &amp; Analysis Cell.

**VI. 6 Trend in Exports of Petroleum Products by Public & PVTs/JVs Sector (in MMT)**

## VI.8: Product-wise Value of Imports by Public & Private Sector

(Value in ₹ Crore)

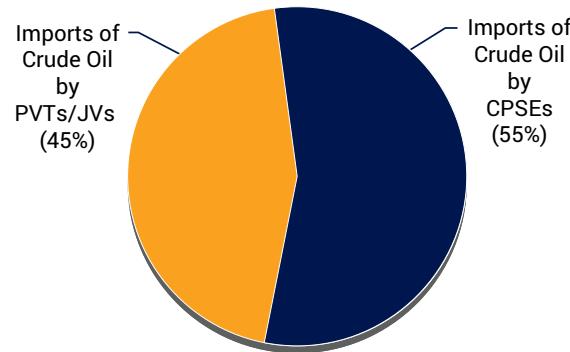
Products	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>A. PUBLIC SECTOR</b>						
Crude Oil	257790	310815	443629	396186	254432	490225
LPG	30797	36626	48636	49617	53501	91465
Petrol	1617	581	3104	9610	4911	3894
Naphtha	429	593	668	616	207	0
ATF	0	0	0	309	0	0
Kerosene	0	0	0	0	0	0
Diesel	2794	3921	2016	11116	1654	0
Lubes	0	0	553	753	361	563
Fuel Oil	215	284	761	345	508	371
Bitumen	24	0	0	18	78	16
Petcoke	0	0	0	0	0	0
Others <sup>1</sup>	815	300	439	315	112	772
<b>Total Product Import</b>	<b>36691</b>	<b>42305</b>	<b>56178</b>	<b>72699</b>	<b>61332</b>	<b>97082</b>
<b>Total Imports (A)</b>	<b>294481</b>	<b>353120</b>	<b>499808</b>	<b>468885</b>	<b>315763</b>	<b>587306</b>
<b>B. PRIVATE/JVs SECTOR</b>						
Crude Oil	212369	255635	339553	320815	205347	409087
LPG	1327	1250	1303	730	251	434
Petrol	0	0	0	0	39	1
Naphtha	7945	7569	8997	6062	3637	7137
ATF	1109	1159	1392	0	0	0
Kerosene	0	0	0	0	12	1
Diesel	165	348	470	503	306	425
Lubes	8625	12075	12796	11116	11809	19602
Fuel Oil	1633	2947	4021	11446	13804	32587
Bitumen	1615	1902	2149	3615	4248	7834
Petcoke	7929	11100	10350	9713	6410	11741
Others <sup>1</sup>	4527	7719	16009	9857	7583	11792
<b>Total Product Import</b>	<b>34875</b>	<b>46069</b>	<b>57487</b>	<b>53042</b>	<b>48098</b>	<b>91555</b>
<b>Total (B)</b>	<b>247244</b>	<b>301704</b>	<b>397041</b>	<b>373857</b>	<b>253445</b>	<b>500642</b>
<b>TOTAL (A+B)</b>	<b>541725</b>	<b>654824</b>	<b>896848</b>	<b>842743</b>	<b>569208</b>	<b>1087948</b>

P : Provisional

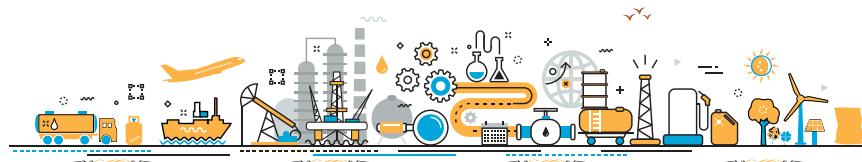
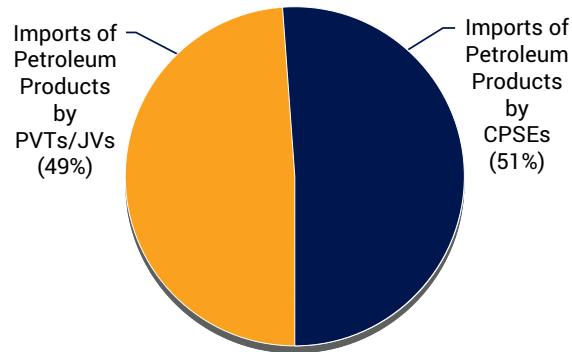
1 : Other imports include Paraffin Wax, Petroleum Jelly, LSWR, Aviation Gas, MTBE &amp; Reformate.

Source: Petroleum Planning &amp; Analysis Cell.

**VI.7: Share(%) of Public & PVTs/JVs Companies in Import of Crude Oil in FY 2021-22**



**VI.8: Share(%) of Public & PVTs/JVs Companies in Import of Petroleum Products in FY 2021-22**



## VI.9: Product-wise Exports by Public & Private Sector

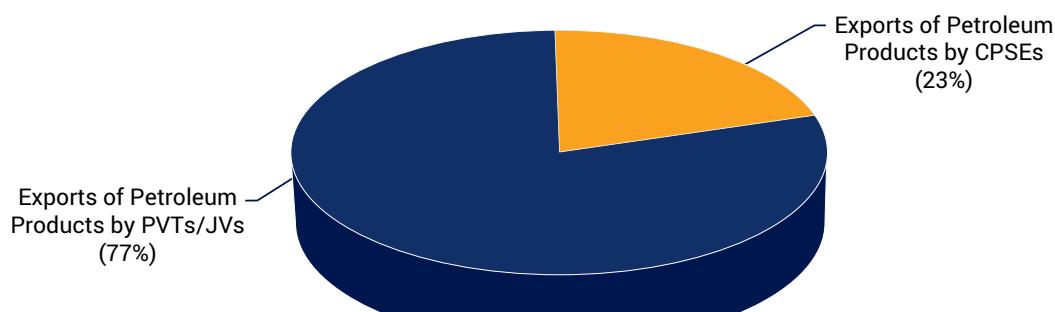
(Value in ₹ Crore)

Products	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>A. PUBLIC SECTOR</b>						
LPG	1168	1501	1976	1970	1797	3214
MS/ Petrol	2419	3240	4237	3123	2768	11446
Naphtha/ NGL	12988	14356	12698	14448	7205	13074
Aviation Turbine Fuel	4263	5771	7317	5083	1566	5282
SKO/ Kerosene	54	68	98	560	48	77
HSD/ Diesel	7516	14777	22097	23068	12790	35448
LDO	399	37	364	0	0	0
LOBS/ Lube Oil	104	118	106	96	93	114
Fuel Oil/LSHS	3823	5291	5648	3700	1876	4028
Bitumen	37	119	72	89	23	28
Petcoke/CBFS	0	0	0	0	0	33
Others <sup>1</sup>	2225	2673	1528	1004	1541	3845
<b>Total (A)</b>	<b>34995</b>	<b>47952</b>	<b>56140</b>	<b>53141</b>	<b>29708</b>	<b>76589</b>
<b>B. PRIVATE/JVs SECTOR</b>						
LPG	0	0	0	0	0	0
MS/ Petrol	50501	51340	56182	51389	33761	70203
Naphtha/ NGL	11627	14719	16195	17061	11437	24157
Aviation Turbine Fuel	18031	19577	26713	23375	7811	21829
SKO/ Kerosene	0	0	0	0	0	0
HSD/ Diesel	72341	84677	101422	100851	68821	129293
LDO	0	0	0	0	0	0
LOBS/ Lube Oil	0	0	0	0	0	0
Fuel Oil/LSHS	107	0	889	111	443	2420
Bitumen	0	0	0	0	0	0
Petcoke/CBFS	804	687	3255	1096	292	520
Others <sup>1</sup>	6485	6437	6901	6994	4894	6604
<b>Total (B)</b>	<b>159897</b>	<b>177436</b>	<b>211557</b>	<b>200876</b>	<b>127460</b>	<b>255026</b>
<b>TOTAL (A+B)</b>	<b>194893</b>	<b>225388</b>	<b>267697</b>	<b>254018</b>	<b>157168</b>	<b>331615</b>

P : Provisional

1: Other exports include VGO, Benzene, MTO &amp; Sulphur.

Source: Petroleum Planning &amp; Analysis Cell.

**VI.9: Share (%) of Public & PVTs/JVs Companies in Exports of Petroleum Products in FY 2021-22**

## VI.10: Oil & Gas Import Dependency

Elements	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Import dependence on crude oil (in MMT)</b>						
<b>Total Consumption</b>	<b>194.6</b>	<b>206.2</b>	<b>213.2</b>	<b>214.1</b>	<b>194.3</b>	<b>204.2</b>
Indigenous crude oil processing	33.5	32.8	31.7	29.3	28.0	27.0
Products from Indigenous crude	31.3	30.6	29.6	27.3	26.1	25.2
Products from Fractionators	4.3	4.6	4.9	4.8	4.2	4.1
<b>Total Indigenous production</b>	<b>35.6</b>	<b>35.2</b>	<b>34.5</b>	<b>32.1</b>	<b>30.3</b>	<b>29.3</b>
Self Sufficiency (%)	18.3	17.1	16.2	15.0	15.6	14.3
<b>Import Dependence (%)</b>	<b>81.7</b>	<b>82.9</b>	<b>83.8</b>	<b>85.0</b>	<b>84.4</b>	<b>85.7</b>
<b>Import dependence on natural gas (in BCM)</b>						
<b>Total Consumption</b>	<b>55.7</b>	<b>59.2</b>	<b>60.8</b>	<b>64.1</b>	<b>60.8</b>	<b>63.9</b>
Indigenous gas production	30.8	31.7	32.1	30.3	27.8	33.1
Import of LNG	24.8	27.4	28.7	33.9	33.0	30.8
Self Sufficiency (%)	55.4	53.6	52.7	47.2	45.7	51.8
<b>Import Dependence (%)</b>	<b>44.6</b>	<b>46.4</b>	<b>47.3</b>	<b>52.8</b>	<b>54.3</b>	<b>48.2</b>
<b>Import dependence on oil and oil equivalent gas (O+OEG) (in MMTOE)</b>						
<b>Total Consumption</b>	<b>264.3</b>	<b>280.2</b>	<b>289.3</b>	<b>293.6</b>	<b>269.1</b>	<b>282.8</b>
Indigenous O+OEG production	68.9	69.4	69.1	64.6	60.3	64.5
Self Sufficiency (%)	26.1	24.8	23.9	22.0	22.4	22.8
<b>Import Dependence (%)</b>	<b>73.9</b>	<b>75.2</b>	<b>76.1</b>	<b>78.0</b>	<b>77.6</b>	<b>77.2</b>

Note: 1. SION norms has been taken as 93.3% of crude oil processed for working out products output from indigenous crude oil processed.

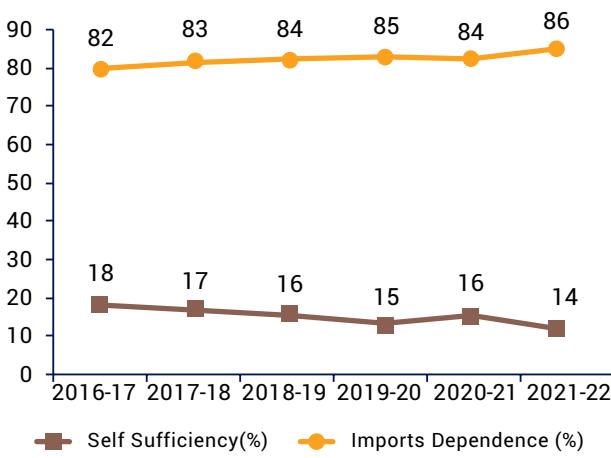
2. For converting production of petroleum products from fractionators, SION norms has been taken as 93.3%.

3. Net production and consumption of natural gas is inclusive of internal gas consumption but excluding flare and loss.

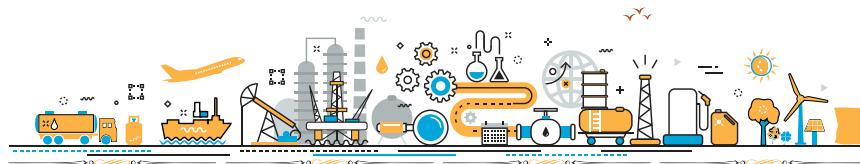
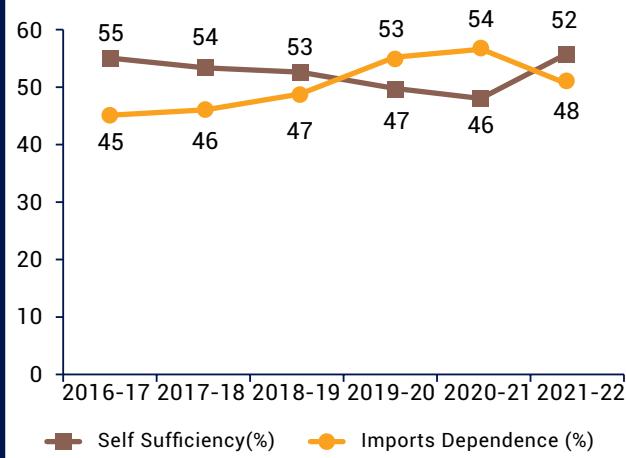
4. 1 BCM of Natural gas =1 Mtoe

Source: Petroleum Planning & Analysis Cell.

**VI.10: Import dependence on crude oil (%)**



**VI.11: Import dependence on natural gas (%)**



## VI.11: Annual Growth of Foreign Direct Investment Equity Inflows

Year	FDI Inflow in P&NG Sector				FDI Inflow in All Sectors	% share of P&NG in All sector's FDI
	Refinery	Exploration	Others (Fuels)	Total		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>FDI Inflow (in Million)</b>						
2016-17	551	3825	7594	11971	2916963	0.4
2017-18	0	959	602	1561	2888885	0.1
2018-19	334	4955	4114	9402	3098667	0.3
2019-20	3168	895	55592	59654	3535584	1.7
2020-21	361	670	6642	7672	4425688	0.2
<b>2021-22 (P)</b>	<b>289</b>	<b>135</b>	<b>3778</b>	<b>4202</b>	<b>4371881</b>	<b>0.1</b>
Year	FDI Inflow in P&NG Sector				FDI Inflow in All Sectors	% FDI Growth in All Sector
	Refinery	Exploration	Others (Fuels)	Total		
<b>FDI Inflow (in US \$ Million)</b>						
2016-17	8	57	115	180	43478	8.7
2017-18	0	15	9	24	44857	3.2
2018-19	5	73	61	138	44366	-1.1
2019-20	45	12	749	806	49977	12.6
2020-21	5	9	89	103	59636	19.3
<b>2021-22 (P)</b>	<b>4</b>	<b>2</b>	<b>51</b>	<b>56</b>	<b>58773</b>	<b>-1.4</b>

P. Provisional

Source: Foreign Direct Investment Cell, Department of Industrial Policy & Promotion

**Figure VI.12: Sectorial Share of FDI inflow during 2021-22 (in %)**





# CHAPTER - VII



ENERGY



# Highlights of Chapter

During FY 2020-21, Oil & Gas Sector contributed to economic activities with Gross Value Added (at current prices) of ₹2,43,981 crore vis-à-vis ₹ 2,30,521 crore in FY 2019-20, thus, registering a positive growth rate of 5.8%.

**Contribution of Oil & Gas Sector in total GVA (at current prices)**



During FY 2020-21, Oil & Gas Sector contributed in economic activities with Gross Value Added [at constant prices (2011-12)] of ₹ 2,96,839 crore vis-à-vis ₹ 2,49,976 crore in FY 2019-20, thus, registering a positive growth rate of 18.7%.

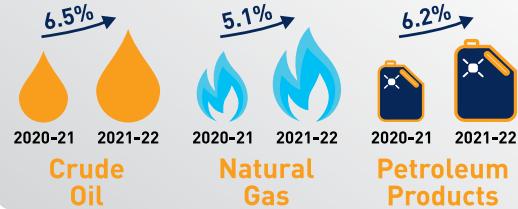
**Contribution of Oil & Gas Sector in total GVA (at constant prices)**



**Coal & Lignite production in the country**



Total availability of Oil, Natural Gas and Petroleum products, which were increased



**Gross Electricity Generation MOP in the country**



## VII.1: Gross Value Added by Economic Activity at Current Prices

(Value in ₹ crore)

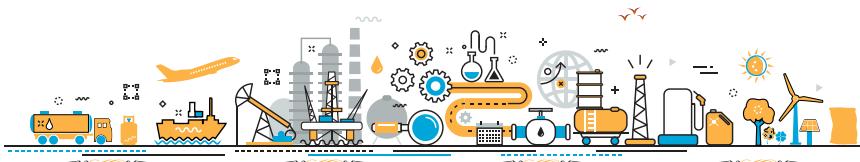
Sectors		2016-17	2017-18	2018-19	2019-20	2020-21 (P)
(1)	(2)	(3)	(4)	(5)	(6)	
1.(a) Petroleum & Natural Gas	115476	95817	112579	104469	75313	
(b) Manufacture of coke and refined petroleum products	180127	201980	156019	126051	168668	
<b>Total</b>	<b>295603</b>	<b>297797</b>	<b>268598</b>	<b>230521</b>	<b>243981</b>	
2. Railways	106786	116584	123596	135477	136807	
3. Transport by other means	568118	617201	665683	704597	569075	
4. Storage	7442	16194	18597	19513	19628	
5. "Communication & Services related to broadcasting"	247809	247549	258179	293094	321902	
6. Electricity	273734	332024	339857	381658	379499	
7. Gas	19115	23885	27941	29453	28606	
8. Water Supply	40248	41927	49659	55363	61887	
9. Other Utility Services	22611	27881	32002	35144	37360	
<b>10. GVA</b>	<b>13965200</b>	<b>15505665</b>	<b>17175128</b>	<b>18355109</b>	<b>18057810</b>	
<b>11. Contribution of P&amp; NG in total GVA (%)</b>	<b>2.12</b>	<b>1.92</b>	<b>1.56</b>	<b>1.26</b>	<b>1.35</b>	

### Growth Rate (%)

1.(a) Petroleum & Natural Gas	3.00	-17.02	17.49	-7.20	-27.91
(b) Manufacture of coke and refined petroleum products	-8.37	12.13	-22.76	-19.21	33.81
<b>Total</b>	<b>-4.24</b>	<b>0.74</b>	<b>-9.81</b>	<b>-14.18</b>	<b>5.84</b>
2. Railways	6.31	9.18	6.01	9.61	0.98
3. Transport by other means	10.15	8.64	7.86	5.85	-19.23
4. Storage	6.00	117.60	14.84	4.92	0.59
5. "Communication & Services related to broadcasting"	4.44	-0.10	4.29	13.52	9.83
6. Electricity	2.12	21.29	2.36	12.30	-0.57
7. Gas	30.68	24.95	16.98	5.41	-2.88
8. Water Supply	25.32	4.17	18.44	11.49	11.79
9. Other Utility Services	12.14	23.31	14.78	9.82	6.31
<b>10. GVA</b>	<b>11.06</b>	<b>11.03</b>	<b>10.77</b>	<b>6.87</b>	<b>-1.62</b>

P. Provisional

Source: National Statistical Office, MoSPI



## VII.2: Gross Value Added at by Economic Activity at Constant Price

(Value in ₹ crore)

Sectors		2016-17	2017-18	2018-19	2019-20	2020-21 (P)
(1)	(2)	(3)	(4)	(5)	(6)	
1.(a) Petroleum & Natural Gas	158125	131373	121891	122650	107184	
(b) Manufacture of coke and refined petroleum products	222153	223738	152497	127326	189654	
<b>Total</b>	<b>380278</b>	<b>355111</b>	<b>274389</b>	<b>249976</b>	<b>296839</b>	
2. Railways	82161	87886	91350	82303	67154	
3. Transport by other means	464899	501039	528628	545769	424993	
4. Storage	6100	12976	13784	13916	14329	
5. Communication & Services related to broadcasting	203896	198344	197215	219313	223158	
6. Electricity	185281	207882	221446	224646	212959	
7. Gas	14144	15029	16863	16459	15400	
8. Water Supply	28811	28973	33184	35312	37181	
9. Other Utility Services	18261	20765	22655	24258	24231	
<b>10. GVA</b>	<b>11328285</b>	<b>12034171</b>	<b>12733798</b>	<b>13219476</b>	<b>12585074</b>	
<b>11. Contribution of P&amp; NG in total GVA (%)</b>	<b>3.36</b>	<b>2.95</b>	<b>2.15</b>	<b>1.89</b>	<b>2.36</b>	
<b>Growth Rate (%)</b>						
1.(a) Petroleum & Natural Gas	7.95	-16.92	-7.22	0.62	-12.61	
(b) Manufacture of coke and refined petroleum products	-8.42	0.71	-31.84	-16.51	48.95	
<b>Total</b>	<b>-2.26</b>	<b>-6.62</b>	<b>-22.73</b>	<b>-8.90</b>	<b>18.75</b>	
2. Railways	-3.85	6.97	3.94	-9.90	-18.41	
3. Transport by other means	6.03	7.77	5.51	3.24	-22.13	
4. Storage	-2.32	112.71	6.23	0.96	2.97	
5. Communication & Services related to broadcasting	1.32	-2.72	-0.57	11.20	1.75	
6. Electricity	8.90	12.20	6.52	1.45	-5.20	
7. Gas	7.05	6.26	12.20	-2.40	-6.44	
8. Water Supply	19.90	0.56	14.53	6.42	5.29	
9. Other Utility Services	8.85	13.71	9.10	7.08	-0.11	
<b>10. GVA</b>	<b>7.97</b>	<b>6.23</b>	<b>5.81</b>	<b>3.81</b>	<b>-4.80</b>	

P : Provisional

Source: National Statistical Office, MoSPI



### VII.3: Gross Production of Various Energy Sources in India

Year	Coal & Lignite Sector				Petroleum Sector				Power Sector								
	Coal		Lignite	Grand Total	Natural Gas	Crude Oil	Petroleum Products	Steam	Diesel	Gas	Total	Hydro	Nuclear	ORs*	Total	Non-Utilities	Gross Electricity Generation
	Cooking	Non-Cooking	Total	(MMT)	(BCM)	(MMT)	(MMT)				(Thousand GWh)				(18)	(19)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	
2016-17	61.66	596.21	657.87	45.23	703.10	31.90	36.01	243.55	944.02	0.40	49.09	993.52	122.38	37.92	81.55	1235.36	
2017-18	40.15	635.25	675.40	46.64	722.04	32.65	35.68	254.40	986.59	0.35	50.21	1037.15	126.12	38.35	101.84	1303.45	
2018-19	41.13	687.59	728.72	44.28	773.00	32.87	34.20	262.36	1022.27	0.22	49.83	1072.31	134.89	37.81	126.76	1371.78	
2019-20	52.94	677.94	730.87	42.10	772.97	31.18	32.17	262.94	994.20	0.20	48.44	1042.84	155.77	46.47	138.34	1383.42	
2020-21	44.79	671.30	716.08	37.90	753.98	28.67	30.49	233.51	981.44	0.22	50.94	1032.61	156.30	43.03	147.25	1373.19	
2021-22 (P)	51.70	726.49	778.19	47.49	825.68	34.02	29.69	254.31	1078.58	0.12	36.02	1114.71	151.63	47.11	170.91	1484.37	
															235.00	1719.37	

P : Provisional

GWh: Giga Watt hour (106 x Kilo Watt hour)

Source : M/o Coal, M/o Power, CEA and Oil Companies.

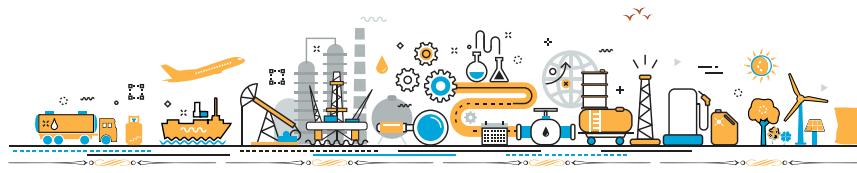
\*: Other renewable sources

### VII.4: Imports & Exports of Various Energy Sources in India

Year	Coal				Lignite				Petroleum Products				Electricity			
	Import	Export	Net Import	Import	Net Export	Import	Net Import	Import	Export	Net Import	Import	Export	Net Import	(13)	(14)	(15)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
(MMT)								(BCM)					(Thousand GWh)			
2016-17	190.95	1.77	189.18	0.02	0.01	0.01	24.85	213.93	36.29	65.51	-29.23	5.62	6.71	-1.09		
2017-18	208.27	1.50	206.77	0.01	0.00	0.01	27.44	220.43	35.46	66.83	-31.37	5.07	7.20	-2.13		
2018-19	235.24	1.31	233.93	0.02	0.08	-0.06	28.74	226.50	33.35	61.10	-27.75	4.40	8.47	-4.07		
2019-20	248.54	1.05	247.49	0.05	0.09	-0.04	33.89	226.95	43.79	65.69	-21.90	6.35	9.49	-3.14		
2020-21	215.25	2.95	212.31	0.02	0.19	-0.17	33.03	196.46	43.25	56.77	-13.52	9.55	9.57	-0.03		
2021-22 (P)	208.93	1.17	207.77	0.07	0.02	0.05	30.78	211.98	42.06	62.71	-20.65	7.60	9.23	-1.63		

P : Provisional

Source : M/o Coal, M/o Power, CEA and Oil Companies.



## VII.5: Consumption of Various Energy Sources in India

Year	Coal	Lignite	Total Coal & Lignite	Natural Gas	Crude Oil	Petroleum Products	Electricity
	(TMT)			(MMSCM)	(TMT)		(GWh)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2016-17	837.22	43.16	880.38	55.70	245.36	194.60	1061.18
2017-18	898.52	46.32	944.84	59.17	251.93	206.17	1123.43
2018-19	968.25	45.81	1014.06	60.80	257.20	213.22	1209.97
2019-20	950.11	42.32	992.42	64.14	254.39	214.13	1248.09
2020-21	906.13	38.51	944.64	60.82	221.77	194.30	1230.21
<b>2021-22 (P)</b>	<b>1027.93</b>	<b>49.14</b>	<b>1077.07</b>	<b>65.04</b>	<b>241.70</b>	<b>204.23</b>	<b>1291.73</b>

Note: Consumption of Crude oil in terms of Crude oil processed

NA: Not Available

P. Provisional

Source : M/o Coal, M/o Power, CEA and Oil Companies.

## VII.6: Availability of Various Energy Sources in India

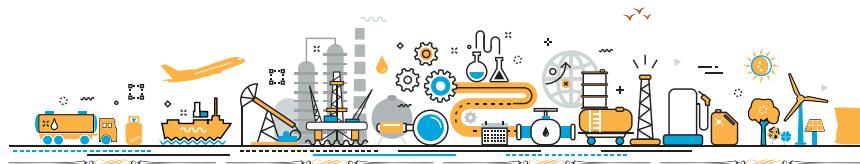
Year	Coal	Lignite	Total Coal & Lignite	Natural Gas	Crude Oil	Petroleum Products	Electricity
	(TMT)			(MMSCM)	(TMT)		(GWh)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2016-17	858.58	47.32	905.89	55.70	249.94	214.32	1163.29
2017-18	896.09	46.98	943.06	59.17	256.12	223.03	1232.51
2018-19	958.25	42.72	1000.97	60.80	260.70	234.61	1307.68
2019-20	1001.84	42.23	1044.07	64.14	259.12	241.04	1323.05
2020-21	956.02	36.21	992.23	60.82	226.95	219.99	1314.02
<b>2021-22 (P)</b>	<b>945.78</b>	<b>45.95</b>	<b>991.73</b>	<b>65.04</b>	<b>241.67</b>	<b>233.65</b>	<b>1371.37</b>

Note: NA: Not Available

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- Availability of Coal & Lignite is equal to sum of Production (Cooking + Non-cooking), Change of Vendible Stock (closing stock-Opening stock) and net imports (Imports-Exports)
- Availability of Natural Gas is equal to sum of net production of gas and imports of LNG
- Availability of Crude oil is equal to sum of gross production and imports of crude oil.
- Availability of Petroleum products is equal to sum of production of petroleum products and gas and net imports (Imports-Exports) of petroleum products.
- Net Availability of Electricity is sum of Gross Electricity Generated from Utilities - Consumption in Power Station Auxiliaries + Purchases from Non-Utilities + Net Import from Other Countries

Source : M/o Coal, M/o Power, CEA and Oil Companies.



## VII.7: Availability of Petroleum Products (Product-wise)

(Figures in MMT)

Items		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)		(2)	(3)	(4)	(5)	(6)	(7)
LPG	Production	11.33	12.38	12.79	12.82	12.07	12.24
	Imports	11.10	11.38	13.24	14.81	16.48	17.12
	Export	0.32	0.36	0.42	0.46	0.45	0.51
	Availability	22.11	23.40	25.60	27.17	28.10	28.85
Motor Spirit	Production	36.59	37.78	38.04	38.62	35.78	40.24
	Imports	0.48	0.17	0.67	2.15	1.35	0.67
	Export	15.42	14.04	12.88	12.71	11.61	13.48
	Availability	21.65	23.92	25.82	28.05	25.52	27.43
Naphtha	Production	19.95	20.01	19.79	20.68	19.40	19.99
	Imports	2.78	2.21	2.08	1.66	1.20	1.27
	Export	8.73	8.95	6.96	8.90	6.51	6.86
	Availability	14.00	13.27	14.90	13.44	14.09	14.40
Kerosene	Production	6.04	4.41	4.07	3.21	2.39	1.92
	Imports	0.00	0.00	0.00	0.00	0.00	0.00
	Export	0.02	0.02	0.02	0.18	0.02	0.01
	Availability	6.03	4.39	4.05	3.03	2.38	1.90
ATF	Production	13.83	14.59	15.48	15.24	7.09	10.29
	Imports	w0.34	0.30	0.26	0.06	0.00	0.00
	Export	7.27	7.18	7.39	6.91	3.54	5.19
	Availability	6.90	7.71	8.35	8.40	3.55	5.11
Diesel (HSD+LDO)	Production	103.11	108.47	111.24	111.84	101.17	107.98
	Imports	1.01	1.36	0.56	2.80	0.65	0.08
	Export	27.45	29.74	27.93	31.65	30.58	32.41
	Availability	76.67	80.09	83.86	82.98	71.24	75.65
Fuel Oils	Production	9.96	9.49	10.03	8.61	7.24	8.33
	Imports	0.92	1.21	1.42	4.58	6.45	9.02
	Export	2.25	2.53	2.20	1.53	1.18	1.72
	Availability	8.64	8.17	9.26	11.66	12.52	15.64
Lube Oils	Production	1.03	1.04	0.95	0.93	1.07	1.17
	Imports	2.13	2.54	2.46	2.67	2.69	3.11
	Export	0.01	0.01	0.01	0.01	0.01	0.01
	Availability	3.15	3.56	3.40	3.60	3.75	4.27
Bitumen	Production	5.19	5.28	5.80	5.24	5.25	5.11
	Imports	0.95	0.95	0.88	1.63	2.05	2.64
	Export	0.04	0.06	0.02	0.03	0.01	0.01
	Availability	6.10	6.16	6.66	6.85	7.29	7.74
Petroleum Coke	Production	13.94	14.75	14.68	15.53	12.66	15.51
	Imports	14.42	12.78	7.93	10.67	8.26	5.74
	Export	0.67	0.56	1.12	0.47	0.58	0.19
	Availability	27.68	26.97	21.48	25.74	20.33	21.06
Others	Production	22.59	26.21	29.50	30.22	29.39	31.53
	Imports	2.17	2.56	3.87	2.75	4.11	2.42
	Export	3.34	3.39	2.14	2.85	2.29	2.33
	Availability	21.41	25.38	31.23	30.11	31.22	31.62
Total Petroleum Products	Production	243.55	254.40	262.36	262.94	233.51	254.31
	Imports	36.29	35.46	33.35	43.79	43.25	42.06
	Export	65.51	66.83	61.10	65.69	56.77	62.71
	Availability	214.32	223.03	234.61	241.04	219.99	233.65

Note: Total may not tally due to rounding off.

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Source: Oil Companies &amp; Petroleum Planning &amp; Analysis Cell.





# CHAPTER - VIII



 MANPOWER



# Highlights of Chapter



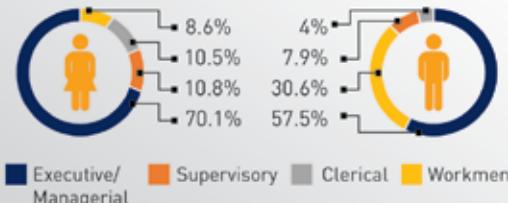
Total manpower employed in oil and gas sector CPSEs stood at 95,303 as on 31.03.2022



Female (8.2%) & Male (91.8%) employees deployed in different verticals



## Female & Male employees deployment



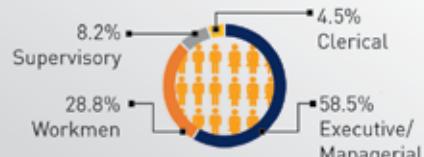
## Highest manpower deployed in E&P followed by marketing and refinery



Employee disparity was highest in E&P and lowest in marketing vertical



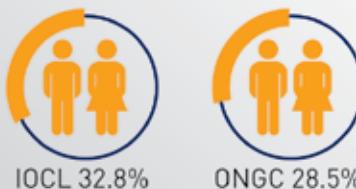
Manpower was highest in Executive/ Managerial roles



58% of total employees are in Executive/Managerial roles. Clerical vertical saw the lowest disparity



ONGC and IOCL together accounted for over 61.3% of the total manpower employed (95,303) in the oil & gas CPSEs as on 31.03.2022.



## VIII.1: Sector-wise Manpower Employed in Oil & Gas CPSEs in India (as on 31<sup>st</sup> March)

(Figures in Number)

Sector	2017	2018	2019	2020	2021	2022(P)	% Share of Total 2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exploration & Production	33150	31823	31019	29987	28381	27297	28.6
Refining	25038	25198	25690	25317	24302	23855	25.0
Marketing	30698	29994	29657	28380	25900	24868	26.1
Pipelines	5689	5869	6101	6205	6138	6213	6.5
Research & Development	1986	1960	1898	1843	1657	1565	1.6
Others	13492	13033	12368	12100	11650	11505	12.1
<b>Grand Total</b>	<b>110053</b>	<b>107877</b>	<b>106733</b>	<b>103832</b>	<b>98028</b>	<b>95303</b>	<b>100</b>

Note: Figures exclude 'Expatriates/Foreign Experts/on Contract' manpower

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Source: (ONGC, OVL, OIL, GAIL, IOCL, BPCL, HPCL, CPCL, NRL, MRPL, BLL, EIL)

## VIII.2: Category-wise Manpower Employed in Oil & Gas CPSEs in India (as on 31<sup>st</sup> March)

(Figures in Number)

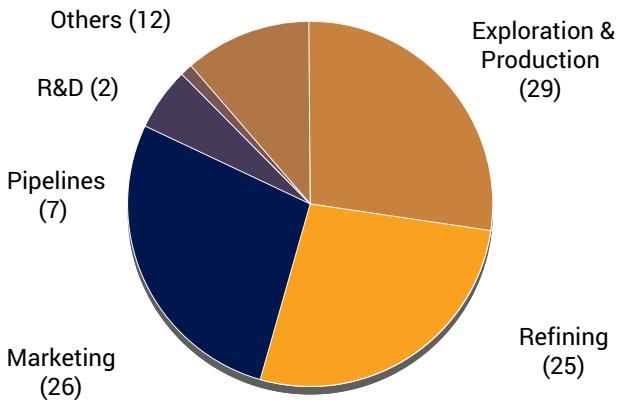
Category	2017	2018	2019	2020	2021	2022 (P)	% Share of Total 2022
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Executive/Managerial	59962	59890	60182	59114	57058	55753	58.5
Supervisory	9988	9614	9008	8751	8241	7786	8.2
Clerical	5392	5457	5275	5088	4723	4282	4.5
Workmen	34711	32916	32268	30879	28006	27482	28.8
<b>Grand Total</b>	<b>110053</b>	<b>107877</b>	<b>106733</b>	<b>103832</b>	<b>98028</b>	<b>95303</b>	<b>100</b>

Note: Figures exclude 'Expatriates/Foreign Experts/on Contract' manpower

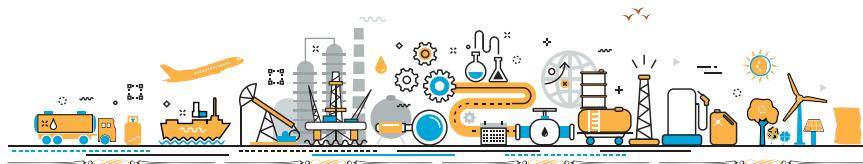
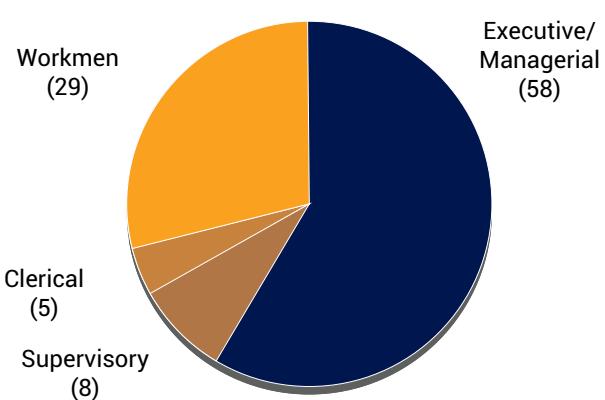
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Source: (ONGC, OVL, OIL, GAIL, IOCL, BPCL, HPCL, CPCL, NRL, MRPL, BLL, EIL)

**Figure VIII.1: Sector-wise Manpower (in %) as on 31.03.2022**



**Figure VIII.2: Category-wise Manpower (in %) as on 31.03.2022**



### VIII.3: Category-wise and Sector-wise Manpower Employed in Oil & Gas CPSEs in India (as on 31<sup>st</sup> March)

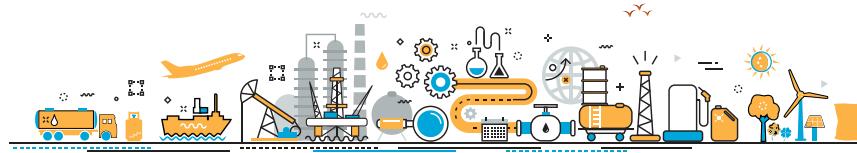
(Figures in Number)

Category	2017	2018	2019	2020	2021	2022 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>1. Exploration and Production</b>						
1. Executive/ Managerial	19394	18574	18128	17304	16046	14879
2. Supervisory	2157	1947	1713	1594	1480	1347
3. Clerical	574	550	541	550	535	541
4. Workman	11025	10752	10637	10539	10320	10530
<b>Total</b>	<b>33150</b>	<b>31823</b>	<b>31019</b>	<b>29987</b>	<b>28381</b>	<b>27297</b>
<b>2. Refining</b>						
1. Executive/ Managerial	10410	10789	11084	11022	10932	10662
2. Supervisory	2958	2809	2699	2575	2252	2105
3. Clerical	679	684	684	685	664	623
4. Workman	10991	10916	11223	11035	10454	10465
<b>Total</b>	<b>25038</b>	<b>25198</b>	<b>25690</b>	<b>25317</b>	<b>24302</b>	<b>23855</b>
<b>3. Marketing</b>						
1. Executive/ Managerial	15805	16162	16730	16632	16157	16216
2. Supervisory	3515	3540	3452	3426	3295	3110
3. Clerical	2870	2625	2461	2277	1710	1485
4. Workman	8508	7667	7014	6045	4738	4057
<b>Total</b>	<b>30698</b>	<b>29994</b>	<b>29657</b>	<b>28380</b>	<b>25900</b>	<b>24868</b>
<b>4. Pipelines</b>						
1. Executive/ Managerial	4081	4250	4485	4545	4538	4669
2. Supervisory	222	265	232	251	267	296
3. Clerical	162	345	393	393	740	665
4. Workman	1224	1009	991	1016	593	583
<b>Total</b>	<b>5689</b>	<b>5869</b>	<b>6101</b>	<b>6205</b>	<b>6138</b>	<b>6213</b>
<b>5. Research &amp; Development</b>						
1. Executive/ Managerial	1672	1663	1636	1572	1432	1357
2. Supervisory	91	84	67	67	54	55
3. Clerical	34	28	26	28	25	13
4. Workman	189	185	169	176	146	140
<b>Total</b>	<b>1986</b>	<b>1960</b>	<b>1898</b>	<b>1843</b>	<b>1657</b>	<b>1565</b>
<b>6. Others</b>						
1. Executive/ Managerial	1672	1663	1636	1572	7953	7970
2. Supervisory	91	84	67	67	893	873
3. Clerical	34	28	26	28	1049	955
4. Workman	189	185	169	176	1755	1707
<b>Total</b>	<b>1986</b>	<b>1960</b>	<b>1898</b>	<b>1843</b>	<b>11650</b>	<b>11505</b>
<b>Grand Total</b>	<b>98547</b>	<b>96804</b>	<b>96263</b>	<b>93575</b>	<b>98028</b>	<b>95303</b>

Note: Figures exclude 'Expatriates/Foreign Experts/on Contract' manpower

P:Provisional

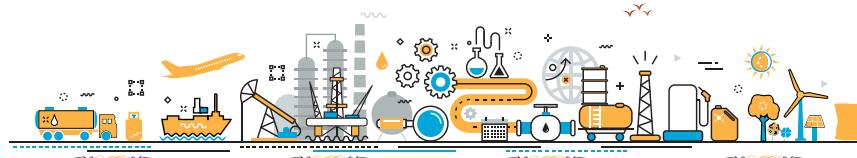
Source: (ONGC, OVL, OIL, GAIL, IOCL, BPCL, HPCL, CPCL, NRL, MRPL, BLL, EIL)



## VIII.4: Gender-wise & Sector-wise Manpower Employed in Oil & Gas CPSEs (as on 31.03.2022)

(Figures in Number)

Sector/Category/CPSE	ONGC*	OIL	GAIL	IOCL	BPCL	HPCL	GPCL	MRPL	NRL	Balmer Lawrie	EIL	Total (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<b>Male Employees</b>												
1. Exploration & Production	22570	3027	30	0	28	11	0	0	0	0	0	25666
2. Refining	165	0	12916	3203	2450	1337	1865	624	0	0	0	22560
3. Marketing	57	0	560	12280	4295	4579	18	88	120	0	0	31
4. Pipelines	74	330	1882	2963	241	414	0	0	13	0	0	5917
5. Research & Development	627	23	9	377	61	97	11	1	1	14	38	1259
6. Others	1628	2467	1964	0	110	592	41	0	157	821	2318	10098
<b>Total</b>	<b>25121</b>	<b>5847</b>	<b>4445</b>	<b>28536</b>	<b>7938</b>	<b>8143</b>	<b>1407</b>	<b>1954</b>	<b>915</b>	<b>835</b>	<b>2387</b>	<b>87528</b>
<b>% Male Manpower of Total</b>	<b>92.5</b>	<b>93.5</b>	<b>91.3</b>	<b>92.4</b>	<b>89.8</b>	<b>94.7</b>	<b>93.0</b>	<b>93.1</b>	<b>89.2</b>	<b>88.1</b>	<b>91.8</b>	
<b>Female Employees</b>												
1. Exploration & Production	1544	80	4	0	2	1	0	0	0	0	0	1631
2. Refining	7	0	758	137	161	56	136	40	0	0	0	1295
3. Marketing	5	0	48	1731	493	549	0	9	2	0	0	3
4. Pipelines	5	19	88	153	4	27	0	0	0	0	0	296
5. Research & Development	176	4	1	76	12	25	5	1	0	1	5	306
6. Others	307	306	168	0	8	159	18	0	26	100	315	1407
<b>Total</b>	<b>2044</b>	<b>409</b>	<b>309</b>	<b>2718</b>	<b>656</b>	<b>922</b>	<b>79</b>	<b>146</b>	<b>68</b>	<b>101</b>	<b>323</b>	<b>7775</b>
<b>% Female Manpower of Total</b>	<b>7.5</b>	<b>6.5</b>	<b>6.5</b>	<b>8.7</b>	<b>7.6</b>	<b>10.2</b>	<b>5.3</b>	<b>7.0</b>	<b>6.9</b>	<b>10.8</b>	<b>11.9</b>	<b>8.2</b>
<b>Total Employees</b>												
1. Exploration & Production	24114	3107	34	0	30	12	0	0	0	0	0	27297
2. Refining	172	0	13674	3340	2611	1393	2001	664	0	0	0	23855
3. Marketing	62	0	608	14011	4788	5128	18	97	122	0	0	34
4. Pipelines	79	349	1970	3116	245	441	0	0	13	0	0	6213
5. Research & Development	803	27	10	453	73	122	16	2	1	15	43	1565
6. Others	1935	2773	2132	0	118	751	59	0	183	921	2633	11505
<b>Total Manpower</b>	<b>27165</b>	<b>6256</b>	<b>4754</b>	<b>31254</b>	<b>8594</b>	<b>9065</b>	<b>1486</b>	<b>2100</b>	<b>983</b>	<b>936</b>	<b>2710</b>	<b>95303</b>
<b>% Share of Total Manpower</b>	<b>28.5</b>	<b>6.6</b>	<b>5.0</b>	<b>32.8</b>	<b>9.0</b>	<b>9.5</b>	<b>1.6</b>	<b>2.2</b>	<b>1.0</b>	<b>1.0</b>	<b>2.8</b>	<b>100.0</b>



P:Provisional

\*:OVL's Manpower (288 employees) included in ONGC's Others

Source: Central Public Sector Enterprises

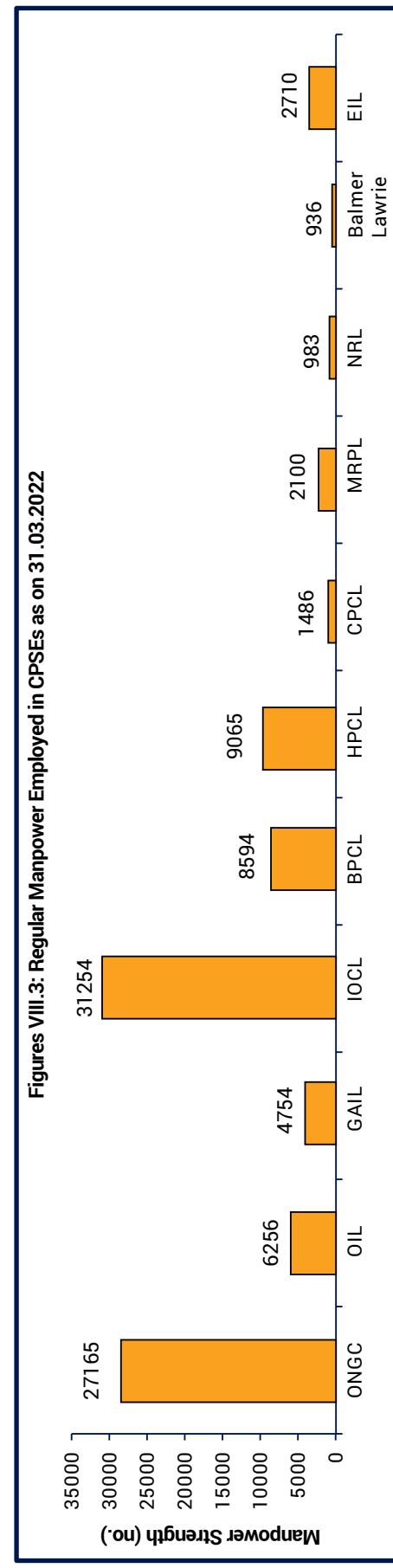
## VIII.5: Gender-wise & Category-wise Manpower Employed in Oil & Gas CPSEs (as on 31.03.2022)

Sector/Category/CPSE	ONGC	OIL	GAIL	IOCL	BPCL	HPCL	CPCl	MRPL	NRL	Balmer Lawrie	(Figures in Number)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<b>Male Employees</b>												
1. Executive/Managerial	15012	1486	3620	16049	4612	5282	180	878	484	427	2275	50305
2. Supervisory	1096	585	335	4176	0	0	514	0	0	185	55	6946
3. Clerical	386	489	445	845	407	676	20	69	32	36	57	3462
4. Workmen	827	3287	45	7466	2919	2185	693	1007	399	187	0	26815
<b>Total</b>	<b>25121</b>	<b>5847</b>	<b>4445</b>	<b>28536</b>	<b>7938</b>	<b>8143</b>	<b>1407</b>	<b>1954</b>	<b>915</b>	<b>835</b>	<b>2387</b>	<b>87528</b>
<b>Female Employees</b>												
1. Executive/Managerial	1401	201	273	1881	482	736	9	45	53	67	300	5448
2. Supervisory	100	61	14	578	0	0	50	0	0	22	15	840
3. Clerical	167	73	21	135	167	177	10	46	8	8	8	820
4. Workmen	376	74	1	124	7	9	10	55	7	4	0	667
<b>Total</b>	<b>2044</b>	<b>409</b>	<b>309</b>	<b>2718</b>	<b>656</b>	<b>922</b>	<b>79</b>	<b>146</b>	<b>68</b>	<b>101</b>	<b>323</b>	<b>7775</b>
<b>Total Employees</b>												
1. Executive/Managerial	16413	1687	3893	17930	5094	6018	189	923	537	494	2575	55753
2. Supervisory	1196	666	349	4754	0	0	564	0	0	207	70	7786
3. Clerical	553	562	466	980	574	853	30	115	40	44	65	4282
4. Workmen	9003	3361	46	7590	2926	2194	703	1062	406	191	0	27482
<b>Total</b>	<b>27165</b>	<b>6256</b>	<b>4754</b>	<b>31254</b>	<b>8594</b>	<b>1486</b>	<b>2100</b>	<b>983</b>	<b>936</b>	<b>2710</b>	<b>95303</b>	

**Notes:** Figures exclude 'Expatriates/Foreign Experts/on Contract' manpower  
 P:Provisional      \*:OVL's Manpower (288 employees) included in ONGC's Others

Source: Central Public Sector Enterprises

**Figures VIII.3: Regular Manpower Employed in CPSEs as on 31.03.2022**



# CHAPTER - IX

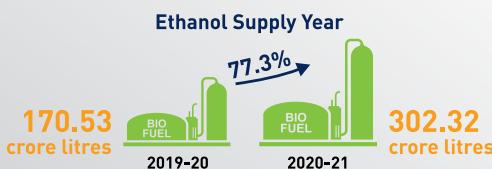


BIO-FUELS



# Highlights of Chapter

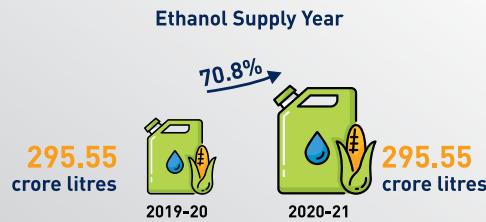
Ethanol Blending with Petrol by Oil's CPSEs during Ethanol Supply Year (ESY) 2020-21 was 8.1%.



The achievement in the course of last 8 years has not only augmented India's energy security but also translated into forex impact of over ₹41,500 crores, reduced GHG emissions of 27 lakh MT and also led to the expeditions payment of over ₹40,600 crores to farmers.

**Ethanol Supply Year 2020-21, a total of ₹ 10,152 crores forex currency saved by ethanol blending.**

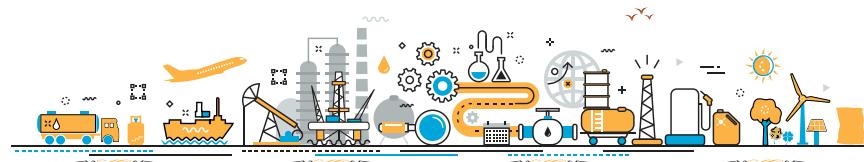
Ethanol received by Oil's CPSEs under the Ethanol blending Programme



Total number of Retail Outlets selling Biofuels blended Petrol/Diesel



Total 3,134 Lof issued as on 31.03.2022 and expected CBG production is 19,307 TPD



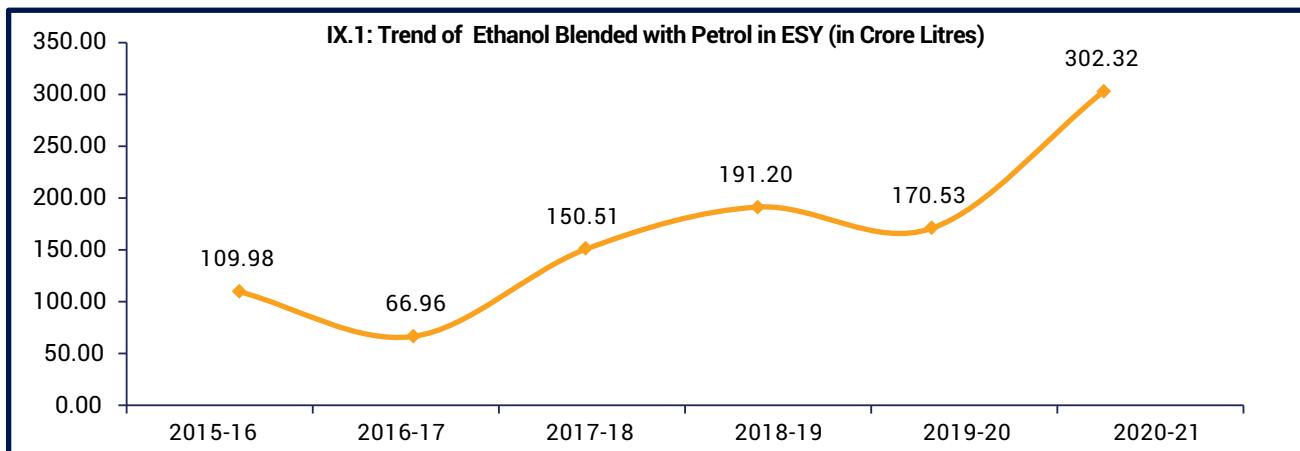
## IX.1: Ethanol Blended with Petrol

Company Name	Unit	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>As per Financial Year-wise</b>							
IOCL	Crore Litres	49.00	40.30	79.80	74.90	93.33	136.10
	%	3.38	2.67	4.96	4.44	5.96	7.97
BPCL	Crore Litres	23.71	19.54	49.96	45.72	59.51	97.30
	%	2.63	1.99	4.79	4.17	5.86	8.68
HPCL	Crore Litres	29.10	19.30	53.50	46.10	58.84	95.03
	%	3.45	2.11	5.50	4.90	6.19	9.03
<b>Total CPSEs</b>	<b>Crore Litres</b>	<b>101.81</b>	<b>79.14</b>	<b>183.26</b>	<b>166.72</b>	<b>211.68</b>	<b>328.43</b>
	%	3.18	2.33	5.05	4.50	6.0	8.46%
<b>As per Ethanol Supply Year (ESY) Year-wise</b>							
IOCL	Crore Litres	35.36	67.61	84.89	78.02	128.96	109.43
	%	2.40	4.30	5.00	5.10	8.00	9.93
BPCL	Crore Litres	15.16	37.56	51.98	45.60	87.07	75.70
	%	1.60	3.70	4.70	4.70	8.00	10.22
HPCL	Crore Litres	16.45	45.34	54.34	46.91	86.28	69.42
	%	1.90	4.80	5.30	5.10	8.36	10.37
<b>Total CPSEs</b>	<b>Crore Litres</b>	<b>66.96</b>	<b>150.51</b>	<b>191.20</b>	<b>170.53</b>	<b>302.32</b>	<b>254.55</b>
	%	2.00	4.20	5.00	5.00	8.10	10.13%

ESY: Ethanol Supply Year (1<sup>st</sup> December to 30<sup>th</sup> November); data for the year 2021-22 is upto June,2022.

P : Provisional

Source: Oil Companies

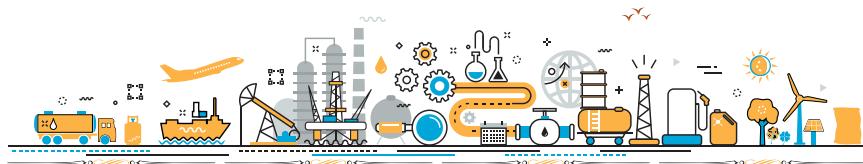


## IX.2: Saving of Foreign Currency by Ethanol Blending

Year	Ethanol blended (PSU OMCs) in KL	Blended Motor Spirit Sale (Actual) PSU OMC in MT	Blended Motor Spirit Sale (Actual) PSU OMC in TMT	Motor spirit saved in TMT	"Petrol FOB price \$/bbl"	RBI (Rs/\$)	Approx total revenue saved (Cr Rs.)
2015-16	1114407	22414744	22415	790	52.48	67.1	2364
2016-17	678096	23263417	23263	481	64.67	65.42	1728
2017-18	1465587	25307855	25308	1039	79.01	67.84	4732
2018-19	1912048	27203623	27204	1355	68.53	70.37	5555
2019-20	1705290	24193515	24194	1209	46.64	73.86	3539
<b>2020-21</b>	<b>3023401</b>	<b>26456053</b>	<b>26456</b>	<b>2143</b>	<b>75.58</b>	<b>73.75</b>	<b>10152</b>

ESY: Ethanol Supply Year (1<sup>st</sup> December to 30<sup>th</sup> November); P : Provisional

Source: PPAC



### IX.3: State-wise Percentage of Ethanol Blended with Petrol (Sales) by CPSEs

(Figures in %)

State/UT	As per Financial Year-wise						As per Ethanol Supply Year (ESY) Year-wise					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Andhra Pradesh	4.01	1.75	6.13	4.76	4.78	8.33	1.70	4.42	6.09	3.36	8.46	10.66
Andman & Nicobar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.00	4.44
Assam	0.00	0.00	0.00	0.00	0.00	4.51	0.00	0.00	0.00	0.00	0.00	4.46
Bihar	5.66	6.48	6.45	6.56	8.80	7.94	6.29	6.38	6.61	8.19	8.04	10.16
Chandigarh	4.20	2.97	5.90	6.00	8.99	9.49	2.69	1.52	6.73	8.87	8.88	10.50
Chhattisgarh	0.15	0.00	1.21	4.22	7.67	8.91	0.01	0.00	3.76	6.22	8.39	10.14
Dadar & Nagar Haveli and Daman & Diu	-	-	-	-	6.43	8.69	-	-	-	-	8.90	10.61
Delhi	5.45	5.03	8.53	5.48	9.90	9.02	4.44	8.47	6.63	7.28	9.35	10.41
Goa	3.71	0.01	7.50	3.19	6.14	8.76	0.10	4.60	4.62	4.83	8.96	10.16
Gujarat	1.48	1.03	4.76	5.07	7.86	9.65	0.89	3.22	5.95	6.35	9.48	10.45
Haryana	5.10	2.63	6.39	8.10	9.74	8.78	2.56	5.92	8.48	9.53	9.72	10.57
Himachal Pradesh	2.84	2.58	4.12	4.60	9.13	8.36	2.61	0.20	4.84	7.86	9.40	9.54
Jammu & Kashmir	0.00	0.00	0.00	0.00	0.02	8.49	0.00	0.00	0.00	0.00	6.99	10.00
Jharkhand	1.01	0.00	0.00	0.11	5.20	8.86	0.10	0.00	0.10	3.77	6.11	8.40
Karnataka	3.87	2.70	7.71	6.62	7.60	9.64	2.13	6.71	6.95	7.26	8.97	10.71
Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kerala	0.08	0.02	0.19	0.11	0.98	6.44	0.04	0.00	0.16	0.05	4.41	10.47
Ladakh	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	4.11	0.00
Madhya Pradesh	0.27	0.01	3.06	4.54	7.42	9.17	0.03	1.05	5.09	6.32	8.58	10.37
Maharashtra	6.05	2.74	9.07	5.73	6.93	9.10	1.81	7.87	6.64	5.67	8.98	10.56
Manipur	0.00	0.00	0.00	0.00	0.00	6.96	0.00	0.00	0.00	0.00	0.00	4.46
Meghalaya	0.00	0.00	0.00	0.00	0.00	6.02	0.00	0.00	0.00	0.00	0.00	5.99
Mizoram	0.00	0.00	0.00	0.00	0.00	2.95	0.00	0.00	0.00	0.00	0.00	5.08
Nagaland	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	3.26
Odisha	0.10	0.07	0.12	0.15	1.03	5.86	0.09	0.00	0.13	0.37	3.99	9.50
Pondicherry	0.47	0.33	0.73	0.73	1.76	5.98	0.26	0.06	1.01	0.41	4.37	10.28
Punjab	3.05	3.72	6.44	7.32	9.51	9.41	3.60	6.28	7.75	9.14	9.92	10.49
Rajasthan	0.01	0.45	1.75	2.43	8.78	0.00	0.06	2.02	1.41	6.73	10.44	10.44
Sikkim	0.00	0.00	0.00	0.00	0.00	1.34	0.00	0.00	0.00	0.00	0.00	3.14
Tamil Nadu	0.01	0.19	1.22	1.45	3.16	7.03	0.07	0.30	2.07	1.05	7.71	10.27
Telangana	5.32	1.66	8.18	3.77	5.30	9.12	0.41	7.38	5.37	3.14	8.21	10.62
Tripura	0.00	0.00	0.00	0.00	0.00	2.34	0.00	0.00	0.00	0.00	0.00	5.01
Uttar Pradesh	7.52	8.17	9.13	8.64	9.64	10.01	7.93	8.93	8.91	9.48	9.85	10.65
Uttarakhand	5.25	5.50	7.59	8.53	9.81	9.18	5.32	5.02	8.34	9.69	9.31	10.13
West Bengal	1.63	0.98	1.61	1.14	1.30	4.38	1.01	1.24	1.77	1.14	2.39	8.00
<b>Total</b>	<b>31.18</b>	<b>2.33</b>	<b>5.05</b>	<b>4.50</b>	<b>5.99</b>	<b>8.46</b>	<b>2.03</b>	<b>4.22</b>	<b>4.98</b>	<b>5.00</b>	<b>8.10</b>	<b>10.13</b>

ESY: Ethanol Supply Year (1<sup>st</sup> December to 30<sup>th</sup> November); data for the year 2021-22 is upto June, 2022. P: Provisional

Source: Oil Companies



#### IX.4: Quantity of Bio Diesel Blended with Diesel

(Figures in Crore Litres)

Company Name	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share in 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
IOCL	1.19	2.29	3.70	4.10	0.23	0.02	41.3
BPCL	0.67	0.82	1.60	1.26	0.02	0.01	18.6
HPCL	1.10	1.24	2.78	5.05	0.27	0.02	40.1
<b>Total CPSEs</b>	<b>2.96</b>	<b>4.35</b>	<b>8.08</b>	<b>10.41</b>	<b>0.52</b>	<b>0.05</b>	<b>100.0</b>

Source: Oil Companies

P. Provisional

#### IX.5: Ethanol received by CPSE OMCs under Ethanol Blending Programme

(Figures in Crore Litres)

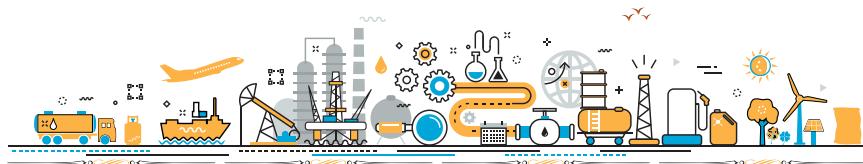
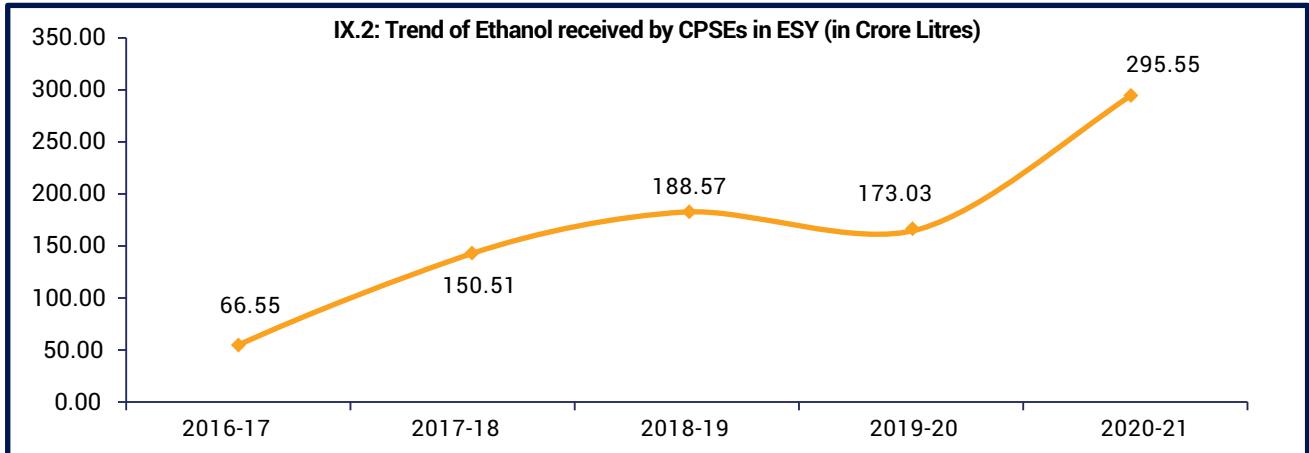
Company Name	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share in 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>As per Financial Year-wise</b>							
IOCL	47.40	41.20	82.00	76.70	97.27	<b>143.02</b>	43.6
BPCL	21.89	18.51	48.70	44.85	60.04	<b>96.90</b>	29.6
HPCL	28.67	21.57	56.72	48.42	64.29	<b>87.92</b>	26.8
<b>Total CPSEs</b>	<b>97.96</b>	<b>81.28</b>	<b>187.42</b>	<b>169.97</b>	<b>221.60</b>	<b>327.84</b>	<b>100.00</b>
<b>As per Ethanol Supply Year (ESY) Year-wise</b>							
IOCL	35.94	67.61	84.11	80.39	125.89	<b>116.18</b>	44.2
BPCL	13.43	37.56	50.46	44.35	85.36	<b>77.79</b>	29.6
HPCL	17.18	45.34	54.00	48.30	84.30	<b>68.70</b>	26.2
<b>Total CPSEs</b>	<b>66.55</b>	<b>150.51</b>	<b>188.57</b>	<b>173.03</b>	<b>295.55</b>	<b>262.68</b>	<b>100.00</b>

Note: Difference between ethanol received and blending is due to stock &amp; inventories etc. P. Provisional

ESY: Ethanol Supply Year (1<sup>st</sup> December to 30<sup>th</sup> November); data for the year 2021-22 is upto June,2022.

Source: Oil Companies

IX.2: Trend of Ethanol received by CPSEs in ESY (in Crore Litres)

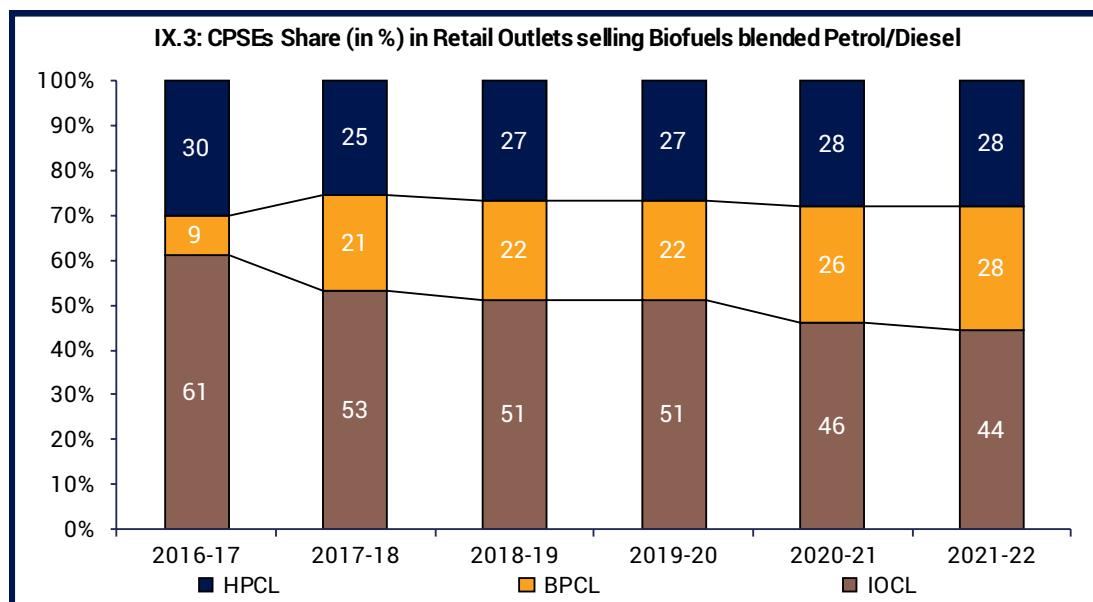


## IX.6: Number of Retail Outlets selling Biofuels blended Petrol/Diesel

Company Name	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	% Share in 2021-22
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
IOCL	18296	17070	23622	25587	27442	29976	44.32
BPCL	2600	6907	10029	10940	15509	18719	27.67
HPCL	9001	8200	12418	13408	16878	18946	28.01
<b>Total CPSEs</b>	<b>29897</b>	<b>32177</b>	<b>46069</b>	<b>49935</b>	<b>59829</b>	<b>67641</b>	<b>100.0</b>

P. Provisional

Source: Oil Companies



## IX.7: Status on CBG as on 31.03.2022

Parameter	Units	IOCL	BPCL	HPCL	GAIL	IGL	Total
LoI issued	No. of plants	2,195	398	297	241	39	3,134
Expected CBG production against LoI issued	TPD	14,462	2,158	1,257	1,235	195	19,307
							(6.8 MMTPA)
Start of CBG sale from Retail Outlet	Nos.	24	1	1	1	-	27
Injection of CBG in CGD network	Nos.	-	-	-	1	-	1



## IX.8: State-wise/UT-wise Ethanol received by CPSE OMCs under Ethanol Blending Programme

(Figures in Crore Lites)

State/UT	As per Financial Year-wise						As per Ethanol Supply Year (ESY) Year-wise					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Andhra Pradesh	5.26	2.50	9.66	7.76	8.84	14.62	2.27	6.49	10.16	5.34	13.51	12.25
Andman & Nikobar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Assam	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	2.52
Bihar	5.01	6.33	7.11	7.45	9.62	11.38	5.98	6.28	6.84	8.39	9.90	8.05
Chandigarh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chhattisgarh	0.10	0.00	0.94	3.45	6.34	7.82	0.00	0.00	3.26	4.70	7.62	5.65
Dadar & Nagar Haveli and Daman & Diu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delhi	6.84	6.87	10.71	6.75	7.73	8.87	5.64	10.91	8.40	6.69	7.02	7.16
Goa	0.83	0.00	1.96	0.85	1.27	2.11	0.00	1.17	1.21	0.79	2.12	1.63
Gujarat	2.93	2.18	10.59	11.14	15.64	19.25	1.76	6.68	13.36	12.36	18.41	13.84
Haryana	5.33	3.97	9.97	12.54	15.06	14.88	3.58	7.35	12.38	13.07	14.44	12.70
Himachal Pradesh	0.00	0.00	0.00	0.11	2.37	2.72	0.00	0.00	0.07	1.62	2.75	1.60
Jammu & Kashmir	0.00	0.00	0.00	0.00	0.01	0.70	0.00	0.00	0.00	0.00	0.52	0.52
Jharkhand	0.16	0.00	0.00	0.17	3.49	4.58	0.04	0.00	0.07	2.41	4.17	3.65
Karnataka	9.12	6.91	21.32	19.61	20.76	25.34	5.10	17.81	19.40	18.77	24.71	20.13
Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kerala	0.00	0.00	0.00	0.00	1.90	15.25	0.00	0.00	0.00	0.00	8.97	14.37
Ladakh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Madhya Pradesh	0.39	0.00	5.54	7.99	12.89	14.86	0.01	1.79	9.31	10.24	13.77	11.82
Maharashtra	24.85	12.45	40.79	25.80	28.82	39.94	7.40	35.99	29.78	21.92	39.48	31.91
Manipur	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Meghalaya	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mizoram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nagaland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Odisha	0.01	0.00	0.00	0.00	1.16	7.09	0.00	0.00	0.00	0.35	4.43	7.16
Pondicherry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Punjab	3.82	4.58	8.44	10.47	12.63	15.33	4.41	6.56	10.40	11.53	14.20	10.36
Rajasthan	0.00	0.00	0.93	3.27	4.76	17.78	0.00	0.10	4.10	2.67	12.91	13.28
Sikkim	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tamil Nadu	0.04	0.58	4.34	4.87	11.24	27.51	0.18	0.99	7.48	3.52	23.27	24.89
Telangana	6.94	2.55	13.08	5.94	8.62	14.94	0.43	10.90	8.88	4.65	14.23	11.86
Tripura	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	24.70	29.65	37.65	37.79	43.96	52.54	27.32	34.01	38.70	40.15	53.19	38.06
Uttarakhand	0.00	1.50	2.35	2.43	2.66	2.74	1.32	2.00	2.45	2.44	2.82	1.75
West Bengal	1.62	1.13	2.03	1.56	1.86	6.28	1.11	1.47	2.30	1.44	3.10	7.51
<b>Total CPSEs</b>	<b>97.94</b>	<b>81.30</b>	<b>187.42</b>	<b>169.96</b>	<b>221.60</b>	<b>327.84</b>	<b>66.55</b>	<b>150.51</b>	<b>188.57</b>	<b>173.03</b>	<b>295.55</b>	<b>262.68</b>

Source: Oil Companies

ESY: Ethanol Supply Year (1<sup>st</sup> December to 30<sup>th</sup> November); data for the year 2021-22 is upto June,2022.

P: Provisional



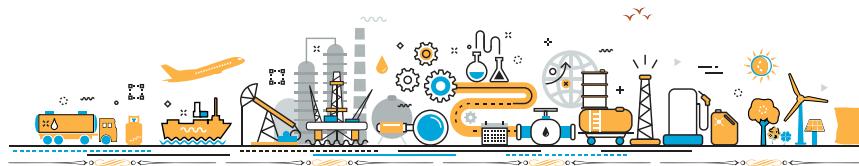
## IX.9: State-wise Ethanol Producing Plants and Capacity (as on 01.04.2022)

State	Grain Based Distilleries		Molasses Based Distilleries		Total	
	No.of Distilleries	KLPD	No.of Distilleries	KLPD	No.of Distilleries	KLPD
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	15	1140	8	328	23	1468
Assam	2	105	0	0	2	105
Bihar	4	365	8	565	12	930
Chhattisgarh	3	140	0	0	3	140
Gujarat	0	0	12	592	12	592
Haryana	14	1263	3	235	17	1498
Himachal Pradesh	3	80	0	0	3	80
Jharkhand	2	360	0	0	2	360
Karnataka	5	245	31	3170	36	3415
Madhya Pradesh	8	530	2	105	10	635
Maharashtra	28	1255	114	6938	142	8193
Orissa	2	90	0	0	2	90
Punjab	16	1960	3	190	19	2150
Rajasthan	8	359	0	0	8	359
Sikkim	1	65	0	0	1	65
Tamil Nadu	0	0	12	575	12	575
Telangana	0	0	3	165	3	165
Uttar Pradesh	2	100	53	5140	55	5240
Uttarakhand	0	0	3	190	3	190
West Bengal	2	180	0	0	2	180
<b>Total</b>	<b>115</b>	<b>8237</b>	<b>252</b>	<b>18193</b>	<b>367</b>	<b>26430</b>

Note: Ethanol producing capacity is estimated

KLPD: Kilo Litres Per Day.

Source: Directorate of Sugar and Vegetable Oils, Ministry of Consumer Affairs, Food and Public Distribution



# CHAPTER - X



CPSEs:  
KEY FINANCIALS INDICATORS



# Highlights of Chapter



Total budgeted Internal and Extra Budgetary Resources (IEBR) for CPSE's under the Ministry of Petroleum and Natural gas in 2022-23 (₹1,11,354 crore) is 3.1% higher over actual expenditure of FY 2021-22 (₹1,07,966 crore).



Actual expenditure of IEBR during FY 2021-22 (₹ 1,07,968 crore) is 103.2% of BE 2021-22 (₹ 1,04,620 crore).



Capital expenditure (CAPEX) for the FY 2021-22 is ₹ 1,08,556 crore i.e. 103% of the total BE ₹ 1,05,359 crore.



IOCL (₹15,261 crore) followed by ONGC (₹11,448 crore) and IOCL (₹9,640 crore), are the top three contributor for the year 2021-22 to the all stake holders.



The dividend paid (payment-basis) by Oil & Gas CPSEs under the Ministry of Petroleum and Natural Gas, for the year 2020-21 (₹ 46,323 crore) is 108.4% higher than the dividend paid in 2020-21 (₹ 22,227 crore).



IOCL (₹ 7,37,480 crore) followed by BPCL (₹ 4,32,258 crore) and HPCL (₹ 3,72,642 crore), are the top three Oil & Gas CPSEs for the year 2021-22.



Total profit earned after tax (Net Profit) by the Oil & Gas CPSEs for the year 2021-22 (₹ 1,04,827 crore) is 41.3% higher than the profit earned after tax in 2020-21 (₹ 74,176 crore). ONGC (₹ 40,306 crore) followed by IOCL (₹ 24,184 crore) and GAIL (₹ 10,364 crore), are the top three who got highest profit in the PNG sectors during the FY 2021-22.



## X.1: Budget Outlay & Actual Expenditure of CPSEs (as per Union Budget)

(Value in ₹ crore)

CPSEs	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22		2022-23	
	Actual	Actual	Actual	Actual	Actual	BE	Actual	% Achievement over BE	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>CPSE-wise Internal &amp; Extra Budget Resources</b>									
Oil & Natural Gas Co. Ltd.	28,006	72,902	29,450	29,538	26,859	29,800	27,741	93.09	29,950
ONGC Videsh Ltd.	17,617	6,798	5,827	5,435	5,734	8,380	4,681	55.86	8,180
Oil India Ltd.	11,083	8,154	3,181	4,247	13,332	4,108	4,367	106.29	4,302
Gail Authority India Ltd.	1,814	3,680	7,143	4,562	6,253	5,861	7,148	121.96	7,500
Indian Oil Corporation Ltd.	20,737	21,457	28,208	31,421	28,684	28,547	30,391	106.46	28,549
Bharat Petroleum Corporation Limited	16,949	8,998	10,993	11,064	11,064	10,000	11,860	118.60	10,000
Hindustan Petroleum Corporation Ltd.	5,757	7,210	12,438	16,311	14,700	14,500	16,771	115.66	14,500
Mangalore Refinery & Petrochemicals Ltd	616	1,281	1,072	1,318	2,179	850	674	79.32	815
Chennai Petroleum Corporation Ltd.	1,269	1,020	1,314	961	583	384	636	165.71	584
Numaligarh Refinery Ltd.	503	420	465	529	1,029	2,000	3,605	180.27	6,774
Balmer Lawrie & Co. Ltd.	74	83	132	46	43	40	22	56.23	40
Engineers India Ltd.	*	*	87	171	733	150	70	46.84	160
<b>Total (I&amp;EBR)</b>	<b>104,426</b>	<b>132,004</b>	<b>100,309</b>	<b>105,603</b>	<b>111,194</b>	<b>104,620</b>	<b>107,968</b>	<b>103.20</b>	<b>111,354</b>
<b>Sector-wise Internal &amp; Extra Budget Resources</b>									
Exploration & Production Sector	72,383	95,455	49,613	44,769	52,994	49,186	46,376	94.29	50,536
Refining & Marketing Sector	30,524	32,794	46,990	56,668	51,446	49,804	54,948	110.33	53,876
Petro-Chemicals Sector	1,446	3,672	3,487	3,949	5,979	5,441	6,551	120.39	6,742
Engineering Sector	74	83	219	217	776	190	93	48.82	200
<b>Total (I&amp;EBR)</b>	<b>104,426</b>	<b>132,004</b>	<b>100,309</b>	<b>105,603</b>	<b>111,194</b>	<b>104,620</b>	<b>107,968</b>	<b>103.20</b>	<b>111,354</b>
Gross Budgetary Support (GBS) for Jagdishpur-Haldia & Bokaro-Dhamra Pipeline.	450	400	1,207	1,552	728	739	590	79.78	-
<b>Total CAPEX</b>	<b>104,876</b>	<b>132,404</b>	<b>101,515</b>	<b>107,155</b>	<b>111,922</b>	<b>105,359</b>	<b>108,557</b>	<b>103.04</b>	<b>111,354</b>
<b>Total OPEX**</b>	<b>91,733</b>	<b>93,058</b>	<b>118,436</b>	<b>113,669</b>	<b>103,750</b>	<b>117,498</b>	<b>136,541</b>	<b>116.21</b>	<b>174,388</b>

Note : \*\*:Operating expenses includes all revenue expenses (excluding Depreciation & Finance cost etc.)

Source : Central Public Sector Enterprises/Budget Documents and IFD, MoPNG

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APPENDIX



## X.2: Financial Performance of CPSEs under the Ministry of Petroleum and Natural Gas: 2021-22

Performance Parameters	Unit	ONGC	OVL	OIL	GAIL	IOCL	BPCL	MRPL	CPCL	NRL	Balmer Lawrie	EIL	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Cash and Bank Balance at year end	₹ crore	236	5,881	657	1,870	710	834	131	44	12	185	416	1,320													
Revenue from Operations (Net)	₹ crore	110,345	17,322	14,530	91,646	728,460	362,277	349,683	69,700	60,474	19,442	2,042	2,870													
Authorised Capital	₹ crore	15,000	25,000	2,000	5,000	15,000	2,635	2,500	6,100	400	5,000	300	400													
Paid up Capital	₹ crore	6,290	15,000	1,084	4,440	9,414	2,129	1,419	1,753	149	736	171	281													
Govt. equity in the CPSE	%	58.91	0.00	56.66	51.45	51.61	52.98	0.00	0.00	0.00	0.00	0.00	51.32													
Gross Turnover	₹ crore	110,345	17,798	14,530	91,426	737,480	432,258	372,642	86,036	60,402	23,546	2,105	2,870													
Profit After Tax	₹ crore	40,306	1,589	3,887	10,364	24,184	8,789	6,383	2,955	1,342	3,562	123	344													
Debt equity ratio	Ratio	0.03	0.68	0.43	0.15	0.84	0.49	0.90 : 1	2.93	3.31	0.12	0.00	0.00													
Reserves & Surpluses	₹ crore	230,858	36,736	28,806	51,146	122,105	47,540	37,258	5,439	2,641	7,652	1,149	1,644													
Net worth	₹ crore	237,148	51,736	26,979	49,920	131,286	49,670	38,677	7,196	2,790	8,388	1,320	1,925													
Dividend Payable (Accrual)	₹ crore	13,209	480	1,545	4,440	11,568	3,471	1,986	0	30	1,103	111	169													
Dividend as a %age of Equity	%	210.00	3.20	142.50	100.00	126.00	6.99	140.00	-	0.20	1.50	65.00	60.00													
Dividend as a %age of PAT	%	0.33	30.20	39.75	42.84	47.83	39.49	31.12	-	0.02	0.31	90.51	48.96													
EPS	₹	32.04	10.59	35.85	23.34	26.34	41.31	44.94	16.86	90.15	48.42	7.18	6.13													
Payout Ratio	%	0.33	30.20	39.75	0.43	47.83	39.49	31.12	-	0.02	0.31	90.51	48.94													
Long Term Borrowings	₹ crore	6,397	35,315	11,636	7,256	63,316	20,021	34,977	16,617	2,392	950	0	0													
Short Term Borrowings	₹ crore	0	0	0	0	47,483	4,102	8,216	4,468	6,831	50	0	0													

**Note:**

OVL: 100% Subsidiaries of ONGC. Revenue from operations (net) excludes Share of profit of equity accounted investees, net of tax

IOCL: Long term borrowing includes current maturities of long term debt. Further, Cash and Bank Balance at year end represents the amount of Cash and Cash Equivalents only.

GAIL: Cash and Bank Balance at year end excludes Earmarked Balances. Long term borrowing includes Current maturities of Long Term debt.

BPCL: Cash and Bank balances include earmarked balances. Paid up share capital has been adjusted for shares held by "BPCL trust for Investment in shares" & "BPCL EPS Trust". Long term borrowings include current maturities of Long term borrowings and excludes lease liabilities as per Ind AS 116. Networth refers to Total Equity. Dividend payable (Accrual) is including dividend on shares held by "BPCL trust for investment in shares" & "BPCL EPS Trust".

MRPL: On January 31, 2018, based on the Share Purchase Agreement (SPA) entered into between Government of India and Oil and Natural Gas Corporation Limited, 54.89% Equity Shares in the Paid up Capital of Hindustan Petroleum Corporation Limited (HPL), have been acquired by Oil and Natural Gas Corporation Limited. Revenue from operations (Net) is Gross turnover plus other operating income less Excise duty. Debt equity ratio is on long term Debt (including current maturities).

MRPL: There is no direct holding by Govt. of India in MRPL. As on 31.03.2022, % of share holding by CPCL's promoters were: IOCL (51.9%) and rest others.

CPCL: There is no direct holding by Govt. of India in CPCL. As on 31.03.2022, % of share holding by MRPL (16.95) and rest public holding.

NRL: Cash and Bank Balance at year end excludes Earmarked Balances. There is no direct holding by Govt. of India in Numaligarh Refinery Limited. As on 31.03.2022, % of share holding by NRL's promoters were as: OIL - 69.63%, Govt. of Assam - 26.00% and EIL - 4.37%. Dividend Payable (Accrual) includes final dividend of Rs. 5 per share proposed by Board of Directors to be approved in AGM.

Balmer Lawrie: There is no direct holding by Govt. of India in Balmer Lawrie & Co. Ltd. Balmer Lawrie Investments Ltd., a Government Company holds 61.8% of shares in Balmer Lawrie. Central Govt. holds 59.67% in Balmer Lawrie Investments Ltd.

EIL: Cash & Bank Balance includes Advances received from Clients, Amount held on behalf of Client, Income receive in advance, Unpaid Dividend.

Source: Central Public Sector Enterprises

### X.3: Dividend Paid (Payment-Basis) by CPSEs under the Ministry of Petroleum and Natural Gas

(Value in ₹ crore)

Name of CPSE	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Oil &amp; Natural Gas Corp. Ltd.</b>	<b>9,518</b>	<b>7,764</b>	<b>9,595</b>	<b>7,234</b>	<b>2,202</b>	<b>11,448</b>
Dividend to Central Government of India	6544	5275	6290	4394	1330	6916
Dividend to other Stakeholder	2974	2489	3305	2840	872	4532
<b>ONGC Videsh Ltd.</b>	<b>0</b>	<b>210</b>	<b>300</b>	<b>510</b>	<b>300</b>	<b>600</b>
Dividend to other Stakeholder	0	210	300	510	300	600
<b>Oil India Ltd.</b>	<b>1,242</b>	<b>1,419</b>	<b>1,078</b>	<b>1,166</b>	<b>553</b>	<b>1,166</b>
Dividend to Central Government of India	835	938	685	666	313	661
Dividend to other Stakeholder	408	480	393	500	240	505
<b>GAIL India Ltd.</b>	<b>1,459</b>	<b>1,750</b>	<b>1,734</b>	<b>3,286</b>	<b>2,238</b>	<b>3,996</b>
Dividend to Central Government of India	804	942	920	1702	1155	2056
Dividend to other Stakeholder	655	809	814	1583	1083	1940
<b>Indian Oil Corp. Ltd.</b>	<b>10,804</b>	<b>9,712</b>	<b>9,910</b>	<b>4,843</b>	<b>8,340</b>	<b>9,640</b>
Dividend to Central Government of India	6231	5535	5383	2545	5091	5091
Dividend to State Government	12	11	11	6	8	11
Dividend to other Stakeholder	4561	4166	4516	2292	3242	4538
<b>Bharat Petroleum Corp. Ltd.</b>	<b>5,640</b>	<b>3,182</b>	<b>3,905</b>	<b>5,315</b>	<b>4,045</b>	<b>15,261</b>
Dividend to Central Government of India	3,098	1,729	2,091	2,821	2,413	7,814
Dividend to State Government	49	27	34	46	30	136
Dividend to other Stakeholder	2,493	1,425	1,780	2,448	1,602	7,310
<b>Hindustan Petroleum Corp. Ltd.</b>	<b>3,478</b>	<b>2,321</b>	<b>1,371</b>	<b>1,432</b>	<b>1,486</b>	<b>3,227</b>
Dividend to Central Government of India	1778	57	0	0	0	0
Dividend to other Stakeholder	1700	2264	1371	1432	1486	3227
<b>Mangalore Refinery &amp; Petrochemicals Ltd.</b>	<b>0</b>	<b>1,052</b>	<b>526</b>	<b>175</b>	<b>0</b>	<b>0</b>
Dividend to other Stakeholder	0	1,052	526	175	0	0
<b>Chennai Petroleum Corp. Ltd.</b>	<b>60</b>	<b>313</b>	<b>275</b>	<b>0</b>	<b>0</b>	<b>0</b>
Dividend to Central Government of India	0	0	0	0	0	0
Dividend to other Stakeholder	60	313	275	0	0	0
<b>Numaligarh Refinery Ltd.</b>	<b>993</b>	<b>1,810</b>	<b>1,214</b>	<b>1,324</b>	<b>2,759</b>	<b>736</b>
Dividend to State Government	123	223	150	163	341	182
Dividend to other Stakeholder	870	1,586	1,064	1,161	2,418	554
<b>Balmer Lawrie Ltd.</b>	<b>57</b>	<b>80</b>	<b>114</b>	<b>125</b>	<b>128</b>	<b>103</b>
Dividend to other Stakeholder	57	80	114	125	128	103
<b>Engineers India Ltd.</b>	<b>236</b>	<b>190</b>	<b>300</b>	<b>275</b>	<b>177</b>	<b>146</b>
Dividend to Central Government of India	136	99	156	142	91	75
Dividend to other Stakeholder	100	90	144	133	86	71
<b>Total Dividend Paid</b>	<b>33,487</b>	<b>29,801</b>	<b>30,323</b>	<b>25,685</b>	<b>22,227</b>	<b>46,323</b>
on which						
Dividend to Central Government of India	19,425	14,576	15,525	12,270	10,393	22,614
Dividend to State Government	183	262	195	215	379	329
Dividend to other Stakeholder	13,878	14,964	14,603	13,200	11,456	23,380
Tax on Dividend	6,682	5,369	5,781	4,665	0	0
<b>Total Dividend Paid incl. Dividend on Tax</b>	<b>40,169</b>	<b>35,170</b>	<b>36,103</b>	<b>30,350</b>	<b>22,227</b>	<b>46,323</b>

Note : 1. Total may not tally due to round-off

(P) : Provisional

2. Dividend paid excludes Dividend Distribution Tax.

Source: Central Public Sector Enterprises



#### X.4: Dividend Payable (Accrual-Basis) by CPSEs under the Ministry of Petroleum and Natural Gas

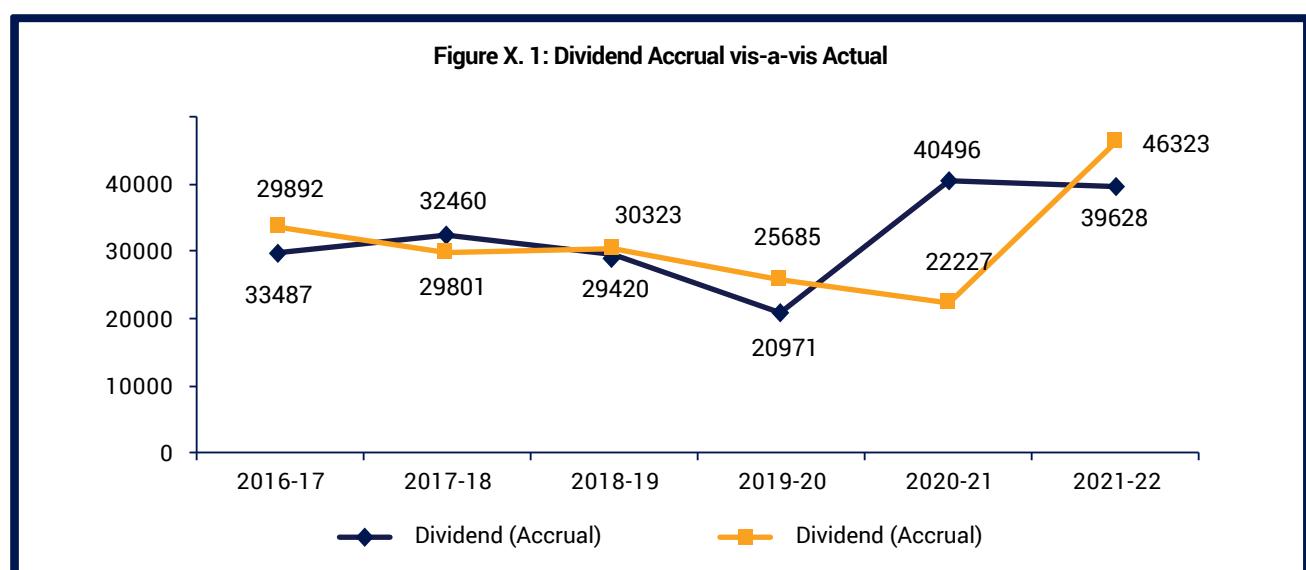
Name of CPSE	(Value in ₹ crore)					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Oil & Natural Gas Corp. Ltd.	7764	8470	8806	6290	4529	13,209
ONGC Videsh Ltd.	210	300	510	300	600	480
Oil India Ltd.	1121	1173	1154	1149	542	1,545
GAIL India Ltd.	1535	1619	1809	2886	2238	4,440
Indian Oil Corp. Ltd.	9,226	11,169	8,909	3,902	11,017	11,568
Bharat Petroleum Corp. Ltd.	4700	4555	4122	3579	17137	3,471
Hindustan Petroleum Corp. Ltd.	3048	2590	2423	1486	3227	1,986
Mangalore Refinery & Petrochemicals Ltd.	1052	526	175	0	0	0
Chennai Petroleum Corp. Ltd.	313	275	0	0	0	30
Numaligarh Refinery Ltd.	1368	1361	1251	1103	2759	1,103
Balmer Lawrie Ltd.	97	138	151	128	103	111
Engineers India Ltd.	200	253	253	325	112	169
<b>Total</b>	<b>30,633</b>	<b>32,430</b>	<b>29,562</b>	<b>21,150</b>	<b>42,264</b>	<b>38,112</b>

Note : Dividend payable (Accrual Basis) is including dividend on shares held by "BPCL trust for investment in shares" & "BPCL ESPS Trust".

P : Provisional

Source: Central Public Sector Enterprises

**Figure X. 1: Dividend Accrual vis-a-vis Actual**



## X.5: Gross Turnover by CPSEs under the Ministry of Petroleum and Natural Gas

Name of CPSEs	(Value in ₹ crore)					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Oil & Natural Gas Corporation Ltd.	77908	85004	109655	96214	68141	110,345
ONGC (Videsh) Ltd.	11745	12910	17577	17164	12931	17,798
Oil India Ltd.	9510	10656	13735	12129	8618	14,530
GAIL (India) Ltd.	48789	53690	74808	71730	56529	91,426
Indian Oil Corporation Ltd.	446,545	507,751	608,510	574,077	521,051	737,480
Bharat Petroleum Corporation Ltd.	241859	276401	336384	326393	300830	432,258
Hindustan Petroleum Corporation Ltd.	213489	243227	295713	286250	269243	372,642
Mangalore Refinery & Petrochemicals Ltd.	59415	63067	72283	60728	50739	86,036
Chennai Petroleum Corporation Ltd.	40586	44135	52177	48624	41814	60,402
Numaligarh Refineries Ltd.	13945	15922	18509	14072	18548	23,546
Balmer Lawrie Ltd.	1901	1830	1854	1612	1593	2,105
Engineers India Ltd.	1449	1788	2444	3203	3105	2,870
<b>Total</b>	<b>1,167,141</b>	<b>1,316,380</b>	<b>1,603,649</b>	<b>1,512,196</b>	<b>1,353,143</b>	<b>1,951,437</b>

Source : Central Public Sector Enterprises

P : Provisional



## X.6: Profit Earned After Tax by CPSEs under the Ministry of Petroleum and Natural Gas

Name of CPSEs	(Value in ₹ crore)					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Oil & Natural Gas Corporation Ltd.	17,900	19,945	26,765	13,464	11,246	40,306
ONGC (Videsh) Ltd.	757	981	1682	454	1891	1,589
Oil India Ltd.	1549	2668	2590	2584	1742	3,887
GAIL (India) Ltd.	3503	4618	6026	6621	4890	10,364
Indian Oil Corporation Ltd.	19106	21346	16894	1313	21836	24,184
Bharat Petroleum Corporation Ltd.	8039	7976	7132	2683	19042	8,789
Hindustan Petroleum Corporation Ltd.	6209	6357	6029	2637	10664	6,383
Mangalore Refinery & Petrochemicals Ltd.	3644	2224	332	-2740	-761	2,955
Chennai Petroleum Corporation Ltd.	1030	913	-213	-2078	238	1,342
Numaligarh Refineries Ltd.	2101	2045	1968	1381	3036	3,562
Balmer Lawrie Ltd.	170	185	189	177	116	123
Engineers India Ltd.	325	378	370	430	259	344
<b>Total</b>	<b>64,320</b>	<b>69,619</b>	<b>69,763</b>	<b>26,927</b>	<b>74,198</b>	<b>103,829</b>

Source: Central Public Sector Enterprises

P : Provisional

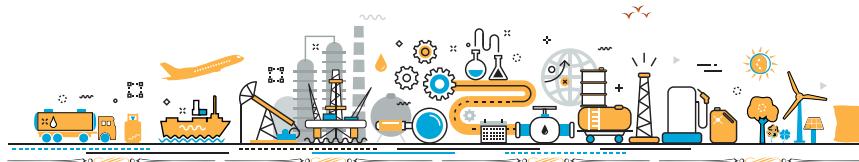
Note: BPCL: FY 2015-16 PAT was restated on account of transition to Ind AS and FY 2017-18 PAT was restated on account of merger of PCCKL.

## X.7: Gross Profit Before Tax by CPSEs under the Ministry of Petroleum and Natural Gas

Name of CPSEs	(Value in ₹ crore)					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Oil & Natural Gas Corporation Ltd.	25,216	28,893	40,029	20,388	16,403	41,040
ONGC (Videsh) Ltd.	1364	1103	5249	3675	2338	4,294
Oil India Ltd.	2146	3710	3916	2120	723	4,987
GAIL (India) Ltd.	5411	6958	9085	7943	6386	13,590
Indian Oil Corporation Ltd.	26321	32564	25127	-3694	29716	31,733
Bharat Petroleum Corporation Ltd.	11043	11286	10440	2671	22618	11,913
Hindustan Petroleum Corporation Ltd.	9021	9202	9339	1573	14247	8,204
Mangalore Refinery & Petrochemicals Ltd.	5531	3351	581	-3957	-915	2,708
Chennai Petroleum Corporation Ltd.	1365	1458	-298	-3016	1277	1,832
Numaligarh Refineries Ltd.	3148	3142	3052	1735	4083	4,848
Balmer Lawrie Ltd.	254	261	280	232	157	170
Engineers India Ltd.	500	568	568	676	351	448
<b>Total</b>	<b>91,306</b>	<b>102,479</b>	<b>107,367</b>	<b>30,345</b>	<b>97,383</b>	<b>125,767</b>

Source: Central Public Sector Enterprises

P : Provisional



# CHAPTER - XI



INTERNATIONAL  
PETROLEUM STATISTICS



# Highlights of Chapter



In 2021, India accounted for  
**3.67 Thousand**  
million barrels  
of World's Proven Crude Oil reserves

World's Proven Crude Oil reserves is 1545 billion barrels, standing India at 24<sup>th</sup> position.



In 2021, India accounted for  
**0.5%**  
of World's Proven  
Natural Gas reserves

World's Proven Natural gas reserves 205.87 Trillion cubic meters, India standing at 25<sup>th</sup> position.



Highest share in the global Crude Oil Production



**United States**  
18.5%



**Saudi Arabia**  
12.2%



**Russia**  
12.2%



**India Position**  
21<sup>st</sup> (0.8%)

In 2021, India accounted for 746 thousand barrels daily (b/d) production of Crude Oil. Also, the World Production of Crude Oil accounted for 89877 Thousand b/d in 2021, lower by 1.6% vis-à-vis 2020 (88494 Thousand b/d).



Highest share in the global Natural Gas Production



**United States**  
23.1%



**Russia**  
17.4%



**Iran**  
6.4%



**India Position**  
26<sup>th</sup> (0.7%)

In 2021, India accounted for 28.54 Billion Cubic Metre (BCM) Gas Production holding 26<sup>th</sup> position. Also, the World Natural gas production accounted for 4036.88 BCM in 2021, lower by 4.5% vis-à-vis 2020 (3861.52 BCM).



Highest share in output of Petroleum Products



**United States**  
20.4%



**China**  
15.1%



**Russia**  
6.9%



**India Position**  
4<sup>th</sup> (6%)

In 2021, India accounted for 6% of World's output in petroleum products holding 4<sup>th</sup> position. Also, the World Output of Petroleum Products accounted for 89814 thousand b/d in 2021, 4.9% higher vis-à-vis 2020 (85607 thousand b/d).



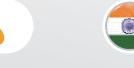
Highest share in consumption of Crude Oil



**United States**  
19.9%



**China**  
16.4%



**India**  
5.2%

World consumption of Crude Oil accounted for 94088 thousand b/d in 2021, 6% higher vis-à-vis 2020 (88746 thousand b/d).



Indian refining capacity of  
**5018**  
thousand b/d



India share 4.9% of the  
World refining capacity & stood at  
**4<sup>th</sup>** position

World Oil Refining capacity accounted for 101912 thousand b/d in 2021, thus, registering a 0.4% negative growth of vis-à-vis 2020 (102331 thousand b/d).



Highest share of imports of Crude Oil



**China**  
24.1%

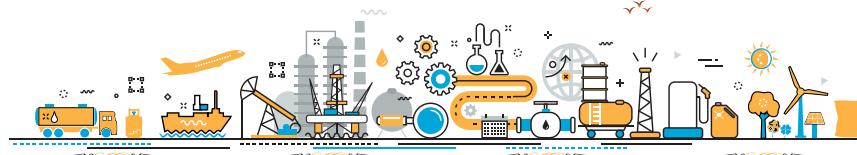


**United States**  
14.3%



**India**  
9.9%

World imports of Crude Oil accounted for 42738 thousand b/d in 2021, lower by 0.4% vis-a-vis 2020 (42905 thousand b/d).



# Highlights of Chapter

CHAPTER I

CHAPTER II

CHAPTER III

CHAPTER IV

CHAPTER V

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CHAPTER XI

APPENDIX



In 2021, India holds 15<sup>th</sup> position accounting for 2.2% of World's imports of Natural Gas

Germany is leading among all Countries in the import of Natural Gas accounting for 10.9% of total world import of Natural Gas (11411.44 BCM).



India stood at 6<sup>th</sup> and 7<sup>th</sup> position globally in the imports and exports of petroleum products respectively.

Singapore is the highest importer of petroleum products with share of 7.1% in World imports of petroleum products (27796 thousand b/d). Also, United States is the highest exporter of petroleum products accounting for 19.2% in world exports of petroleum products (29370 thousand b/d).



Highest share of export of Crude Oil



Saudi Arabia  
15.1%



Russia  
10.9%



Iraq  
8.3%

In 2021, OPEC Countries accounted for 19656 thousand b/d contributing 47.7% in world Crude oil export (41228 thousand b/d).



Highest share of export of Natural Gas



Russia  
17.4%



United States  
13.3%



Qatar  
9.5%

In 2021, the world exports of natural gas accounted for 1418.82 BCM, 7.8% higher vis-a-vis 2020 (1316.73 thousand b/d).



Coal  
56.7%



Crude Oil  
26.5%



Natural Gas  
6.3%



Hydroelectricity  
4.3%

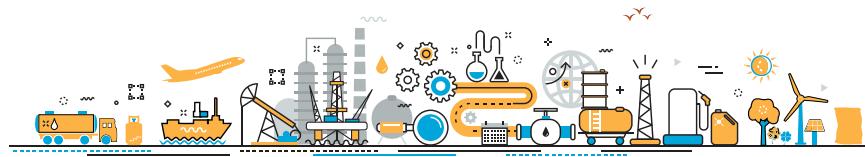


Renewables  
5%



Nuclear Energy  
1.1%

In 2021, India with consumption of 35.43 Exajoules (6%) stood as the third largest consumer of Primary Energy.

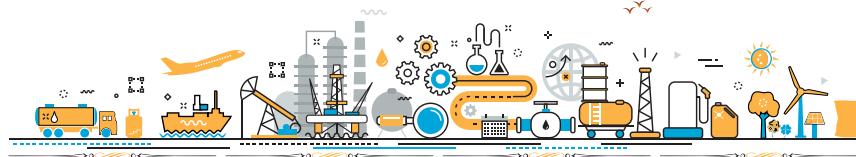


## XI.1: World Energy Outlook-2021

Total Primary Energy Consumption (Exajoules)		Refining Capacity (Thousand barrels daily)	
World	595	World	101912
India (Rank 3)	35	India (Rank 4)	5018
Top Five Countries		Top Five Countries	
China	158	US	17941
United States of America	93	China	16990
India	35	Russian Federation	6861
Russian Federation	31	India	5018
Japan	18	South Korea	3572
Production - Oil (Thousand barrels daily)		Consumption- Oil (Thousand barrels daily)	
World	89877	World	94088
India (Rank 21)	746	India (Rank 3)	4878
Top Five Countries		Top Five Countries	
US	16585	US	18684
Saudi Arabia	10954	China	15442
Russian Federation	10944	India	4878
Canada	5429	Saudi Arabia	3595
Iraq	4102	Russian Federation	3407
Production - Natural Gas (BCM)		Consumption- Natural Gas (BCM)	
World	4037	World	4037
India (Rank 26)	29	India (Rank 14)	62
Top Five Countries		Top Five Countries	
US	934	US	827
Russian Federation	702	Russian Federation	475
Iran	257	China	379
China	209	Iran	241
Qatar	177	Canada	119
Crude Oil Imports (Thousand barrels daily)		Crude Oil Exports (Thousand barrels daily)	
World	42738	World	41228
India (Rank 3)	4244	India	-
Top Five Countries		Top Five Countries	
China	10301	Saudi Arabia	6227
United States	6110	Russia	4510
India	4244	Iraq	3440
South Korea	2613	Canada	3195
Japan	2493	United States	2980
Petroleum Product Imports (Thousand barrels daily)		Petroleum Product Exports (Thousand barrels daily)	
World	27796	World	29370
India (Rank 6)	1013	India (Rank 7)	1283
Top Five Countries		Top Five Countries	
Singapore	1977	United States	5652
United States	2359	Russia	2385
Netherlands	1745	Netherlands	2258
China	1428	Singapore	1426
South Korea	1080	Saudi Arabia	1344
Natural Gas Imports (BCM)		Natural Gas Exports (BCM)	
World	1411	World	1419
India (Rank 15)	31	India	-
Top Five Countries		Top Five Countries	
Germany	154	Russia	247
China	143	United States	188
Japan	105	Qatar	135
United States	80	Norway	111
Italy	73	Australia	107

Note: Detail country-wise XI.5, XI.6, XI.8 to XI.10, XI.12 to XI.17 & XI.22.

Source: BP Statistical Review of World Energy, June 2022 and OPEC Annual Statistical Bulletins, 2022



## XI.2: Economic Indicators of OPEC Nations' during 2021

Country	Export of Crude Oil (Thousand b/d)	Export of Natural Gas BCM	Exports of Petroleum Products (Thousand b/d)	Imports of Petroleum Products (Thousand b/d)	Value of Petroleum Exports (\$ Million)	Value of Total Export (\$ Million)	Petroleum Exports as % of total Exports	Proven Crude Oil Reserves (Million Barrels)	Gas Reserves (BCM)	Crude Oil Production (Thousand b/d)	Natural Gas Marketed Production (Thousand b/d)	Production of Petroleum Products (Thousand b/d)	Refinery Throughput (Thousand b/d)	Crude Refining Capacity (Thousand b/d)	Oil Demand (Thousand b/d)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Algeria	446	54.8	493	21	23316	43344	53.8	12200	4504	911	105.0	621	643	677	418
Angola	1080	5.1	29	55	28440	33667	84.5	2516	301	1124	8.8	40	40	80	100
Congo	251	0.0	4	0	5785	7291	79.3	1811	284	267	0.4	16	17	21	7
Equatorial Guinea	93	4.7	0	4	2366	4376	54.1	1100	39	93	7.0	na	na	na	5
Gabon	181	0.0	10	6	4641	5888	78.8	2000	26	181	0.5	19	19	25	45
Iran	763	18.4	333	99	25313	58132	43.5	20860	33988	2392	257.1	1673	1691	2202	1777
Iraq	3440	0.0	158	107	79788	86298	92.5	145019	3714	3971	9.6	740	623	1116	621
Kuwait	1740	0.0	604	34	56545	72386	78.1	101500	1784	2415	12.7	845	686	800	482
Libya	1091	8.0	89	133	27485	28986	94.8	48363	1505	1207	24.2	126	134	634	186
Nigeria	1592	38.5	11	488	41378	46868	88.3	37050	5848	1323	48.6	5	5	486	495
Saudi Arabia	6227	0.0	1344	361	20216	286502	70.6	267192	8507	9125	120.5	2548	2475	3327	2966
U.A.E	2305	7.8	891	129	54595	425160	12.8	111000	8200	2718	54.5	1041	1063	1272	916
Venezuela	448	0.0	67	69	8816	9990	88.2	303468	5541	636	23.7	270	521	2276	232
<b>Total OPEC</b>	<b>19656</b>	<b>137</b>	<b>4034</b>	<b>1505</b>	<b>560633</b>	<b>1108888</b>	<b>51</b>	<b>1241819</b>	<b>74241</b>	<b>26363</b>	<b>673</b>	<b>7943</b>	<b>7916</b>	<b>12915</b>	<b>8249</b>

Note:

1. Totals may not add up due to round off.
2. Crude oil exports may include lease condensate and volume of oil in transit.

Source: OPEC Annual Statistical Bulletin, 2022



### XI.3: World Proven Oil Reserves (Country-wise)

(Figures in Thousand million barrels)

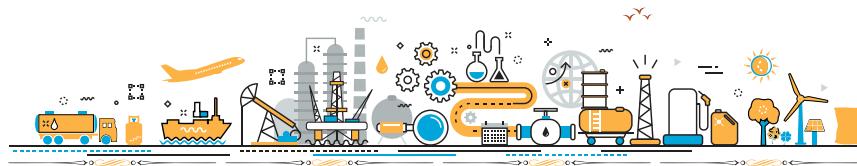
S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Venezuela	302.25	302.81	303.81	303.81	303.56	<b>303.47</b>	<b>19.6</b>
2	Saudi Arabia	266.21	266.26	267.03	267.07	267.08	<b>267.19</b>	<b>17.3</b>
3	IR Iran	157.20	155.60	155.60	208.60	208.60	<b>208.60</b>	<b>13.5</b>
4	Iraq	148.77	147.22	145.02	145.02	145.02	<b>145.02</b>	<b>9.4</b>
5	United Arab Emirates	97.80	97.80	97.80	105.00	107.00	<b>111.00</b>	<b>7.2</b>
6	Kuwait	101.50	101.50	101.50	101.50	101.50	<b>101.50</b>	<b>6.6</b>
7	Russia	80.00	80.00	80.00	80.00	80.00	<b>80.00</b>	<b>5.2</b>
8	Libya	48.36	48.36	48.36	48.36	48.36	<b>48.36</b>	<b>3.1</b>
9	United States	32.77	39.16	43.82	44.19	35.84	<b>38.83</b>	<b>2.5</b>
10	Nigeria	37.45	37.45	36.97	36.89	36.91	<b>37.05</b>	<b>2.4</b>
11	Kazakhstan	30.00	30.00	30.00	30.00	30.00	<b>30.00</b>	<b>1.9</b>
12	China	25.62	25.63	25.93	26.15	26.02	<b>26.49</b>	<b>1.7</b>
13	Qatar	25.24	25.24	25.24	25.24	25.24	<b>25.24</b>	<b>1.6</b>
14	Algeria	12.20	12.20	12.20	12.20	12.20	<b>12.20</b>	<b>0.8</b>
15	Brazil	13.00	12.63	12.84	13.44	12.72	<b>11.89</b>	<b>0.8</b>
16	Ecuador	8.27	8.27	8.27	8.27	8.27	<b>8.27</b>	<b>0.5</b>
17	Norway	7.60	7.92	8.65	8.52	7.90	<b>7.53</b>	<b>0.5</b>
18	Azerbaijan	7.00	7.00	7.00	7.00	7.00	<b>7.00</b>	<b>0.5</b>
19	Mexico	7.14	6.54	5.81	5.33	5.50	<b>5.62</b>	<b>0.4</b>
20	Oman	5.37	5.37	5.37	5.37	5.37	<b>5.37</b>	<b>0.3</b>
21	Canada	4.42	5.42	5.19	4.91	5.01	<b>5.01</b>	<b>0.3</b>
22	Sudans	5.00	5.00	5.00	5.00	5.00	<b>5.00</b>	<b>0.3</b>
23	Vietnam	4.40	4.40	4.40	4.40	4.40	<b>4.40</b>	<b>0.3</b>
<b>24</b>	<b>India</b>	<b>4.62</b>	<b>4.50</b>	<b>4.42</b>	<b>4.42</b>	<b>4.61</b>	<b>3.67</b>	<b>0.24</b>
25	Malaysia	3.60	3.60	3.60	3.60	3.60	<b>3.60</b>	<b>0.2</b>
26	Egypt	3.38	3.33	3.33	3.08	3.08	<b>3.30</b>	<b>0.2</b>
27	Angola	9.52	8.38	8.16	7.78	7.23	<b>2.52</b>	<b>0.2</b>
28	Syrian Arab Republic	2.50	2.50	2.50	2.50	2.50	<b>2.50</b>	<b>0.2</b>
29	Indonesia	3.23	3.31	3.17	3.15	2.48	<b>2.44</b>	<b>0.2</b>
30	Argentina	2.19	2.16	2.02	2.39	2.48	<b>2.41</b>	<b>0.2</b>
<b>Rest of World</b>		<b>32.50</b>	<b>31.75</b>	<b>31.74</b>	<b>31.29</b>	<b>30.95</b>	<b>29.59</b>	<b>1.9</b>
<b>Total World</b>		<b>1489.13</b>	<b>1491.33</b>	<b>1494.74</b>	<b>1554.50</b>	<b>1545.43</b>	<b>1545.07</b>	<b>100.0</b>
of which: OPEC		1187.35	1183.67	1182.53	1241.28	1242.38	<b>1241.82</b>	<b>80.4</b>
OECD		59.24	66.22	70.55	70.28	61.38	<b>62.99</b>	<b>4.1</b>

**Notes:** 1. Total may not add up due to rounding off.

P. Provisional

2. Total proved reserves of oil - Generally taken to be those quantities that geological and engineering information indicate with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions. The data series for total proved oil does not necessarily meet the definitions, guidelines and practices used for determining proved reserves at company level, for instance as published by the US Securities and Exchange Commission, nor does it necessarily represent BP's view of proved reserves by country.

Source : OPEC Annual Statistical Bulletins 2022



## XI.4: World Proven Gas Reserves (Country-wise)

(Figures in Billion cubic metres)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Russia	50617	50508	49571	49154	47759	47759	23.2
2	IR Iran	33721	33810	33330	33899	33988	33988	16.5
3	Qatar	24073	23861	23846	23831	23831	23831	11.6
4	Turkmenistan	9979	13950	13950	13950	13950	13950	6.8
5	United State	9119	12408	13437	13171	13171	12246	5.9
6	Saudi Arabia	8619	8715	8260	8366	8437	8507	4.1
7	United Arab Emirates	6091	6091	6091	7726	7730	8200	4.0
8	Nigeria	5475	5627	5675	5761	5750	5848	2.8
9	Venezuela	5740	5707	5674	5674	5590	5541	2.7
10	Algeria	4504	4504	4504	4504	4504	4504	2.2
11	Iraq	3820	3744	3729	3714	3714	3714	1.8
12	China	2838	2786	2779	2834	2922	3269	1.6
13	Mozambique	-	2840	2840	2840	2840	2840	1.4
14	Canada	2097	1980	2094	2471	2471	2758	1.3
15	Indonesia	2841	2783	2875	2851	2728	2553	1.2
16	Australia	3193	3193	3193	2846	2716	2218	1.1
17	Egypt	2221	2221	2221	2209	2209	2209	1.1
18	Malaysia	2470	2346	2290	2213	2179	2179	1.1
19	Norway	2388	2334	2226	2165	2095	1991	1.0
20	Azerbaijan	1277	1074	1435	1917	1917	1917	0.9
21	Uzbekistan	1564	1846	1846	1846	1846	1846	0.9
22	Kazakhstan	1898	1830	1830	1830	1830	1830	0.9
23	Kuwait	1784	1784	1784	1784	1784	1784	0.9
24	Libya	1505	1505	1505	1505	1505	1505	0.7
25	India	1227	1284	1340	1381	1372	1071	0.5
26	Oman	705	705	677	674	673	673	0.3
27	Pakistan	479	502	499	446	428	428	0.2
28	Argentina	337	355	372	400	376	377	0.2
29	Ukraine	380	384	358	349	338	338	0.2
30	Brazil	378	370	368	365	338	312	0.2
<b>Rest of World</b>		<b>7329</b>	<b>6989</b>	<b>6367</b>	<b>6162</b>	<b>5821</b>	<b>5679</b>	<b>2.8</b>
<b>Total World</b>		<b>198669</b>	<b>208036</b>	<b>206966</b>	<b>208838</b>	<b>206812</b>	<b>205865</b>	<b>100</b>
of which: OPEC		72056	72261	71288	73626	73651	74242	36.1
OECD		18870	22012	22567	22246	21967	20666	10.0

**Notes:** 1. Total may not add up due to rounding off.

P. Provisional

2. Total proved reserves of natural gas - Generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions. The data series for natural gas does not necessarily meet the definitions, guidelines and practices used for determining proved reserves at company level, for instance as published by the US Securities and Exchange Commission, nor does it necessarily represent bp's view of proved reserves by country.

Source: BP Statistical Review of World Energy, June 2021.

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CHAPTER II

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CHAPTER VIII

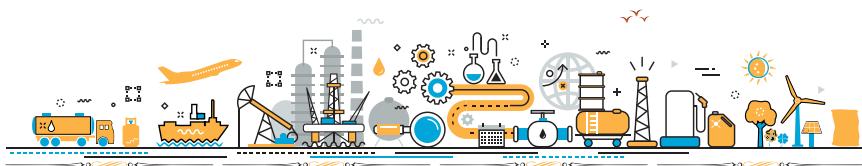
CHAPTER IX

CHAPTER X

CHAPTER XI

CHAPTER XII

APPENDIX



## XI.5: World Crude Oil Production (Country-wise)

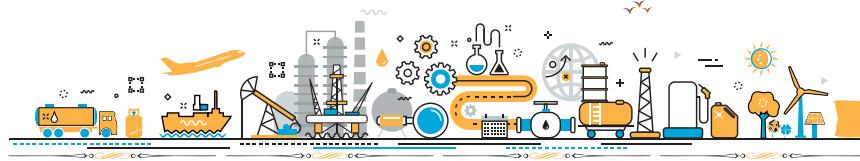
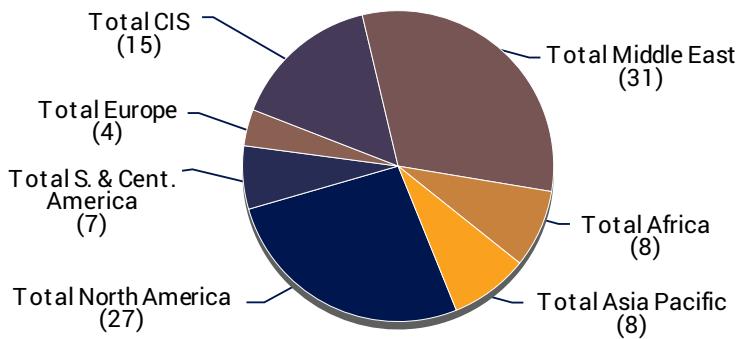
(Figures in Thousand barrels daily)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	US	12354	13140	15310	17114	16458	<b>16585</b>	<b>18.5</b>
2	Saudi Arabia	12406	11892	12261	11832	11039	<b>10954</b>	<b>12.2</b>
3	Russian Federation	11342	11374	11562	11679	10667	<b>10944</b>	<b>12.2</b>
4	Canada	4464	4813	5244	5372	5130	<b>5429</b>	<b>6.0</b>
5	Iraq	4423	4538	4632	4779	4114	<b>4102</b>	<b>4.6</b>
6	China	3999	3846	3802	3848	3901	<b>3994</b>	<b>4.4</b>
7	United Arab Emirates	4038	3910	3912	3999	3693	<b>3668</b>	<b>4.1</b>
8	Iran	4578	4854	4608	3399	3084	<b>3620</b>	<b>4.0</b>
9	Brazil	2607	2731	2691	2890	3030	<b>2987</b>	<b>3.3</b>
10	Kuwait	3150	3009	3050	2976	2695	<b>2741</b>	<b>3.0</b>
11	Norway	1997	1971	1851	1762	2003	<b>2025</b>	<b>2.3</b>
12	Mexico	2461	2227	2072	1921	1912	<b>1928</b>	<b>2.1</b>
13	Kazakhstan	1655	1838	1904	1919	1806	<b>1811</b>	<b>2.0</b>
14	Qatar	1790	1756	1793	1727	1714	<b>1746</b>	<b>1.9</b>
15	Nigeria	1898	1968	2005	2101	1828	<b>1626</b>	<b>1.8</b>
16	Algeria	1577	1540	1511	1487	1330	<b>1353</b>	<b>1.5</b>
17	Libya	412	929	1165	1228	425	<b>1269</b>	<b>1.4</b>
18	Angola	1745	1671	1519	1420	1318	<b>1164</b>	<b>1.3</b>
19	Oman	1004	971	978	971	951	<b>971</b>	<b>1.1</b>
20	United Kingdom	1015	1005	1092	1118	1049	<b>874</b>	<b>1.0</b>
<b>21</b>	<b>India</b>	<b>874</b>	<b>885</b>	<b>869</b>	<b>826</b>	<b>771</b>	<b>746</b>	<b>0.8</b>
22	Colombia	886	854	865	886	781	<b>738</b>	<b>0.8</b>
23	Azerbaijan	838	793	796	775	714	<b>722</b>	<b>0.8</b>
24	Indonesia	873	837	808	781	742	<b>692</b>	<b>0.8</b>
25	Venezuela	2566	2220	1631	1022	640	<b>654</b>	<b>0.7</b>
26	Argentina	610	590	591	620	601	<b>627</b>	<b>0.7</b>
27	Egypt	691	660	674	653	632	<b>608</b>	<b>0.7</b>
28	Malaysia	726	718	713	672	616	<b>573</b>	<b>0.6</b>
29	Ecuador	548	531	517	531	479	<b>473</b>	<b>0.5</b>
30	Australia	353	322	342	453	453	<b>435</b>	<b>0.5</b>
<b>Rest of World</b>		<b>4175</b>	<b>4152</b>	<b>4105</b>	<b>4156</b>	<b>3920</b>	<b>3818</b>	<b>4.2</b>
<b>Total World</b>		<b>92053</b>	<b>92546</b>	<b>94874</b>	<b>94916</b>	<b>88494</b>	<b>89877</b>	<b>100</b>
of which: OECD		24011	24811	27236	29056	28198	<b>28405</b>	<b>31.6</b>
Non-OECD		68041	67735	67638	65860	60296	<b>61471</b>	<b>68.4</b>
OPEC		37467	37206	36995	34957	30839	<b>31745</b>	<b>35.3</b>
Non-OPEC		54586	55340	57879	59959	57655	<b>58131</b>	<b>64.7</b>
European Union		471	465	448	415	393	<b>366</b>	<b>0.4</b>

**Notes:** 1. Total may not add up due to rounding off. P. Provisional  
 2. Production includes crude oil, shale oil, oil sands, condensates (both lease condensate and gas plant condensate) and NGLs (natural gas liquids - ethane, LPG and naphtha separated from the production of natural gas).

Source: BP Statistical Review of World Energy, June 2022.

**Figures XI.1: Region-wise Distribution of Crude Oil Production-2021(%)**



## XI.6: World Natural Gas Production (Country-wise)

(Figures in Billion cubic metres)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	US	727.36	746.17	840.94	928.11	915.90	934.20	23.1
2	Russian Federation	589.28	635.56	669.11	679.04	637.29	701.67	17.4
3	Iran	199.34	213.85	224.90	232.90	249.53	256.65	6.4
4	China	137.94	149.20	161.42	176.74	194.01	209.21	5.2
5	Qatar	174.77	170.54	175.20	177.15	174.93	176.98	4.4
6	Canada	165.08	171.27	176.80	169.77	165.73	172.32	4.3
7	Australia	94.00	110.12	127.40	146.11	145.95	147.22	3.6
8	Saudi Arabia	105.32	109.25	112.10	111.15	113.05	117.29	2.9
9	Norway	115.89	123.73	121.29	114.26	111.45	114.32	2.8
10	Algeria	91.39	92.98	93.84	86.95	81.46	100.77	2.5
11	Turkmenistan	63.22	58.68	61.52	63.16	66.01	79.28	2.0
12	Malaysia	76.70	79.58	76.12	76.44	68.69	74.19	1.8
13	Egypt	40.25	48.81	58.56	64.94	58.47	67.80	1.7
14	Indonesia	75.08	72.70	72.80	67.58	59.54	59.29	1.5
15	United Arab Emirates	59.52	59.54	58.08	57.52	55.44	56.99	1.4
16	Uzbekistan	53.12	53.61	58.29	57.46	47.10	50.92	1.3
17	Nigeria	42.64	47.21	48.27	49.28	49.43	45.91	1.1
18	Oman	31.48	32.32	36.33	36.69	36.93	41.79	1.0
19	Argentina	37.28	37.15	39.42	41.62	38.29	38.61	1.0
20	United Kingdom	41.74	41.88	40.64	39.16	39.47	32.70	0.8
21	Pakistan	34.68	34.65	34.20	32.69	30.61	32.68	0.8
22	Kazakhstan	31.48	33.40	33.08	33.07	33.34	31.97	0.8
23	Azerbaijan	18.28	17.76	18.76	23.94	25.86	31.81	0.8
24	Thailand	37.27	35.95	34.73	35.77	32.71	31.53	0.8
25	Mexico	43.65	38.27	35.19	31.29	30.49	29.24	0.7
<b>26</b>	<b>India</b>	<b>26.58</b>	<b>27.69</b>	<b>27.49</b>	<b>26.91</b>	<b>23.76</b>	<b>28.54</b>	<b>0.7</b>
27	Trinidad & Tobago	31.28	31.87	33.96	34.56	29.47	24.72	0.6
28	Brazil	24.12	27.18	25.16	25.75	24.24	24.33	0.6
29	Bangladesh	26.45	26.59	26.58	25.28	23.73	24.14	0.6
30	Venezuela	37.24	38.61	31.62	25.58	21.56	23.98	0.6
<b>Rest of World</b>		<b>312.30</b>	<b>307.36</b>	<b>297.88</b>	<b>296.86</b>	<b>277.07</b>	<b>275.82</b>	<b>6.8</b>
<b>Total World</b>		<b>3544.73</b>	<b>3673.49</b>	<b>3851.68</b>	<b>3967.73</b>	<b>3861.52</b>	<b>4036.88</b>	<b>100.0</b>
of which: OECD		1289.8	1328.0	1431.7	1511.6	1483.5	1503.05	37.2
Non-OECD		2255.0	2345.5	2420.0	2456.1	2378.0	2533.83	62.8
European Union		82.3	76.8	68.8	61.1	47.8	44.04	1.1

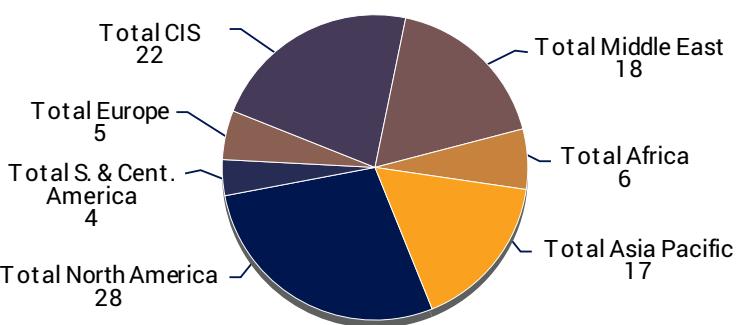
Notes: 1. Total may not add up due to rounding off.

P. Provisional

2. Excludes gas flared or recycled. Includes natural gas produced for Gas-to-Liquids transformation.

Source: BP Statistical Review of World Energy, June 2022

**Figures XI.2: Region-wise Distribution of Natural Gas Production-2021 (%)**



## XI.7: World Output of Petroleum Products (Country-wise)

(Figures in Thousand barrels daily)

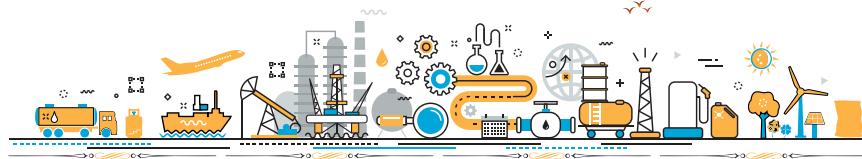
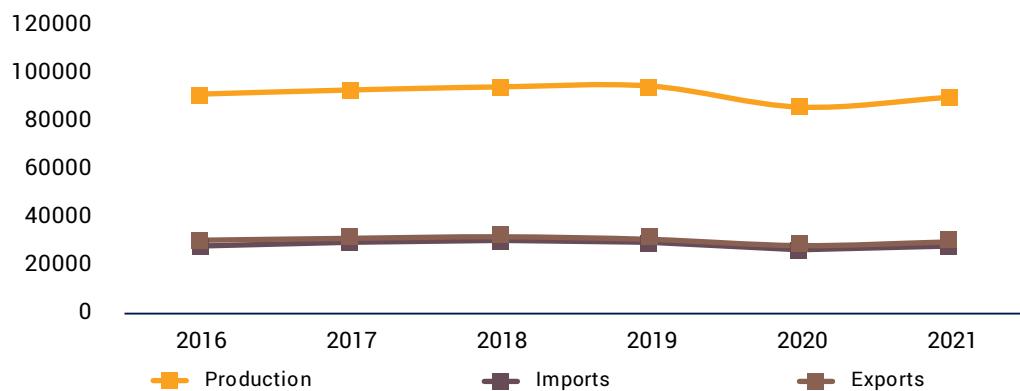
S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	United States	20079	20298	20693	20439	17492	18642	20.4
2	China	10449	11059	11608	12501	12952	13537	15.1
3	Russia	5976	6147	6264	6257	5912	6160	6.9
<b>4</b>	<b>India</b>	<b>5236</b>	<b>5426</b>	<b>5675</b>	<b>5654</b>	<b>5120</b>	<b>5667</b>	<b>6.0</b>
5	South Korea	3122	3302	3389	3397	3130	3149	3.7
6	Japan	3546	3469	3291	3279	2726	2730	3.2
7	Saudi Arabia	2511	2630	2817	2586	2177	2548	2.5
8	Canada	1888	2009	1889	2230	2008	2082	2.3
9	Germany	2204	2158	2065	2076	1973	1981	2.3
10	Brazil	1912	1787	1764	1787	1839	1900	2.1
11	IR Iran	1618	1680	1691	1705	1577	1673	1.8
12	Italy	1571	1607	1549	1521	1268	1401	1.5
13	Netherlands	1283	1282	1302	1329	1183	1256	1.4
14	Spain	1346	1360	1398	1356	1150	1217	1.3
15	Singapore	1297	1322	1242	1236	1150	1194	1.3
16	Thailand	1206	1225	1250	1132	1053	1094	1.2
17	United Arab Emirates	1089	1043	1027	1005	925	1041	1.1
18	United Kingdom	1283	1290	1254	1262	1025	1034	1.2
19	Indonesia	889	997	1022	1024	1003	966	1.2
20	Kuwait	857	883	891	886	780	845	0.9
21	Turkey	619	658	589	772	732	784	0.9
22	France	1283	1304	1232	1121	805	769	0.9
23	Mexico	1046	846	677	660	638	754	0.7
24	Belgium	704	731	702	734	579	646	0.7
25	Algeria	621	609	621	660	614	621	0.7
26	Egypt	487	506	519	570	596	587	0.7
27	Poland	559	554	592	600	564	556	0.7
28	Argentina	532	517	511	521	487	520	0.6
29	Malaysia	512	545	494	574	512	447	0.6
30	South Africa	-	442	429	431	326	403	0.4
31	Rest of World	15440	15251	15810	15339	13311	13610	15.5
<b>Total World</b>		<b>91165</b>	<b>92937</b>	<b>94257</b>	<b>94644</b>	<b>85607</b>	<b>89814</b>	<b>100.0</b>
of which: OECD		44657	45341	45407	45408	39527	41159	46.2
OPEC		8394	8596	8781	8499	7157	7943	8.4

Notes: Data may include products from GTL and condensate units. Na: Not Available

P. Provisional

Source : OPEC Annual Statistical Bulletins 2022

**Figures XI.3: Trends in Production, Imports & Exports of World Petroleum Products (in '000'b/d)**



## XI.8: World Crude Oil Consumption (Country-wise)

(Figures in Thousand barrels daily)

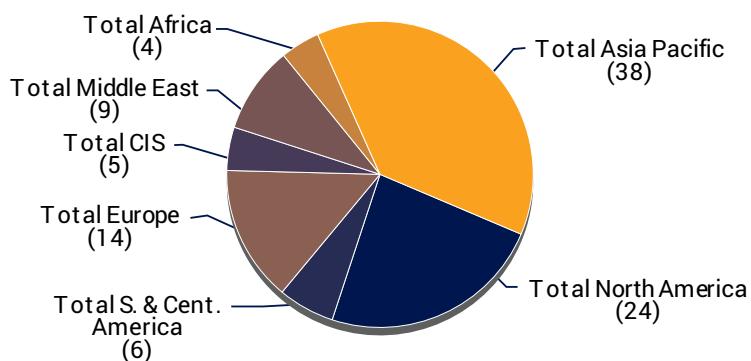
S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	US	18593	18845	19417	19424	17183	18684	19.9
2	China	12297	13003	13642	14321	14408	15442	16.4
<b>3</b>	<b>India</b>	<b>4544</b>	<b>4724</b>	<b>4974</b>	<b>5150</b>	<b>4701</b>	<b>4878</b>	<b>5.2</b>
4	Saudi Arabia	3962	3870	3762	3691	3552	3595	3.8
5	Russian Federation	3275	3280	3310	3376	3210	3407	3.6
6	Japan	3983	3949	3815	3692	3269	3341	3.6
7	South Korea	2811	2804	2800	2789	2630	2813	3.0
8	Brazil	2370	2407	2293	2303	2134	2252	2.4
9	Canada	2453	2424	2501	2491	2191	2229	2.4
10	Germany	2307	2374	2255	2270	2049	2045	2.2
11	Iran	1579	1656	1728	1784	1673	1690	1.8
12	Indonesia	1454	1565	1616	1578	1398	1471	1.6
13	France	1529	1540	1538	1528	1307	1424	1.5
14	Mexico	1950	1883	1836	1698	1313	1350	1.4
15	Singapore	1372	1405	1432	1403	1343	1330	1.4
16	United Kingdom	1587	1594	1569	1522	1172	1236	1.3
17	Thailand	1294	1336	1362	1374	1214	1214	1.3
18	Spain	1252	1260	1286	1287	1056	1169	1.2
19	Italy	1255	1274	1300	1259	1039	1156	1.2
20	Taiwan	1047	1032	1039	986	946	989	1.1
21	United Arab Emirates	1021	1006	1004	972	855	952	1.0
22	Australia	1016	1063	1076	1064	916	943	1.0
23	Turkey	973	1022	989	999	913	939	1.0
24	Western Africa	623	679	787	801	790	856	0.9
25	Malaysia	839	797	804	868	749	763	0.8
26	Netherlands	843	818	843	812	740	742	0.8
27	Iraq	687	720	847	720	629	722	0.8
28	Poland	594	646	663	679	640	687	0.7
29	Egypt	836	801	721	686	598	648	0.7
30	Belgium	644	653	693	651	568	638	0.7
	Rest of World	15175	15492	15590	15568	13560	14482	15.4
	<b>Total World</b>	<b>94169</b>	<b>95924</b>	<b>97490</b>	<b>97747</b>	<b>88746</b>	<b>94088</b>	<b>100.0</b>
	of which: OECD	45522	45952	46420	46070	40360	42941	45.6
	Non-OECD	48647	49972	51070	51677	48386	51147	54.4
	European Union	11090	11319	11345	11307	9853	10421	11.1

Notes: 1. Total may not add up due to rounding off. P. Provisional

2. Inland demand plus international aviation and marine bunkers and refinery fuel and loss. Consumption of bio gasoline (such as ethanol) and biodiesel are excluded while derivatives of coal and natural gas are included.

Source: BP Statistical Review of World Energy, June 2022

**Figures XI.4: Region-wise Distribution of Crude Oil Consumption-2021 (%)**



## XI.9: World Natural Gas Consumption (Country-wise)

(Figures in Billion cubic metres)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	US	749.10	739.99	821.72	850.69	831.90	<b>826.72</b>	<b>20.5</b>
2	Russian Federation	420.65	431.10	454.50	444.31	423.48	<b>474.61</b>	<b>11.8</b>
3	China	209.44	241.25	283.93	308.38	336.62	<b>378.69</b>	<b>9.4</b>
4	Iran	196.32	205.00	212.64	218.39	234.30	<b>241.12</b>	<b>6.0</b>
5	Canada	104.99	109.90	115.63	117.29	113.26	<b>119.17</b>	<b>3.0</b>
6	Saudi Arabia	105.32	109.25	112.10	111.15	113.05	<b>117.29</b>	<b>2.9</b>
7	Japan	116.42	116.99	115.71	108.12	104.13	<b>103.62</b>	<b>2.6</b>
8	Germany	84.88	87.74	85.85	89.28	87.11	<b>90.53</b>	<b>2.2</b>
9	Mexico	83.03	86.03	87.59	87.97	83.73	<b>88.23</b>	<b>2.2</b>
10	United Kingdom	80.67	78.55	78.57	77.69	73.03	<b>76.95</b>	<b>1.9</b>
11	Italy	67.55	71.58	69.21	70.79	67.63	<b>72.50</b>	<b>1.8</b>
12	United Arab Emirates	71.93	72.46	71.21	70.99	69.62	<b>69.41</b>	<b>1.7</b>
13	South Korea	47.64	49.76	57.80	56.03	57.54	<b>62.55</b>	<b>1.5</b>
<b>14</b>	<b>India</b>	<b>50.79</b>	<b>53.60</b>	<b>58.00</b>	<b>59.25</b>	<b>60.47</b>	<b>62.17</b>	<b>1.5</b>
15	Egypt	49.35	55.93	59.59	59.04	58.31	<b>61.88</b>	<b>1.5</b>
16	Turkey	44.50	51.57	47.23	43.36	46.21	<b>57.32</b>	<b>1.4</b>
17	Thailand	50.56	50.08	50.02	50.94	46.85	<b>47.01</b>	<b>1.2</b>
18	Uzbekistan	43.33	44.78	44.40	44.60	43.56	<b>46.43</b>	<b>1.1</b>
19	Argentina	48.21	48.30	48.70	46.56	43.93	<b>45.94</b>	<b>1.1</b>
20	Algeria	38.60	39.46	43.41	45.05	43.60	<b>45.82</b>	<b>1.1</b>
21	Pakistan	38.65	40.74	43.59	44.47	41.18	<b>44.79</b>	<b>1.1</b>
22	France	44.53	44.77	42.84	43.66	40.58	<b>43.04</b>	<b>1.1</b>
23	Malaysia	44.99	45.04	44.68	45.22	38.32	<b>41.07</b>	<b>1.0</b>
24	Brazil	37.09	37.63	35.89	35.73	31.42	<b>40.45</b>	<b>1.0</b>
25	Qatar	41.37	41.22	40.71	41.87	38.91	<b>40.01</b>	<b>1.0</b>
26	Australia	37.87	37.11	36.77	43.92	43.10	<b>39.41</b>	<b>1.0</b>
27	Indonesia	44.63	43.22	44.53	44.00	37.52	<b>37.08</b>	<b>0.9</b>
28	Turkmenistan	25.12	24.76	28.39	31.53	29.62	<b>36.70</b>	<b>0.9</b>
29	Netherlands	35.15	36.09	35.49	37.02	36.15	<b>35.07</b>	<b>0.9</b>
30	Spain	29.12	31.71	31.50	35.97	32.49	<b>33.90</b>	<b>0.8</b>
<b>Rest of World</b>		<b>514.27</b>	<b>527.29</b>	<b>533.43</b>	<b>543.00</b>	<b>537.95</b>	<b>558.02</b>	<b>13.8</b>
<b>Total World</b>		<b>3556.08</b>	<b>3652.92</b>	<b>3835.63</b>	<b>3906.29</b>	<b>3845.57</b>	<b>4037.46</b>	<b>100</b>
of which: OECD		1656.13	1677.76	1762.61	1803.01	1758.61	<b>1794.87</b>	<b>44.5</b>
Non-OECD		1899.95	1975.16	2073.02	2103.28	2086.96	<b>2242.59</b>	<b>55.5</b>
European Union		368.16	385.18	378.11	391.85	380.34	<b>396.62</b>	<b>9.8</b>

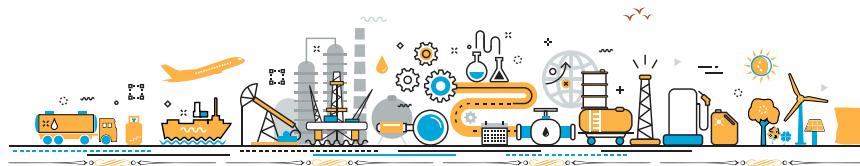
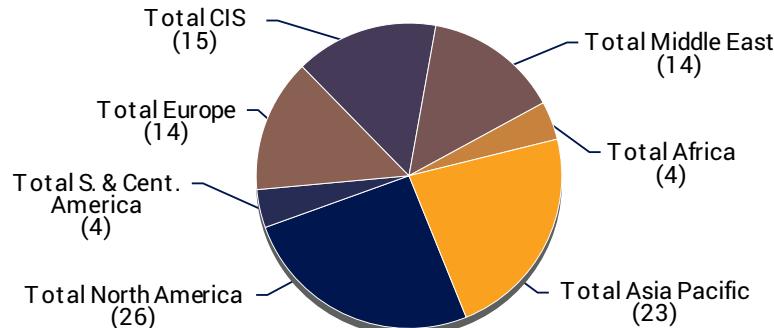
Notes: 1. Total may not add up due to rounding off.

P. Provisional

2. Excludes gas flared or recycled. Includes natural gas produced for Gas-to-Liquids transformation.

Source: BP Statistical Review of World Energy, June 2022

**Figures XI.5: Region-wise Distribution of Natural Gas Consumption-2021 (%)**



## XI.10: World Oil Refining Capacity (Country-wise)

(Figures in Thousand barrels daily\*)

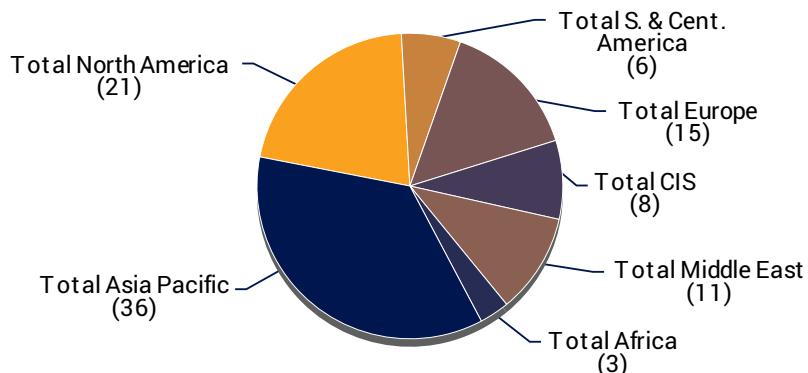
S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	US	18617	18598	18808	18974	18143	17941	17.6
2	China	14895	15231	15655	16199	16691	16990	16.7
3	Russian Federation	6543	6545	6551	6676	6736	6861	6.7
<b>4</b>	<b>India</b>	<b>4620</b>	<b>4699</b>	<b>4972</b>	<b>4994</b>	<b>5018</b>	<b>5018</b>	<b>4.9</b>
5	South Korea	3259	3298	3346	3393	3572	3572	3.5
6	Japan	3600	3343	3343	3343	3285	3285	3.2
7	Saudi Arabia	2901	2826	2835	2905	2905	2905	2.9
8	Iran	2075	2220	2330	2495	2475	2508	2.5
9	Brazil	2289	2285	2285	2290	2290	2303	2.3
10	Germany	2051	2069	2062	2062	2062	2121	2.1
11	Canada	1934	1970	1939	2054	2065	1954	1.9
12	Italy	1900	1900	1900	1900	1900	1900	1.9
13	Spain	1562	1562	1564	1586	1586	1586	1.6
14	Mexico	1522	1546	1558	1558	1558	1558	1.5
15	Singapore	1514	1514	1514	1514	1514	1461	1.4
16	Kuwait	936	736	736	736	800	1430	1.4
17	Venezuela	1303	1303	1303	1303	1303	1303	1.3
18	United Arab Emirates	1149	1229	1229	1307	1331	1246	1.2
19	Thailand	1235	1235	1235	1235	1245	1245	1.2
20	Netherlands	1298	1299	1299	1291	1244	1238	1.2
21	United Kingdom	1227	1227	1227	1227	1251	1197	1.2
22	France	1245	1245	1245	1245	1245	1140	1.1
23	Taiwan	988	1083	1083	1083	1131	1131	1.1
24	Indonesia	1111	1111	1094	1111	1094	1094	1.1
25	Malaysia	618	625	625	625	955	955	0.9
26	Iraq	779	779	849	919	919	919	0.9
27	Turkey	596	596	818	822	822	822	0.8
28	Egypt	810	810	795	795	795	795	0.8
29	Algeria	651	657	657	657	657	657	0.6
30	Belgium	776	776	776	776	776	645	0.6
<b>Rest of World</b>		<b>14685</b>	<b>14649</b>	<b>14716</b>	<b>14895</b>	<b>14964</b>	<b>14134</b>	<b>13.9</b>
<b>Total World</b>		<b>98689</b>	<b>98965</b>	<b>100348</b>	<b>101971</b>	<b>102331</b>	<b>101912</b>	<b>100</b>
of which: OECD		44853	44684	45154	45503	44781	43730	42.9
Non-OECD		53835	54280	55194	56468	57551	58182	57.1
European Union		12761	12757	12735	12748	12656	12310	12.1

Notes: Total may not add up due to rounding off. P. Provisional

\*: Atmospheric distillation capacity at year end on a calendar-day basis.

Source: BP Statistical Review of World Energy, June 2022.

**Figures XI.6: Region-wise Distribution of Refinery Capacity-2021 (%)**



## XI.11: World Oil Refinery Throughput (Country-wise)

(Figures in Thousand barrels daily\*)

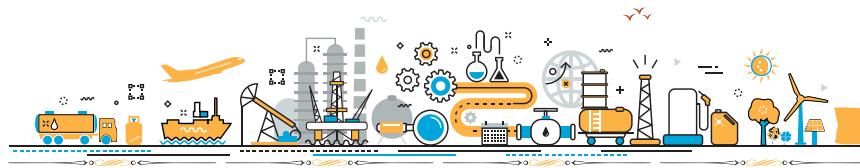
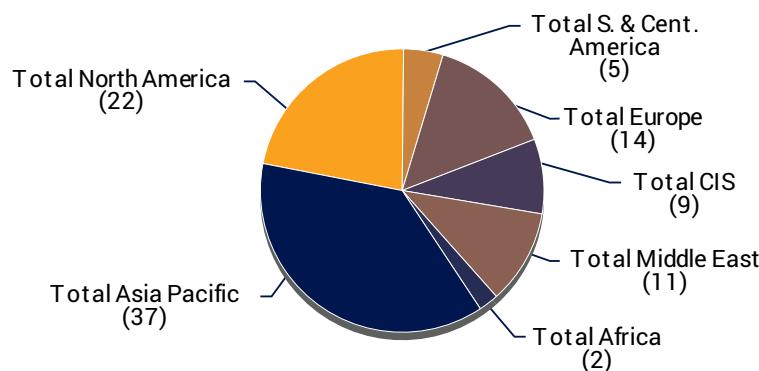
S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	US	16187	16590	16969	16563	14212	15148	19.1
2	China	11304	11844	12574	13433	13824	14461	18.3
3	Russian Federation	5715	5703	5864	5824	5504	5723	7.2
4	India	4930	5010	5154	5119	4493	4792	6.0
5	Saudi Arabia	2753	2802	2770	2649	2397	2766	3.5
6	South Korea	2928	3061	3031	2922	2679	2634	3.3
7	Japan	3280	3214	3059	3046	2492	2488	3.1
8	Iran	1875	1897	2087	2101	2193	2344	3.0
9	Brazil	1812	1741	1733	1751	1769	1818	2.3
10	Germany	1887	1870	1775	1763	1685	1691	2.1
11	Canada	1594	1757	1653	1822	1585	1653	2.1
12	Italy	1293	1399	1346	1355	1105	1223	1.5
13	Netherlands	1172	1180	1192	1217	1134	1195	1.5
14	Spain	1302	1326	1363	1318	1105	1143	1.4
15	Thailand	1022	1064	1093	990	982	976	1.2
16	United Arab Emirates	1078	1119	1096	1037	936	939	1.2
17	United Kingdom	1071	1073	1041	1044	880	879	1.1
18	Indonesia	885	885	916	918	826	824	1.0
19	Singapore	929	994	974	930	798	816	1.0
20	Taiwan	861	848	889	890	726	770	1.0
21	Mexico	933	767	612	592	591	712	0.9
22	Turkey	531	542	472	673	655	691	0.9
23	France	1122	1149	1085	978	665	686	0.9
24	Kuwait	841	686	679	663	539	643	0.8
25	Iraq	440	527	596	633	536	616	0.8
26	Egypt	509	508	519	562	602	591	0.7
27	Algeria	584	573	601	569	585	588	0.7
28	Belgium	640	685	663	693	545	577	0.7
29	Malaysia	574	570	566	586	491	571	0.7
30	Poland	517	508	540	546	516	497	0.6
<b>Rest of World</b>		<b>10038</b>	<b>10164</b>	<b>10159</b>	<b>9561</b>	<b>8545</b>	<b>8772</b>	<b>11.1</b>
<b>Total World</b>		<b>80608</b>	<b>82056</b>	<b>83073</b>	<b>82748</b>	<b>75591</b>	<b>79229</b>	<b>100</b>
of which: OECD		38279	39096	38905	38476	33476	34764	43.9
Non-OECD		42329	42960	44169	44272	42115	44465	56.1
European Union		10627	10907	10755	10542	9225	9453	11.9

Notes: Total may not add up due to rounding off. P: Provisional

\*: Atmospheric distillation capacity on a calendar-day basis.

Source: BP Statistical Review of World Energy, June 2022.

**Figures XI.7: Region-wise Distribution of Refinery Throughput-2021 (%)**



## XI.12: World Imports of Crude Oil (Country-wise)

(Figures in Thousand barrels daily)

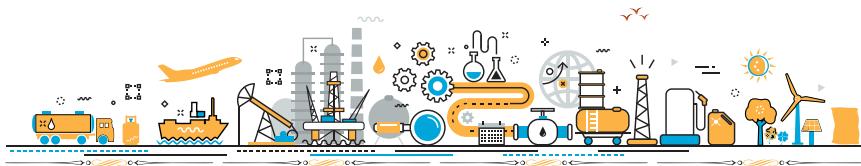
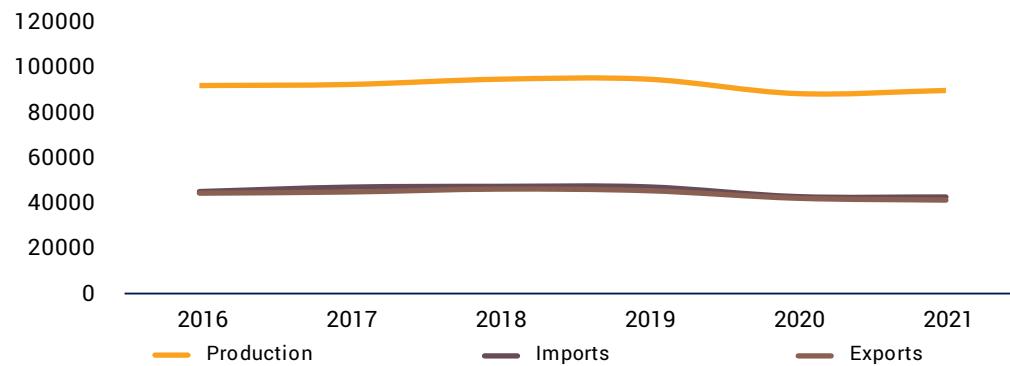
S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	China	7625	8426	9260	10180	10853	10301	24.1
2	United States	7850	7969	7768	6801	5875	6110	14.3
3	India	4308	4431	4544	4507	4033	4244	9.9
4	South Korea	2925	3041	3034	2924	2660	2613	6.1
5	Japan	3158	3235	3056	3023	2472	2493	5.8
6	Germany	1837	1832	1720	1737	1666	1645	3.8
7	Italy	1226	1340	1253	1275	1014	1145	2.7
8	Spain	1292	1332	1365	1339	1105	1134	2.7
9	Netherlands	1090	1092	1097	1153	998	1060	2.5
10	Thailand	853	906	942	932	837	863	2.0
11	Singapore	897	982	919	848	753	793	1.9
12	United Kingdom	798	894	892	910	713	727	1.7
13	France	1092	1149	1061	976	666	683	1.6
14	Canada	889	807	743	856	767	661	1.5
15	Turkey	503	520	423	627	591	634	1.5
16	Belgium	642	689	667	696	551	579	1.4
17	Greece	473	478	491	461	459	461	1.1
18	Sweden	397	401	402	344	375	364	0.9
19	Belarus	366	365	368	363	321	342	0.8
20	South Africa	432	403	437	417	307	220	0.5
21	Indonesia	366	344	336	209	232	206	0.5
22	Australia	333	335	361	328	238	197	0.5
23	United Arab Emirates	52	68	42	53	163	187	0.4
24	Bahrain	212	223	220	226	179	183	0.4
25	Brazil	134	150	186	189	134	166	0.4
26	Chile	170	177	173	185	147	164	0.4
27	Egypt	83	95	142	121	221	162	0.4
28	Romania	153	159	170	178	142	140	0.3
29	Malaysia	198	209	210	284	248	131	0.3
30	Philippines	na	198	230	162	130	101	0.2
<b>Rest of World</b>		<b>4569</b>	<b>4462</b>	<b>4515</b>	<b>4514</b>	<b>4055</b>	<b>4029</b>	<b>9.4</b>
<b>Total World</b>		<b>44922</b>	<b>46709</b>	<b>47025</b>	<b>46817</b>	<b>42905</b>	<b>42738</b>	<b>100</b>
of which: OECD		26868	27650	26914	26015	22492	22760	53.3

**Notes:** Total may not add up due to rounding off. P. Provisional

1. Data may include lease condensate and volumes of oil in transit.

Source : OPEC Annual Statistical Bulletins 2022

**Figures XI.8: Trends in Production, Imports & Exports of World Crude Oil (in '000'b/d)**



CHAPTER I

CHAPTER II

CHAPTER III

CHAPTER IV

CHAPTER V

CHAPTER VI

CHAPTER VII

CHAPTER VIII

CHAPTER IX

CHAPTER X

CHAPTER XI

CHAPTER XII

APPENDIX

### XI.13: World Imports of Natural Gas (Country-wise)

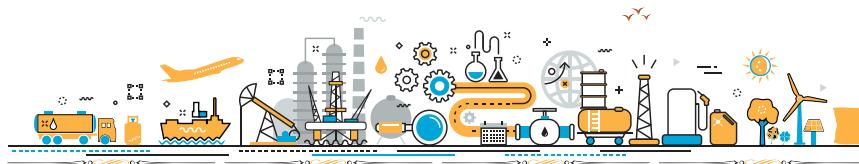
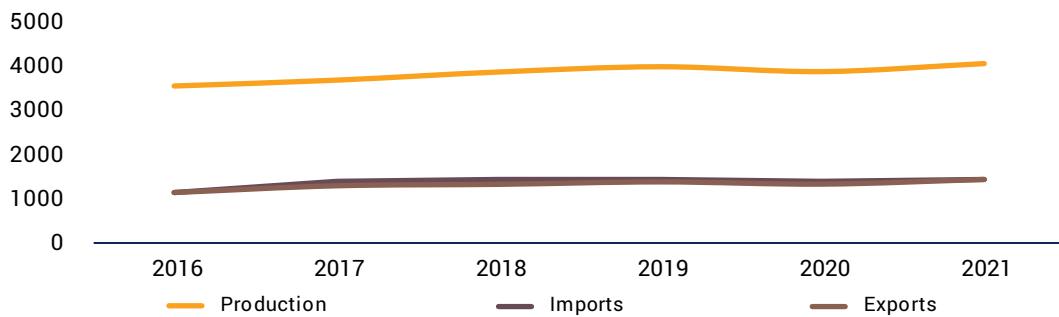
(Figures in Billion Standard Cubic Metres)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Germany	150.56	153.56	162.39	158.90	155.49	<b>154.45</b>	<b>10.9</b>
2	China	72.80	92.02	121.28	129.73	136.52	<b>142.69</b>	<b>10.1</b>
3	Japan	120.07	120.50	119.37	111.31	107.29	<b>104.51</b>	<b>7.4</b>
4	United States	85.13	85.90	81.80	77.64	72.26	<b>79.52</b>	<b>5.6</b>
5	Italy	65.29	69.62	67.88	70.91	66.23	<b>72.73</b>	<b>5.2</b>
6	South Korea	44.52	48.65	58.02	53.81	53.56	<b>60.95</b>	<b>4.3</b>
7	Turkey	46.35	55.10	50.01	45.21	48.13	<b>58.70</b>	<b>4.2</b>
8	Netherlands	29.47	54.23	60.90	59.29	59.92	<b>57.43</b>	<b>4.1</b>
9	United Kingdom	48.46	47.62	48.18	47.62	43.93	<b>51.07</b>	<b>3.6</b>
10	France	46.44	48.26	49.32	54.67	46.14	<b>45.41</b>	<b>3.2</b>
11	Austria	7.40	51.98	49.51	51.37	45.08	<b>41.46</b>	<b>2.9</b>
12	Belgium	39.43	45.56	43.08	43.14	42.70	<b>41.00</b>	<b>2.9</b>
13	Poland	12.50	44.76	14.17	44.79	41.04	<b>39.36</b>	<b>2.8</b>
14	Spain	30.35	34.62	34.82	37.19	32.49	<b>36.97</b>	<b>2.6</b>
15	<b>India</b>	<b>26.16</b>	<b>26.74</b>	<b>29.59</b>	<b>31.50</b>	<b>33.90</b>	<b>31.27</b>	<b>2.2</b>
16	Canada	22.27	25.27	23.18	26.07	23.64	<b>24.19</b>	<b>1.7</b>
17	United Arab Emirates	27.48	26.03	26.05	22.50	22.65	<b>21.55</b>	<b>1.5</b>
18	Belarus	17.20	17.60	18.81	18.75	17.34	<b>18.16</b>	<b>1.3</b>
19	Thailand	-	13.83	14.20	14.37	14.39	<b>15.72</b>	<b>1.1</b>
20	Singapore	-	13.42	14.50	14.44	15.57	<b>14.41</b>	<b>1.0</b>
21	Pakistan	-	6.57	8.97	10.70	9.76	<b>11.79</b>	<b>0.8</b>
22	Brazil	-	10.72	10.81	9.66	9.72	<b>11.79</b>	<b>0.8</b>
23	Iraq	-	1.46	4.10	6.10	7.20	<b>9.74</b>	<b>0.7</b>
24	Russia	15.91	18.15	15.10	19.00	8.59	<b>9.10</b>	<b>0.6</b>
25	Kazakhstan	5.23	5.60	8.50	7.90	3.20	<b>7.67</b>	<b>0.5</b>
26	Argentina	11.58	12.20	10.89	7.33	7.96	<b>7.11</b>	<b>0.5</b>
27	Kuwait	4.31	4.78	4.42	4.51	5.34	<b>7.02</b>	<b>0.5</b>
28	Bulgaria	-	3.12	2.97	3.24	3.21	<b>6.47</b>	<b>0.5</b>
29	Australia	6.92	6.20	6.26	5.77	6.71	<b>6.07</b>	<b>0.4</b>
30	Jordan	-	4.56	4.03	2.77	4.17	<b>4.27</b>	<b>0.3</b>
<b>Rest of World</b>		<b>202.83</b>	<b>211.50</b>	<b>239.67</b>	<b>233.99</b>	<b>228.85</b>	<b>218.86</b>	<b>15.5</b>
<b>Total World</b>		<b>1138.67</b>	<b>1360.14</b>	<b>1402.76</b>	<b>1424.20</b>	<b>1372.96</b>	<b>1411.44</b>	<b>100</b>
of which: OECD		823.25	1024.70	1033.00	1042.20	989.60	<b>1014.90</b>	<b>72.1</b>
OPEC		41.04	37.00	40.50	34.39	35.20	<b>38.30</b>	<b>2.6</b>

Notes: Total may not add up due to rounding off. P. Provisional

Source : OPEC Annual Statistical Bulletins 2022

Figures XI.9: Trends in Production, Imports &amp; Exports of World Natural Gas (in BCM)



### XI.14: World Imports of Petroleum Products (Country-wise)

(Figures in Thousand barrels daily)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Singapore	2473	2621	2335	2244	2088	1977	7.1
2	United States	2205	2175	2174	2340	1988	2359	8.5
3	Netherlands	1926	1926	1865	1798	1559	1745	6.3
4	China	1220	1369	1398	1389	1318	1428	5.1
5	South Korea	920	891	958	995	963	1080	3.9
6	India	814	844	777	969	1051	1013	3.6
7	Japan	869	924	976	896	919	1012	3.6
8	Mexico	736	846	1090	1138	932	1004	3.6
9	France	823	861	896	939	926	967	3.5
10	Germany	824	880	867	908	752	805	2.9
11	Malaysia	648	760	752	679	795	790	2.8
12	Brazil	551	698	640	725	606	738	2.7
13	Australia	551	606	625	634	590	681	2.4
14	Belgium	551	576	621	564	530	561	2.0
15	United Kingdom	737	700	754	704	523	543	2.0
16	Nigeria	423	392	442	460	466	488	1.8
17	Indonesia	499	576	642	596	533	463	1.7
18	Turkey	521	556	573	444	382	399	1.4
19	Saudi Arabia	591	487	898	319	353	361	1.3
20	Spain	363	400	362	365	308	288	1.0
21	Italy	324	347	363	322	270	271	1.0
22	Morocco	257	272	267	270	240	248	0.9
23	Ukraine	196	201	213	222	221	241	0.9
24	Canada	248	274	305	323	194	205	0.7
25	Egypt	351	318	278	264	149	203	0.7
26	Ecuador	123	134	194	188	165	169	0.6
27	Libya	108	131	137	144	147	133	0.5
28	United Arab Emirates	340	344	351	266	120	129	0.5
29	Iraq	92	116	89	96	77	107	0.4
30	IR Iran	62	96	101	98	92	99	0.4
<b>Rest of World</b>		<b>7487</b>	<b>8205</b>	<b>8045</b>	<b>7968</b>	<b>7093</b>	<b>7289</b>	<b>26.2</b>
<b>Total World</b>		<b>27830</b>	<b>29523</b>	<b>29985</b>	<b>29264</b>	<b>26349</b>	<b>27796</b>	<b>100</b>
of which: OECD		13727	14061	14508	14476	12794	13881	49.9
OPEC		1939	1890	2424	1684	1519	1505	5.4

Notes: Total may not add up due to rounding off. P. Provisional

Source : OPEC Annual Statistical Bulletins 2022



## XI.15: World Exports of Crude Oil (Country-wise)

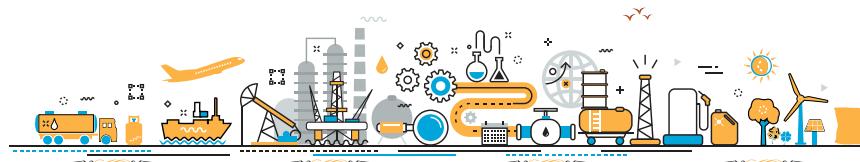
(Figures in Thousand barrels daily)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Saudi Arabia	7463	6968	7372	7038	6659	6227	15.1
2	Russia	5079	5058	5207	5241	4617	4510	10.9
3	Iraq	3804	3802	3862	3968	3428	3440	8.3
4	Canada	2742	2893	3178	3357	3146	3195	7.7
5	United States	591	1158	2048	2982	3206	2980	7.2
6	United Arab Emirates	2408	2379	2296	2414	2418	2305	5.6
7	Kuwait	2128	2010	2050	1986	1826	1740	4.2
8	Nigeria	1738	1811	1979	2008	1879	1592	3.9
9	Norway	1372	1361	1254	1234	1502	1563	3.8
10	Kazakhstan	1230	1371	1401	1411	1417	1323	3.2
11	Brazil	891	1127	1147	1301	1401	1292	3.1
12	Mexico	1274	1264	1283	1200	1199	1091	2.6
13	Libya	350	792	999	1036	347	1091	2.6
14	Angola	1670	1577	1421	1319	1220	1080	2.6
15	Oman	888	803	808	839	860	897	2.2
16	IR Iran	1922	2125	1850	651	404	763	1.9
17	United Kingdom	620	693	818	834	726	604	1.5
18	Azerbaijan	655	615	609	559	500	483	1.2
19	Qatar	503	466	477	485	464	458	1.1
20	Venezuela	1835	1596	1273	847	487	448	1.1
21	Algeria	669	633	571	584	439	446	1.1
22	Colombia	614	642	590	612	541	442	1.1
23	Ecuador	400	380	367	398	365	349	0.8
24	Australia	200	180	215	249	253	254	0.6
25	Congo	254	261	307	309	282	251	0.6
26	Malaysia	343	345	358	287	280	209	0.5
27	Gabon	205	188	174	207	196	181	0.4
28	Bahrain	132	155	157	156	151	152	0.4
29	Sudans	120	99	115	138	135	138	0.3
30	Indonesia	335	285	206	74	92	117	0.3
<b>Rest of World</b>		<b>1761</b>	<b>1664</b>	<b>1535</b>	<b>1526</b>	<b>1586</b>	<b>1607</b>	<b>3.9</b>
<b>Total World</b>		<b>44194</b>	<b>44699</b>	<b>45925</b>	<b>45250</b>	<b>42027</b>	<b>41228</b>	<b>100</b>
of which: OECD		6940	7716	8913	9954	10099	9766	23.7
OPEC		24604	24267	24274	22478	19701	19656	47.7

**Notes:** Total may not add up due to rounding off.

P. Provisional

Source : OPEC Annual Statistical Bulletins 2022



## XI.16: World Exports of Natural Gas (Country-wise)

(Figures in Billion Standard Cubic Metres)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Russia	208.04	229.42	249.87	262.40	239.45	247.10	17.4
2	United States	66.13	89.31	102.16	131.88	149.61	188.40	13.3
3	Qatar	130.32	126.19	126.77	129.30	127.46	134.52	9.5
4	Norway	114.37	123.09	119.95	113.25	112.27	111.45	7.9
5	Australia	58.68	74.80	91.58	100.25	102.43	106.99	7.5
6	Canada	84.27	85.12	79.64	76.63	70.93	79.56	5.6
7	Germany	27.53	31.54	38.44	41.83	50.09	62.61	4.4
8	Algeria	53.97	53.89	51.42	42.78	39.46	54.76	3.9
9	Netherlands	56.60	56.13	54.48	47.66	39.98	43.28	3.1
10	Nigeria	25.15	32.51	28.63	35.95	35.59	38.46	2.7
11	Austria	na	43.37	41.58	40.15	38.62	36.71	2.6
12	Turkmenistan	37.70	37.70	36.40	36.37	32.56	35.20	2.5
13	Malaysia	34.18	36.76	33.65	35.56	34.21	34.21	2.4
14	Belgium	21.18	28.55	25.24	24.63	24.63	22.71	1.6
15	Indonesia	30.42	29.82	29.62	24.86	24.25	22.44	1.6
16	Azerbaijan	7.62	8.86	9.19	11.81	13.40	18.94	1.3
17	IR Iran	8.57	12.93	12.24	12.35	11.52	18.43	1.3
18	Kazakhstan	12.48	14.22	17.55	17.84	12.64	15.10	1.1
19	Bolivia	17.80	15.39	13.84	11.75	11.80	12.90	0.9
20	Oman	10.55	11.15	13.28	13.44	13.20	12.70	0.9
21	Myanmar	12.80	12.15	11.31	12.24	11.37	11.00	0.8
22	Trinidad & Tobago	14.15	14.61	16.67	16.90	13.92	10.45	0.7
23	Libya	4.66	4.47	4.25	5.70	4.29	8.00	0.6
24	United Arab Emirates	9.33	8.78	8.94	9.26	8.77	7.85	0.6
25	United Kingdom	10.30	11.35	7.61	8.04	9.60	6.82	0.5
26	Brunei	8.45	8.92	8.27	8.59	7.99	6.77	0.5
27	France	3.72	6.04	5.93	10.79	9.10	5.79	0.4
28	Egypt	0.67	1.33	2.86	7.61	2.91	5.50	0.4
29	China	3.43	3.47	3.40	3.64	5.20	5.44	0.4
30	Angola	1.15	5.25	5.49	5.90	6.37	5.08	0.4
<b>Rest of World</b>		<b>58.20</b>	<b>62.72</b>	<b>61.75</b>	<b>66.05</b>	<b>53.12</b>	<b>49.68</b>	<b>3.5</b>
<b>Total World</b>		<b>1132.43</b>	<b>1279.82</b>	<b>1311.99</b>	<b>1365.42</b>	<b>1316.73</b>	<b>1418.82</b>	<b>100</b>
of which: OECD		450.43	574.12	589.80	619.34	628.49	682.34	48.1
OPEC		108.42	124.19	116.47	116.62	110.02	137.28	9.7

**Notes:** Total may not add up due to rounding off. P: Provisional na: Not available

Source : OPEC Annual Statistical Bulletins 2022

CHAPTER I

CHAPTER II

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CHAPTER VI

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CHAPTER XI

CHAPTER XII

APPENDIX



## XI.17: World Exports of Petroleum Products (Country-wise)

(Figures in Thousand barrels daily)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Share of Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	United States	4670	5218	5553	5490	5292	5652	19.2
2	Russia	2502	2479	2510	2554	2417	2385	8.1
3	Netherlands	2304	2333	2306	2247	1918	2258	7.7
4	Singapore	1995	2088	1777	1622	1440	1426	4.9
5	Saudi Arabia	1503	1438	1971	1300	1017	1344	4.6
6	China	1089	1169	1276	1460	1324	1289	4.4
7	India	1402	1411	1344	1360	1216	1283	4.4
8	South Korea	1313	1367	1432	1409	1259	1206	4.1
9	United Arab Emirates	630	654	916	882	840	891	3.0
10	Malaysia	609	632	663	646	775	877	3.0
11	Kuwait	707	640	630	637	527	604	2.1
12	Belgium	538	624	622	608	502	542	1.8
13	Italy	580	636	579	557	462	531	1.8
14	Germany	465	483	461	449	454	521	1.8
15	Algeria	541	570	532	506	503	493	1.7
16	Canada	435	491	444	500	423	473	1.6
17	Qatar	568	639	552	538	460	431	1.5
18	Japan	595	575	548	609	385	401	1.4
19	United Kingdom	524	506	483	451	395	392	1.3
20	Spain	423	471	453	420	398	389	1.3
21	Norway	352	433	416	428	388	379	1.3
22	IR Iran	515	270	272	285	281	333	1.1
23	France	428	435	424	367	278	278	0.9
24	Sweden	321	350	347	230	201	250	0.9
25	Brazil	124	133	171	217	284	246	0.8
26	Bahrain	230	242	239	250	214	218	0.7
27	Mexico	182	156	141	116	139	170	0.6
28	Iraq	37	20	46	107	151	158	0.5
29	Egypt	36	44	73	126	166	134	0.5
30	Kazakhstan	136	147	129	122	114	107	0.4
<b>Rest of World</b>		<b>4283</b>	<b>4166</b>	<b>4131</b>	<b>3908</b>	<b>3646</b>	<b>3709</b>	<b>12.6</b>
<b>Total World</b>		<b>30037</b>	<b>30819</b>	<b>31440</b>	<b>30400</b>	<b>27867</b>	<b>29370</b>	<b>100</b>
of which: OECD		14942	15872	15964	15673	14211	15137	51.5
OPEC		4307	3899	4673	3885	3483	4034	13.7

Notes: Total may not add up due to rounding off.

P. Provisional

Source : OPEC Annual Statistical Bulletins 2022



## XI.18: Spot Reference Basket and Corresponding Components' Spot Prices

(Figures in US \$/bbl.)

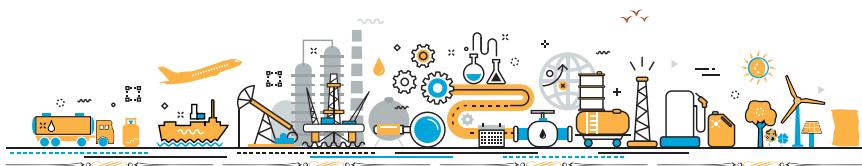
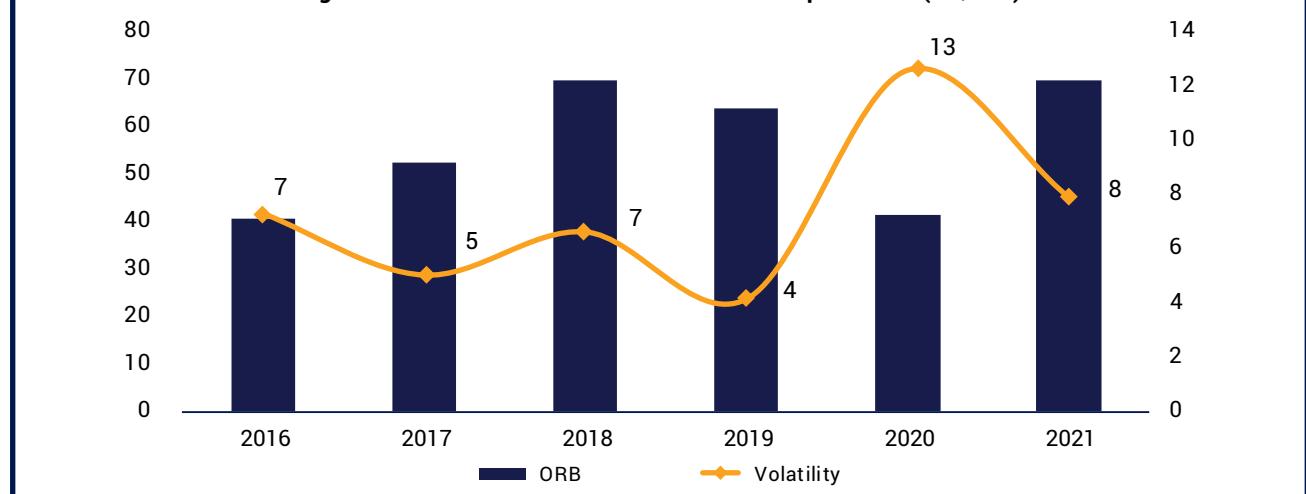
Country	Crude	2016	2017	2018	2019	2020	2021 (P)	% Variation in 2021 over 2020
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Algeria	Saharan Blend	44.28	54.12	71.44	64.49	42.12	70.89	68.3
Angola	Girassol	43.61	54.47	71.72	66.11	42.64	71.31	67.2
Congo	Djeno	41.98	52.77	68.59	61.80	35.77	63.35	77.1
Equatorial Guinea	Zafiro	42.43	54.04	71.36	65.74	41.54	71.09	71.1
Gabon	Rabi Light	42.62	53.16	70.30	63.18	40.22	70.34	74.9
IR Iran	Iran Heavy	39.57	51.71	67.97	61.85	40.77	69.80	71.2
Iraq	Basrah Light	39.53	51.87	68.62	63.64	41.55	69.86	68.1
Kuwait	Kuwait Export	39.30	51.60	68.90	64.25	41.49	70.50	69.9
Libya	Es Sider	42.69	52.82	69.78	63.81	40.06	69.16	72.6
Nigeria	Bonny Light	44.02	54.55	72.11	65.63	41.53	70.63	70.1
Saudi Arabia	Arab Light	40.96	52.59	70.59	64.96	41.91	70.65	68.6
United Arab Emirates	Murban	44.83	54.82	72.20	64.72	42.98	70.09	63.1
Venezuela	Merey	34.02	47.63	64.47	54.04	28.12	51.45	83.0
OPEC	ORB	40.76	52.43	69.78	64.04	41.47	69.89	68.53
ORB	Volatility <sup>1</sup>	7.28	5.00	6.59	4.11	12.55	7.87	-
ORB	Coefficient of variation <sup>2</sup> ,	17.85	9.54	9.44	6.43	30.26	11.26	-

Notes: 1. Standard deviation of daily prices.

2. Ratio of volatility to annual average price.

Source : OPEC Annual Statistical Bulletins 2022

Figure XI.10: Trend of OPEC reference Basket Spot Prices (in \$/bbl)



## XI.19: Crude Oil Spot Prices

(Figures in US \$/bbl.)

Country	Crude	2016	2017	2018	2019	2020	2021	% Variation in 2021 over 2020
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Algeria	Zarzaitine	44.02	54.08	71.35	64.42	41.72	<b>70.72</b>	69.5
Angola	Cabinda	42.83	54.30	71.15	65.34	42.29	<b>71.00</b>	67.9
Egypt	Suex Mix	40.41	51.56	68.47	62.61	40.23	<b>67.77</b>	68.5
Indonesia	Minas	41.66	48.99	65.44	60.25	41.08	<b>68.75</b>	67.4
Iran	Iran Light	41.66	52.36	69.10	62.74	40.36	<b>67.90</b>	68.2
Libya	Brega	43.73	53.62	70.65	63.76	40.12	<b>69.39</b>	73.0
Malaysia	Miri	46.39	56.93	75.90	69.30	47.15	<b>71.26</b>	51.1
Malaysia	Tapis	45.69	56.33	73.78	69.15	43.24	<b>72.82</b>	68.4
Mexico	Isthmus	42.37	54.60	68.74	63.00	36.61	<b>66.20</b>	80.8
Mexico	Maya	36.52	47.00	62.71	57.51	36.20	<b>64.42</b>	78.0
Nigeria	Forcados	43.70	54.58	72.56	66.19	41.56	<b>70.81</b>	70.4
Norway	Ekofisk	44.01	54.49	71.86	65.24	42.33	<b>71.65</b>	69.3
Norway	Oseberg	44.52	55.04	72.34	65.38	42.36	<b>71.78</b>	69.5
Oman	Oman	41.96	53.32	70.10	64.00	43.20	<b>69.46</b>	60.8
Qatar	Dukhan	43.69	54.12	71.22	63.65	42.44	<b>69.92</b>	64.8
Russia	Urals	42.16	53.27	70.13	64.38	41.83	<b>69.45</b>	66.0
Saudi Arabia	Arab Heavy	38.45	50.96	68.79	63.85	41.45	<b>69.98</b>	68.8
United Kingdom	Brent	43.76	54.17	71.22	64.19	41.67	<b>70.80</b>	69.9
United Kingdom	Forties	43.42	54.20	71.21	64.66	41.38	<b>71.23</b>	72.1
U.S.A	WTI	43.27	50.82	65.16	57.02	39.43	<b>68.17</b>	72.9
UAE	Dubai	41.39	53.08	69.68	63.48	42.31	<b>69.38</b>	64.0

Source : OPEC Annual Statistical Bulletins 2022

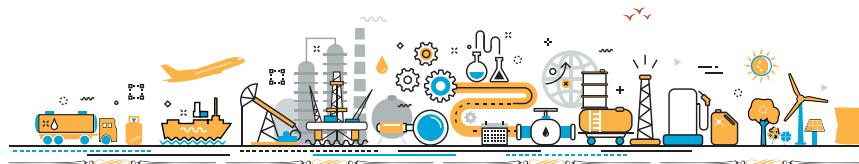
## XI.20: Spot Prices of Petroleum Products in Major Markets

(Figures in US \$/bbl.)

Product	Specifications	2016	2017	2018	2019	2020	2021	% Variation in 2021 over 2020
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>US Gulf</b>								
Gasoline	Regular unleaded 87	57.15	68.57	80.17	72.70	47.80	<b>86.72</b>	81.4
Gas Oil	0.2% sulphur	50.10	62.31	80.99	74.61	44.92	<b>73.94</b>	64.6
Fuel Oil	3.0 % sulphur	32.13	47.05	60.17	52.55	34.72	<b>59.84</b>	72.4
<b>Singapore</b>								
Gasoline	Premium unleaded 87	57.81	69.51	81.30	74.15	47.61	<b>81.66</b>	71.5
Gas Oil	0.05% sulphur	52.05	65.69	84.05	77.22	48.36	<b>75.96</b>	57.1
Fuel Oil	380 centistokes	34.92	49.24	64.74	56.70	37.53	<b>62.07</b>	65.4
<b>Rotterdam</b>								
Gasoline	Premium unleaded 98	63.58	75.13	87.34	79.52	51.34	<b>85.89</b>	67.3
Gas Oil	10ppm sulphur	53.28	66.35	85.94	79.50	49.17	<b>78.31</b>	59.3
Fuel Oil	3.5% sulphur	29.64	44.31	59.04	48.90	33.27	<b>60.09</b>	80.6

Note: US Gulf and Singapore apply to cargo. Rotterdam prices apply to barge size lots.

Source : OPEC Annual Statistical Bulletins 2022



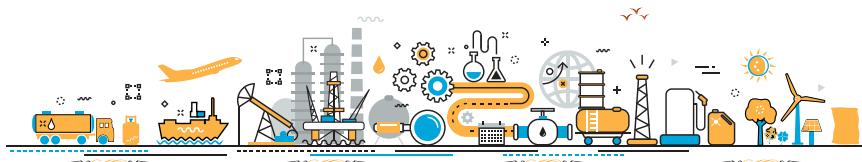
## XI.21: Oil Trade Movements

(Figures in Thousand Barrels daily)

Country/Year	2016	2017	2018	2019	2020	2021 (P)	% share in Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Imports</b>							
US	10056	10147	9928	9142	7869	<b>8478</b>	<b>12.7</b>
Europe	14342	15012	14473	14396	13206	<b>13522</b>	<b>20.2</b>
China	9215	10241	11028	11861	12932	<b>12724</b>	<b>19.0</b>
India	4945	4920	5196	5394	4898	<b>5325</b>	<b>8.0</b>
Japan	4180	4142	3940	3780	3310	<b>3350</b>	<b>5.0</b>
Rest of World	28491	25629	25819	25320	22701	<b>23559</b>	<b>35.2</b>
<b>Total World</b>	<b>71230</b>	<b>70090</b>	<b>70383</b>	<b>69893</b>	<b>64916</b>	<b>66958</b>	<b>100</b>
<b>Exports</b>							
Canada	3889	4233	4499	4678	4425	<b>4666</b>	<b>7.0</b>
Mexico	1405	1289	1307	1254	1251	<b>1234</b>	<b>1.8</b>
US	5077	5878	7037	8003	8128	<b>7892</b>	<b>11.8</b>
S. & Cent. America	5735	3976	3736	3451	3452	<b>2987</b>	<b>4.5</b>
Europe	4907	3387	3405	3236	2732	<b>3041</b>	<b>4.5</b>
Russia	8823	8992	8117	8122	7778	<b>8234</b>	<b>12.3</b>
Other CIS	2097	2236	2060	2127	2089	<b>2120</b>	<b>3.2</b>
Saudi Arabia	8729	8352	8574	8348	7904	<b>7696</b>	<b>11.5</b>
Middle East	15902	16205	16069	14678	13531	<b>14074</b>	<b>21.0</b>
North Africa	1735	2600	2748	2783	1844	<b>2664</b>	<b>4.0</b>
West Africa	4458	4523	4558	4619	4223	<b>3942</b>	<b>5.9</b>
Asia Pacific (ex Japan)	6348	6556	6442	6602	6058	<b>6566</b>	<b>9.8</b>
Rest of World	2124	1863	1831	1993	1502	<b>1842</b>	<b>2.8</b>
<b>Total World</b>	<b>71230</b>	<b>70090</b>	<b>70383</b>	<b>69893</b>	<b>64916</b>	<b>66958</b>	<b>100</b>

**Note:** Bunker fuel use is not included as exports. Intra-area movements (for example, between countries within Europe) are excluded.

Source: BP Statistical Review of World Energy, June 2022.



## XI.22: World Primary Energy Consumption by Fuel: 2021

(Figures in Exajoules)

S. No.	Country	Oil	Natural Gas	Coal	Nuclear Energy	Hydro electricity	Renewables	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	China	30.60	13.63	86.17	3.68	12.25	11.32	157.65
2	US	35.33	29.76	10.57	7.40	2.43	7.48	92.97
<b>3</b>	<b>India</b>	<b>9.41</b>	<b>2.24</b>	<b>20.09</b>	<b>0.40</b>	<b>1.51</b>	<b>1.79</b>	<b>35.43</b>
4	Russian Federation	6.71	17.09	3.41	2.01	2.02	0.06	31.30
5	Japan	6.61	3.73	4.80	0.55	0.73	1.32	17.74
6	Canada	4.17	4.29	0.48	0.83	3.59	0.58	13.94
7	Germany	4.18	3.26	2.12	0.62	0.18	2.28	12.64
8	South Korea	5.39	2.25	3.04	1.43	^	0.44	12.58
9	Brazil	4.46	1.46	0.71	0.13	3.42	2.39	12.57
10	Iran	3.25	8.68	0.07	^	0.14	^	12.19
11	Saudi Arabia	6.59	4.22	^	-	-	^	10.82
12	France	2.91	1.55	0.23	3.43	0.55	0.74	9.41
13	Indonesia	2.83	1.33	3.28	-	0.23	0.63	8.31
14	United Kingdom	2.50	2.77	0.21	0.41	^	1.24	7.18
15	Turkey	1.89	2.06	1.74	-	0.52	0.61	6.83
16	Mexico	2.56	3.18	0.23	0.11	0.33	0.39	6.79
17	Italy	2.35	2.61	0.23	-	0.41	0.76	6.36
18	Australia	1.93	1.42	1.63	-	0.15	0.59	5.72
19	Spain	2.45	1.22	0.16	0.51	0.28	0.97	5.59
20	Thailand	2.25	1.69	0.81	-	^	0.32	5.11
21	South Africa	1.04	0.14	3.53	0.09	^	0.16	4.98
22	Taiwan	1.92	0.98	1.67	0.25	^	0.12	4.98
23	United Arab Emirates	1.81	2.50	0.07	0.10	-	^	4.53
24	Poland	1.38	0.84	1.88	-	^	0.32	4.44
25	Vietnam	0.94	0.26	2.15	-	0.71	0.27	4.32
26	Malaysia	1.46	1.48	0.89	-	0.30	0.06	4.19
27	Pakistan	1.02	1.61	0.67	0.14	0.36	0.05	3.86
28	Egypt	1.28	2.23	0.05	-	0.14	0.10	3.79
29	Netherlands	1.51	1.26	0.23	^	^	0.43	3.47
30	Singapore	2.93	0.48	^	-	-	^	3.46
<b>Rest of World</b>		<b>30.58</b>	<b>25.13</b>	<b>8.93</b>	<b>3.14</b>	<b>9.83</b>	<b>4.42</b>	<b>82.03</b>
<b>Total World</b>		<b>184.21</b>	<b>145.35</b>	<b>160.10</b>	<b>25.31</b>	<b>40.26</b>	<b>39.91</b>	<b>595.15</b>
of which: OECD		83.62	64.62	29.69	17.27	13.57	21.11	229.89
Non-OECD		100.59	80.73	130.41	8.04	26.69	18.80	365.26
European Union		21.32	14.28	6.74	6.62	3.24	7.92	60.11

Notes: Total may not add up due to rounding off. ^: Less than 0.05. P: Provisional

- Primary energy comprises commercially traded fuels, including modern renewables used to generate electricity.
- Energy from all sources of non-fossil power generation is accounted for on an input-equivalent basis.
- Conversion factor used for Oil as per product basket of 1 Mtoe = 0.0431 Exajoules, for all other fuels 1 Mtoe = 0.0419 Exajoules.
- All figures all provisional.

Source: BP Statistical Review of World Energy, June 2022.

Figure XI.11: Distribution of India's Primary Energy Consumption by Fuel during 2021 (%)

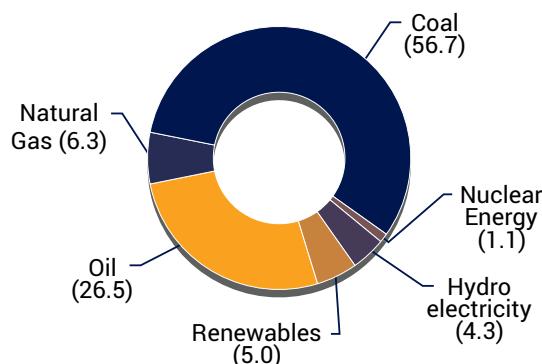
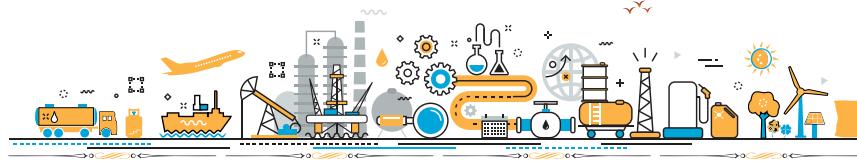
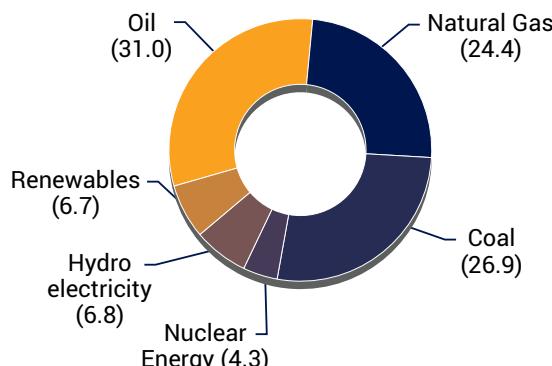


Figure XI.12: Distribution of World's Primary Energy Consumption by Fuel during 2021 (%)



## XI.23: Primary Energy Consumption of the World

(Figures in Exajoules)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% share in Total 2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	China	129.15	133.60	138.88	143.92	147.58	157.65	26.5
2	US	92.60	92.95	96.34	95.66	88.54	92.97	15.6
<b>3</b>	<b>India</b>	<b>30.16</b>	<b>31.32</b>	<b>33.34</b>	<b>34.15</b>	<b>32.19</b>	<b>35.43</b>	<b>5.95</b>
4	Russian Federation	28.99	29.17	30.24	30.02	28.88	31.30	5.3
5	Japan	18.82	19.05	18.95	18.51	17.13	17.74	3.0
6	Canada	14.35	14.58	14.70	14.63	13.82	13.94	2.3
7	Germany	13.83	14.01	13.65	13.30	12.36	12.64	2.1
8	South Korea	12.35	12.48	12.68	12.51	11.99	12.58	2.1
9	Brazil	12.12	12.25	12.30	12.56	12.00	12.57	2.1
10	Iran	10.40	10.83	11.19	11.74	12.02	12.19	2.0
11	Saudi Arabia	11.16	11.08	10.94	10.79	10.62	10.82	1.8
12	France	9.94	9.87	10.05	9.84	8.86	9.41	1.6
13	Indonesia	7.07	7.39	8.19	8.75	8.10	8.31	1.4
14	United Kingdom	8.11	8.09	8.06	7.87	7.06	7.18	1.2
15	Turkey	6.07	6.43	6.36	6.60	6.44	6.83	1.1
16	Mexico	7.82	7.93	7.90	7.58	6.43	6.79	1.1
17	Italy	6.54	6.62	6.67	6.56	5.92	6.36	1.1
18	Australia	5.78	5.76	5.84	6.04	5.74	5.72	1.0
19	Spain	5.72	5.79	5.89	5.73	5.18	5.59	0.9
20	Thailand	5.23	5.32	5.48	5.49	5.07	5.11	0.9
21	South Africa	5.33	5.32	5.13	5.36	4.95	4.98	0.8
22	Taiwan	4.87	4.86	4.93	4.84	4.70	4.98	0.8
23	United Arab Emirates	4.62	4.64	4.58	4.55	4.26	4.53	0.8
24	Poland	4.18	4.34	4.39	4.27	4.08	4.44	0.7
25	Vietnam	3.24	3.48	3.91	4.34	4.22	4.32	0.7
26	Malaysia	4.22	4.28	4.35	4.47	4.10	4.19	0.7
27	Pakistan	3.20	3.39	3.50	3.54	3.52	3.86	0.6
28	Egypt	3.69	3.84	3.84	3.77	3.54	3.79	0.6
29	Netherlands	3.61	3.55	3.55	3.55	3.38	3.47	0.6
30	Singapore	3.48	3.59	3.61	3.53	3.44	3.46	0.6
<b>Rest of World</b>		<b>79.24</b>	<b>80.84</b>	<b>82.92</b>	<b>82.96</b>	<b>77.89</b>	<b>82.03</b>	<b>13.8</b>
<b>Total World</b>		<b>555.91</b>	<b>566.66</b>	<b>582.38</b>	<b>587.43</b>	<b>564.01</b>	<b>595.15</b>	<b>100</b>
of which: OECD		233.85	235.86	239.69	237.41	220.20	229.89	38.6
Non-OECD		322.05	330.81	342.69	350.01	343.82	365.26	61.4
European Union		61.95	62.55	62.77	61.77	57.07	60.11	10.1

**Notes:** Total may not add up due to rounding off. P: Provisional

1. Primary energy comprises commercially traded fuels, including modern renewables used to generate electricity.

2. Energy from all sources of non-fossil power generation is accounted for on an input-equivalent basis.

3. Conversion factor used for Oil as per product basket of 1 Mtoe = 0.0431 Exajoules, for all other fuels 1 Mtoe = 0.0419 Exajoules.

Source: BP Statistical Review of World Energy, June 2022

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CHAPTER VII

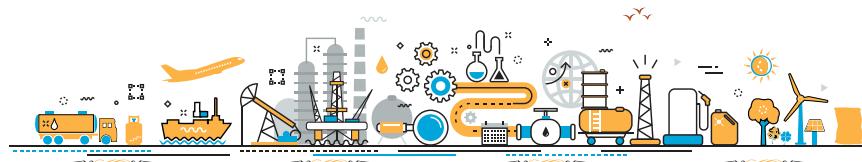
CHAPTER VIII

CHAPTER IX

CHAPTER X

CHAPTER XI

APPENDIX



## XI.24: Per Capita Primary Energy Consumption International Comparisons: 2021

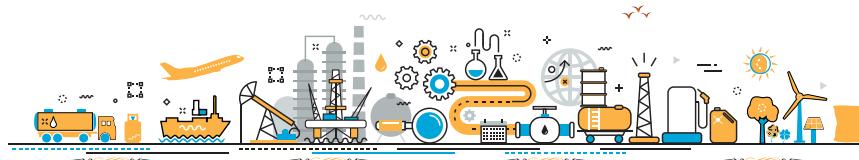
(Figures in Kg. Oil Equivalent)

S. No.	Country	Oil	Natural Gas	Coal	Nuclear Energy	Hydro electricity	Renewables	Total	Population (Mil- lion) Mid-2021
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	China	503	230	1456	62	207	191	2650	1412
2	US	2467	2138	759	532	174	537	6607	332
<b>3</b>	<b>India</b>	<b>157</b>	<b>38</b>	<b>344</b>	<b>7</b>	<b>26</b>	<b>31</b>	<b>603</b>	<b>1393</b>
4	Russian Federation	1067	2797	559	329	331	10	5093	146
5	Japan	1223	710	913	105	139	250	3341	125
6	Canada	2533	2680	300	519	2241	361	8634	38
7	Germany	1168	936	608	179	52	655	3597	83
8	South Korea	1471	632	853	401	8	123	3489	85
9	Brazil	486	163	80	15	383	268	1395	213
10	Iran	1454	3999	34	15	65	8	5575	52
11	Saudi Arabia	4259	2807	2	-	-	5	7074	36
12	France	1033	566	85	1253	200	270	3408	65
13	Indonesia	239	116	285	-	20	55	714	275
14	United Kingdom	858	979	74	147	17	439	2514	68
15	Turkey	340	382	323	-	97	113	1255	129
16	Mexico	709	905	66	31	93	110	1913	84
17	Italy	923	1056	93	-	164	308	2544	59
18	Australia	1736	1312	1508	-	139	545	5242	26
19	Spain	852	437	58	183	100	347	1976	67
20	Thailand	1099	852	407	-	22	161	2541	47
21	South Africa	402	55	1402	37	5	63	1965	60
22	Taiwan	1893	998	1701	255	33	122	5001	24
23	United Arab Emirates	4290	6085	180	232	-	118	10905	10
24	Poland	975	609	1370	-	16	235	3204	33
25	Vietnam	217	61	511	-	170	64	1023	100
26	Malaysia	884	924	555	-	190	39	2593	38
27	Pakistan	231	376	157	33	83	13	893	102
28	Egypt	132	236	5	-	15	10	398	225
29	Netherlands	6159	5286	982	145	4	1797	14372	6
30	Singapore	3886	656	44	-	-	17	4603	18
<b>Rest of World</b>		<b>285</b>	<b>241</b>	<b>86</b>	<b>30</b>	<b>94</b>	<b>42</b>	<b>779</b>	<b>2487</b>
<b>Total World</b>		<b>545</b>	<b>443</b>	<b>488</b>	<b>77</b>	<b>123</b>	<b>122</b>	<b>1797</b>	<b>7837</b>

**Notes:** Total may not add up due to rounding off.

1. Primary energy comprises commercially traded fuels, including modern renewables used to generate electricity.
2. Energy from all sources of non-fossil power generation is accounted for on an input-equivalent basis.
3. Conversion factor used for Oil as per product basket of 1 Mtoe = 0.0431 Exajoules, for all other fuels 1 Mtoe = 0.0419 Exajoules.
4. Population 2021 data have been taken from "Population Reference Bureau"
5. All figures are provisional.

Source: BP Statistical Review of World Energy, June 2022.



## XI.25: Per-Capita Primary Energy Consumption Growth : International Comparison 2021

(Figures in Gigajoule per capita)

S. No.	Country	2016	2017	2018	2019	2020	2021 (P)	% Growth in 2021 over 2020
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	China	91.29	93.97	97.23	100.33	102.49	109.12	6.5
2	US	285.71	284.79	293.45	289.83	267.10	279.89	4.8
<b>3</b>	<b>India</b>	<b>22.74</b>	<b>23.37</b>	<b>24.61</b>	<b>24.96</b>	<b>23.30</b>	<b>25.40</b>	<b>9.00</b>
4	Russian Federation	199.58	200.45	207.53	205.82	197.90	214.53	8.4
5	Japan	147.35	149.45	149.01	145.91	135.48	140.75	3.9
6	Canada	397.32	398.96	396.67	389.09	363.39	364.38	0.3
7	Germany	167.81	169.37	164.64	160.06	148.56	151.98	2.3
8	South Korea	242.15	244.35	247.75	244.24	233.77	245.07	4.8
9	Brazil	58.74	58.90	58.67	59.44	56.41	58.68	4.0
10	Iran	130.71	134.30	136.81	141.70	143.15	143.50	0.2
11	Saudi Arabia	351.47	339.65	327.48	315.35	303.18	301.33	-^
12	France	153.91	152.34	154.76	151.19	135.87	143.99	6.0
13	Indonesia	27.00	27.89	30.58	32.27	29.57	30.03	1.6
14	United Kingdom	123.46	122.40	121.17	117.72	105.27	106.93	1.6
15	Turkey	75.98	79.24	77.20	79.06	76.29	80.23	5.2
16	Mexico	63.30	63.48	62.50	59.35	49.81	52.05	4.5
17	Italy	107.91	109.34	110.47	109.44	99.59	107.24	7.7
18	Australia	238.52	233.77	233.20	237.89	223.33	222.06	-^
19	Spain	123.11	124.21	125.84	121.42	109.26	117.42	7.5
20	Thailand	75.78	76.86	78.96	78.77	72.61	73.03	0.6
21	South Africa	94.75	93.10	88.56	91.44	83.38	82.79	-^
22	Taiwan	207.02	206.39	209.00	205.11	199.18	210.82	5.8
23	United Arab Emirates	492.47	487.67	474.95	465.75	465.13	487.90	4.9
24	Poland	110.04	114.32	115.62	112.35	107.60	117.17	8.9
25	Vietnam	34.58	36.83	40.94	45.00	43.38	44.04	1.5
26	Malaysia	137.34	137.27	137.84	139.65	126.54	127.68	0.9
27	Pakistan	15.73	16.31	16.48	16.35	15.91	17.13	7.6
28	Egypt	39.09	39.79	39.03	37.58	34.61	36.41	5.2
29	Netherlands	211.58	207.18	205.92	204.37	193.87	198.16	2.2
30	Singapore	621.14	639.14	638.96	620.30	609.46	630.28	3.4
<b>Total World</b>		<b>74.48</b>	<b>75.07</b>	<b>76.31</b>	<b>76.15</b>	<b>72.37</b>	<b>75.61</b>	<b>4.5</b>
of which: OECD		175.02	175.44	177.26	174.65	161.28	167.92	4.1
Non-OECD		52.56	53.32	54.57	55.08	53.48	56.17	5.0
European Union		139.82	140.95	141.21	138.81	128.19	135.01	5.3

**Notes:** Total may not add up due to rounding off. P. Provisional

- Primary energy comprises commercially traded fuels, including modern renewables used to generate electricity.
- Energy from all sources of non-fossil power generation is accounted for on an input-equivalent basis.

Source: BP Statistical Review of World Energy, June 2022

CHAPTER I

CHAPTER II

CHAPTER III

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CHAPTER VI

CHAPTER VII

CHAPTER IX

CHAPTER X

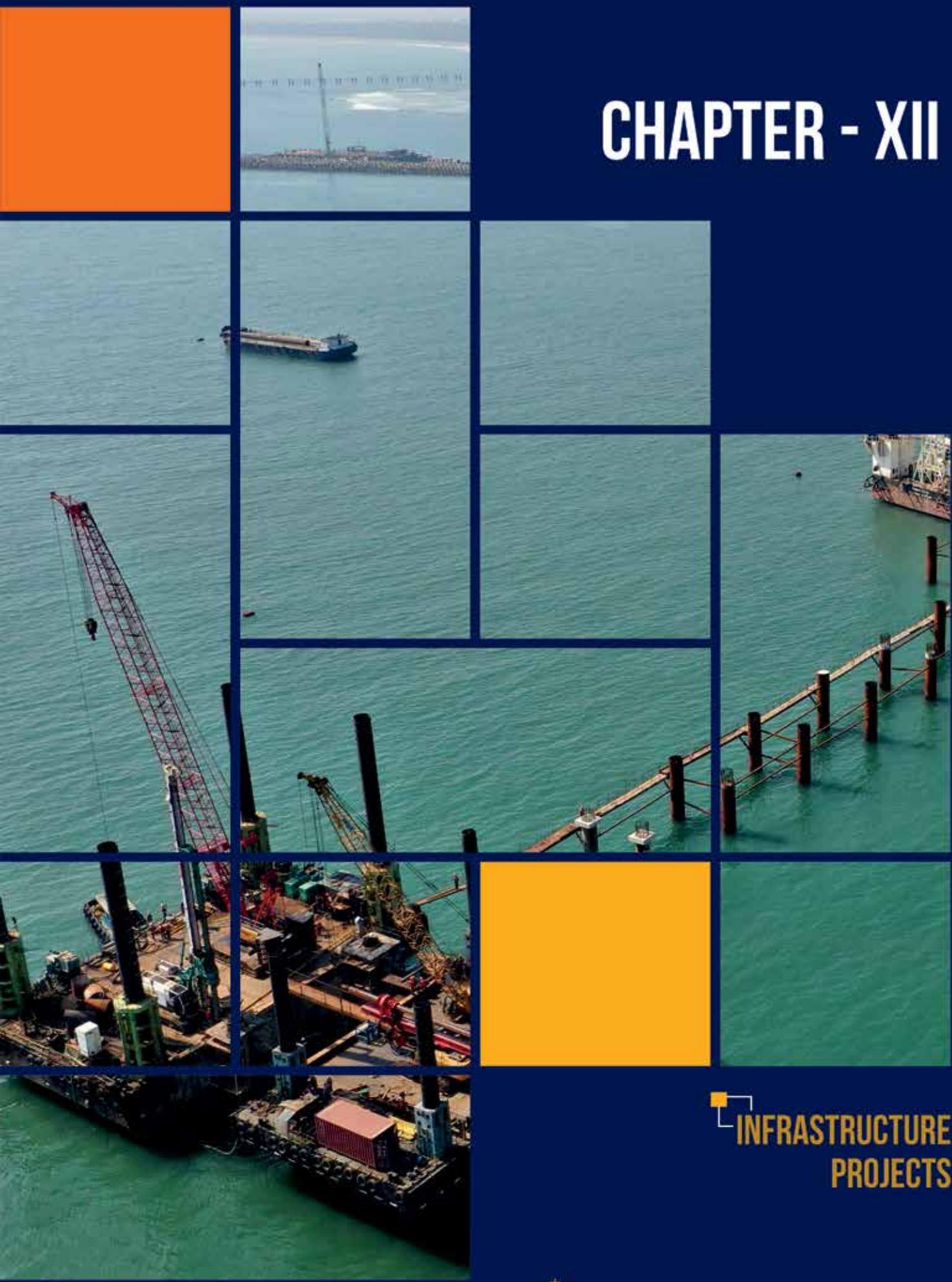
CHAPTER XI

APPENDIX





# CHAPTER - XII



 INFRASTRUCTURE  
PROJECTS



# Highlights of Chapter

The approved project cost for total Projects



Total number of CSPEs projects in Oil & Gas sector stood at 506 nos. in 2021-22, higher by 2% against 496 nos. during 2020-21.

The approved project cost for Mega Projects



Total number of CPSEs Mega Projects (₹ 500 Cr & above) in Oil & Gas sector stood at 128 nos. in 2021-22, higher by 18.5% against 108 nos. during 2020-21.

The approved project cost for Medium Projects



Total number of Medium Projects (₹ 100 Cr to ₹ 500 Cr) in Oil & Gas sector stood at 114 nos. in 2021-22 lower by 4.2% against 119 nos. during 2020-21.

The approved project cost for Small Projects



Total number of CPSEs Small Projects (₹ 5 Cr to ₹100 Cr) in Oil & Gas sector stood at 264 nos. in 2021-22, lower by 1.9% against 269 nos. during 2020-21.

IOCL undertook Maximum number of projects among all CPSEs  
105 projects in 2021-22 against 108 nos. during 2020-21

The approved project cost was ₹ 1,89,537 crore in 2021-22 against ₹ 1,81,926 crore during 2020-21.

The refinery sector is having Maximum number of running projects  
53 nos. against all sectors in 2021-22 against 51 nos. during 2020-21.

The approved project cost for Refinery sector was ₹ 2,42,619 crore in 2021-22 against ₹ 2,04,965 crore during 2020-21.

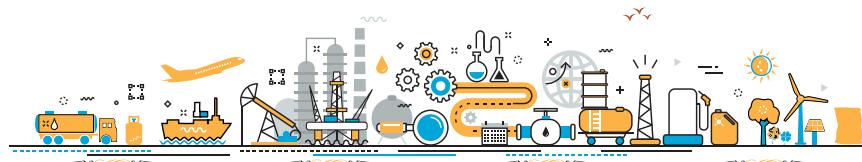
Highest ongoing projects with approved project cost among all states



Uttar Pradesh is having maximum number (19 nos.) of ongoing projects among all states with approved project cost of ₹ 8,579 crore in 2021-22. Haryana is having maximum 17 nos. ongoing projects with approved project cost ₹ 44,124 crore CPSEs in 2021-22.

Timely Implementation and avoiding cost overrun

Stepping towards timely implementation and avoiding cost overrun, a total 16 nos. of issues have been resolved by active intervention Ministry to help expediting 16 projects of Oil & Gas infrastructure.



## XII.1: Overall Summary of Oil & Gas CPSEs Projects

Sl No	Company Name	2017-18		2018-19		2019-20		2020-21		2021-22						
		New Projects added	Total No. of Projects	Ap-proved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Ap-proved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Ap-proved Project Cost (₹ crore)	New Projects added	Total No. of Projects				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	Mega projects (Costing Rs. > 500 crore)	17	74	2,07,053	19	86	2,30,028	28	106	3,09,109	27	108	3,93,877	25	128	4,92,791
2	Medium Projects (Costing between Rs. 100 to Rs. 500 crore)	44	93	20,856	34	114	26,209	25	117	28,433	20	119	30,202	13	114	29,293
3	Small Projects (Costing between Rs. 5 crore & Rs. 100 crore)	378	9,351	73	380	10,808	95	332	9,257	66	269	7,869	80	264	7,653	
<b>Total</b>		<b>439</b>	<b>545</b>	<b>237260</b>	<b>126</b>	<b>580</b>	<b>267045</b>	<b>148</b>	<b>555</b>	<b>346798</b>	<b>113</b>	<b>496</b>	<b>431948</b>	<b>118</b>	<b>506</b>	<b>529737</b>

**Note :** 1. Data as on 31<sup>st</sup> March of each financial year

2. Projects costing ₹ 100 crore & above are considered

Source: Ministry Monitoring Cell, MoPNG



## XII.2: Total number of ongoing Oil & Gas CPSEs Projects-CPSEs-wise

Sl No	Company Name	2017-18			2018-19			2019-20			2020-21			2021-22				
		New Projects added	Total No. of Projects	Approved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Approved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Approved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Approved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Approved Project Cost (₹ crore)		
1	APGDCCL	-	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
2	BPCCL	4	15	14,173	8	21	24,854	3	19	26,842	13	27	33,077	3	26	30,518		
3	CPCCL	1	5	5,822	-	3	2,344	-	2	2,279	-	2	2,279	1	2	32,001		
4	GAIL	8	14	22,038	6	19	26,360	2	22	27,647	6	28	45,280	4	30	62,377		
5	GAIL GAS	-	1	749	4	5	1,571	-	5	3,296	4	4	1,170	8	12	9,945		
6	HPCL	8	15	32,059	4	17	33,486	5	21	80,127	10	27	91,228	3	29	94,258		
7	IGGL	-	-	-	-	-	-	-	-	-	-	-	-	1	1	9,265		
8	IOCL	30	65	51,203	29	88	71,552	34	112	104,268	15	108	181,926	6	105	189,537		
13	ISPRCL	-	1	2,397	-	1	2,397	-	-	-	-	-	-	-	-	-	-	
9	MRPL	1	4	2,750	-	4	2,750	-	3	2,526	1	3	2,591	1	4	2,711		
10	NRL	-	2	1,153	-	1	122	2	2	2,096	-	2	2,096	3	5	25,180		
11	OIL	2	9	3,520	1	8	2,710	1	7	2,493	-	7	2,580	1	6	2,168		
12	ONGC	7	36	92,044	1	33	88,089	6	30	85,967	2	19	61,853	4	20	63,053		
<b>Grand Total</b>		<b>61</b>	<b>167</b>	<b>227,909</b>	<b>53</b>	<b>200</b>	<b>256,237</b>	<b>53</b>	<b>223</b>	<b>337,541</b>	<b>51</b>	<b>227</b>	<b>424,079</b>	<b>37</b>	<b>242</b>	<b>522,084</b>		

Note : 1. Data as on 31<sup>st</sup> March of each financial year

2. Projects costing ₹ 100 crore & above are considered

Source: Ministry Monitoring Cell., MoPNG



### XII.3: Total Number of ongoing Oil & Gas CPSEs Projects-Sector wise

Sl No	Company Name	2017-18			2018-19			2019-20			2020-21			2021-22		
		New Projects added	Total No. of Projects	Ap-proved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Ap-proved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Ap-proved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Ap-proved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Ap-proved Project Cost (₹ crore)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	Exploration and Production	8	33	85,197	2	31	81,263	4	29	81,489	1	17	57,335	4	17	55,706
2	Infrastructure and Others	-	4	6,957	-	3	6,457	1	3	4,217	2	5	5,063	-	5	5,063
3	Refinery	7	37	72,903	11	42	88,469	13	50	144,727	13	51	204,965	7	53	242,619
4	Petrochemical	-	-	-	-	-	-	-	-	-	1	1	911	1	2	9,708
5	Marketing	31	46	10,637	13	54	15,047	3	49	13,948	9	46	16,663	5	43	21,397
6	Pipeline	13	44	50,934	5	45	57,548	7	42	57,031	8	45	84,692	7	47	106,146
7	CGD	2	3	1,280	22	25	7,453	25	50	36,130	17	62	54,451	13	75	81,446
<b>Grand Total</b>		<b>61</b>	<b>167</b>	<b>227,909</b>	<b>53</b>	<b>200</b>	<b>256,237</b>	<b>53</b>	<b>223</b>	<b>337,541</b>	<b>51</b>	<b>227</b>	<b>424,079</b>	<b>37</b>	<b>242</b>	<b>522,084</b>

Note : 1. Data as on 31<sup>st</sup> March of each financial year

2. Projects costing ₹ 100 crore & above are considered

Source: Ministry Monitoring Cell., MoPNG

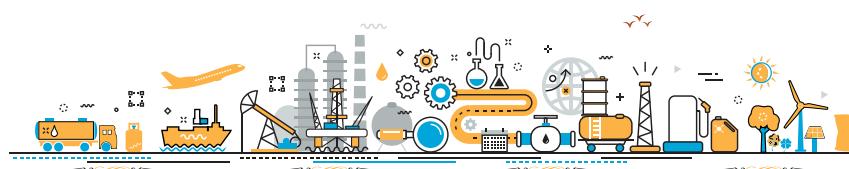


## XII.4: Total Number of ongoing Oil & Gas CPSEs Projects-Sector wise

Sl No	State Name	2017-18			2018-19			2019-20			2020-21			2021-22		
		New Projects added	Total No. of Projects	Approved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Approved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Approved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Approved Project Cost (₹ crore)	New Projects added	Total No. of Projects	Approved Project Cost (₹ crore)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	Andhra Pradesh	3	6	22,462	3	8	23,574	3	10	26,570	5	15	27,486	3	17	28,332
2	Arunachal Pradesh	-	1	248	-	1	248	-	-	-	-	-	-	-	-	-
3	Assam	3	16	9,703	2	16	9,791	2	13	10,967	1	10	4,708	5	13	17,783
4	Bihar	2	3	2,012	5	8	3,488	7	14	9,022	2	15	24,099	-	14	22,324
5	Chandigarh (UT)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Chhattisgarh	2	2	421	-	2	421	-	1	121	-	1	121	1	1	456
7	Delhi (UT)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Goa	-	-	-	1	1	208	-	1	249	-	1	208	1	1	208
9	Gujarat	4	15	10,551	3	16	11,626	3	14	14,318	4	14	31,720	3	16	37,322
10	Haryana	1	2	3,262	8	10	7,942	7	16	12,957	2	16	44,028	-	17	44,124
11	Himachal Pradesh	-	1	356	-	1	356	-	-	-	1	1	428	1	1	428
12	Jammu and Kashmir (UT)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Jharkhand	1	3	1,012	2	4	1,433	2	6	2,294	-	6	2,294	3	9	4,050
14	Karnataka	2	6	3,620	3	9	4,859	-	8	6,299	4	10	5,436	3	12	7,726
15	Kerala	1	6	9,174	2	7	20,558	3	8	26,884	-	7	22,474	6	19,161	-
16	Madhya Pradesh	3	4	624	1	4	609	1	5	850	2	5	1,041	2	6	2,695
17	Maharashtra	6	11	9,090	3	13	7,486	-	12	7,465	7	17	15,389	2	15	29,341
18	Manipur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Meghalaya	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Nagaland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Odisha	3	8	6,972	4	11	13,421	3	14	18,474	6	18	31,716	2	18	32,464
22	Puducherry (UT)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	Punjab	-	1	126	-	1	125	-	2	298	1	3	1,690	1	4	1,895
24	Rajasthan	-	-	-	1	1	230	1	2	43,359	1	3	43,508	-	3	43,508
25	Sikkim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	Tamil Nadu	4	11	7,536	-	9	4,319	2	9	8,124	2	11	10,443	2	11	40,918
27	Telangana	-	-	1	1	611	-	1	611	-	1	611	-	1	611	-
28	Tripura	1	3	409	-	2	277	-	2	277	-	1	133	-	-	-
29	Uttar Pradesh	7	9	3,374	8	17	6,733	4	21	8,815	4	18	7,666	1	19	8,579
30	Uttarakhand	1	1	160	1	2	295	1	3	471	1	4	545	1	5	2,242
31	West Bengal	4	9	9,698	-	7	8,886	2	8	7,538	2	6	10,480	2	8	16,577
32	Western Offshore	5	15	37,934	1	15	38,100	5	17	39,342	-	10	24,093	1	9	23,691
33	Projects in Multiple States	8	34	89,166	4	34	90,642	7	36	92,237	6	34	113,761	5	36	137,649
<b>Grand Total</b>		<b>61</b>	<b>167</b>	<b>227,909</b>	<b>53</b>	<b>200</b>	<b>256,237</b>	<b>53</b>	<b>223</b>	<b>337,541</b>	<b>51</b>	<b>227</b>	<b>424,079</b>	<b>37</b>	<b>242</b>	<b>522,084</b>

Note : 1. Data as on 31<sup>st</sup> March of each financial year  
 2. Projects costing ₹ 100 crore & above are considered

Source: Ministry Monitoring Cell, MoPNG



### XII.5: Overall Summary of Oil & Gas Complete Projects

Sl No	Company Name	2017-18		2018-19		2019-20		2020-21		2021-22	
		No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Mega projects (Costing Rs. > 500 crore)	7	15,282	10	23,221	26	57,266	6	12,206	12	20,523
2	Medium Projects (Costing between Rs. 100 to Rs. 500 crore)	13	2,697	25	4,982	19	3,818	16	3,668	21	5,210
3	Small Projects (Costing between Rs. 5 crore & Rs. 100 crore)	65	1,108	133	2,787	121	3,041	82	2,000	98	2,197
<b>Total</b>		<b>85</b>	<b>19,086</b>	<b>168</b>	<b>30,990</b>	<b>166</b>	<b>64,125</b>	<b>104</b>	<b>17,874</b>	<b>131</b>	<b>27,930</b>

**Note :** Data as on 31<sup>st</sup> March of each financial year

Source: Ministry Monitoring Cell, MoPNG



## XII.6: Completed Oil & Gas CPSEs Projects - CPSE wise

Sl No	Company Name	2017-18		2018-19		2019-20		2020-21		2021-22	
		No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)
1	APGDCL	-	-	-	-	-	-	-	-	-	-
2	Bpcl	2	1,839	6	1,196	5	7,118	4	4,197	2	1,811
3	CPCL	2	3,420	1	258	-	-	1	1,858	1	315
4	GAIL	1	200	2	651	2	4,197	1	114	4	2,634
5	GAIL GAS	-	-	-	-	1	2,127	-	-	-	-
6	Hpcl	2	275	2	530	4	1,419	1	1,700	6	6,323
7	IGGL	-	-	-	-	-	-	-	-	-	-
8	IOCL	6	2,912	8	7,653	19	21,837	10	3,663	14	7,959
9	MRPL	-	-	1	172	1	171	-	-	2	2,447
10	NRL	1	1,031	1	122	-	-	-	-	-	-
11	OIL	2	1,568	2	606	-	-	2	623	2	345
12	ONGC	4	6,731	11	12,917	13	24,217	3	3,719	2	3,900
13	ISPRL	-	-	1	4,098	-	-	-	-	-	-
<b>Grand Total</b>		<b>20</b>	<b>17,978</b>	<b>35</b>	<b>28,203</b>	<b>45</b>	<b>61,085</b>	<b>22</b>	<b>15,874</b>	<b>33</b>	<b>25,733</b>

Note: 1. Data as on 31<sup>st</sup> March of each financial year

2. Projects costing ₹ 100 crore & above are considered

Source: Ministry Monitoring Cell, MoPNG



### XII.7: Completed Oil & Gas CPSEs Projects - Sector wise

Sl No	Company Name	2017-18		2018-19		2019-20		2020-21		2021-22	
		No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Exploration and Production	5	7,931	8	10,234	13	24,217	4	3,576	2	3,743
2	Infrastructure and Others	1	368	1	4,098	-	-	-	-	-	-
3	Refinery	6	6,555	3	4,497	12	24,998	6	7,695	10	9,909
4	Petrochemical	-	-	-	-	-	-	-	-	-	-
5	Marketing	5	851	9	1,950	12	2,731	8	1,574	11	3,780
6	Pipeline	3	2,272	13	7,253	7	7,012	4	3,030	9	8,035
7	CGD	-	-	1	170	1	2,127	-	-	1	265
<b>Grand Total</b>		<b>20</b>	<b>17,978</b>	<b>35</b>	<b>28,203</b>	<b>45</b>	<b>61,085</b>	<b>22</b>	<b>15,874</b>	<b>33</b>	<b>25,733</b>

Note: 1. Data as on 31<sup>st</sup> March of each financial year  
 2. Projects costing ₹ 100 crore & above are considered

Source: Ministry Monitoring Cell, MoPNG



## XII.8: Completed Oil & Gas CPSEs Projects - State wise

Sl No	State Name	2017-18		2018-19		2019-20		2020-21		2021-22	
		No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)	No. of Completed Projects	Anticipated Project Cost of completed projects (₹ crore)
1	Andhra Pradesh	1	83	1	247	1	407	1	385	1	303
2	Arunachal Pradesh	-	-	1	248	-	-	-	-	-	-
3	Assam	2	1,291	4	910	4	6,421	2	623	5	1708
4	Bihar	-	-	1	130	1	136	1	1,774	3	918
5	Chandigarh (UT)	-	-	-	-	-	-	-	-	-	-
6	Chhattisgarh	-	-	1	300	-	-	1	136	-	-
7	Delhi (UT)	-	-	-	-	-	-	-	-	-	-
8	Goa	-	-	-	-	-	-	-	-	-	-
9	Gujarat	2	479	7	1,771	4	4,879	1	208	2	446
10	Haryana	-	-	1	170	1	3,529	-	-	1	300
11	Himachal Pradesh	-	-	1	300	-	-	-	-	-	-
12	Jammu and Kashmir (UT)	-	-	-	-	-	-	-	-	-	-
13	Jharkhand	1	191	-	-	-	-	-	-	1	162
14	Karnataka	-	-	2	293	2	2,297	1	176	3	2827
15	Kerala	1	125	2	472	1	5,246	1	3,289	1	527
16	Madhya Pradesh	1	85	-	-	1	141	1	147	1	320
17	Maharashtra	1	1,714	1	120	2	1,277	4	1,044	3	5554
18	Manipur	-	-	-	-	-	-	-	-	-	-
19	Meghalaya	-	-	-	-	-	-	-	-	-	-
20	Nagaland	-	-	-	-	-	-	-	-	-	-
21	Odisha	1	239	-	-	2	3,230	2	565	1	690
22	Puducherry (UT)	-	-	-	-	-	-	-	-	-	-
23	Punjab	-	-	-	-	1	153	-	-	1	149
24	Rajasthan	-	-	-	-	-	-	-	-	-	-
25	Sikkim	-	-	-	-	-	-	-	-	-	-
26	Tamil Nadu	2	3,420	3	741	-	-	2	1,972	3	1009
27	Telangana	-	-	-	-	-	-	-	-	-	-
28	Tripura	1	215	-	-	1	143	1	133	-	-
29	Uttar Pradesh	-	-	-	-	5	1,986	-	-	2	384
30	Uttarakhand	-	-	-	-	-	-	-	-	-	-
31	West Bengal	2	341	1	4,190	4	4,321	-	-	-	-
32	Western Offshore	1	707	3	10,910	7	15,167	2	3,585	1	3596
33	Projects in Multiple States	4	9,087	6	7,403	8	11,750	2	1,836	4	6,842
<b>Grand Total</b>		<b>20</b>	<b>17,978</b>	<b>35</b>	<b>28,203</b>	<b>45</b>	<b>61,085</b>	<b>22</b>	<b>15,874</b>	<b>33</b>	<b>25,733</b>

Note: 1. Data as on 31<sup>st</sup> March of each financial year  
 2. Projects costing ₹ 100 crore & above are considered

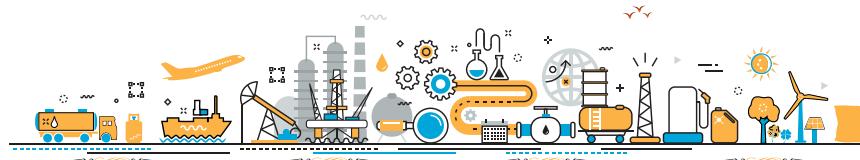
Source: Ministry Monitoring Cell.



## **APPENDICES**

## APPENDICES

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## Abbreviations

(I) Companies / Organisations	
<b>AFPC, Syria</b>	<b>Al Furat Petroleum Company, Syria</b>
<b>AGC</b>	<b>Assam Gas Company</b>
BL	Balmer Lawrie & Co. Ltd.
BLIL	Balmer Lawrie Investments Ltd.
BORL	Bharat Oman Refinery Ltd.
BP	British Petroleum
BPCL	Bharat Petroleum Corporation Ltd.
CAIRN	Cairn India Limited
CPCL	Chennai Petroleum Corporation Ltd.
DGCIS	Directorate General of Commercial Intelligence and Statistics
DGH	Directorate General of Hydrocarbons
DNPL	Duliajan Numaligarh Pipeline Limited
EIL	Engineers India Ltd
GAIL	Gail (India) Limited
GOI	Government of India
GPOC, South Sudan	Greater Pioneer Operating Company, South Sudan
HMEL	HPCL Mittal Energy Ltd
HPCL	Hindustan Petroleum Corporation Ltd
IEC, Russia	Imperial Energy Corporation, Russia
IOCL	Indian Oil Corporation Ltd
ISPRL	Indian Strategic Petroleum Reserves Limited
MECL	Mansarovar Energy Colombia Ltd
MoPNG	Ministry of Petroleum & Natural Gas
MoSPI	Ministry of Statistics And Programme Implementation
MRPL	Mangalore Refinery & Petrochemical Ltd
NEL	Nyara Energy Ltd. (Formerly known as Essar Oil Ltd.)
NRL	Numaligarh Refinery Ltd
OIL	Oil India Limited
OMC	Oil Marketing Company
ONGC	Oil & Natural Gas Corporation Ltd
OPEC	Organization of the Petroleum Exporting Countries
OVL	ONGC Videsh Ltd
P&NG	Petroleum & Natural Gas
PPAC	Petroleum Planning & Analysis Cell
RBI	Reserve Bank of India
RIL	Reliance Industries Ltd



**(II) Petroleum Products**

ATF	Aviation Turbine Fuel
CBFS	Carbon Black Feed Stock
CBM	Coal bed Methane
CNG	Compressed Natural Gas
EBP	Ethanol Blended Petrol
FO	Furnace Oil
HHS	Hot Heavy Stock
HSD	High Speed Diesel
HSDO	High Speed Diesel Oil
HSFO	Heavy/High Sulphur Fuel Oil
LABFS	Linear Alkyl Benzene Feed Stock
LDF	Light Distillate Feedstock
LDO	Light Diesel Oil
LNG	Liquefied Natural Gas
LO	Lubricating Oil
LOBS	Lube Oil Base Stocks
LPG	Liquefied Petroleum Gas
LSHS	Low Sulphur Heavy Stock
LSWR	Low Sulphur Waxy Residue
Mogas	Motor Gasoline
Motor Spirit	Petrol
MS	Motor Spirit/Petrol
MTBE	Methyl Tertiary Butyl Ether
MTO	Mineral Turpentine Oil
NGL	Natural Gas Liquids
Pet-coke	Petroleum Coke
PNG	Piped Natural Gas
RFO	Residual Fuel Oil
RPO	Rubber Process Oil
SKO	Superior Kerosene Oil
VGO	Vacuum Gas Oil



**(III) Prefixes Used in Metric Tables**

Prefix	Meaning
Centi	One Hundredth ( $1/100=0.01$ )
Deci	One Tenth ( $1/10=0.1$ )
Deka	Ten(10)
Hecto	One Hundred (100)
Kilo	One Thousand (1,000)
Mega	One Million (1,000,000)
Milli	One Thousandth ( $1/1000=0.001$ )
Unit	One (1)

**(IV) Others**

A&AA	Assam & Assam Arakan
A.N Islands	Andaman Nicobar Islands
ACG, Azerbaijan	Azeri-Chirag-Deepwater Gunashli, Azerbaijan
Addl.	Additional
bbl.	Barrel
BCM	Billion Cubic Meter
BE	Budgetary Estimates
BMC	Bombay Municipal Corporation
Bn.Cu.Mtr.	Billion Cubic Meters
BPA	Bassein Platform A
BPB	Bassein Platform B
CAGR	Compound Annual Growth Rate
CEA	Chief Economic Advisor
CGD	City Gas Distribution
China Hong Kong SAR	China Hong Kong Special Administrative Region
CIF	Cost Insurance Freight
CIS	Commonwealth of Independent States
CPSEs	Central Public Sector Enterprises
CRBC	Central Region Basin Coast
CSR	Corporate Social Responsibility
CST	Central Sales Tax
Cyl.	Cylinder
DBTL	Direct Benefit Transfer of LPG
Dom.	Domestic
DVPL	Dahej-Vijaipur Pipeline
DWT	Dead Weight Tonnage
EPS	Earning per share
ERBC	Eastern Region Basin cost
FDI	Foreign Direct Investment
FDZ	Free Delivery Zone
FOB	Free on Board
FPC	Federal Power Commission
GBS	Gross Budgetary Support
GCV	Gross Calorific Value
GDP	Gross Domestic Product
GNOP	Greater Nile Oil Project
GREP	Gas Rehabilitation and Expansion
GVA	Gross Value Added
HELP	Hydrocarbon Exploration Licensing Policy
HVJ	Hazira-Vijaipur-Jagdishpur
I&EBR	Internal and Extra Budgetary Resources



## (IV) Others (Contd.)

Int. Con.	Internal Consumption
JV	Joint Venture
K.Cal	Kilocalories
K.g.	Kilogram
KG - D6	Krishna Godavari Dhirubhai 6
KI	Kilo litre
KM	Kilometer
LK	Line kilometer
Itr	Litre.
M.Sq.Km	Million square kilometer
MMSCMD	Million Metric Standard Cubic Meter per day
MMT	Million Metric Tonnes
MMTOE	Million Metric Ton of Oil Equivalent
MMTPA	Million Metric Tonnes Per Annum
Mn. Tonne	Million Tonne.
MST	Manufacturers' Sales Tax
MT	Metric Ton
MUT	Mumbai-Uran Trunk
MWh	Megawatt Hour
n.a	Not Available
NCV	Net Calorific Value
NE	North East
NELP	New Exploration Licensing Policy
NNI	Net National Income
NRBC	Northern Region Basin Coast
OEG	Oil Equivalent of Gas
PAT	Profit after Tax
PDS	Public Distribution System
PMUY	Pradhan Mantri Ujjwala Yojana
PPP	Purchasing Power Parity
PSC	Production Sharing Contract
R.E.S.	Renewable Energy Source
R/P ratio	Reserves-to-Production Ratio
RBF	Refinery Boiler Fuel and Losses
RE	Revised Estimate
RON	Research Octane Number
RSP	Retail Selling Price
S.& Cent. America	South & Central America
S.E.Z	Special Economic Zone
SAD	Special Additional Duty
SCM	Standard Cubic Meter.
SDR	Special Drawing Right
SION	Standard Input Output Norms
SKM	Square Kilometer
SRBC	Southern Region Basin Coast
t/w/d	Tonne/Well/Day
TCF	Trillion Cubic Feet
TMT	Thousand Metric Tonnes
TMTPA	Thousand Metric Tonnes per Annum
Tr.Cu.ft.	Trillion Cubic Feet
VAT	Value Added Tax
Vol.	Volume
WPI	Wholesale Price Index
WRBC	Western Region Basin Coast



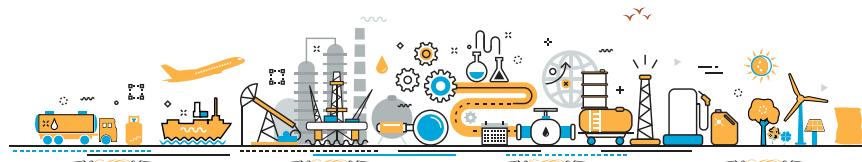
## Conversion Factors

(V) Metric Units	
<b>Linear</b>	
10 Millimetres	1 Centimetre.
10 Centimetres	1 Decimetre
10 Decimetres	1 Metre
10 Metres	1 Decametre
10 Decametres	1 Hectometre
10 Hectometres	1 Kilometre
<b>Area</b>	
100 Sq. Millimetres	1 Sq. Centimetre
100 Sq. Centimetres	1 Sq. Decimetre
100 Sq. Decimetres	1 Sq. Metre
100 Sq. Metres	1 Sq. Decametre-1 Acre.
100 Sq. Acres	1 Sq. Hectometre-1 Hectare.
100 Hectares	1 Sq. Kilometre.
<b>Weight</b>	
10 Milligrams	1 Centigram
10 Centigrams	1 Decigram
10 Decigrams	1 Gram
10 Grams	1 Decagram
10 Decagrams	1 Hectogram
10 Hectograms	1 Kilogram.
100 Kilograms	1 Quintal
1000 Kilograms	1 Metric Tonne.
<b>Capacity</b>	
10 Millilitres	1 Centilitre
10 Centilitres	1 Decilitre
10 Decilitres	1 Litre
10 Litres	1 Decalitre
10 Decalitres	1 Hectolitre
10 Hectolitres	1 Kilolitre
<b>Volume</b>	
1000 Cubic Millimetres	1 Cubic Centimetre
1000 Cubic Centimetres	C
1000 Cubic Decimetres	1 Cubic Metre



**(VI) Linear and Square Measures**

<b>Length</b>	
1 Inch	25.4 Millimetres (mm) 0.0254 Metres.
1 Foot	12 Inches. 0.333333 Yard 0.3048 Metre(m).
1 Yard	36 Inches. 3 Feet 0.9144 Metre (m)
1 Metre	39.3701Inches. 3.28084 Feet 1.09361 Yards 0.001 Kilometre (km.)
1 Kilometre	1000 Metre (m) 0.621371 Mile
1 Mile	1760 Yard 1.60934 Kilometre (km.)
1 International	6076.12 Feet
1 Nautical Mile	1.852 Kilometre (km) 1.5152 Statute mile
<b>Area</b>	
1 Square Inch	645.16 Square Millimetres (mm <sup>2</sup> ).
1 Square Foot	0.0929030 Square Metre (m <sup>2</sup> ).
1 Square Yard	9 Square Feet. 0.836127 Square Metre (m <sup>2</sup> ).
1 Square Metre	10.7639 Square Feet. 1.19599 Square Yards.
1 Acre	4840 Square Yards 4046.86 Sq. Metres (m <sup>2</sup> ) 0.404686 Hectares.
1 Hectare	10,000 Square Metres (m <sup>2</sup> ). 2.47105.Acres. 0.01 Square Kilometre (km <sup>2</sup> )
1 Square Kilometre	100 Hectares. 0.386102 Square Mile.
1 Square Mile	640 Acres. 258.999 Hectares 2.58999 Square Kilometre (km <sup>2</sup> ).



**(VII) Mass and Weights**

1 Ounce	28.3495 Grams (g).
1 Pound	0.453592 Kilogram (Kg.)
	0.00892857 Hundred Weight
1 Kilogram	2.20462 Pounds.
	0.01 Quintal
1 Hundred Weight (Cwt)	112 Pounds.
	50.8023 Kilograms (Kg.)
1 American (Short) Ton	2000 Pounds.
	0.892857 Long Ton
	0.97185 Tonnes
1 Tonne (Metric Ton)	2204.62 Pounds
	1000 Kilograms (Kg.)
	1.10231 Short tons
	0.984207 Long Ton
1 Imperial (Long) Ton	2240 Pounds
	1.12 Short Tons.
	1.01605 Tonnes.

**(VIII) Energy and Power**

1 International Table (IT) Calorie	4.1868 Joules (J).
115 C calorie	4.1855 Joules (J)
1 Thermochemical Calorie	4.184 Joules (J)
	1000 Calories
1 Kilo Calories (IT)	3.96832 British Thermal Units
	1.163 Watt Hours
	1 Thermie
1 Kilowatt Hour	3412.14 British Thermal Units
	859.845 Kilo Calories
	3.6 Megajoules (MJ)
	1.34102 Horse Power Hours.
1 Therm	100,000 British Thermal Units (BTU).
	105.506 Megajoules (MJ)
	29.3071 Kilowatt Hours
	25.1996 Thermies
	25200 Kilocalories
1 Metric Horsepower (Pferdestaerke or Cheval Vapeur)	735.499 watts (W).
	542.476 Foot Pounds Force/Second.
	0.986320 Imperial Horse Power
1 Imperial Horsepower	745.700 Watts (W)
	550 Foot Pounds Force/Second
	1.01387 Metric Horse Power.
1 Kilowatt	737.562 Foot Pounds Force/Second
	1.35962 Metric Horsepower
	1.34102 Imperial Horsepower.
	1000 Watts.
1 BTU	0.252 Kilocalories
	1.055 Kilojoules



## (IX) Cubic Measures Volume

1 Cubic Inch	16.3871 Cubic Centimetres (cm <sup>3</sup> )
1 Pint	0.568261 Cubic Decimetres (dm <sup>3</sup> ) or Litres. 61.024 Cubic Inches 1.75975 Pints
1 Litre	1 Cubic Decimeter (dm <sup>3</sup> ) 0.264172 American Gallons 0.219963 Imperial Gallons 0.0353147 Cubic Foot
1 Hectolitre	100 Cubic Decimetres (dm <sup>3</sup> ) or 100 Litres
1 American Gallon	231 Cubic Inches 3.78541 Cubic Decimetres or Litres 0.832674 Imperial Gallon. 0.133681 Cubic Foot. 0.0238095 American Barrel. 0.00378541 Cubic Metre (m <sup>3</sup> )
1 Imperial Gallon	277.420 Cubic Inches 4.54609 Cubic Decimetres (dm <sup>3</sup> ) or Litres 1.20095 American Gallon 0.160544 Cubic Foot 0.02894 American Barrel 0.00454609 Cubic Metre (m <sup>3</sup> )
1 Cubic Foot	28.3168 Cubic Decimetres (dm <sup>3</sup> ) or Litres 7.48052 American Gallons 6.22883 Imperial Gallons 0.17811 American Barrel 0.0283168 Cubic Metre (m <sup>3</sup> )
1 Americal Barrel	9702 Cubic Inches 158.987 Cubic Decimetres (dm <sup>3</sup> ) or Litres 42 American Gallons 34.9726 Imperial Gallons 5.6146 Cubic Feet 0.158987 Cubic Metre (m <sup>3</sup> )
1 Cubic Metres	1000 Litres. 264.172 American Gallons 219.969 Imperial Gallons 35.3147 Cubic Feet
1 Kilolitre	1000 Cubic Decimetres (dm <sup>3</sup> ) or Litres 6.28981 Americal Barrels.
1 Gross Ton (Shipping)	2.83168 Cubic Metres or 100 Cubic Feet or Permanently Enclosed Space
1 Ton of Liquefied Methane	Approx. 16 Barrels Approx. 1400 Cubic Metres of Natural Gas depending upon Methane Content



## (X) Product Conversion Factor

(Conversion Factor from Volume to Tonnes at Natural Temp.)

Product	Litres to Metric Tonnes	Tonnes per K.L	American Barrels to Metric Tonnes
Aviation Spirit 100/130	1421	0.7034	8.94
Aviation Spirit 144/145	1449	0.6901	9.11
Aviation Spirit 73 ON	1432	0.6983	9.01
Motor Spirit 79 ON	1427	0.7008	8.98
Motor Spirit 80 ON	1427	0.7008	8.98
Motor Spirit 93 ON	1386	0.7215	8.72
Motor Spirit 95 ON	1359	0.7358	8.55
Motor Spirit 83 ON/87 ON	1411	0.7087	8.88
JP-4	1384	0.7225	8.71
JP-5	1273	0.7855	8.01
Aviation Turbine Fuel	1288	0.7764	8.10
Naphtha	1467	0.6817	9.23
Power Alcohol	1286	0.7776	8.09
Benzol	1154	0.8666	7.26
SBP Spirit/Hexane	1457	0.6863	9.16
Mineral Turpentine (Laws 140/205)	1302	0.7680	8.19
Liquefied Petroleum Gas	1785	0.5602	11.23
Superior Kerosene	1285	0.7782	8.08
Inferior Kerosene	1265	0.7905	7.96
Power Kerosene (Vap. Oil)	1251	0.7994	7.87
High Speed Diesel	1210	0.8263	7.61
Light Diesel Oil	1172	0.8532	7.37
Malarial Oil	1172	0.8532	7.37
Special Larvicides	1175	0.8511	7.39
Furnace Oil	1071	0.9337	6.74
Tea Drier Oil	1071	0.9337	6.74
Hot Heavy Stock/LSHS	1017	0.9833	6.40
Refinery Gas/Ref. Boiler Fuel	1071	0.9337	6.74
Lubricants/Greases	1114	0.8977	7.01
Jute Batching Oil/Wash Oils	1167	C	7.34
Bitumen	1002	0.9980	6.30
SBP/Alcohol Mixture	1414	0.7072	8.89
Methanol Mixture	1106	0.9042	6.96
Carbon Black Feed Stock	1134	0.8818	7.13
Carburetor Testing Fluid	1388	0.7205	8.73
Benzene	1131	0.8812	7.05
Toluene	1148	0.8711	7.19
Demineralised Water	1002	0.9930	6.30
S. Glass Kleanzit	1003	0.9970	6.31
Miscellaneous	1114	0.8977	7.01
Wax/P. Coke/Chemicals	1114	0.8977	7.01
Aromex	1221	0.8190	7.68
Linear Alkyl Benzene Feed Stock	1205	0.8239	7.88



## (XI) Volume per Metric Ton of Petroleum Products

Products	Kilolitre	Imperial Gallon	U.S. Gallon	Barrel
Liquefied Petroleum Gas	1.8519	407.365	489.213	11.648
Aviation Spirit	1.3699	301.332	361.873	8.613
Natural Gasoline	1.3514	297.265	356.990	8.496
Motor Spirit	1.3514	297.265	356.990	8.496
Kerosene	1.2346	271.569	326.137	7.764
Jet Fuel	1.2346	271.569	326.137	7.764
Distillate Fuel Oil	1.1494	252.415	293.522	6.988
Lubricating Oil	1.1111	252.845	303.647	7.231
Fuel Oil N.O.S.	1.0939	241.727	290.301	6.911
Residual Fuel Oils	1.0526	231.551	278.071	6.623
Asphalt and Bitumen	0.9615	211.515	254.013	6.050
Crude Oil	1.1856	260.910	313.340	7.441

Source: Energy Statistics Year book. Please refer the <https://unstats.un.org/unsd/energy/yearbook/conversion.htm>

## (XII) Conversion Factors for Duty Reduction from 150 C to 29.50 C

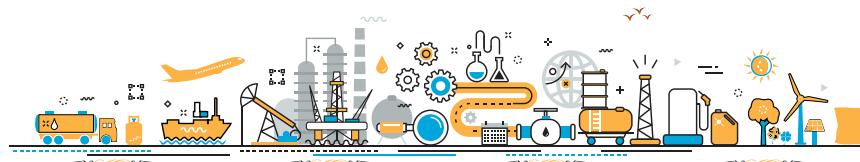
Product	Conversion Factor
Aviation Spirit 100/130	0.9827
Aviation Spirit 114/145	0.982
Aviation Spirit 73 Clear	0.9824
Aviation Turbine Fuel	0.9862
Motor Spirit 83	0.983
Motor Spirit 93	0.9836
High Speed Diesel Oil	0.9879
Kerosene	0.9864
Light Diesel Oil	0.9877
Furnace Oil	0.9899
Special Boiling Point Spirit 55/115	0.9820
Special Boiling Point Spirit 64/69	0.9806
Solvent 1425	0.9820
Hexane	0.9806

Source: Statistical Review of World Energy – updated July 2021.

## (XIII) Crude Oil Conversions\*

To convert the following into	Metric Tonnes	Barrels	Kilolitres	1000 Imp. Gallon	1000 U.S Gallon
Metric Tons	1	7.33	1.16	0.256	0.308
Barrels	0.136	1	0.159	0.035	0.042
Kilolitres	0.863	6.29	1	0.220	0.264
1,000 Imp. Gallons	3.91	28.6	4.55	1	1.201
1,000 U.S. Gallons	3.25	23.8	3.79	0.833	

\* Based on World Average Gravity (Excluding Natural Gas liquids)



**(XIV) Natural Gas Conversions**

1 SCM (Standard Cubic Meter)	= 1 cubic metre @ 1 atmosphere pressure and 15.56 ° C	
1 Cubic Metre	= 35.31 Cubic feet	
1 BCM(Billion Cubic Metre) / Year of gas (consumption or production)	= 2.74 MMSCMD	365 Days a Year
1 TCF (Trillion Cubic Feet) of Gas Reserve	= 3.88 MMSCMD	100% Recoverable for 20 years @ 365 days/ annum)
1 MMTPA of LNG	=3.60 MMSCMD	Molecular Weight of 18 @ 365 days/ annum)
1 MT of LNG	=1314 SCM	Molecular Weight of 18
Gross Calorific Value (GCV)	10000 Kcal/ SCM	
Net Calorific Value (NCV)	90% of GCV	
1 Million BTU (MMBTU)	= 25.2 SCM	@10000 Kcal/SCM; 1 MMBTU= 252,000 Kcal)
Specific Gravity of Gas	0.62	Molecular Weight of Dry Air=28.964 gm/mole)
Density of Gas	=0.76 Kg/SCM	Molecular Weight of Gas 18 gm/mol
Gas required for 1 MW of Power generation	=4128 SCM per Day	@50% efficiency of Combined Cycle Operation; at a station heat rate of 860 Kcal/Kwh~ 1720 Kcal/ Kwh@50% Thermal Efficiency)
Power Generation from 1 MMSCMD Gas	=242 MW	@50% efficiency of Combined Cycle Operation; at a station heat rate of 860 Kcal/Kwh~ 1720 Kcal/ Kwh@50% Thermal Efficiency)

Source: PPAC

**(XV) Other Conversion**

## Crude oil\*

	tonnes (metric)	kilolitres	barrels	US gallons	tonnes/year
<b>Multiply by</b>					
Tonnes (metric)	1	1.165	7.33	307.86	-
Kilolitres	0.8581	1	6.2898	264.17	-
Barrels	0.1364	0.159	1	42	-
US gallons	0.00325	0.0038	0.0238	1	-
Barrels/day	-	-	-	-	49.8

**Products**

From	To convert			
	barrels	tonnes	kilolitres	tonnes
	to tonnes	to barrels	to tonnes	to kilolitres
<b>Multiply by</b>				
Liquefied petroleum gas (LPG)	0.086	11.60	0.542	1.844
Gasoline	0.120	8.35	0.753	1.328
Kerosene	0.127	7.88	0.798	1.253
Gas oil/ diesel	0.134	7.46	0.843	1.186
Residual fuel oil	0.157	6.35	0.991	1.010
Product basket	0.125	7.98	0.788	1.269



Natural Gas (NG) and Liquefied Natural Gas (LNG)						
From	To					
	billion cubic metres NG	billion cubic feet NG	million tonnes oil equiva- lent	million tonnes LNG	trillion British thermal units	million barrels oil equiva- lent
<b>Multiply by</b>						
1 billion cubic metres NG	1	35.3	0.90	0.74	35.7	6.60
1 billion cubic feet NG	0.028	1	0.025	0.021	1.01	0.19
1 million tonnes oil equivalent	1.11	39.2	1	0.82	39.7	7.33
1 million tonnes LNG	1.36	48.0	1.22	1	48.6	8.97
1 trillion British thermal units	0.028	C	0.025	0.021	1	0.18
1 million barrels oil equivalent	0.15	5.35	0.14	0.11	5.41	1

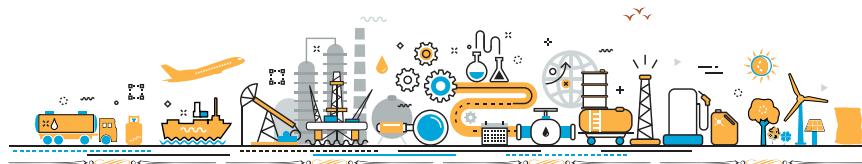
Units	
1 metric tonne	1.1023 short tons 2204.62 lb.
1 kilolitre	6.2898 barrels 1 cubic metre
1 kilocalorie (kcal)	4.187 kJ 3.968 Btu
1 kilojoule (kJ)	0.239 kcal 0.948 Btu
1 British thermal unit (Btu)	0.252 kcal 1.055 kJ
1 kilowatt-hour (kWh)	860 kcal 3412 Btu 3600 kJ
1 barrel of ethanol	0.57 barrel of oil
1 barrel of biodiesel	0.88 barrel of oil

\*Based on worldwide average gravity.

Source: BP Statistical Review of World Energy 2016

Calorific equivalents	
One tonne of oil equivalent equals approximately:	
Heat units	10 million kilocalories
	42 gigajoules
	40 million Btu
Solid fuels	1.5 tonnes of hard coal
	3 tonnes of lignite
Electricity	12 megawatt-hours

One million tonnes of oil or oil equivalent produces about 4400 gigawatt-hours (=4.4 terawatt hours) of electricity in a modern power station.



**(XVI) Petroleum Specific Gravities**

Degrees	Specific	Barrels	Long
A.P.I.	Gravity	per tonne*	Ton*
25	0.9042	6.98	7.09
26	0.8984	7.02	7.13
27	0.8927	7.06	7.18
28	0.8871	7.10	7.22
29	0.8816	7.15	7.27
30	0.8762	7.19	7.31
31	0.8708	7.24	7.36
32	0.8654	7.28	7.40
33	0.8602	7.33	7.45
34	0.8550	7.37	7.49
35	0.8499	7.42	7.54
36	0.8448	7.46	7.58
37	0.8398	7.51	7.63
38	0.8348	7.55	7.67
39	0.8299	7.60	7.72
40	0.8251	7.64	7.76
41	0.8203	7.69	7.81
42	0.8156	7.73	7.85

\*Approximate figure at 15.6 degrees C or 60 degrees F.

**(XVII) Petroleum Specific Gravity Ranges**

Products	Specific	Barrels
	Gravity	Per tonne
Crude Oils	0.80-0.97	8.0-6.6
Aviation gasolines	0.70-0.78	9.1-8.2
Motor Gasolines	0.71-0.79	9.0-8.1
Kerosene	0.78- 0.84	8.2-7.6
Gas Oil	0.82-0.90	7.8-7.1
Diesel Oils	0.82-0.92	7.8-6.9
Lubricating Oils	0.85-0.95	7.5-6.7
Fuel Oils	0.92-0.99	6.9-6.5
Asphaltic Bitumen	1.00-1.10	6.4-5.8

**(XVIII) Multiplier for Conversion of one Metric Tonne of Petroleum Productsto one Tonne of Oil Equivalent**

Product	Multiplier
L.P.G.	1.130
Naphtha	1.075
Aviation Gasoline	1.070
Motor Gasoline	1.070
Jet Fuel	1.065
Kerosene	1.045
Gas/diesel	1.035
Residual Fuel Oils	0.985
Others	0.960



## (XIX) Average International Calorific Value of different Fuels

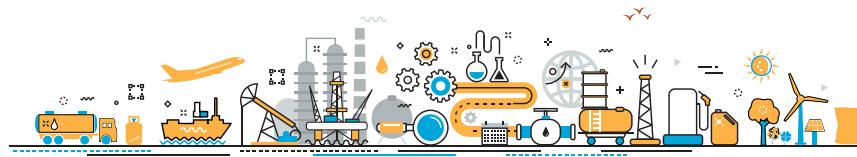
Products	K Cals./Kg. (M. Cals/Tonne)	BTUs/Kg.
<b>A. Oil Equivalence:</b>		
Average Crude Oil/NGLS(a)	10300	40870
United Nations	10175	40375
<b>B. Oil Products:</b>		
NGL	12135	48150
Motor Gasoline	11135	44190
Kerosene	10638	42210
Jet Fuel	11790	46790
Gas Oil	10790	42820
Fuel Oil	10440	41430
<b>C. Coal Equivalence:</b>		
Average Hard Coal (b)	7000	27775
<b>D. INDIA</b>		
Hard Coal	5000	19840
Lignite-Brown Coal	2310	916
Firewood@	4750	18848
Charcoal@	6900	27379
<b>E. Natural Gas-Production: (Average) India</b>		<b>K cals/Cu. Metre</b>
		8000-9480
<b>F. Electricity:</b>		
Output Basis(c)	860	
Fuel Input basis(d)	2500-2700	

**Note:**

- (a) Represent average global factor for crude Oil/NGL production. For a specific crude oil, relevant conversion factors may have to be used.
- (b) Factor used by United Nations to represent average calorific value of hard coals for purposes of standardising coal production to hard coal equivalent base.
- (c) Calorific value of 1kwh of electricity.
- (d) Represents K cals of hydro-carbon energies required to produce 1 kwh of electricity.

@ :As per Report of Fuel Policy Committee 1974

Conversion Factor: 1 K Cal=4.19 KJoules.



## (XX) Coefficients used to Convert from Original Units into Standard Coal Equivalents

Products	Hard Coal	Lignite Brown Coal	Fuel Wood
<b>A. Primary Solids</b>			
Standard Factor	1	0.385	0.333
India	0.714	0.330	
<b>B. Other Hydrocarbons</b>			
Petroleum Crude		1.454	
Natural Gas Liquids (wt.av.)		1.542	
Gasoline		1.500	
Kerosene & Jet Fuel		1.474	
Gas-Diesel Oil		1.450	
Residual Fuel Oil		1.416	
Liquefied Petroleum Gases		1.554	
Natural Gasoline		1.532	
Condensate		1.512	
Other Natural Gas Liquids		1.512	
Natural Gas (in Tera joules)*		34.121	
Other Gases(in Tera joules)*		34.121	
Hydro, Nuclear and Geothermal Electricity (In 1,000 kwh)		0.123	

**Note:**

The average calorific value of gas is measured in Kcal/m<sup>3</sup> (st.) i.e. in Kcal per cubic metre of gas under standard conditions at 150 C, 013.25 mbar, dry.



## (XXI) Coal Replacement and Equivalents of different Fuels

Fuels	Original	Unit	Unit
	Unit	million tonnes of coal equivalent (mtce)	million tonnes of coal replacement (mtcr)
Coal coking (6640 K cal/Kg), Non Cooking coal used in steam generation (500 Kcal/kg)	1mt	1.0	1.0
Hard Coke	1mt	1.3	1.3
Soft Coke	1mt	1.5	1.3
Firewood (4750 Kcal/Kg.)	1mt	0.95	0.95
Char Coal (6900 Kcal/Kg.)	1mt	1.0	1.0
<b>Oil Products: 10,000 Kcal/Kg.</b>			
Black Products:(Fuel Oil, FO, Refinery Fuel, LSHS & HHS)	1mt	2.0	2.0
Kerosene & LPG	1mt	2.0	8.0
HSDO & LDO	1mt	2.0	9.0
Motor Spirit & Jet Fuel	1mt	2.0	7.5
Natural Gas(9000k CAL/kg)	109m3	1.8	3.6
Electricity	109 kwh	1.0	1.0

m : Million mt: Million Tonnes

Source : Fuel Policy Committee 1974

## (XXII) Approximate Calorific Equivalents(Oil =10000 Kcal/Kg.)

Items	Million Tonnes of Oil equals
Heat Units	40 million BTU
	397 million therms
	10,000 Tera calories
Solid Fuels	1.5 million tonnes of Coal
	3.0 million tonnes of lignite
	1 Cub metre = 9000 K cal.
Natural Gas (1 cub.ft.=1000 BTU)	1.111 thousand million cub metres
	39.2 thousand million cubic feet
	107 million cubic feet per day of a year
Electricity	12 thousand million KWH
(1 Kwh=3412 BTU)	
(1 Kwh=860 KCal)	



**(XXIII) Heat Units & others expressed in terms of Million Tonnes of Oil**

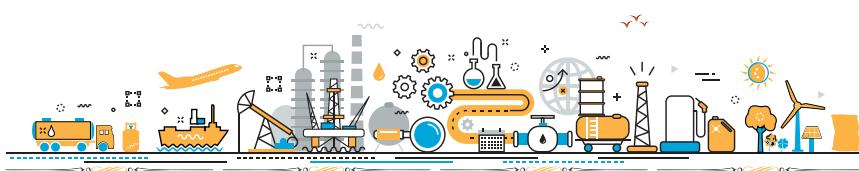
Items	Million Tonnes of Oil equals
<b>Heat Units</b>	
10 million BTU	0.25
100 million therms	0.25
10000 Tera calories	1
<b>Solid Fuels</b>	
1 million tonne of coal	0.67
1 million tonne of lignite approximates to	0.33
<b>Natural Gas</b>	
1 thousand million cubic metres(BCM)	0.9
<b>Town Gas</b>	
1 thousand million cubic Metres (BCM)	0.42
<b>Electricity</b>	
12 thousand million KWH	0.86

**Note:** One Million tonne of oil produces about 4000 million units(KWH) of electricity in a modern power station.

Source: BP Statistical Review of World Energy



## NOTES







Website : <https://mopng.gov.in>

For any further information & query, please contact:

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