



# India's Oil & Gas READY RECKONER

Oil & Gas Industry Information at a Glance

**FY 2022-23 (H1)**

[April 2022 - September 2022]

**Petroleum Planning & Analysis Cell**  
(Ministry of Petroleum & Natural Gas, Government of India)

### **Suggestions & Feedback**

Readers are invited to send their suggestions & feedback for improvement of the Ready Reckoner to:

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PPAC also thanks various organizations from the Oil & Gas sector for providing useful inputs for inclusion in the Ready Reckoner.

### **Disclaimer**

While every care is taken to check the accuracy of data & information included in the Ready Reckoner, PPAC would not be held responsible for any loss, damage etc. due to action taken by any one based on information contained in this publication.

# Preface

Petroleum Planning & Analysis Cell (PPAC), an attached office of the Ministry of Petroleum & Natural Gas (MoPNG), Government of India, collects, compiles, analysis and disseminate data on the Oil and Gas Sector. The data is collected from Public Sector Oil Companies, Government Agencies and Private Companies. PPAC publishes the 'Ready Reckoner' bi-annually, which is a comprehensive databank for key Oil & Gas industry of the country. The current edition of Ready Reckoner contains the latest information for FY 2022-23 H1 (April 2022 – September 2022) and five years historical time series data covered in nine broad chapters.

The current issue of Ready Reckoner at the time when India assumes the G20 Presidency from Indonesia and will convene the G20 Leaders' Summit for the first time in the country in 2023. India is assuming the Presidency of the G20 with the motto of 'One earth, One family, One future' in tradition of our ethos 'Vasudhaiva Kutumbakam'. This spirit is exhibited in all spheres including the fight against climate change by the world as one family.

It is quite evident in the current edition of Ready Reckoner that India has significantly achieved various milestones in the energy sector. Some of the key achievements and recent developments include:

- At the heart of India's vision of a safe planet is a one-word Mantra – Lifestyle



for Environment, that Hon'ble Prime Minister set forth in our National Statement at COP26. Mission LIFE was launched by our Hon'ble Prime Minister on 20th October 2022.

- Taking its commitment forward, at COP27, India submitted its Long-Term Low Emission Development Strategy.
- The target of supplying petrol mixed with 10 per cent ethanol (10 per cent ethanol, 90 per cent petrol) was achieved in June 2022, ahead of the original schedule of November 2022.
- CCEA approved higher ethanol price derived from different sugarcane-based raw materials under the EBP Programme for the forthcoming sugar season 2022-23 and the Ethanol Supply Year (ESY) from 1st December 2022 to 31st October 2023. This will help in achieving

advanced target to sell 20% Ethanol Blended Petrol (EBP).

- The Government of India has preponed the target from 2030 to 2025-26 by changing in the Biofuel Policy for 20% ethanol blending with petroleum.
- Asia's largest Compressed Biogas plant was inaugurated in Sangrur in October 2022 under the Sustainable Alternative Towards Affordable Transportation (SATAT) scheme. The plant's present production is about 6 TPD CBG, with maximum capacity to produce 33 TPD of CBG.
- Hon`ble Prime Minister dedicated to the Nation the U-field Offshore Deep-Water Project on 12th November 2022. The project's deepest gas discovery has production potential of 3 million Metric Cubic Metre per day.
- OMCs playing active role in Energy Transition and have alternate fuel at over 9,000 outlets including CNG, CBG, LPG and EV charging.
- India is exploring various ways to decarbonize trucking sector and saw First Liquified Natural Gas (LNG) fuelled green truck with 1000 lt fuel tank with travelling potential upto 1400 Km at one go.

- The FY2022-23(H1) POL consumption of 108MMT marked the highest in the history from FY1997-98 till date.

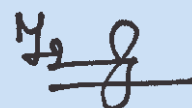
In line with the changes in energy scenario, the PPAC has undertaken reassessment of its Energy Demand Projection Model. It is also undertaking various other studies to assist Oil & Gas sector in its endeavour of energy transition.

PPAC publishes the Oil & Gas industry data on its website [www.ppac.gov.in](http://www.ppac.gov.in). The Ready Reckoner is also published on PPAC's website (<https://www.ppac.gov.in>) and on mobile app - PPACE.

The publication of Ready Reckoner is a concerted effort by all Divisions of PPAC and I would like to place on record my sincere appreciation of the diligent efforts of the officers and staff of PPAC who have contributed to bring out this edition in a timely manner. I also acknowledge the sincere support of the Oil & Gas industry and various organizations for their timely inputs.

PPAC welcomes feedback and suggestions for broadening the coverage and contents of the data being disseminated through this publication.

The comments and feedback may please be sent to [epankaj.sharma@ppac.gov.in](mailto:epankaj.sharma@ppac.gov.in) and [dirgen@ppac.gov.in](mailto:dirgen@ppac.gov.in).



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December 19, 2022



# Vision & Mission

## Vision

To be the most authentic official source for data and policy analysis on the hydrocarbon sector in the country.

## Mission

1. To monitor and analyze developments in the domestic oil and gas sector.
2. To undertake analysis of domestic and international energy markets.
3. To develop a cooperative framework for exchange of information and conduct of studies with other countries and international organizations in the energy sector.
4. To strengthen the existing data system in PPAC by adopting the latest techniques and best practices.
5. To render effective assistance and advice to the Ministry of Petroleum & Natural Gas in the discharge of its responsibilities, particularly pricing of petroleum products and administration of subsidy schemes.

## Objectives

1. To monitor and analyze trends in prices of crude oil, petroleum products and natural gas and their impact on the oil companies and consumers and prepare appropriate technical inputs for policy making.
2. To monitor developments in the domestic market and analyze options for policy changes in pricing, transportation and distribution of petroleum products.
3. To collect compile and disseminate data on the domestic oil and gas sector in a continuous manner and maintain the data bank.
4. To ensure quality of data in terms of prescribed parameters such as accuracy, completeness and timeliness.
5. To disseminate periodic reports on various aspects of oil and gas sector.
6. To ensure effective administration of the subsidy schemes notified by the Government.

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# Chapter-1 General



**Table 1.1 : Selected indicators of the Indian economy**

General									
Sl. no.	Particular	Source	Unit/ Base	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
1	Projected Total Population	Report of the Technical Group on Population Projections\$	('000)	1,323,419	1,337,640	1,351,862	1,365,482	-	-
2	GDP At constant (2011-12 Prices)	MoC&I	Growth %	6.5 2nd RE	4.0 1st RE	-6.6 1st RE	8.7 PE (2021-22)	20.1 E (Q1, 2021-22)	13.5 QE (Q1, 2022-23)
3	Agricultural production (Foodgrains)	MoA	Million tonne	285.2	297.5	310.7	315.7 4th AE	150.5 1st AE (Kharif)	149.9 1st AE (Kharif)
			Growth %	0.1	4.3	4.5	1.6	4.2	-
4	Index of Industrial Production(Base: 2011-12)	MoSPI	Growth %	3.8	-0.8	-8.4	11.4	23.4#	7.7#
5	Imports^	MoC&I	\$ Billion	514.1	474.7	394.4	611.9	218.9	318.0
6	Exports^	MoC&I	\$ Billion	330.1	313.4	291.8	419.7	164.4	193.5
7	Trade balance	MoC&I	\$ Billion	-184.0	-161.3	-102.6	-192.2	-53.8	-124.5
8	Wholesale Price Index (all commodities) (average)	MoC&I	2011-12=100	119.8	121.8	123.4	139.4	134.3	153.7
9	All India Consumer Price Index (average):								
	i) Industrial workers	Labour Bureau, Govt. of India	2001=100 2016=100 (wef Sep.2020) <sup>&amp;</sup>	299.9	322.5	119.0	127.7	121.9	129.6
	ii) Agricultural labourers		1986-87=100	907.3	979.6	1033.7	1108.0	1108.0	1128.7
	iii) Rural labourers		1986-87=100	915.1	986.0	1039.9	1119.0	1119.0	1140.5
10	Foreign exchange reserves- Total	RBI	\$ Billion	411.9	475.6	579.3	617.6	638.6	576.1¥
11	Outstanding external liabilities (as of end of financial year)	MoF	₹ Crore	2,69,961	2,99,250	3,88,472	4,29,403		
12	Outstanding 'internal debt and other liabilities' (as of end of financial year)	MoF	₹ Crore	88,13,254	99,47,402	1,17,39,338	1,31,58,490		
13	Centrally Sponsored Schemes & other transfers	MoF	₹ Crore	4,77,967	6,31,969	7,61,408	6,41,686		
14	Gross fiscal deficit	MoF	%	3.4	4.6	9.5	3.4		

**Note :** \$: Population figures have been taken from table no.11 of 'Report of the Technical Group on Population Projections'; #IP is for the month of Apr-Aug; Apr'21 growth rate to be interpreted considering COVID since Mar'20; Avg. of September 2020-Mar 21 as base year changed to 2016 from 2001 wef Sep 2020; 2020-21-as on March 26, 2021, ^Imports & Exports are for Merchandise for the month of August-22; &: Since September-2020 base period is considered as 2016; average 'Consumer Price Index' is the arithmetic average of monthly CPI for April to September period.¥: From table-1 of Half Yearly Report on Management of Foreign Exchange Reserves: April - September 2022 dated 4th November-2022; E: Estimates; PE:Provisional Estimates; AE-Advanced Estimates; RE- Revised Estimates; QE- Quick Estimates.¥: FY2020-21 as on March 26, 2021, FY2021-22 as on March 26, 2022; Sept-2021 as on Sept 24, 2021 and Sept-2022 as on Sept 30, 2022.(P): Provisional; MoA: Ministry of Agriculture; MoF: Ministry of Finance; MoC&I: Ministry of Commerce & Industry; MoSPI: Ministry of Statistics and Programme Implementation; RBI: Reserve Bank of India; E: Estimates; PE: Provisional Estimates; QE: Quick Estimates; AE: Advance Estimates; RE: Revised Estimates; FE: Final Estimates

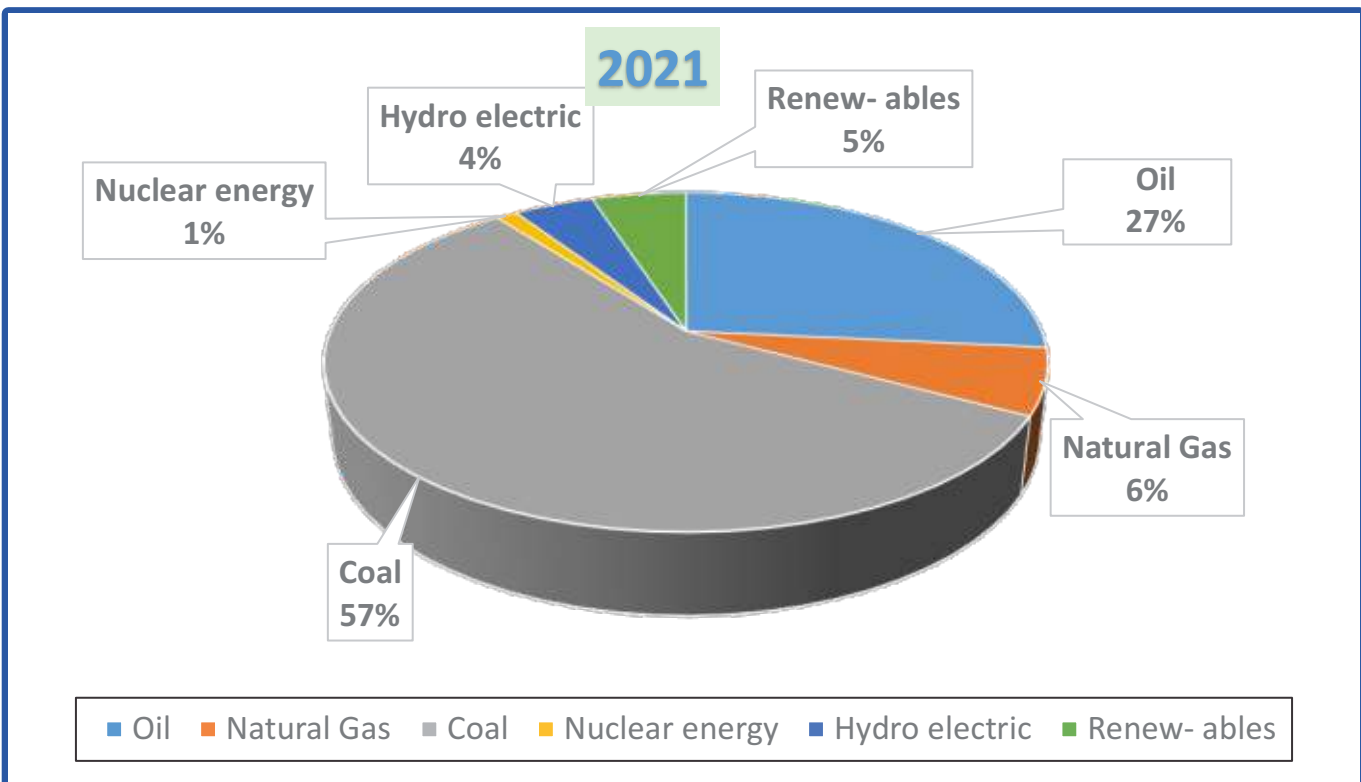
Petroleum									
Sl. no.	Particular	Source	Unit/ Base	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
1	Crude oil production in India	ONGC/OIL/DGH	MMT	34.2	32.2	30.5	29.7	14.9	14.7
2	Consumption of petroleum products in India	OMCs/PPAC	MMT	213.2	214.1	194.3	204.7	95.2	108.0
3	Petroleum products production in India	Oil Cos	MMT	262.4	262.9	233.5	254.3	119.3	131.4
4	Imports & exports								
	Crude oil imports	Oil Cos	\$ Billion	111.9	101.4	62.2	120.4	51.4	89.0
	Petroleum products imports	Oil Cos & DGCIS	\$ Billion	16.3	17.7	14.8	25.2	10.4	14.2
	Total petroleum imports (crude oil + petroleum products)	Oil Cos & DGCIS	\$ Billion	128.3	119.1	77.0	145.7	61.8	103.2
	Petroleum products exports	Oil Cos	\$ Billion	38.2	35.8	21.4	44.4	17.9	33.1
	Gross petroleum imports as % of India's gross imports in value terms	MOC&I/PPAC	%	24.9	25.1	19.5	23.8	28.3	32.9
	Gross petroleum exports as % of India's gross exports in value terms	MOC&I/PPAC	%	11.6	11.4	7.3	10.6	10.9	17.5
7	Import dependency (based on consumption)	PPAC	%	83.8	85.0	84.4	85.7	84.8	86.8

**Note :** (P): Provisional, OMCs: Oil Marketing Companies, PPAC: Petroleum Planning & Analysis Cell

Natural gas									
Sl. no.	Particular	Source	Unit/ Base	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
1	Gross Production	ONGC/OIL/DGH	MMSCM	32,875	31,184	28,672	34,024	16,891	17,184
2	Net Production (net of flare and loss)	ONGC/OIL/DGH	MMSCM	32,058	30,257	27,784	33,131	16,470	16,772
3	LNG Import	LNG importing Cos, DGCIS	MMSCM	28,740	33,887	33,031	30,776	16,572	14,706
4	Total Consumption including internal use (Net Production+ LNG import)		MMSCM	60,798	64,144	60,815	63,907	33,042	31,478
5	Import dependency (based on consumption)	PPAC	%	47.3	52.8	54.3	48.2	50.2	46.7

Note : MMSCMD : Million Standard Cubic Meter Per Day

### India's Energy Basket in 2021



Source: BP Statistical Review of World Energy, 2022.



**Table 1.2 : Global primary energy consumption, 2021**

Sl. no.	Country	Unit	Oil	Natural Gas	Coal	Nuclear Energy	Hydro Electricity	Renewables	Total Energy
1	China	Mtoe	709.94	325.37	2056.56	87.91	292.27	270.08	3742.13
	Percentage share	%	18.97	8.69	54.96	2.35	7.81	7.22	100%
	Per capita consumption	Toe	0.50	0.23	1.46	0.06	0.21	0.19	2.65
2	USA	Mtoe	817.56	710.31	252.30	176.71	57.93	178.51	2193.33
	Percentage share	%	37.27	32.38	11.50	8.06	2.64	8.14	100%
	Per capita consumption	Toe	2.47	2.14	0.76	0.53	0.17	0.54	6.62
3	India	Mtoe	218.24	53.41	479.44	9.47	36.04	42.68	839.30
	Percentage share	%	26.00	6.36	57.12	1.13	4.29	5.09	100%
	Per capita consumption	Toe	0.16	0.04	0.35	0.01	0.03	0.03	0.61
4	Russian Federation	Mtoe	155.61	407.78	81.43	47.98	48.23	1.46	742.49
	Percentage share	%	20.96	54.92	10.97	6.46	6.50	0.20	100%
	Per capita consumption	Toe	1.08	2.83	0.57	0.33	0.33	0.01	5.15
5	Japan	Mtoe	153.42	89.03	114.50	13.21	17.45	31.39	419.00
	Percentage share	%	36.62	21.25	27.33	3.15	4.17	7.49	100%
	Per capita consumption	Toe	1.22	0.71	0.91	0.10	0.14	0.25	3.33
6	Canada	Mtoe	96.74	102.39	11.45	19.84	85.62	13.79	329.83
	Percentage share	%	29.33	31.04	3.47	6.01	25.96	4.18	100%
	Per capita consumption	Toe	2.54	2.69	0.30	0.52	2.25	0.36	8.67
7	Germany	Mtoe	97.08	77.78	50.49	14.89	4.29	54.40	298.93
	Percentage share	%	32.48	26.02	16.89	4.98	1.44	18.20	100%
	Per capita consumption	Toe	1.17	0.94	0.61	0.18	0.05	0.65	3.59
8	Brazil	Mtoe	103.40	34.75	17.00	3.17	81.57	57.04	296.93
	Percentage share	%	34.82	11.70	5.73	1.07	27.47	19.21	100%
	Per capita consumption	Toe	0.49	0.16	0.08	0.01	0.38	0.27	1.40
9	Iran	Mtoe	75.33	207.17	1.77	0.76	3.35	0.41	288.78
	Percentage share	%	26.09	71.74	0.61	0.26	1.16	0.14	100%
	Per capita consumption	Toe	0.90	2.47	0.02	0.01	0.04	0.00	3.44
10	South Korea	Mtoe	125.08	53.74	72.46	34.09	0.69	10.49	296.55
	Percentage share	%	42.18	18.12	24.44	11.50	0.23	3.54	100%
	Per capita consumption	Toe	2.41	1.04	1.40	0.66	0.01	0.20	5.72
11	Saudi Arabia	Mtoe	152.91	100.77	0.09	0.00	0.00	0.19	253.96
	Percentage share	%	60.21	39.68	0.03	-	-	0.07	100%
	Per capita consumption	Toe	4.39	2.89	0.00	-	-	0.01	7.29
12	France	Mtoe	67.49	36.98	5.55	81.84	13.03	17.66	222.56
	Percentage share	%	30.32	16.62	2.50	36.77	5.86	7.93	100%
	Per capita consumption	Toe	1.00	0.55	0.08	1.21	0.19	0.26	3.30
13	Indonesia	Mtoe	65.67	31.86	78.32	0.00	5.55	15.04	196.44
	Percentage share	%	33.43	16.22	39.87	-	2.83	7.66	100%
	Per capita consumption	Toe	0.24	0.12	0.29	-	0.02	0.06	0.72
14	United Kingdom	Mtoe	57.91	66.11	5.02	9.90	1.13	29.62	169.69
	Percentage share	%	34.13	38.96	2.96	5.83	0.66	17.46	100%
	Per capita consumption	Toe	0.86	0.98	0.07	0.15	0.02	0.44	2.52
15	Mexico	Mtoe	59.39	75.80	5.53	2.57	7.81	9.23	160.33
	Percentage share	%	37.04	47.28	3.45	1.60	4.87	5.76	100%
	Per capita consumption	Toe	0.46	0.59	0.04	0.02	0.06	0.07	1.24
	Sub total	Mtoe	2955.76	2373.26	3231.93	502.35	654.97	731.99	10450.25
	Others	Mtoe	1318.34	1095.68	589.16	101.78	305.88	220.58	86.80
	Total World	Mtoe	4274.10	3468.94	3821.09	604.12	960.85	952.57	10537.05
	Percentage share	%	40.56	32.92	36.26	5.73	9.12	9.04	100%
	Per capita consumption	Toe	0.55	0.45	0.49	0.08	0.12	0.12	1.36

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

**Note:** For calculation of per capita consumption population figures have been taken from World Bank International Data Base for 2020.

Conversion factor used for Oil as per product basket of 1 Mtoe = 0.0431 Exajoules, for all other fuels 1 Mtoe = 0.0419 Exajoules. (Approximate conversion factors from BP Statistical Review of World Energy, 2021)

**Mtoe:** Million tonnes of oil equivalent, **Toe:** Tonnes of oil equivalent

Figures are for Calendar year



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# Chapter-2

## Exploration & Crude Oil Production





## Chapter-highlights

### Exploration & Crude Oil Production

- Exploration & Production industry has come a long way in India from the first oil discovery in 1889 near the town of Digboi in the state of Assam to current 26 sedimentary basins in India, covering a total area of 3.4 million square kilometer. The area is spread across on land, shallow water up to 400-meter water depth and Deepwater further up to Exclusive Economic Zone (EEZ).
- These basins are divided into three categories based on maturity of hydrocarbon resources as under:
- Category-I: Basins, which have reserves and already producing. Total 7 Basins.
- Category-II: Basins, which have contingent resources pending commercial production. Total 5 Basins.
- Category-III: Basins, which have prospective resources awaiting discovery. Total 14 Basins.
- The Government of India has taken several steps to increase the crude oil & gas production in India through various policy initiatives towards Exploration & Production activities by allocating & awarding Blocks to both National & Private E&P companies.
- In this regard, starting from Pre-Independence era (1886 – 1946) to Nomination Basis era where Petroleum Exploration License (PEL) was awarded (1947 – 1990), then Pre NELP era where Petroleum Mining Lease (PML) was awarded (1991 – 1996) then NELP (New Exploration Licensing Policy) era and then HELP (Hydrocarbon Exploration Licensing Policy) era India has taken several policy initiatives to boost domestic Crude Oil & Gas production.
- Further to the above exploration policies, MoPNG introduced DSF (Discovered Small Fields) policy in 2016 to monetizing the unmonetized/ relinquished discoveries of Nomination and PSC regimes.
- After success of DSF I (2016) & II (2018), MoPNG closed round for DSF III for 32 contract areas in 31st May 2022.
- Further to the above MoPNG has introduced OLAP (Open Acreage Licensing Policy) under HELP policy in 2016.
- After success of previous OALP rounds MoPNG has launched OALP Bid Round-VIII on 7th July, 2022 offering 10 Blocks for Exploration and Development through International Competitive Bidding. It closes on 31st December 2022. It is to be noted in FY 2021 – 22, OALP VI & VII was awarded for 21 & 8 Blocks respectively.
- The crude oil & gas production in India is mainly attributed to two National E&P companies vis-à-vis ONGC & Oil India Limited and other private E&P companies monitored by DGH under PSC, RSC & DSF regime. Indigenous Crude Oil production including condensate in FY 2021 – 22 was 29.7 MMT.
- The total indigenous crude oil production including condensate in H 1 in FY 2022 – 23 (P) is 14.7 MMT, share of ONGC was 66.7 %, share of OIL was 10.6 % and PSC was 22.7 %.
- There is a de-growth of 1.3 % in crude oil production (including condensate) in H 1 of FY 2022 – 23 as compared to H 1 of FY 2021 – 22

Table 2.1: World top 30 crude oil proved reserves countries

S. no.	Country	at end 2020		
		Thousand million tonnes	Thousand million barrels	Reserves/Production ratio
1	Venezuela	48.0	303.8	*
2	Saudi Arabia	40.9	297.5	73.6
3	Canada	27.1	168.1	89.4
4	Iran	21.7	157.8	139.8
5	Iraq	19.6	145.0	96.3
6	Russian Federation	14.8	107.8	27.6
7	Kuwait	14.0	101.5	103.2
8	United Arab Emirates	13.0	97.8	73.1
9	US	8.2	68.8	11.4
10	Libya	6.3	48.4	339.2
11	Nigeria	5.0	36.9	56.1
12	Kazakhstan	3.9	30.0	45.3
13	China	3.5	26.0	18.2
14	Qatar	2.6	25.2	38.1
15	Brazil	1.7	11.9	10.8
16	Algeria	1.5	12.2	25.0
17	Angola	1.1	7.8	16.1
18	Norway	1.0	7.9	10.8
19	Azerbaijan	1.0	7.0	26.7
20	Mexico	0.9	6.1	8.7
21	Oman	0.7	5.4	15.4
<b>22</b>	<b>India</b>	<b>0.6</b>	<b>4.5</b>	<b>16.1</b>
23	Vietnam	0.6	4.4	58.1
24	Other Africa	0.5	3.8	33.2
25	South Sudan	0.5	3.5	56.4
26	Egypt	0.4	3.1	14.0
27	Republic of Congo	0.4	2.9	25.7
28	Yemen	0.4	3.0	86.7
29	Malaysia	0.4	2.7	12.5
30	Argentina	0.3	2.5	11.3
	<b>Sub total</b>	<b>240.5</b>	<b>1703.3</b>	
	Others	3.9	29.0	
	<b>Total World</b>	<b>244.4</b>	<b>1732.4</b>	<b>53.5</b>
	of which: OECD	38.3	260.0	25.2
	Non-OECD	206.1	1472.4	66.9
	OPEC	172.0	1216.0	106.8
	Non-OPEC	72.4	516.4	24.6
	European Union	0.3	2.4	16.8
	Canadian oil sands: Total	26.2	161.4	
	of which: Under active development	3.1	18.9	
	Venezuela: Orinoco Belt	42.0	261.8	

Source: BP Statistical Review of World Energy, July 2022; \* More than 500 years.

Notes: Total proved reserves of oil - 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 total proved oil reserves 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.

Reserves-to-production (R/P) ratio - If the reserves remaining at the end of any year are divided by the production in that year, the result is the length of time that those remaining reserves would last if production were to continue at that rate. Canadian oil sands 'under active development' are an official estimate. Venezuelan Orinoco Belt reserves are based on the OPEC Secretariat and government announcements. Reserves and R/P ratio for Canada includes Canadian oil sands. Reserves and R/P ratio for Venezuela includes the Orinoco Belt. Saudi Arabia's oil reserves include NGLs from 2017. Reserves include gas condensate and natural gas liquids (NGLs) as well as crude oil. Shares of total and R/P ratios are calculated using thousand million barrels figures.

'Please note that due to process improvement for Statistical Review this reserves tables have not been updated this year.'

**Table 2.2: World top 30 crude oil producing countries, 2021**

S. no.	Country	Production*	
		Million tonnes	Million barrels daily
1	US	711	16.6
2	Russian Federation	536	10.9
3	Saudi Arabia	515	11.0
4	Canada	267	5.4
5	Iraq	201	4.1
6	China	199	4.0
7	Iran	168	3.6
8	United Arab Emirates	164	3.7
9	Brazil	157	3.0
10	Kuwait	131	2.7
11	Mexico	96	1.9
12	Norway	94	2.0
13	Kazakhstan	86	1.8
14	Nigeria	78	1.6
15	Qatar	73	1.7
16	Libya	60	1.3
17	Algeria	58	1.4
18	Angola	57	1.2
19	Oman	47	1.0
20	United Kingdom	41	0.9
21	Colombia	39	0.7
22	Azerbaijan	35	0.7
<b>23</b>	<b>India</b>	<b>34</b>	<b>0.7</b>
24	Indonesia	34	0.7
25	Venezuela	33	0.7
26	Egypt	30	0.6
27	Argentina	29	0.6
28	Malaysia	26	0.6
29	Ecuador	25	0.5
30	Australia	18	0.4
	<b>Sub total</b>	<b>4042</b>	<b>86</b>
	Others	179	3.8
	<b>Total World</b>	<b>4221</b>	<b>89.9</b>
	of which: OECD	1286	28.4
	Non-OECD	2936	61.5
	OPEC	1494	31.7
	Non-OPEC	2727	58.1
	European Union #	18	0.4

Source: BP Statistical Review of World Energy, June 2022

\* Includes crude oil, shale oil, oil sands, condensates (lease condensate or gas condensates that require further refining) and NGLs (natural gas liquids - ethane, LPG and naphtha separated from the production of natural gas).

Excludes liquid fuels from other sources such as biofuels and synthetic derivatives of coal and natural gas. This also excludes liquid fuel adjustment factors such as refinery processing gain. Excludes oil shales/kerogen extracted in solid form.

# Excludes Estonia, Latvia and Lithuania prior to 1985 and Croatia and Slovenia prior to 1990.



**Table 2.3: World top 30 crude oil consuming countries, 2021**

S. no.	Million tonnes	Consumption*	
		Million tonnes	Million barrels daily
1	US	803.6	18.7
2	China	718.5	15.4
<b>3</b>	<b>India</b>	<b>220.5</b>	<b>4.9</b>
4	Russian Federation	153.4	3.4
5	Saudi Arabia	152.4	3.6
6	Japan	151.7	3.3
7	South Korea	122.0	2.8
8	Brazil	102.2	2.3
9	Canada	96.0	2.2
10	Germany	95.5	2.0
11	Iran	73.9	1.7
12	Singapore	69.5	1.3
13	France	66.7	1.4
14	Indonesia	64.3	1.5
15	Mexico	58.4	1.4
16	United Kingdom	57.3	1.2
17	Spain	57.3	1.2
18	Italy	54.5	1.2
19	Thailand	50.5	1.2
20	Turkey	44.6	0.9
21	Australia	44.2	0.9
22	Taiwan	43.6	1.0
23	United Arab Emirates	41.6	1.0
24	Western Africa	38.4	0.9
25	Netherlands	35.3	0.7
26	Iraq	34.5	0.7
27	Malaysia	33.0	0.8
28	Poland	31.7	0.7
29	Belgium	30.0	0.6
30	Egypt	29.3	0.6
	<b>sub total</b>	<b>3574.6</b>	<b>79.6</b>
	Others	671.1	14.5
	<b>Total World</b>	<b>4245.7</b>	<b>94.1</b>
	of which: OECD	1914.1	42.9
	Non-OECD	2331.6	51.1
	European Union #	492.3	10.4

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

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

# Excludes Estonia, Latvia and Lithuania prior to 1985 and Croatia and Slovenia prior to 1990.

**Notes:** Differences between these world consumption figures and world production statistics are accounted for by stock changes, consumption of non-petroleum additives and substitute fuels and unavoidable disparities in the definition, measurement or conversion of oil supply and demand data.

**Table 2.4: World top 30 crude oil refining capacities\* countries**

(Thousand barrels daily)					
S.no.	Country	2011	2021	ADDITION	% CHANGE
1	US	17367	17941	574	3.3
2	China	13015	16990	3976	30.5
3	Russian Federation	5673	6861	1188	20.9
<b>4</b>	<b>India</b>	<b>3795</b>	<b>5018</b>	<b>1223</b>	<b>32.2</b>
5	South Korea	2864	3572	708	24.7
6	Japan	4274	3285	(989)	-23.1
7	Saudi Arabia	2107	2905	798	37.9
8	Iran	1950	2508	558	28.6
9	Brazil	2014	2303	289	14.3
10	Germany	2077	2121	43	2.1
11	Canada	2005	1954	(51)	-2.5
12	Italy	2276	1900	(376)	-16.5
13	Spain	1542	1586	45	2.9
14	Mexico	1606	1558	(47)	-3.0
15	Singapore	1427	1461	34	2.4
16	Kuwait	936	1430	494	52.8
17	Venezuela	1303	1303	0	0.0
18	United Arab Emirates	707	1246	539	76.2
19	Thailand	1230	1245	15	1.2
20	Netherlands	1276	1238	(38)	-3.0
21	United Kingdom	1787	1197	(590)	-33.0
22	France	1610	1140	(470)	-29.2
23	Taiwan	1197	1131	(67)	-5.6
24	Indonesia	1099	1094	(6)	-0.5
25	Malaysia	601	955	354	58.9
26	Iraq	935	919	(16)	-1.7
27	Turkey	596	822	226	37.9
28	Egypt	810	795	(15)	-1.9
29	Algeria	652	657	5	0.7
30	Belgium	788	645	(143)	-18.1
	<b>Sub total</b>	<b>79519</b>	<b>87778</b>	<b>8259</b>	<b>10.4</b>
	Others	15532	14134	(1398)	-9.0
	<b>Total World</b>	<b>95051</b>	<b>101912</b>	<b>6861</b>	<b>9.7</b>
	of which: OECD	45552	43730	(1822)	-4.0
	Non-OECD	49499	58182	8682	17.5
	European Union #	13432	12310	(1122)	-8.4

Source: BP Statistical Review of World Energy, June 2022

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

# Excludes Estonia, Latvia and Lithuania prior to 1985 and Croatia and Slovenia prior to 1990.

**Table 2.5 : Indigenous crude oil and condensate production**

(Million metric tonne)						
Particulars	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
<b>PSU companies</b>						
ONGC	19.6	19.2	19.1	18.5	9.2	9.3
OIL	3.3	3.1	2.9	3.0	1.5	1.6
<b>PSU total</b>	<b>22.9</b>	<b>22.4</b>	<b>22.0</b>	<b>21.5</b>	<b>10.7</b>	<b>10.9</b>
<b>PSC total</b>	<b>9.6</b>	<b>8.2</b>	<b>7.1</b>	<b>7.0</b>	<b>3.6</b>	<b>3.2</b>
<b>Total crude oil</b>	<b>32.5</b>	<b>30.5</b>	<b>29.1</b>	<b>28.4</b>	<b>14.3</b>	<b>14.1</b>
Condensate	1.7	1.6	1.4	1.2	0.6	0.6
<b>Total (crude oil + condensate)</b>	<b>34.2</b>	<b>32.2</b>	<b>30.5</b>	<b>29.7</b>	<b>14.9</b>	<b>14.7</b>
<b>Total (crude oil + condensate) (crore barrels)</b>	<b>25.1</b>	<b>23.6</b>	<b>22.4</b>	<b>21.8</b>	<b>10.9</b>	<b>10.8</b>

Source: Oil companies and DGH(P): Provisional

**Table 2.5A: State wise Crude Oil Production (Including Condensate) in TMT**

State	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
Onshore						
Assam	4309	4093	3902	3991	1994	2062
Arunachal Pradesh	43	56	53	48	25	23
Andhra Pradesh	296	243	195	202	98	116
Gujarat	4626	4707	4651	4626	2321	2415
Rajasthan	7667	6653	5891	5885	3019	2679
Tamil Nadu	395	415	410	367	187	167
West Bengal	0.00	0.00	0.13	0.05	0.04	0.01
<b>A. Onshore Total Production</b>	<b>17336</b>	<b>16167</b>	<b>15103</b>	<b>15120</b>	<b>7645</b>	<b>7461</b>
Offshore						
Eastern Offshore	654	557	744	626	310	252
Western Offshore	15478	14857	14236	13604	6782	6844
Gujarat Offshore	736	589	411	338	187	177
<b>B. Offshore Total Production</b>	<b>16868</b>	<b>16003</b>	<b>15391</b>	<b>14569</b>	<b>7279</b>	<b>7273</b>
<b>Total Production (A+B)</b>	<b>34203</b>	<b>32170</b>	<b>30494</b>	<b>29688</b>	<b>14925</b>	<b>14734</b>

Note: Source: ONGC, OIL & DGH

**Table 2.6 : Self sufficiency in petroleum products**

(Million metric tonne)						
Particulars	2018-19	2019-20	2020-21	2021-22 (P)	Apr-Sep 2021	Apr-Sep 2022 (P)
i) Indigenous crude oil processing	31.7	29.3	28.0	27.0	13.3	13.6
a) Products from indigeneous crude	29.6	27.3	26.1	25.2	12.4	12.7
b) Products from fractionators	4.9	4.8	4.2	4.1	2.1	1.8
ii) Total production from indigenous crude and condensate (a+b)	34.5	32.1	30.3	29.3	14.5	14.5
iii) Total domestic consumption	213.2	214.1	194.3	204.7	95.2	108.0
Percentage of self sufficiency (ii/iii)	16.2%	15.0%	15.6%	14.3%	15.2%	13.4%

Source: Oil companies(P): Provisional

**Note:**

1. Production of petroleum products from indigenous crude considered at 93.3% of indigenous crude oil processing.
2. The balance demand of petroleum products is met through import of crude oil and POL products.

**Table 2.7 (A) : Status of blocks under NELP (As on 01.10.2022)**

Round	Launch Year	Offered	Awarded				RELINQUISHED/ PROPOSED FOR RELINQUISHMENT/TERMINATION NOTICE SENT				Operational			
			DEEP WATER	Shallow Water	Onland	Total	DEEP WATER	Shallow Water	Onland	Total	DEEP WATER	Shallow Water	Onland	Total
NELP-I	1999	48	7	16	1	24	5	15	1	21	2	1	0	3
NELP-II	2000	25	8	8	7	23	8	8	6	22	0	0	1	1
NELP-III	2002	27	9	6	8	23	9	5	5	19	0	1	3	4
NELP-IV	2003	24	10	0	10	20	10	0	7	17	0	0	3	3
NELP-V	2005	20	6	2	12	20	6	1	9	16	0	1	3	4
NELP-VI	2006	55	21	6	25	52	21	5	20	46	0	1	5	6
NELP-VII	2007	57	11	7	23	41	11	5	20	36	0	2	3	5
NELP-VIII	2009	70	8	11	13	32	8	10	12	30	0	1	1	2
NELP-IX	2010	34	1	3	15	19	1	2	11	14	0	1	4	5
<b>TOTAL</b>		<b>360</b>	<b>81</b>	<b>59</b>	<b>114</b>	<b>254</b>	<b>79</b>	<b>51</b>	<b>91</b>	<b>221</b>	<b>2</b>	<b>8</b>	<b>23</b>	<b>33</b>

Source: DGH



**Table 2.7(B): Status of blocks under OALP round of HELP and DSF Rounds (As on 01.10.2022)**

Round	Launch Year	Offered	Awarded				Relinquished/ Proposed For Relinquishment				Operational			
			Deep/ Ultra Deep Water	Shallow Water	Onland	Total	Deep/ Ultra Deep Water	Shallow Water	Onland	Total	Deep/ Ultra Deep Water	Shallow Water	Onland	Total
<b>OALP</b>														
OALP Round-I	2018	55	1	8	46	55	0	0	4	4	1	8	42	51
OALP Round-II	2019	14	1	5	8	14	0	0	0	0	1	5	7	13
OALP Round-III	2019	23	1	3	14	18	0	0	3	3	1	3	9	13
OALP Round-IV	2019	7	0	0	7	7	0	0	0	0	0	0	7	7
OALP Round-V	2020	11	1	2	8	11	0	0	0	0	1	2	8	11
OALP Round-VI	2021	21	2	4	15	21	0	0	0	0	2	4	4	10
OALP Round-VII	2021	8	1	2	5	8	0	0	0	0	1	2	3	6
OALP Total		139	7	24	103	134	0	0	7	7	7	24	80	111
<b>DSF</b>														
DSF Round-I	2016	46	0	7	23	30	0	4	7	11	0	3	16	19
DSF Round-II	2018	25	0	9	15	24	0	1	4	5	0	8	11	19
DSF Round-III*	2021	32	1	19	11	31	0	0	0	0	0	17	0	17
DSF Total		103	1	35	49	85	0	5	11	16	0	28	27	55
TOTAL		242	8	59	152	219	0	5	18	23	7	52	107	166

Source: DGH

Note : NELP New Exploration Licensing Policy  
OALP Open Acreage Licensing Policy Round

HELP Hydrocarbon Exploration Licensing Policy  
DSF Discovered Small and Marginal Fields Round

**Table 2.8 : Domestic oil & gas production vis a vis overseas production**

Year	2018-19	2019-20	2020-21	2021-22 (P)	Apr-Sep 2021	Apr-Sep 2022 (P)
Total domestic production (MMTOE)	67.1	63.4	59.2	63.7	31.8	31.5
Overseas production by Indian Companies (MMTOE)	24.7	24.5	21.9	21.8	11.0	9.7
Overseas production as percentage of domestic production	36.8	38.7	37.0	34.2	34.6	30.7

Source: ONGC Videsh Ltd., OIL, GAIL, BPRL, IOCL and HPCL



**Table 2.9 : Coal Bed Methane (CBM) Gas development in India as on 01.10.2022**

Parameter	Value	Unit
Prognosticated CBM resources	91.80	TCF
Established CBM resources	10.40	TCF
CBM Resources (33 Blocks)	62.80	TCF
Total available coal bearing areas (India)	32760.00	Sq. KM
Total available coal bearing areas with MoPNG/DGH	17886.00	Sq. KM
Area awarded**	20460.00	Sq. KM
Blocks awarded*	36.00	Nos.
Exploration initiated (Area considered if any boreholes were drilled in the awarded block)	10667***	Sq. KM
Production of CBM gas April-September 2022(P)	342.71	MMSCM

\*ST CBM Block awarded & relinquished twice- in CBM Round II and Round IV -Area considered if any boreholes were drilled in the awarded block. \*\*MoPNG awarded 04 new CBM Blocks (Area 3862 sq. km) under Special CBM Bid Round 2021 in September 2022. \*\*\*Area considered if any boreholes were drilled in the awarded block.

Source: DGH

**Table 2.10: Status of Shale Gas and oil development in India ( As on 01.10.2022)**

Policy	Details				
Policy Guidelines for Exploration & exploitation of Shale gas and oil	<p>Shale gas and oil exploration policy was announced in October, 2013. ONGC and OIL India Ltd have been allotted 50 and 6 blocks respectively for assessment under Phase-I. ONGC identified 50 blocks in 4 basins and OIL identified 6 blocks in 2 basins in Phase-I.</p> <p>Under Hydrocarbon Exploration and Licensing Policy (HELP), 2016 the single licence will enable the contractor to explore conventional as well as unconventional oil and gas resources including CBM, shale gas/oil, tight gas and gas hydrates under a single license.</p> <p>In August 2018, the Government of India notified a Policy framework for Exploration and exploitation of Unconventional hydrocarbons in existing acreages under existing Production Sharing Contracts (PSC), Coal Bed Methane (CBM) Contracts and Nomination fields.</p>				
Exploration Activities up to 2021-22					
	Basin	Phase-I Blocks	MWP* Wells	Blocks Taken up for Drilling	Actual Wells Drilled
ONGC	Cambay	28	29	16	17
	KG	10	13	6	8
	Cauvery	9	12	1	3
	Assam	3	3	2	2
	<b>Total</b>	<b>50</b>	<b>57</b>	<b>25</b>	<b>30</b>
Oil	Jaisalmer	1	2	1	1
	Assam	5	6	0	3
	<b>Total</b>	<b>6</b>	<b>8</b>	<b>1</b>	<b>4</b>
<b>Grand Total</b>	<b>56</b>	<b>65</b>	<b>26</b>	<b>34</b>	

\*MWP : Minimum Work Programme





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# Chapter-3 Natural Gas





## Chapter-highlights

### Natural Gas

- Domestic natural gas production:
  - o The domestic Gross Production of natural gas for the from April-September 2022 period has shown an increase of ~1.7% when compared from April-September 2021 i.e., an increase of ~293 MMSCM from 16891 MMSCM in April-September 2021 to 17184 MMSCM in April-September 2022.
  - o The above rise is mainly due to an increase in production of natural gas from PSC/JVs fields (~ 7.3%) and OIL from nomination fields (~6.4%). Whereas natural gas production from ONGC nomination fields have shown declining trend (~-1.8%).
- LNG import\*:
  - o The LNG Imports in volume terms declined by ~15.9% i.e., from 16572 MMSCM in the period April-September 2021 to 13932 MMSCM in the period April-September 2022. However, the LNG Imports in US \$ terms has shown an increase of ~ 66.24% i.e., from US \$ 5773 Million in the period April-September 2021 to US \$ 9597 Million in the period April-September 2022.  
(\*Data may vary from DGCIS data)
- LNG terminals capacity utilization:
  - o Utilization of LNG terminal capacity of 42.7 MMTPA in the period April-September 2022 ranged from ~13% (Ennore LNG Terminal) to ~83.4% (Dahej LNG terminal).
- CGD Networks:
  - o In terms of infrastructure, in CNG there are 4800 CNG stations in 230 GAs being operated by about 50 CGD entities and in PNG there are 10027849 PNG connections (DPNG- 9977630 Nos., Commercial- 36007 Nos, Industrial- 14212) in 189 GAs being operated by about 46 CGD entities.
  - o In terms of aggregated 6 monthly sales (April-September 2022), there was an increase of ~10% in CNG sector from the immediate previous six-month period (October 2021-March-2022). However, there was a decrease of ~8% DPNG sales, ~1% in Commercial sector sales and ~ 13% in Industrial sector sales. Total Six-Monthly sales under CGD sector also decreased by ~1% when compared to last 6 months CGD sales.
- Consumption:
  - o From availability perspective: Total Consumption (including for internal use i.e., Net Production+ LNG import) showed a decrease of ~ 7.1% to 30705 MMSCM (April-September 2022) from 33042 MMSCM (April-September 2021).
  - o Sectoral Consumption: Major Sectors for NG consumption during April-September 2022 were Fertilizer (34 %), CGD (21%), Power (14%), Refinery (7%) and Petrochem (3 %)
- Natural Gas Pipeline infrastructure- is an economical and safe mode of transporting natural gas by connecting gas sources to gas consuming markets. Gas pipeline grid determines the structure of the gas market and its development. Therefore, an interconnected National Gas Grid has been envisaged to ensure the adequate availability and equitable distribution of natural gas in all parts of the country. At present (upto September 2022), there are about 21102 km long Natural Gas pipeline network which is operational in the country. In order to make available natural gas across the country, it has been envisaged to develop additional about 12005 km pipelines (excluding Tie-in connectivity, dedicated & STPL) to complete the National Gas Grid and same are at various stages of development. This would ensure easy availability of natural gas across all regions and potentially help to achieve uniform economic and social progress.



**Table 3.1 : World top 30 natural gas reserve countries, 2020**

(Billion cubic metres)		
Sl. no.	Country	2020
1	Russian Federation	37392
2	Iran	32101
3	Qatar	24665
4	Turkmenistan	13601
5	US	12619
6	China	8399
7	Venezuela	6260
8	Saudi Arabia	6019
9	United Arab Emirates	5939
10	Nigeria	5473
11	Iraq	3529
12	Azerbaijan	2504
13	Australia	2390
14	Canada	2354
15	Algeria	2279
16	Kazakhstan	2257
17	Egypt	2138
18	Kuwait	1695
19	Other Africa	1569
20	Libya	1430
21	Norway	1429
<b>22</b>	<b>India</b>	<b>1320</b>
23	Indonesia	1252
24	Ukraine	1091
25	Malaysia	908
26	Uzbekistan	845
27	Oman	666
27	Vietnam	646
29	Israel	589
30	Myanmar	432
	Others	388
	<b>Total World</b>	<b>187977</b>
	of which: OECD	20280
	Non-OECD	167795
	European Union	442

Source: BP Statistical Review of World Energy, July 2022

Figures are for Calendar year

'Please note that due to process improvement for Statistical Review this reserves tables have not been updated this year.'

**Table 3.2 : World top 30 natural gas producing countries, 2021**

(Billion cubic metres)		
Sl. no.	Country	2021
1	US	934
2	Russian Federation	702
3	Iran	257
4	China	209
5	Qatar	177
6	Canada	172
7	Australia	147
8	Saudi Arabia	117
9	Norway	114
10	Algeria	101
11	Turkmenistan	79
12	Malaysia	74
13	Egypt	68
14	Indonesia	59
15	United Arab Emirates	57
16	Uzbekistan	51
17	Nigeria	46
18	Oman	42
19	Argentina	39
20	United Kingdom	33
21	Pakistan	33
22	Kazakhstan	32
23	Azerbaijan	32
24	Thailand	32
25	Mexico	29
<b>26</b>	<b>India</b>	<b>29</b>
27	Trinidad & Tobago	25
28	Brazil	24
29	Bangladesh	24
30	Venezuela	24
	<b>Sub total</b>	<b>3761</b>
	Others	276
	<b>Total World</b>	<b>4037</b>
	of which: OECD	1503
	Non-OECD	2534
	European Union	44

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

**Note:** As per BP Statistics India is at 26th position with Natural Gas Production at 28.5 BCM in calendar year 2021 while as per MoPNG/PPAC Net Natural Gas Production of India (after excluding flare & loss and internal consumption) during 2021 has been 27.7 BCM

Figures are for Calendar year

**Table 3.3 : World top 30 natural gas consuming countries, 2021**

(Billion cubic metres)		
Sl. no.	Country	2021
1	US	827
2	Russian Federation	475
3	China	379
4	Iran	241
5	Canada	119
6	Saudi Arabia	117
7	Japan	104
8	Germany	91
9	Mexico	88
10	United Kingdom	77
11	Italy	73
12	United Arab Emirates	69
13	South Korea	63
<b>14</b>	<b>India</b>	<b>62</b>
15	Egypt	62
16	Turkey	57
17	Thailand	47
18	Uzbekistan	46
19	Argentina	46
20	Algeria	46
21	Pakistan	45
22	France	43
23	Malaysia	41
24	Brazil	40
25	Qatar	40
26	Australia	39
27	Indonesia	37
28	Turkmenistan	37
29	Netherlands	35
30	Spain	34
	<b>Sub total</b>	<b>3479</b>
	Others	558
	<b>Total World</b>	<b>4037</b>
	of which: OECD	1795
	Non-OECD	2243
	European Union	397

Source: BP Statistical Review of World Energy, July 2022

Figures are for Calendar year

**Table 3.4 : Natural gas at a glance**

	(MMSCM)					
	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
Gross production	32873	31184	28672	34024	16891	17184
Net Production (net of flare and loss)	32056	30257	27784	33131	16470	16771
LNG import	28740	33887	33031	30776	16572	14706
Total Consumption including internal use (Net Production+ LNG import)	60796	64144	60815	63907	33042	31477
Total consumption (in BCM)	60.8	64.1	60.8	63.9	33.0	31.5

**Source:** Domestic Gas Producers / DGH / LNG Importing companies/DGCIS (in some cases DGCIS data is prorated)

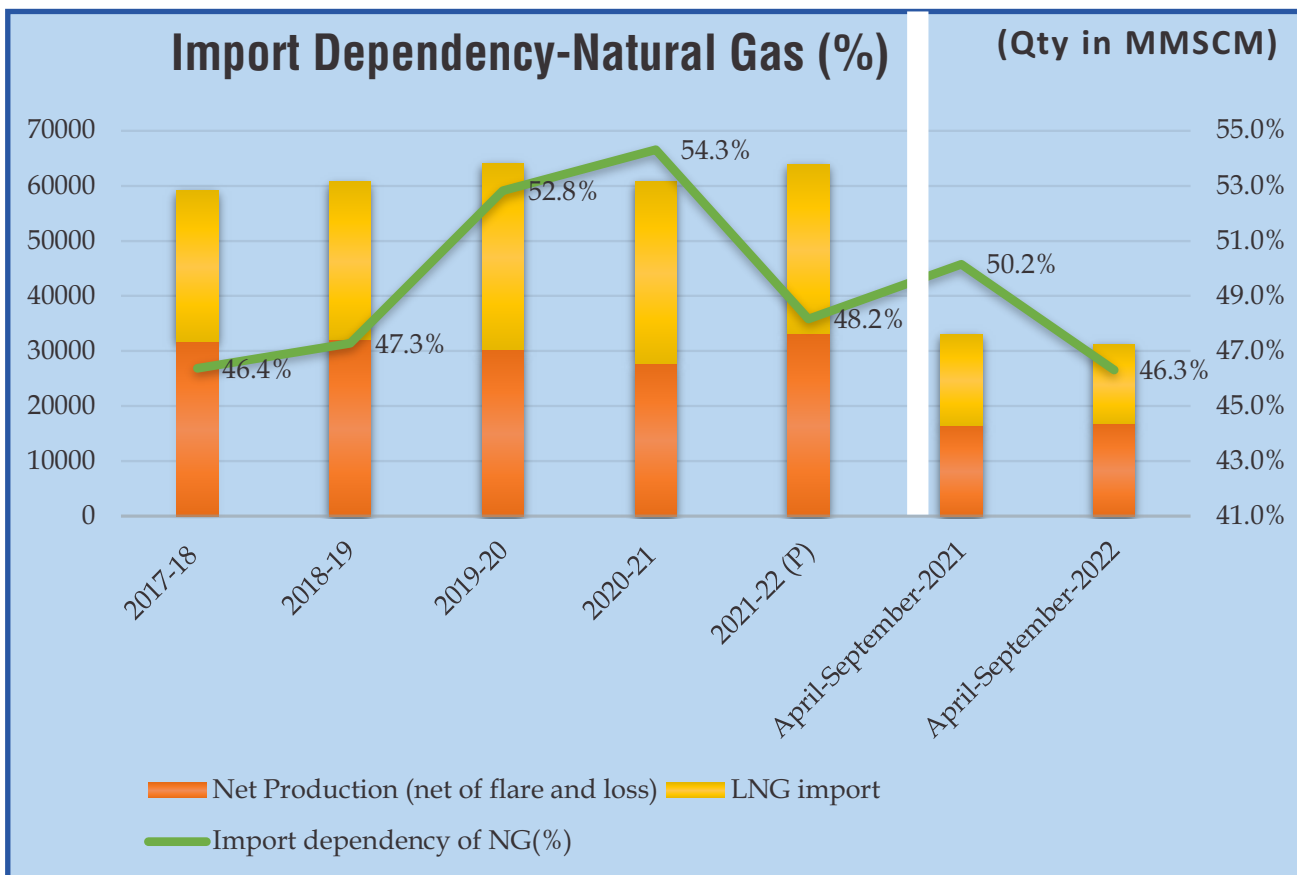
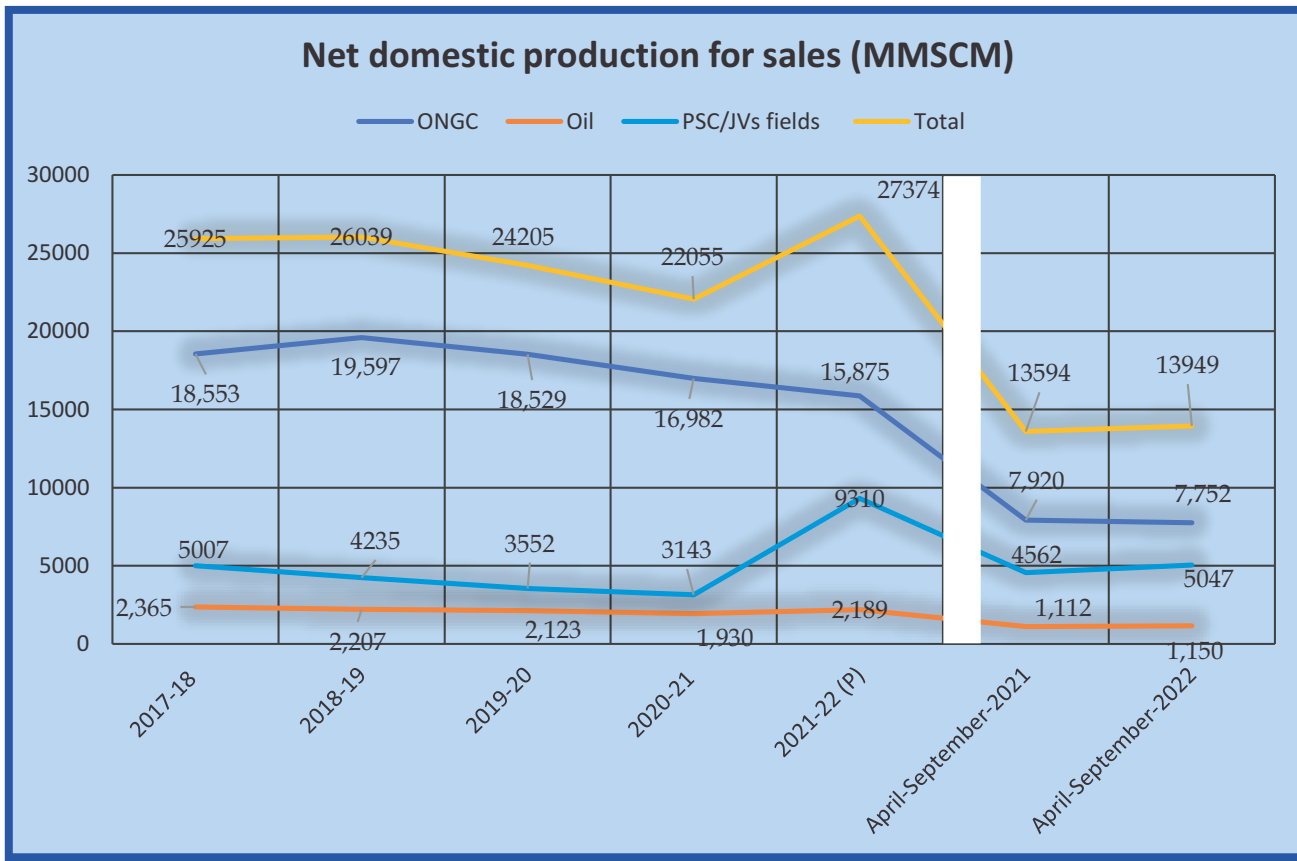
**Note:** LNG import data in Million Metric Tonne (MMT), converted to MMSCM; 1MMT=1325 MMSCM

**BCM:** Billion Cubic Meter; MMSCMD: Million Standard Cubic Meter per Day

**Table 3.5 : Natural gas production**

	(MMSCM)					
	2018-19	2018-19	2019-20	2020-21 (P)	Apr-Sep 2020	Apr-Sep 2021 (P)
<b>ONGC</b>						
<b>A) Gross Production</b>	<b>24675</b>	<b>23746</b>	<b>21872</b>	<b>20629</b>	<b>10256</b>	<b>10076</b>
B) Flared	449	520	458	515	230	223
C) Internal Use	4629	4697	4432	4239	2106	2101
D) Loss	0	0	0	0	0	0
<b>D) =A-B-C Net Production for Sale</b>	<b>19597</b>	<b>18529</b>	<b>16982</b>	<b>15875</b>	<b>7920</b>	<b>7752</b>
<b>Oil India Limited</b>						
A) Gross Production	2722	2668	2480	2893	1434	1527
B) Flared	122	155	164	200	88	115
C) Internal Use	382	377	371	471	221	240
D) Loss	12	13	14	32	14	22
<b>D) =A-B-C Net Production for Sale</b>	<b>2207</b>	<b>2123</b>	<b>1930</b>	<b>2189</b>	<b>1112</b>	<b>1150</b>
<b>PSC/JVs fields</b>						
A) Gross Production	5477	4770	4321	10502	5200	5582
B) Flared	153	185	199	98	66	30
C) Internal Use	1007	978	925	1047	549	482
D) Loss	81	54	53	47	24	22
<b>E) =A-B-C-D Net Production for Sale</b>	<b>4235</b>	<b>3552</b>	<b>3143</b>	<b>9310</b>	<b>4562</b>	<b>5047</b>
<b>Grand Total</b>						
<b>A) Gross Production</b>	<b>32873</b>	<b>31184</b>	<b>28672</b>	<b>34024</b>	<b>16891</b>	<b>17184</b>
B) Flared	724	860	822	813	384	368
C) Internal Use	6017	6052	5729	5758	2876	2823
D) Loss	93	67	67	80	37	44
<b>E) =A-B-C-D Net Production for Sale</b>	<b>26039</b>	<b>24205</b>	<b>22055</b>	<b>27374</b>	<b>13594</b>	<b>13949</b>

**Source:** Domestic Gas Producers( ONG/OIL)/ DGH



**Table 3.5A: State wise Natural Gas Production in MMSCM**

State	Onshore/ CBM/ Offshore	FY	Gross Production	Net Production
Andhra Pradesh	A. Onshore	2017-18	959	943
		2018-19	1082	1045
		2019-20	912	874
		2020-21	827	783
		2021-22	809	767
		April-Sep-21	414	391
		April-Sep-22 (P)	369	354
Assam & Arunachal Pradesh	A. Onshore	2017-18	3249	3036
		2018-19	3317	3093
		2019-20	3187	2942
		2020-21	3051	2815
		2021-22	3429	3136
		April-Sep-21	1678	1550
		April-Sep-22 (P)	1811	1644
Gujarat	A. Onshore	2017-18	1607	1556
		2018-19	1402	1349
		2019-20	1342	1287
		2020-21	1138	1059
		2021-22	1017	969
		April-Sep-21	511	482
		April-Sep-22 (P)	475	452
Rajasthan	A. Onshore	2017-18	1442	1338
		2018-19	1483	1378
		2019-20	1883	1772
		2020-21	2040	1938
		2021-22	2619	2541
		April-Sep-21	1394	1350
		April-Sep-22 (P)	1152	1125
Tamil Nadu	A. Onshore	2017-18	1207	1186
		2018-19	1208	1168
		2019-20	1097	1051
		2020-21	911	857
		2021-22	1067	1043
		April-Sep-21	496	481
		April-Sep-22 (P)	584	573
Tripura	A. Onshore	2017-18	1440	1440
		2018-19	1554	1554
		2019-20	1473	1472
		2020-21	1634	1634
		2021-22	1531	1530
		April-Sep-21	692	692
		April-Sep-22 (P)	801	801
Jharkhand (CBM)	A. Onshore	2017-18	4	4
		2018-19	4	4
		2019-20	5	5
		2020-21	2	2
		2021-22	4	4
		April-Sep-21	2	2



PPAC Ready Reckoner

State	Onshore/ CBM/ Offshore	FY	Gross Production	Net Production
		April-Sep-22 (P)	4	4
Madhya Pradesh (CBM)	B. CBM	2017-18	200	199
		2018-19	357	356
		2019-20	345	344
		2020-21	334	333
		2021-22	389	365
		April-Sep-21	151	150
		April-Sep-22 (P)	137	137
West Bengal (CBM)		2017-18	531	358
		2018-19	350	309
		2019-20	306	277
		2020-21	307	250
		2021-22	290	290
		April-Sep-21	192	174
		April-Sep-22 (P)	201	195
Onshore Total	A+B	2017-19	10639	10060
		2018-20	10756	10254
		2019-21	10549	10025
		2020-22	10243	9670
		2021-23	11155	10646
		April-Sep-22	5531	5272
		April-Sep-22 (P)	5535	5283
Mumbai High + Eastern Offshore	C	2017-19	17791	17496
		2018-20	19042	18771
		2019-21	18576	18226
		2020-22	17086	16810
		2021-23	15943	15581
		April-Sep-22	8009	7859
		April-Sep-22 (P)	7729	7578
Private / JVCs		2017-19	4219	4175
		2018-20	3075	3030
		2019-21	2059	2006
		2020-22	1343	1303
		2021-23	6926	6904
		April-Sep-22	3351	3338
		April-Sep-22 (P)	3920	3912
Offshore Total	C	2017-19	22011	21671
		2018-20	22117	21802
		2019-21	20635	20232
		2020-22	18429	18113
		2021-23	22869	22485
		April-Sep-22	11360	11197
		April-Sep-22 (P)	11649	11490
Grand Total	A+B+C	2017-19	32649	31731
		2018-20	32873	32056
		2019-21	31184	30257
		2020-22	28672	27784
		2021-23	34024	33131
		April-Sep-22	16891	16470
		April-Sep-22 (P)	17184	16772

**Table No. 3.6 : PNG Data as on 01.10.2022**

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
Andhra Pradesh	Kakinada	Bhagyanagar Gas Limited	63771	149	3
	Vijaywada	Bhagyanagar Gas Limited	53686	81	1
	West Godavari District	Godavari Gas Private Limited	51115	12	2
	East Godavari District (EAAA)	Godavari Gas Private Limited	49809	5	1
	Krishna District (EAAA)	Megha Engineering & Infrastructure Limited	21331	150	24
<b>Andhra Pradesh Total</b>			<b>239712</b>	<b>397</b>	<b>31</b>
Andhra Pradesh, Karnataka & Tamil Nadu	Chittoor, Kolar and Vellore Districts	AGP City Gas Private Limited	18	0	2
<b>Andhra Pradesh, Karnataka &amp; Tamil Nadu Total</b>			<b>18</b>	<b>0</b>	<b>2</b>
Assam	Upper Assam	Assam Gas Company Limited	45610	1307	437
	Cachar, Hailakandi & Karimganj Districts	Purba Bharati Gas Private Limited	499	0	0
<b>Assam Total</b>			<b>46109</b>	<b>1307</b>	<b>437</b>
Bihar	Patna District	GAIL (India) Limited	51764	40	2
	Muzaffarpur, Vaishali, Saran and Samastipur Districts	Indian Oil Corporation Limited	11128	0	0
	Arwal, Jehanabad, Bhojpur and Buxar Districts	Indian Oil Corporation Limited	7613	1	0
	Lakhisarai, Munger and Bhagalpur Districts	Indian Oil Corporation Limited	6201	0	0
	Begusarai District	Think Gas Begusarai Private Limited	3692	4	0
	Aurangabad, Kaimur & Rohtas Districts	Indian Oil Corporation Limited	2619	5	0
<b>Bihar Total</b>			<b>83017</b>	<b>50</b>	<b>2</b>
Bihar & Jharkhand	Sheikhpura, Jamui and Deoghar Districts	Indian Oil Corporation Limited	4185	0	0
	Nawada and Koderma Districts	Indian Oil Corporation Limited	1162	0	0
<b>Bihar &amp; Jharkhand Total</b>			<b>5347</b>	<b>0</b>	<b>0</b>
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	Chandigarh	Indian-Oil Adani Gas Private Limited	24136	104	18
<b>Chandigarh (UT), Haryana, Punjab &amp; Himachal Pradesh Total</b>			<b>24136</b>	<b>104</b>	<b>18</b>
Dadra & Nagar Haveli (UT)	UT of Dadra & Nagar Haveli	Gujarat Gas Limited	9796	53	52
<b>Dadra &amp; Nagar Haveli (UT) Total</b>			<b>9796</b>	<b>53</b>	<b>52</b>
Daman & Diu (UT)	UT of Daman	Indian-Oil Adani Gas Private Limited	5087	44	40
<b>Daman &amp; Diu (UT) Total</b>			<b>5087</b>	<b>44</b>	<b>40</b>
Daman and Diu & Gujarat	Diu & Gir Somnath Districts	IRM Energy Private Limited	1505	3	0
<b>Daman and Diu &amp; Gujarat Total</b>			<b>1505</b>	<b>3</b>	<b>0</b>
Goa	North Goa District	Goa Natural Gas Private Limited	10070	15	18
	South Goa District	Indian-Oil Adani Gas Private Limited	205	0	7
<b>Goa Total</b>			<b>10275</b>	<b>15</b>	<b>25</b>
Gujarat	Surat, Bharuch, Ankleshwar	Gujarat Gas Limited	748872	9390	1043
	Ahmedabad City and Daskroi Area	Adani Total Gas Limited	518899	3306	861
	Rajkot	Gujarat Gas Limited	307103	1156	1537
	Gandhinagar Mehsana Sabarkantha	Sabarmati Gas Limited	239752	1044	394
	Vadodara	Vadodara Gas Limited	211997	2791	20
	Gandhinagar	Gujarat Gas Limited	141163	573	25
	Valsad	Gujarat Gas Limited	119109	413	714





Table 3.6 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
Gujarat	Navsari	Gujarat Gas Limited	112301	273	51
	Nadiad	Gujarat Gas Limited	69460	414	22
	Bhavnagar	Gujarat Gas Limited	56117	373	88
	Anand area including Kanjari & Vadtal Villages (in Kheda District)	Charotar Gas Sahakari Mandali Limited	44323	711	164
	Anand District (EAAA)	Gujarat Gas Limited	41682	256	23
	Banaskantha District	IRM Energy Private Limited	38717	162	12
	Hazira	Gujarat Gas Limited	38041	130	18
	Jamnagar	Gujarat Gas Limited	37472	203	129
	Surendranagar	Gujarat Gas Limited	27832	287	369
	Panchmahal District	Gujarat Gas Limited	20621	113	86
	Patan District	Sabarmati Gas Limited	17797	53	9
	Amreli District	Gujarat Gas Limited	8344	39	2
	Kutch (West)	Gujarat Gas Limited	5410	46	4
	Dahod District	Gujarat Gas Limited	4769	9	25
	Narmada (Rajpipla) District	Gujarat Gas Limited	2085	2	0
	Dahej Vagra Taluka	Gujarat Gas Limited	1215	15	47
	Junagadh District	Torrent Gas Private Limited	755	0	0
	Vadodara	Adani Total Gas Limited	616	1	86
	Ahmedabad District (EAAA)	Gujarat Gas Limited	676	0	0
<b>Gujarat Total</b>			<b>2815128</b>	<b>21760</b>	<b>5729</b>
Haryana	Faridabad	Adani Total Gas Limited	87476	333	496
	Sonipat	GAIL Gas Limited	29661	38	184
	Gurugram	Haryana City Gas Distribution Limited	26107	163	327
	Kaithal District	Indraprastha Gas Limited	22983	0	0
	Panipat District	Indian-Oil Adani Gas Private Limited	17196	15	47
	Karnal District	Indraprastha Gas Limited	15474	15	41
	Rewari District	Indraprastha Gas Limited	14507	50	105
	Nuh and Palwal Distircts	Adani Total Gas Limited	12192	8	50
	Ambala & Kurukshetra Districts	HPOIL Gas Private Limited	11876	0	0
	Yamunanagar District	Bharat Petroleum Corporation Limited	8323	0	0
	Rohtak District	Bharat Petroleum Corporation Limited	7228	0	0
	Sonipat District (EAAA) & Jind District	Hindustan Petroleum Corporation Limited	6670	0	7
	Jhajjar District	Haryana City Gas (KCE) Private Limited	24	0	22
	Gurugram	Indraprastha Gas Limited	20447	106	40
<b>Haryana Total</b>			<b>280164</b>	<b>728</b>	<b>1319</b>
Himachal Pradesh	Bilaspur, Hamirpur & Una Districts	Bharat Petroleum Corporation Limited	3112	0	0
<b>Himachal Pradesh Total</b>			<b>3112</b>	<b>0</b>	<b>0</b>
Jharkhand	Ranchi District	GAIL (India) Limited	37245	1	0
	East Singhbhum District	GAIL (India) Limited	23746	0	0
	Seraikela-Kharsawan District	GAIL Gas Limited	13058	0	0
	Giridih & Dhanbad Districts	GAIL Gas Limited	11686	0	0



Table 3.6 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
	Bokaro, Hazaribagh & Ramgarh Districts	Indian Oil Corporation Limited	5450	1	0
	Chatra and Palamu Districts	Bharat Petroleum Corporation Limited	468	0	0
<b>Jharkhand Total</b>			<b>91653</b>	<b>2</b>	<b>0</b>
Karnataka	Bengaluru Rural and Urban Districts	GAIL Gas Limited	233346	183	149
	Tumkur District	Megha Engineering & Infrastructure Limited	26996	153	57
	Ramanagara District	Maharashtra Natural Gas Limited	25326	2	13
	Dakshina Kannada District*	GAIL Gas Limited	24345	4	4
	Belgaum District	Megha Engineering & Infrastructure Limited	23061	117	34
	Dharwad District	Indian-Oil Adani Gas Private Limited	16769	15	5
	Ballari & Gadag Districts	Bharat Petroleum Corporation Limited	3435	0	0
	Bidar District	Bharat Petroleum Corporation Limited	2189	0	0
	Chitradurga & Davanagere Districts	Unison Enviro Private Limited	1362	0	0
	Mysuru, Mandya and Chamarajanagar Districts	AGP City Gas Private Limited	96	0	4
<b>Karnataka Total</b>			<b>356925</b>	<b>474</b>	<b>266</b>
Kerala	Ernakulam District	Indian-Oil Adani Gas Private Limited	21041	18	10
	Alapuzha, Kollam and Thiruvananthapuram Districts	AGP City Gas Private Limited	0	0	3
	Palakkad & Thrissur Districts	Indian-Oil Adani Gas Private Limited	0	0	1
<b>Kerala Total</b>			<b>21041</b>	<b>18</b>	<b>14</b>
Madhya Pradesh	Indore (including Ujjain City)	Aavantika Gas Limited	82467	163	334
	Gwalior	Aavantika Gas Limited	42806	55	12
	Bhopal & Rajgarh Districts	Think Gas Bhopal Private Limited	19737	23	5
	Dewas	GAIL Gas Limited	17062	27	30
	Raisen, Shajapur and Sehore Districts	GAIL Gas Limited	2253	2	4
	Satna & Shandol Districts	Bharat Petroleum Corporation Limited	1960	0	0
	Rewa District	Indian Oil Corporation Limited	1839	1	0
	Dhar District	Naveriya Gas Private Limited	1351	20	3
	Shivpuri District	Think Gas Bhopal Private Limited	1057	1	0
	Morena District	Indian Oil Corporation Limited	1049	0	0
	Guna District	Indian Oil Corporation Limited	987	0	0
	Ashoknagar District	Indian Oil Corporation Limited	605	0	0
	Sidhi and Singrauli Districts	Bharat Petroleum Corporation Limited	250	0	0
	Ujjain (EAAA) District, Dewas (EAAA) District t and Indore (EAAA) Distric	Gujarat Gas Limited	72	0	0
	Gwalior (EAAA) District and Sheopur District	Rajasthan State Gas Limited	0	0	0
<b>Madhya Pradesh Total</b>			<b>173495</b>	<b>292</b>	<b>388</b>
Madhya Pradesh and Rajasthan	Jhabua, Banswara, Ratlam and Dungarpur Districts	Gujarat Gas Limited	135	0	0
<b>Madhya Pradesh and Rajasthan Total</b>			<b>135</b>	<b>0</b>	<b>0</b>
Maharashtra	Mumbai & Greater Mumbai	Mahanagar Gas Limited	1076473	3150	117
	Thane urban and adjoining Municipalities	Mahanagar Gas Limited	852710	921	243
	Pune City including Pimpri - Chichwad &	Maharashtra Natural Gas Limited	423889	431	258



Table 3.6 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
Maharashtra	adjoining contiguous areas Hinjewadi, Chakan, Talegaon				
	Raigarh District (EAAA)	Mahanagar Gas Limited	60320	1	1
	Kolhapur District	HPOIL Gas Private Limited	17461	0	2
	Ahmednagar & Aurangabad Districts	Bharat Petroleum Corporation Limited	16502	4	1
	Sangli & Satara Districts	Bharat Petroleum Corporation Limited	15718	0	1
	Palghar District & Thane Rural	Gujarat Gas Limited	11283	22	97
	Pune District (EAAA)	Torrent Gas Pune Limited	8468	10	33
	Ratnagiri District	Unison Enviro Private Limited	6401	3	35
	Sindhudurg District	Maharashtra Natural Gas Limited	5063	0	0
	Solapur District	IMC Limited	3366	0	0
	Latur & Osmanabad Districts	Unison Enviro Private Limited	1035	0	0
<b>Maharashtra Total</b>			<b>2498689</b>	<b>4542</b>	<b>788</b>
Maharashtra & Gujarat	Valsad (EAAA), Dhule & Nashik Districts	Maharashtra Natural Gas Limited	130928	2	12
<b>Maharashtra &amp; Gujarat Total</b>			<b>130928</b>	<b>2</b>	<b>12</b>
National Capital	National Capital Territory of Delhi	Indraprastha Gas Limited	1313646	3292	1749
<b>National Capital Territory of Delhi (UT) Total</b>			<b>1313646</b>	<b>3292</b>	<b>1749</b>
Odisha	Khordha District	GAIL (India) Limited	39219	3	0
	Cuttack District	GAIL (India) Limited	17796	1	0
	Sundargarh & Jharsuguda Districts	GAIL Gas Limited	7339	0	0
	Ganjam, Nayagarh & Puri Districts	GAIL Gas Limited	5913	0	0
	Jajpur & Kendujhar Districts	Bharat Petroleum Corporation Limited	1684	0	0
	Jagatsinghpur & Kendrapara Districts	Bharat Petroleum Corporation Limited	572	0	0
	Angul & Dhekanal Districts	Bharat Petroleum Corporation Limited	292	0	0
	Bargarh, Debagarh & Sambalpur Districts	Bharat Petroleum Corporation Limited	118	0	0
	Balasore, Bhadrak & Mayurbhanj Districts	Adani Total Gas Limited	0	0	0
<b>Odisha Total</b>			<b>72933</b>	<b>4</b>	<b>0</b>
Puducherry & Tamil Nadu	Karaikal & Nagapattinam Districts	Torrent Gas Private Limited	50	0	0
<b>Puducherry &amp; Tamil Nadu Total</b>			<b>50</b>	<b>0</b>	<b>0</b>
Punjab	Amritsar District	Gujarat Gas Limited	18953	100	10
	Jalandhar District (EAAA), Kapurthala & SBS Nagar Districts	Think Gas Ludhiana Private Limited	7524	6	7
	Ludhiana District (EAAA), Barnala & Moga Districts	Think Gas Ludhiana Private Limited	6482	16	26
	Rupnagar District	Bharat Petroleum Corporation Limited	5693	3	0
	Bhatinda District	Gujarat Gas Limited	3669	19	0
	Fatehgarh Sahib District	IRM Energy Private Limited	2961	37	156
	SAS Nagar District (EAAA), Patiala & Sangrur Districts	Torrent Gas Private Limited	1625	22	11
	Hoshiarpur and Gurdaspur Districts	Gujarat Gas Limited	126	0	0
	Ferozepur, Faridkot and Sri Muktsar Sahib Districts	Gujarat Gas Limited	84	0	0
<b>Punjab Total</b>			<b>47117</b>	<b>203</b>	<b>210</b>
Rajasthan	Ajmer, Pali and Rajsamand Districts	Indraprastha Gas Limited	131925	0	0
	Kota	Rajasthan State Gas Limited	19207	26	17



Table 3.6 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
	Barmer, Jaisalmer & Jodhpur Districts	AGP CGD India Private Limited	15177	23	29
	Bhiwadi (in Alwar District)	Haryana City Gas Distribution (Bhiwadi) Limited	4856	2	144
	Bhilwara & Bundi Districts	Adani Total Gas Limited	381	3	2
	Kota District (EAAA), Baran & Chittorgarh (Only Rawatbhata Taluka) Districts	Torrent Gas Private Limited	278	0	0
	Jalore and Sirohi Districts	Gujarat Gas Limited	203	1	0
	Alwar (Other than Bhiwadi) & Jaipur Districts	Torrent Gas Jaipur Private Limited	0	0	4
	Dholpur District	Dholpur CGD Private Limited	11	0	0
	<b>Rajasthan Total</b>		<b>172038</b>	<b>55</b>	<b>196</b>
Tamil Nadu	Kanchipuram District	AGP CGD India Private Limited	0	0	5
	Ramanathapuram District	AGP CGD India Private Limited	2	0	0
	<b>Tamil Nadu Total</b>		<b>2</b>	<b>0</b>	<b>5</b>
Telangana	Hyderabad	Bhagyanagar Gas Limited	170728	65	70
	Nalgonda Suryapet & Yadadri Bhuvanagiri Districts	Megha Engineering & Infrastructure Limited	2320	5	3
	Medak, Siddipet & Sangareddy Districts	Torrent Gas Private Limited	767	1	15
	Jangaon, Jayashankar Bhupalpally, Mahabubabad, Warangal Urban & Warangal Rural Districts	Megha Engineering & Infrastructure Limited	582	0	0
	Medchal-Malkajigiri, Ranga Reddy & Vikarabad Districts	Megha Engineering & Infrastructure Limited	295	0	2
	<b>Telangana Total</b>		<b>174692</b>	<b>71</b>	<b>90</b>
Tripura	Agartala	Tripura Natural Gas Company Limited	45332	500	62
	West Tripura (EAAA) District	Tripura Natural Gas Company Limited	11496	6	0
	<b>Tripura Total</b>		<b>56828</b>	<b>506</b>	<b>62</b>
Uttar Pradesh	Gautam Budh Nagar District	Indraprastha Gas Limited	302528	781	1161
	Ghaziabad & Hapur Districts	Indraprastha Gas Limited	292263	402	454
	Kanpur	Central UP Gas Limited	117622	302	98
	Agra	Green Gas Limited	112918	61	17
	Lucknow	Green Gas Limited	98073	57	11
	Varanasi District	GAIL (India) Limited	57305	48	9
	Meerut	GAIL Gas Limited	53101	32	54
	Bareilly	Central UP Gas Limited	50070	149	24
	Meerut District (EAAA), Muzaffarnagar & Shamli Districts	Indraprastha Gas Limited	29229	24	1
	Kanpur (EAAA) District, Fatehpur and Hamirpur Districts	Indraprastha Gas Limited	23966	1	0
	Moradabad	Torrent Gas Moradabad Limited	16039	36	147
	Saharanpur District	Bharat Petroleum Corporation Limited	16074	1	0
	Allahabad	Indian-Oil Adani Gas Private Limited	13611	57	10
	Jhansi	Central UP Gas Limited	13602	1	0
	Khurja	Adani Total Gas Limited	13092	9	248
	Moradabad (EAAA) District	Torrent Gas Private Limited	6317	3	6
	Mirzapur, Chandauli and Sonbhadra Districts	GAIL Gas Limited	5980	0	0
Bagpat District	Bagpat Green Energy Private Limited	4954	7	2	



Table 3.6 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
Uttar Pradesh	Mathura	Sanwariya Gas Limited	4835	26	94
	Farrukhabad, Etah and Hardoi Districts	Hindustan Petroleum Corporation Limited	4891	0	0
	Mainpuri and Kannauj Districts	Hindustan Petroleum Corporation Limited	3621	0	0
	Bareilly (EAAA) District, Pilibhit and Rampur Districts	Hindustan Petroleum Corporation Limited	3100	0	0
	Shahjahanpur and Budaun Districts	Hindustan Petroleum Corporation Limited	3027	0	0
	Auraiya, Kanpur Dehat & Etawah Districts	Torrent Gas Private Limited	2499	2	6
	Amethi, Pratapgarh & Raebareilly Districts	Bharat Petroleum Corporation Limited	1824	0	0
	Allahabad District (EAAA), Bhadohi & Kaushambi Districts	Indian-Oil Adani Gas Private Limited	1102	3	0
	Faizabad & Sultanpur Districts	Green Gas Limited	841	0	0
	Gonda and Barabanki Districts	Torrent Gas Private Limited	316	0	3
	Azamgarh, Mau and Ballia Districts	Torrent Gas Private Limited	305	0	0
	Basti and Ambedkarnagar Districts	Torrent Gas Private Limited	178	0	1
	Jaunpur and Ghazipur Districts	Indian-Oil Adani Gas Private Limited	173	0	0
	Unnao (EAAA) District	Green Gas Limited	172	0	0
	Bulandshahr (part) District	Indian-Oil Adani Gas Private Limited	125	0	13
	Gorakhpur, Sant Kabir Nagar & Kushinagar Districts	Torrent Gas Private Limited	1322	1	6
	<b>Uttar Pradesh Total</b>		<b>1255075</b>	<b>2003</b>	<b>2365</b>
Uttar Pradesh & Rajasthan	Firozabad (Taj Trapezium Zone)	GAIL Gas Limited	18958	36	340
	<b>Uttar Pradesh &amp; Rajasthan Total</b>		<b>18958</b>	<b>36</b>	<b>340</b>
Uttar Pradesh and Uttrakhand	Bijnor and Nainital Districts	Hindustan Petroleum Corporation Limited	6263	0	0
	<b>Uttar Pradesh and Uttrakhand Total</b>		<b>6263</b>	<b>0</b>	<b>0</b>
Uttrakhand	Dehradun District	GAIL Gas Limited	26060	0	0
	Haridwar District	Haridwar Natural Gas Private Limited	24723	4	1
	Udham Singh Nagar District	Indian-Oil Adani Gas Private Limited	12973	42	71
	<b>Uttrakhand Total</b>		<b>63756</b>	<b>46</b>	<b>72</b>
<b>Grand Total</b>			<b>9977630</b>	<b>36007</b>	<b>14212</b>

Source: PNGRB

Note/Remarks:-

1. All the GAs where PNG connections/CNG Stations have been established is considered as Operational.
2. Under normal conditions, operation of any particular GA commences within around one year of authorization.
3. EAAA stands for Excluding/Except Area Already Authorized | \* stands for Sub-Judice | # stands for authorization of GA cancelled | ## stands for the data which is not provided by the CGD Entity
4. PNG- There are 10027849 PNG connections in 189 GAs being operated by about 46 CGD entites.



**Table 3.7: CNG Sales in India**

(Sales in TMT) #								
State (s) / Union Territory	Company name	No. of companies (as on 01.10.2022)	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
Andhra Pradesh*	AGP City Gas Private Limited, Bhagyanagar Gas Limited, Godavari Gas Private Limited, Indian Oil Corporation Limited, Megha Engineering & Infrastructure Limited	5	31	21	13	33	14	23
Andhra Pradesh, Karnataka and Tamil Nadu	AGP City Gas Private Limited	1	0	0	0	0.1	0.0	0.9
Assam	Assam Gas Company Limited	1	0	0.02	0.05	0.06	0.02	0.05
Bihar	GAIL (India) Limited, Indian Oil-Adani Gas Private Limited, Think Gas Begusarai Pvt Limited, Indian Oil Corporation Limited	4	0.0	2	5	15	5	17
Bihar & Jharkhand	Indian Oil Corporation Limited	1	0	0	0	0	0	0.003
Chandigarh, Haryana, Punjab & Himachal Pradesh	Indian Oil-Adani Gas Private Limited	1	15	21	14	25	11	18
Dadra & Nagar Haveli**	Gujarat Gas Limited	1	0	3	2	3	1	2
Daman and Diu	Indian Oil-Adani Gas Private Limited	1	2	2	1.37	3	1	1
Delhi NCT***	Indraprastha Gas Limited	1	1144	1033	785	1015	456	607
Goa	Goa Natural Gas Private Limited, Indian Oil-Adani Gas Private Limited	2	0	0.03	0.15	1.05	0.21	1.26
Gujarat **	Adani Total Gas Limited, Charotar Gas Sahakari Mandali Limited, Gujarat Gas Limited, Hindustan Petroleum Corporation Limited, IRM Energy Private Limited, Sabarmati Gas Limited, Torrent Gas Private Limited, Vadodara Gas Limited	8	662	745	649	945	426	537
Gujarat & UT of Daman and Diu	IRM Energy Private Limited	1	0	0.07	1.36	3.82	1.48	2.77
Haryana	Adani Total Gas Limited, Bharat Petroleum Corporation Limited, GAIL Gas Limited, Haryana City Gas (KCE) Private Limited, Haryana City Gas Distribution (Bhiwadi) Limited, Haryana City Gas Distribution Ltd., Hindustan Petroleum Corporation Limited, HPOIL Gas Private Limited, Indian Oil-Adani Gas Private Limited, Indraprastha Gas Limited	10	179	197	173	303	127	212
Haryana & Himachal Pradesh	Indian Oil-Adani Gas Private Limited	1	0	0	0.08	0.7	0.3	0.7
Haryana & Punjab	Gujarat Gas Limited	1	0	0	1.4	5	2	3
Himachal Pradesh	Bharat Gas Resources Limited	1	0	0	0	0.2	0.0	0.2
Jharkhand	GAIL (India) Limited, GAIL Gas Limited, Indian Oil Corporation Limited, Bharat Gas Resources Limited	4	0	0.34	1.2	4	1	4
Karnataka	Adani Total Gas Limited, AGP City Gas Private Limited, GAIL Gas Limited, Indian Oil-Adani Gas Private Limited, Maharashtra Natural Gas Limited, Megha Engineering & Infrastructure Limited, Unison Enviro Private Limited, Bharat Gas Resources Limited	8	0.3	1	3	15	3	23
Kerala	AGP City Gas Private Limited, Indian Oil-Adani Gas Private Limited	2	1	6	4	12	3	13
Kerala & Puducherry	Indian Oil-Adani Gas Private Limited	1	0	0	0	0.2	0.0	0.5
Madhya Pradesh	Aavantika Gas Limited, GAIL Gas Limited, Gujarat Gas Limited, Indian Oil Corporation Limited, Naveriya Gas Private Limited, Rajasthan State Gas Limited, Think Gas Bhopal Private Limited, Bharat Gas Resources Limited	8	31	34	24	45	17	36
Madhya Pradesh & Rajasthan	Gujarat Gas Limited	1	0	0	0.26	3	1	3
Madhya Pradesh and Chhattisgarh	Adani Total Gas Limited	1	0	0	0	0	0	0.002
Maharashtra	Bharat Petroleum Corporation Limited, Gujarat Gas Limited, HPOIL Gas Private Limited, Mahanagar Gas Limited, Maharashtra Natural Gas Limited, Torrent Gas Pune Limited, Unison Enviro Private Limited, Haryana City Gas Nagpur Private Limited, IMC Limited	9	702	738	504	812	348	518
Maharashtra & Gujarat	Maharashtra Natural Gas Limited	1	0	0	1.4	5.6	1.8	9.4
Odisha	Adani Total Gas Limited, GAIL (India) Limited, GAIL Gas Limited	3	1	3	2	4	1	3
Puducherry (UT) & Tamil Nadu	Torrent Gas Private Limited	1	0	0	0.001	0.04	0.01	0.07



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State (s) / Union Territory	Company name	No. of companies (as on 01.10.2022)	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
Punjab	Bharat Petroleum Corporation Limited, Gujarat Gas Limited, IRM Energy Private Limited, Think Gas Ludhiana Private Limited, Torrent Gas Private Limited	5	1	7	14	43	16	30
Rajasthan	*Adani Total Gas Limited, AGP City Gas Private Limited, Dholpur CGD Private Limited, Gujarat Gas Limited, Indraprastha Gas Limited, Rajasthan State Gas Limited, Torrent Gas Jaipur Private Limited, Torrent Gas Private Limited, Haryana City Gas Distribution (Bhiwadi) Limited"	9	7	9	15	47	14	43
Tamil Nadu	Adani Total Gas Limited, AGP CGD India Pvt Ltd, Indian Oil Corporation Limited, Torrent Gas Chennai Private Limited	4	0	0	0.004	2	0	8
Telangana*	Bhayanagar Gas Limited, Megha Engineering & Infrastructure Limited, Torrent Gas Private Limited, Indian Oil Corporation Limited	4	0	13	9	33	13	29
Tripura	Tripura Natural Gas Company Limited	1	15	16	18	20	9	12
Uttar Pradesh	Adani Total Gas Limited, Bagpat Green Energy Private Limited, Bharat Petroleum Corporation Limited, Central UP Gas Limited, GAIL (India) Limited, GAIL Gas Limited, Green Gas Limited, Hindustan Petroleum Corporation Limited, Indian Oil-Adani Gas Private Limited, Indraprastha Gas Limited, Sanwariya Gas Limited, Torrent Gas Moradabad Limited, Torrent Gas Private Limited	13	282	392	339	545	238	325
Uttar Pradesh & Uttarakhand	Hindustan Petroleum Corporation Limited	1	0	0	0.359	2	1	1
Uttar Pradesh & Madhya Pradesh	Adani Total Gas Limited	1	0	0.001	0.402	8	6	2
Uttar Pradesh & Rajasthan	Gail Gas Limited	1	0	0	0	0	0	18
Uttarakhand	GAIL Gas Limited, Haridwar Natural Gas Private Limited, Indian Oil-Adani Gas Private Limited, Hindustan Petroleum Corporation Limited	4	0.1	1	5	12	5	10
West Bengal	Bengal Gas Company Limited, IndianOil-Adani Gas Private Limited, Hindustan Petroleum Corporation Limited	3	3	2	2	4	1	3
<b>Total</b>			<b>3076</b>	<b>3247</b>	<b>2589</b>	<b>3968</b>	<b>1725</b>	<b>2517</b>

**Source :** CGD companies ( # Data subject to change based on inputs provided by CGD entities)

**Notes:** From the FY 2019-20 entries for \* Andhra Pradesh & Telangana are reported separately. Prior to this AP & Telangana were taken together.\*\* Dadra & 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.



**Table No. 3.8 : CNG stations as on 01.10.2022 (P)**

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
Andhra Pradesh	Kakinada	Bhagyanagar Gas Limited	13
	Vijaywada	Bhagyanagar Gas Limited	34
	West Godavari District	Godavari Gas Private Limited	16
	East Godavari District (EAAA)	Godavari Gas Private Limited	16
	Krishna District (EAAA)	Megha Engineering & Infrastructure Limited	23
	Anantapur and YSR (Kadapa) Districts	AGP City Gas Private Limited	19
	Sri Potti Sriramulu Nellore District	AGP City Gas Private Limited	13
	Srikakulam, Visakhapatnam & Vizianagaram Districts	Indian Oil Corporation Limited	10
<b>Andhra Pradesh Total</b>			<b>144</b>
Andhra Pradesh, Karnataka & Tamil Nadu	Chittoor, Kolar and Vellore Districts	AGP City Gas Private Limited	28
<b>Andhra Pradesh, Karnataka &amp; Tamil Nadu Total</b>			<b>28</b>
Assam	Upper Assam	Assam Gas Company Limited	1
<b>Assam Total</b>			<b>1</b>
Bihar	Patna District	GAIL (India) Limited	20
	Muzaffarpur, Vaishali, Saran and Samastipur Districts	Indian Oil Corporation Limited	17
	Arwal, Jehanabad, Bhojpur and Buxar Districts	Indian Oil Corporation Limited	7
	Lakhisarai, Munger and Bhagalpur Districts	Indian Oil Corporation Limited	2
	Begusarai District	Think Gas Begusarai Private Limited	8
	Aurangabad, Kaimur & Rohtas Districts	Indian Oil Corporation Limited	5
	Gaya & Nalanda Districts	Indian-Oil Adani Gas Private Limited	8
<b>Bihar Total</b>			<b>67</b>
Bihar & Jharkhand	Sheikhpura, Jamui and Deoghar Districts	Indian Oil Corporation Limited	1
<b>Bihar &amp; Jharkhand Total</b>			<b>1</b>
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	Chandigarh	Indian-Oil Adani Gas Private Limited	24
<b>Chandigarh (UT), Haryana, Punjab &amp; Himachal Pradesh Total</b>			<b>24</b>
Dadra & Nagar Haveli (UT)	UT of Dadra & Nagar Haveli	Gujarat Gas Limited	7
<b>Dadra &amp; Nagar Haveli (UT) Total</b>			<b>7</b>
Daman & Diu (UT)	UT of Daman	Indian-Oil Adani Gas Private Limited	4
<b>Daman &amp; Diu (UT) Total</b>			<b>4</b>
Daman and Diu & Gujarat	Diu & Gir Somnath Districts	IRM Energy Private Limited	13
<b>Daman and Diu &amp; Gujarat Total</b>			<b>13</b>
Goa	North Goa District	Goa Natural Gas Private Limited	6
	South Goa District	Indian-Oil Adani Gas Private Limited	4
<b>Goa Total</b>			<b>10</b>
Gujarat	Surat, Bharuch, Ankleshwar	Gujarat Gas Limited	115
	Ahmedabad City and Daskroi Area	Adani Total Gas Limited	82
	Rajkot	Gujarat Gas Limited	86
	Gandhinagar Mehsana Sabarkantha	Sabarmati Gas Limited	134
	Vadodara	Vadodara Gas Limited	33
	Gandhinagar	Gujarat Gas Limited	16
	Valsad	Gujarat Gas Limited	27
	Navsari	Gujarat Gas Limited	26
Nadiad	Gujarat Gas Limited	40	





Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
Gujarat	Bhavnagar	Gujarat Gas Limited	38
	Anand area including Kanjari & Vadtal Villages (in Kheda District)	Charotar Gas Sahakari Mandali Limited	10
	Anand District (EAAA)	Gujarat Gas Limited	36
	Banaskantha District	IRM Energy Private Limited	36
	Hazira	Gujarat Gas Limited	1
	Jamnagar	Gujarat Gas Limited	30
	Surendranagar	Gujarat Gas Limited	28
	Panchmahal District	Gujarat Gas Limited	32
	Patan District	Sabarmati Gas Limited	24
	Amreli District	Gujarat Gas Limited	14
	Kutch (West)	Gujarat Gas Limited	18
	Dahod District	Gujarat Gas Limited	17
	Narmada (Rajpipla) District	Gujarat Gas Limited	8
	Dahej Vagra Taluka	Gujarat Gas Limited	5
	Junagadh District	Torrent Gas Private Limited	17
	Vadodara	Adani Total Gas Limited	6
	Ahmedabad District (EAAA)	Gujarat Gas Limited	8
	Ahmedabad City (Only for CNG)	Hindustan Petroleum Corporation Limited	22
	Kheda District (EAAA) & Mahisagar District	Adani Total Gas Limited	21
	Surendranagar District (EAAA) & Morbi District (EAAA)	Adani Total Gas Limited	12
	Navsari District (EAAA), Surat District (EAAA), Tapi District (EAAA) & the Dangs District	Adani Total Gas Limited	9
	Porbandar District	Adani Total Gas Limited	9
Barwala & Ranpur Talukas	Adani Total Gas Limited	4	
<b>Gujarat Total</b>			<b>964</b>
Haryana	Faridabad	Adani Total Gas Limited	29
	Sonipat	GAIL Gas Limited	25
	Gurugram	Haryana City Gas Distribution Limited	32
	Kaithal District	Indraprastha Gas Limited	11
	Panipat District	Indian-Oil Adani Gas Private Limited	13
	Karnal District	Indraprastha Gas Limited	16
	Rewari District	Indraprastha Gas Limited	24
	Nuh and Palwal Distircts	Adani Total Gas Limited	29
	Ambala & Kurukshetra Districts	HPOIL Gas Private Limited	14
	Yamunanagar District	Bharat Petroleum Corporation Limited	8
	Rohtak District	Bharat Petroleum Corporation Limited	12
	Sonipat District (EAAA) & Jind District	Hindustan Petroleum Corporation Limited	19
	Jhajjar District	Haryana City Gas (KCE) Private Limited	6
	Bhiwani, Charkhi Dadri & Mahendragarh Districts	Adani Total Gas Limited	29
	Hisar District	HCG (KCE) Private Limited	2
	Gurugram	Indraprastha Gas Limited	15
<b>Haryana Total</b>			<b>284</b>
Haryana & Himachal Pradesh	Panchkula District (EAAA), Sirmaur, Shimla & Solan (EAAA) Districts	Indian-Oil Adani Gas Private Limited	9
<b>Haryana &amp; Himachal Pradesh Total</b>			<b>9</b>



Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
Haryana & Punjab	Sirsa, Fatehabad and Mansa (Punjab) Districts	Gujarat Gas Limited	16
<b>Haryana &amp; Punjab Total</b>			<b>16</b>
Himachal Pradesh	Bilaspur, Hamirpur & Una Districts	Bharat Petroleum Corporation Limited	7
<b>Himachal Pradesh Total</b>			<b>7</b>
Jharkhand	Ranchi District	GAIL (India) Limited	8
	East Singhbhum District	GAIL (India) Limited	8
	Seraikela-Kharsawan District	GAIL Gas Limited	10
	Giridih & Dhanbad Districts	GAIL Gas Limited	8
	Bokaro, Hazaribagh & Ramgarh Districts	Indian Oil Corporation Limited	21
	Chatra and Palamu Districts	Bharat Petroleum Corporation Limited	4
<b>Jharkhand Total</b>			<b>59</b>
Karnataka	Bengaluru Rural and Urban Districts	GAIL Gas Limited	61
	Tumkur District	Megha Engineering & Infrastructure Limited	2
	Ramanagara District	Maharashtra Natural Gas Limited	11
	Dakshina Kannada District*	GAIL Gas Limited	27
	Belgaum District	Megha Engineering & Infrastructure Limited	4
	Dharwad District	Indian-Oil Adani Gas Private Limited	6
	Ballari & Gadag Districts	Bharat Petroleum Corporation Limited	10
	Bidar District	Bharat Petroleum Corporation Limited	6
	Chitradurga & Davanagere Districts	Unison Enviro Private Limited	10
	Mysuru, Mandya and Chamarajanagar Districts	AGP City Gas Private Limited	20
	Bagalkot, Koppal and Raichur Districts	AGP City Gas Private Limited	19
	Chikkamagaluru, Hassan and Kodagu Districts	AGP City Gas Private Limited	14
	Uttara Kannada, Haveri and Shivamogga Districts	AGP City Gas Private Limited	14
	Kalaburagi and Vijayapura Districts	AGP City Gas Private Limited	13
	Udupi District	Adani Total Gas Limited	7
<b>Karnataka Total</b>			<b>224</b>
Kerala	Ernakulam District	Indian-Oil Adani Gas Private Limited	14
	Alapuzha, Kollam and Thiruvananthapuram Districts	AGP City Gas Private Limited	24
	Palakkad & Thrissur Districts	Indian-Oil Adani Gas Private Limited	26
	Kozhikode & Wayanad Districts	Indian-Oil Adani Gas Private Limited	14
	Malappuram District	Indian-Oil Adani Gas Private Limited	13
<b>Kerala Total</b>			<b>91</b>
Kerala & Puducherry	Kannur, Kasaragod & Mahe Districts	Indian-Oil Adani Gas Private Limited	9
<b>Kerala &amp; Puducherry Total</b>			<b>9</b>
Madhya Pradesh	Indore (including Ujjain City)	Aavantika Gas Limited	61
	Gwalior	Aavantika Gas Limited	27
	Bhopal & Rajgarh Districts	Think Gas Bhopal Private Limited	32
	Dewas	GAIL Gas Limited	3
	Raisen, Shajapur and Sehore Districts	GAIL Gas Limited	19
	Satna & Shandol Districts	Bharat Petroleum Corporation Limited	6
	Rewa District	Indian Oil Corporation Limited	5
Dhar District	Naveriya Gas Private Limited	3	



Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
Madhya Pradesh	Shivpuri District	Think Gas Bhopal Private Limited	4
	Morena District	Indian Oil Corporation Limited	4
	Guna District	Indian Oil Corporation Limited	4
	Ashoknagar District	Indian Oil Corporation Limited	2
	Sidhi and Singrauli Districts	Bharat Petroleum Corporation Limited	2
	Ujjain (EAAA) District, Dewas (EAAA) District and Indore (EAAA) District	Gujarat Gas Limited	16
	Gwalior (EAAA) District and Sheopur District	Rajasthan State Gas Limited	2
<b>Madhya Pradesh Total</b>			<b>190</b>
Madhya Pradesh and Chhattisgrah	Anuppur, Bilaspur and Korba Districts	Adani Total Gas Limited	3
<b>Madhya Pradesh and Chhattisgrah Total</b>			<b>3</b>
Madhya Pradesh and Rajasthan	Jhabua, Banswara, Ratlam and Dungarpur Districts	Gujarat Gas Limited	23
<b>Madhya Pradesh and Rajasthan Total</b>			<b>23</b>
Madhya Pradesh and Uttar Pradesh	Jhansi (EAAA) District, Bhind, Jalaun, Lalitpur and Datia Districts	Adani Total Gas Limited	15
<b>Madhya Pradesh and Uttar Pradesh Total</b>			<b>15</b>
Maharashtra	Mumbai & Greater Mumbai	Mahanagar Gas Limited	151
	Thane urban and adjoining Municipalities	Mahanagar Gas Limited	128
	Pune City including Pimpri - Chichwad & adjoining contiguous areas Hinjewadi, Chakan, Talegaon	Maharashtra Natural Gas Limited	101
	Raigarh District (EAAA)	Mahanagar Gas Limited	23
	Kolhapur District	HPOIL Gas Private Limited	16
	Ahmednagar & Aurangabad Districts	Bharat Petroleum Corporation Limited	34
	Sangli & Satara Districts	Bharat Petroleum Corporation Limited	20
	Palghar District & Thane Rural	Gujarat Gas Limited	27
	Pune District (EAAA)	Torrent Gas Pune Limited	47
	Ratnagiri District	Unison Enviro Private Limited	18
	Sindhudurg District	Maharashtra Natural Gas Limited	8
	Solapur District	IMC Limited	9
	Latur & Osmanabad Districts	Unison Enviro Private Limited	13
Nagpur district	HCG Nagpur Private Limited	3	
<b>Maharashtra Total</b>			<b>598</b>
Maharashtra & Gujarat	Valsad (EAAA), Dhule & Nashik Districts	Maharashtra Natural Gas Limited	48
National Capital Territory of Delhi (UT)	National Capital Territory of Delhi	Indraprastha Gas Limited	461
Odisha	Khordha District	GAIL (India) Limited	11
	Cuttack District	GAIL (India) Limited	7
	Sundargarh & Jharsuguda Districts	GAIL Gas Limited	4
	Ganjam, Nayagarh & Puri Districts	GAIL Gas Limited	5
	Jajpur & Kendujhar Districts	Bharat Petroleum Corporation Limited	1
	Jagatsinghpur & Kendrapara Districts	Bharat Petroleum Corporation Limited	2



Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
	Angul & Dhekanal Districts	Bharat Petroleum Corporation Limited	1
	Bargarh, Debagarh & Sambalpur Districts	Bharat Petroleum Corporation Limited	3
	Balasore, Bhadrak & Mayurbhanj Districts	Adani Total Gas Limited	8
<b>Odisha Total</b>			<b>42</b>
Puducherry & Tamil Nadu	Karaikal & Nagapattinam Districts	Torrent Gas Private Limited	7
<b>Puducherry &amp; Tamil Nadu Total</b>			<b>7</b>
Punjab	Amritsar District	Gujarat Gas Limited	18
	Jalandhar District (EAAA), Kapurthala & SBS Nagar Districts	Think Gas Ludhiana Private Limited	17
	Ludhiana District (EAAA), Barnala & Moga Districts	Think Gas Ludhiana Private Limited	19
	Rupnagar District	Bharat Petroleum Corporation Limited	12
	Bhatinda District	Gujarat Gas Limited	16
	Fatehgarh Sahib District	IRM Energy Private Limited	8
	SAS Nagar District (EAAA), Patiala & Sangrur Districts	Torrent Gas Private Limited	23
	Hoshiarpur and Gurdaspur Districts	Gujarat Gas Limited	33
	Ferozepur, Faridkot and Sri Muktsar Sahib Districts	Gujarat Gas Limited	21
	Jalandhar	Jay Madhok Energy Private Limited led Consortium	3
	Ludhiana	Jay Madhok Energy Private Limited led Consortium	3
	<b>Punjab Total</b>		
Rajasthan	Ajmer, Pali and Rajsamand Districts	Indraprastha Gas Limited	46
	Kota	Rajasthan State Gas Limited	9
	Barmer, Jaisalmer & Jodhpur Districts	AGP CGD India Private Limited	20
	Bhiwadi (in Alwar District)	Haryana City Gas Distribution (Bhiwadi) Limited	2
	Bhilwara & Bundi Districts	Adani Total Gas Limited	13
	Kota District (EAAA), Baran & Chittorgarh (Only Rawatbhata Taluka) Districts	Torrent Gas Private Limited	14
	Jalore and Sirohi Districts	Gujarat Gas Limited	19
	Alwar (Other than Bhiwadi) & Jaipur Districts	Torrent Gas Jaipur Private Limited	32
	Chittorgarh (Other than Rawatbhata Taluka) & Udaipur Districts	Adani Total Gas Limited	30
	Dholpur District	Dholpur CGD Private Limited	6
<b>Rajasthan Total</b>			<b>191</b>
Tamil Nadu	Chennai & Tiruvallur Districts	Torrent Gas Chennai Private Limited	48
	Kanchipuram District	AGP CGD India Private Limited	24
	Tiruppur District	Adani Total Gas Limited	28
	Cuddalore, Nagapattinam & Tiruvarur Districts	Adani Total Gas Limited	23
	Coimbatore District	Indian Oil Corporation Limited	12
	Ramanathapuram District	AGP CGD India Private Limited	4
	Salem District	Indian Oil Corporation Limited	7
<b>Tamil Nadu Total</b>			<b>146</b>
Telangana	Hyderabad	Bhagyanagar Gas Limited	88
	Nalgonda Suryapet & Yadadri Bhuvanagiri Districts	Megha Engineering & Infrastructure Limited	9
	Medak, Siddipet & Sangareddy Districts	Torrent Gas Private Limited	16
	Jangaon, Jayashankar Bhupalpally, Mahabubabad, Warangal Urban & Warangal Rural Districts	Megha Engineering & Infrastructure Limited	3
	Medchal-Malkajgiri, Ranga Reddy & Vikarabad Districts	Megha Engineering & Infrastructure Limited	9
	Jagtial, Peddapalli, Karimnagar & Rajanna Sircilla Districts	Indian Oil Corporation Limited	2



Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
	Bhadradi Kothagudem & Khamman Districts	Megha Engineering & Infrastructure Limited	2
	<b>Telangana Total</b>		<b>129</b>
Tripura	Agartala	Tripura Natural Gas Company Limited	6
	West Tripura (EAAA) District	Tripura Natural Gas Company Limited	6
	Gomati District	Tripura Natural Gas Company Limited	6
	<b>Tripura Total</b>		<b>18</b>
Uttar Pradesh	Gautam Budh Nagar District	Indraprastha Gas Limited	54
	Ghaziabad & Hapur Districts	Indraprastha Gas Limited	63
	Kanpur	Central UP Gas Limited	45
	Agra	Green Gas Limited	28
	Lucknow	Green Gas Limited	42
	Varanasi District	GAIL (India) Limited	18
	Meerut	GAIL Gas Limited	19
	Bareilly	Central UP Gas Limited	20
	Meerut District (EAAA), Muzaffarnagar & Shamli Districts	Indraprastha Gas Limited	20
	Kanpur (EAAA) District, Fatehpur and Hamirpur Districts	Indraprastha Gas Limited	14
	Moradabad	Torrent Gas Moradabad Limited	7
	Saharanpur District	Bharat Petroleum Corporation Limited	10
	Allahabad	Indian-Oil Adani Gas Private Limited	7
	Jhansi	Central UP Gas Limited	7
	Khurja	Adani Total Gas Limited	7
	Moradabad (EAAA) District	Torrent Gas Private Limited	18
	Mirzapur, Chandauli and Sonbhadra Districts	GAIL Gas Limited	15
	Bagpat District	Bagpat Green Energy Private Limited	10
	Mathura	Sanwariya Gas Limited	10
	Farrukhabad, Etah and Hardoi Districts	Hindustan Petroleum Corporation Limited	21
	Mainpuri and Kannauj Districts	Hindustan Petroleum Corporation Limited	13
	Bareilly (EAAA) District, Pilibhit and Rampur Districts	Hindustan Petroleum Corporation Limited	28
	Shahjahanpur and Budaun Districts	Hindustan Petroleum Corporation Limited	21
	Auraiya, Kanpur Dehat & Etawah Districts	Torrent Gas Private Limited	25
	Amethi, Pratapgarh & Raebareli Districts	Bharat Petroleum Corporation Limited	17
	Allahabad District (EAAA), Bhadohi & Kaushambi Districts	Indian-Oil Adani Gas Private Limited	11
	Faizabad & Sultanpur Districts	Green Gas Limited	7
	Gonda and Barabanki Districts	Torrent Gas Private Limited	20
	Azamgarh, Mau and Ballia Districts	Torrent Gas Private Limited	21
	Basti and Ambedkarnagar Districts	Torrent Gas Private Limited	13
	Jaunpur and Ghazipur Districts	Indian-Oil Adani Gas Private Limited	9
	Unnao (EAAA) District	Green Gas Limited	2
	Bulandshahr (part) District	Indian-Oil Adani Gas Private Limited	10
	Bulandshahr District (EAAA), Aligarh & Hathras Districts	Indian-Oil Adani Gas Private Limited	17
Gorakhpur, Sant Kabir Nagar & Kushinagar Districts	Torrent Gas Private Limited	23	
	<b>Uttar Pradesh Total</b>		<b>672</b>



Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
Uttar Pradesh & Rajasthan	Firozabad (Taj Trapezium Zone)	GAIL Gas Limited	36
	<b>Uttar Pradesh &amp; Rajasthan Total</b>		<b>36</b>
Uttar Pradesh and Uttrakhand	Bijnor and Nainital Districts	Hindustan Petroleum Corporation Limited	16
	<b>Uttar Pradesh and Uttrakhand Total</b>		<b>16</b>
Uttrakhand	Dehradun District	GAIL Gas Limited	13
	Haridwar District	Haridwar Natural Gas Private Limited	7
	Udham Singh Nagar District	Indian-Oil Adani Gas Private Limited	9
	<b>Uttrakhand Total</b>		<b>29</b>
West Bengal	Burdwan District	Indian-Oil Adani Gas Private Limited	19
	Nadia (EAAA) District and North 24 Parganas (EAAA) District	Hindustan Petroleum Corporation Limited	8
	Kolkata Municipal Corporation and Parts of Adjoining Districts	Bengal Gas Company Limited	7
	Howrah (EAAA) District and Hoogly (EAAA) District	Hindustan Petroleum Corporation Limited	6
	South 24 Parganas (EAAA) District	Hindustan Petroleum Corporation Limited	1
	<b>West Bengal Total</b>		<b>41</b>
<b>Grand Total</b>			<b>4800</b>

Source: PNGRB

Note/Remarks:-

1. All the GAs where PNG connections/CNG Stations have been established is considered as Operational.
2. Under normal conditions. Operation of any particular GA commences within around one year of authorization.
3. EAAA stands for Excluding/Except Area Already Authorized | \* stands for Sub-Judice | # stands for authorization of GA cancelled | ## stands for the data which is not provided by the CGD Entity
4. CNG- There are 4800 CNG stations in 230 GAs being operated by about 50 CGD entites.



**Table 3.9 : LNG terminals (Operational)**

Location	Promoters	Capacity as on 01.10.2022	% Capacity utilisation (Apr-Sep 2022)
Dahej	Petronet LNG Ltd (PLL)	17.5 MMTPA	83.47
Hazira	Shell Energy India Pvt. Ltd.	5.2 MMTPA	48.27
Dabhol	Konkan LNG Limited	*5 MMTPA	19.2
Kochi	Petronet LNG Ltd (PLL)	5 MMTPA	16.9
Ennore	Indian Oil LNG Pvt Ltd	5 MMTPA	13.00
Mundra	GSPC LNG Limited	5 MMTPA	17.8
<b>Total Capacity</b>		<b>42.7 MMTPA</b>	

\* To increase to 5 MMTPA with breakwater. Only HP stream of capacity of 2.9 MMTPA is commissioned

**Table 3.10 : Import of Liquefied Natural Gas (LNG)**

Financial Year	LNG import quantity/value				
	MMT	MMSCM	Million Btu	Value (Mn. USD)	USD /MMBtu
2017-18	20.7	27,439	1,088,847,280	8,051	7.4
2018-19	21.7	28,740	1,140,494,327	10,253	9.0
2019-20	25.6	33,886	1,344,684,149	9,489	7.1
2020-21	24.9	33,031	1,310,768,505	7,864	6.0
2021-22 (P)	23.2	30,776	1,221,273,902	13,382	11.0
Apr-Sep 2021 (P)	12.5	16,572	657,620,509	5,773	8.8
Apr-Sep 2022 (P)	10.5	13,932	552,875,481	9,597	17.4

Source: LNG importing companies & DGCIS

Conversion of MMSCM to MMBtu is based on approximation of 1 Million BTU (MMBTU) = 25.2 SCM. (@10000 Kcal/SCM; 1 MMBtu = 252000 Kcal); (1 Trillion Btu = 10,00,000 MMBtu)

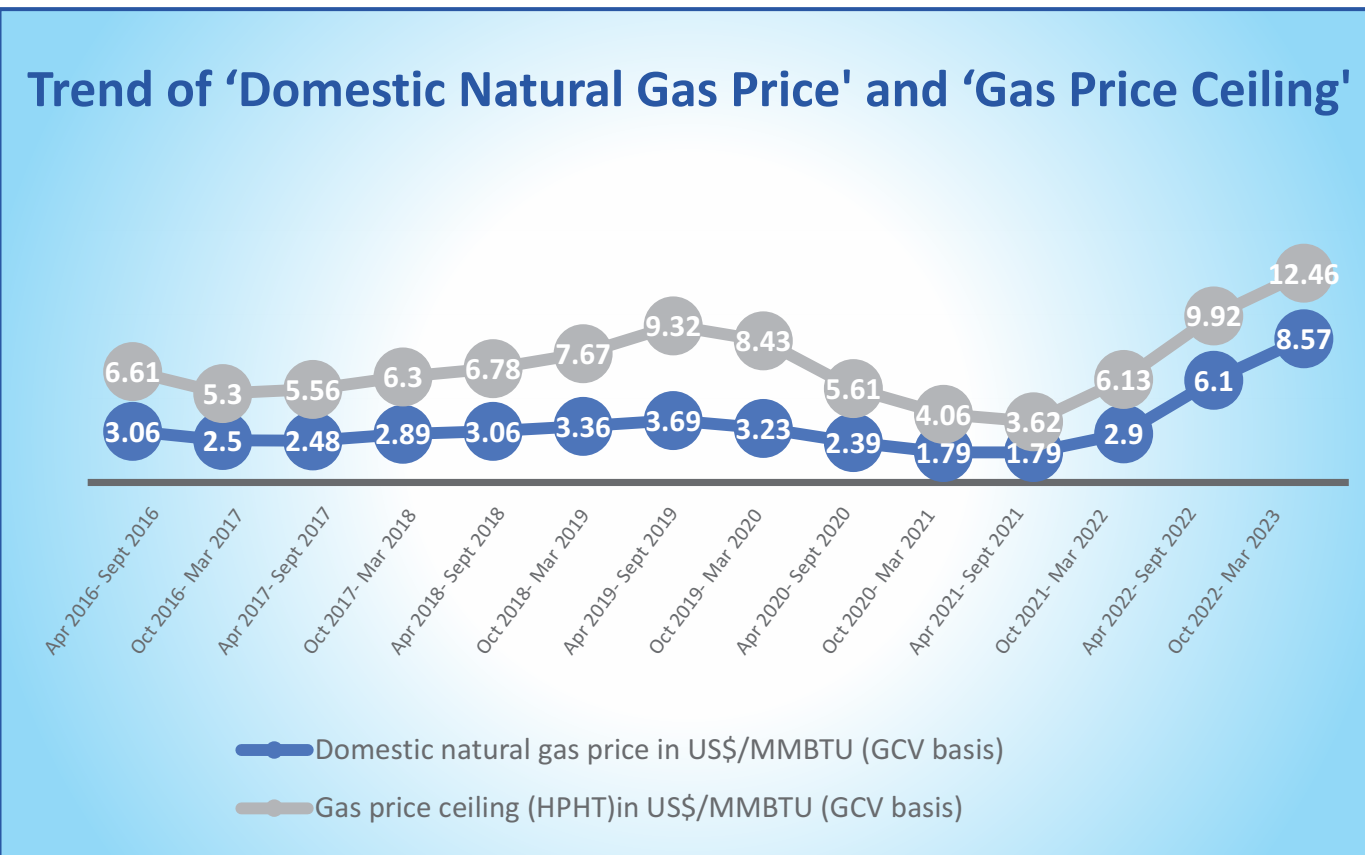


**Table 3.11 : Domestic natural gas price and gas price ceiling**

Period	Domestic natural gas price in US\$/MMBTU (GCV basis)*	Gas price ceiling (HPHT) in US\$/MMBTU (GCV basis)**
November 2014 - March 2015	5.05	-
April 2015 - September 2015	4.66	-
October 2015 - March 2016	3.82	-
April 2016 - September 2016	3.06	6.61
October 2016 - March 2017	2.5	5.3
April 2017 - September 2017	2.48	5.56
October 2017 - March 2018	2.89	6.3
April 2018 - September 2018	3.06	6.78
October 2018 - March 2019	3.36	7.67
April 2019 - September 2019	3.69	9.32
October 2019 - March 2020	3.23	8.43
April 2020 - September 2020	2.39	5.61
October 2020 - March 2021	1.79	4.06
April 2021 - September 2021	1.79	3.62
October 2021 - March 2022	2.9	6.13
April 2022 - September 2022	6.1	9.92
October 2022 - March 2023	8.57	12.46

Note: \* As per the "New Domestic Natural Gas Pricing Guidelines, 2014" issued by Ministry of Petroleum & Natural Gas dated October 25, 2014.

\*\* As per the notification issued by Ministry of Petroleum and Natural Gas dated 21.03.2016 on marketing including pricing freedom for the gas to be produced from discoveries in Deepwater, Ultra Deepwater and High Pressure-High Temperature areas.







**Table 3.12: Statewise CGD Sale Profile\* (in SCMD ) base period: April 2022-September 2022**

State (s) / Union Territory	CNG	Domestic (PNG)	Commercial (PNG)	Industrial (PNG)	Total
Andhra Pradesh	113569	35728	3052	55994	208343
Andhra Pradesh, Karnataka & Tamilnadu	6448	2	0	26061	32510
Assam	345	31530	20328	644426	696629
Bihar	125784	3937	1282	327	131330
Bihar & Jharkhand	19	0	0	0	19
Chandigarh, Haryana, Punjab & Himachal Pradesh	136377	8998	4260	8908	158543
Dadra and Nagar Haveli (U.T.)	13591	2783	696	96172	113242
Daman and Diu	11718	1462	1163	122126	136469
Daman and Diu & Gujarat	20968	506	26	0	21500
Goa	9660	1046	564	26555	37825
Gujarat	4115954	1025323	206570	6319197	11667045
Haryana	1615003	62786	23927	688425	2390142
Haryana & Himachal Pradesh	5769	0	0	0	5769
Haryana & Punjab	24524	0	0	0	24524
Himachal Pradesh	1235	253	0	0	1487
Jharkhand	33841	1805	25	0	35672
Karnataka	168009	40246	19702	355181	583138
Kerala	97402	2183	1416	17816	118817
Kerala & Puducherry	3922	0	0	0	3922
Madhya Pradesh	273065	46663	6416	163474	489618
Madhya Pradesh & Rajasthan	20456	19	0	0	20475
Madhya Pradesh and Chhattisgrah	32	0	0	0	32
Maharashtra	3949387	578230	170148	736431	5434196
Maharashtra & Gujarat	70036	116	53	6409	76614
National Capital Territory of Delhi (UT)	4546140	312131	129583	160375	5148229
Odisha	23294	3440	208	0	26942
Puducherry & Tamil Nadu	495	5	0	0	499
Punjab	227777	12928	5339	336715	582759
Rajasthan	323466	3848	516	174418	502247
Tamil Nadu	62420	0	0	4605	67025
Telangana	124483	31373	944	47712	204512
Tripura	92359	44193	7500	20410	164462
Uttar Pradesh	2462099	299613	64623	741617	3567952
Uttar Pradesh & Madhya Pradesh	14238	0	0	0	14238
Uttar Pradesh & Rajasthan	133811	2707	1891	1296470	1434880
Uttar Pradesh and Uttarakhand	11066	0	0	0	11066
Uttarakhand	76178	17119	839	62889	157025
West Bengal	23938	0	0	0	23938
<b>Grand Total</b>	<b>18938879</b>	<b>2570973</b>	<b>671072</b>	<b>12112714</b>	<b>34293638</b>

\*\* Inputs based on the information submitted by CGD entities - subject to revisions, if any. Categorizations of data under Commercial and Industrial sectors- as per the respective policies of individual CGD entities "

Sales of SCMD (SCM per day) calculated based on sale for period April 2022 to September 2022

**Table 3.12 A: Basket Trends- CGD Sale Profile\* (in SCMD)**

Period	CNG	Domestic (PNG)	Commercial (PNG)	Industrial (PNG)	Total
October-2020 to March 2021	12864911	2621058	922209	16507543	32915721
April-2021 to September 2021	13238071	2456140	489067	14206677	30389956
October 2021 to March 2022	17253563	2801726	678335	13870178	34603802
April-2022 to September 2022	18938879	2570973	671072	12112714	34293638

\*\* Inputs based on the information submitted by CGD entities - subject to revisions, if any. Categorizations of data under Commercial and Industrial sectors- as per the respective policies of individual CGD entities "

Sales of SCMD (SCM per day) calculated based on sale for period

**Table 3.12 B: Segment Trends- CGD Sale Profile vis-à-vis previous six months (in %)**

Period	CNG	Domestic (PNG)	Commercial (PNG)	Industrial (PNG)	Total
October-2020 to March 2021	0	0	0	0	0
April-2021 to September 2021	3	-6	-47	-14	-8
October 2021 to March 2022	30	14	39	-2	14
April-2022 to September 2022	10	-8	-1	-13	-1

\*\* Inputs based on the information submitted by CGD entities - subject to revisions, if any. Categorizations of data under Commercial and Industrial sectors- as per the respective policies of individual CGD entities "

Sales calculated based on sale for period

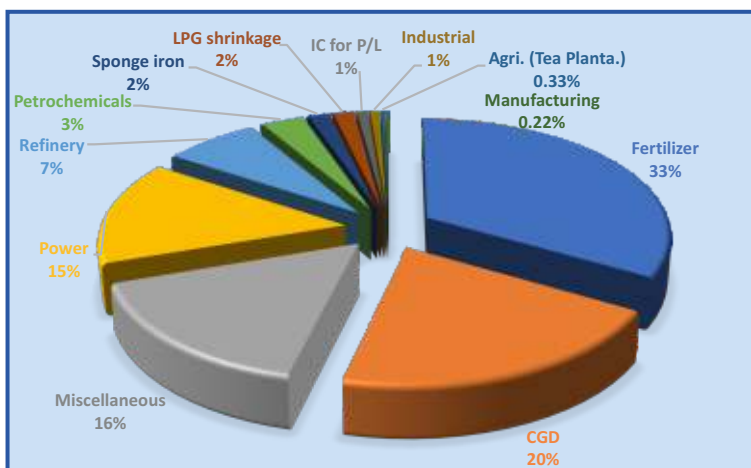
**Table 3.12 C: Basket Trends- CGD Sale Profile\* (in %)**

Period	CNG	Domestic (PNG)	Commercial (PNG)	Industrial (PNG)	Total
October-2020 to March 2021	39	8	3	50	100
April-2021 to September 2021	44	8	2	47	100
October 2021 to March 2022	50	8	2	40	100
April-2022 to September 2022	55	7	2	35	100

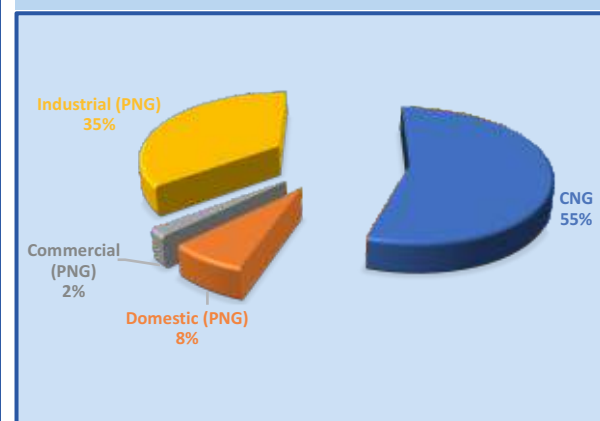
\*\* Inputs based on the information submitted by CGD entities - subject to revisions, if any. Categorizations of data under Commercial and Industrial sectors- as per the respective policies of individual CGD entities "

Sales in % calculated based on sale for period

**Sectoral Consumption of Natural Gas (in %) April-September-2022 (P)**



**CGD Sales Profile (in %) (P)**





Analysis • Knowledge • Information



# Chapter-4 Refining & Production



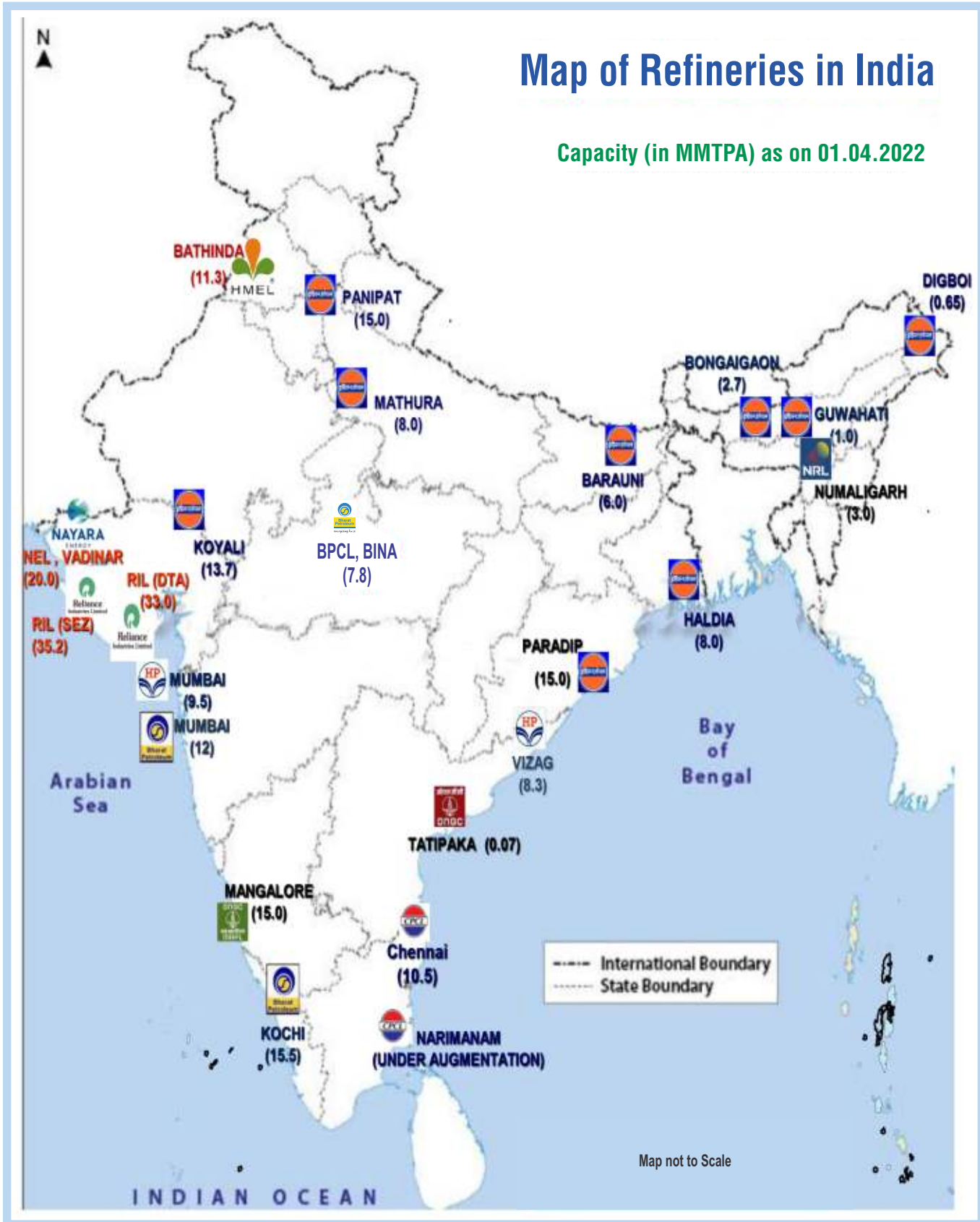


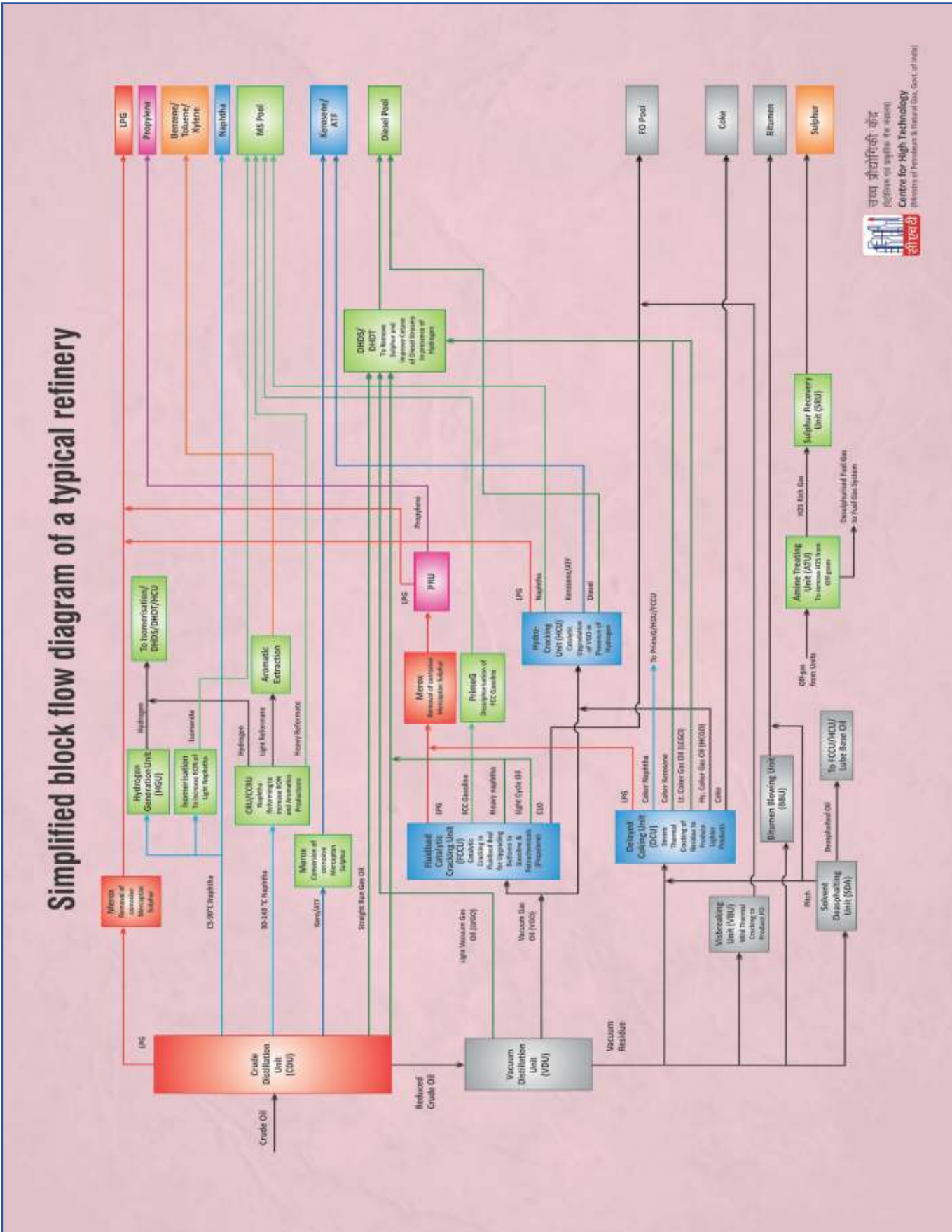
## Chapter-highlights

### Refining & Production

- As of April 2022, India's oil refining capacity stood at 251.2 million metric tonnes per annum (MMTPA), making it the second-largest refiner in Asia & fourth largest in the world. India has 23 Nos. of refineries presently Installed where Private companies owned about 35.1 % of the total refining capacity.
- Cauvery Basin Refinery (CBR) – Nagapattinam is under Capacity Augmentation from 1.0 MMTPA to 9 MMTPA. HPCL Rajasthan Refinery Ltd. (HRRL) a Joint Venture between Hindustan Petroleum Corporation Limited (HPCL) and Government of Rajasthan (GoR) with an equity participation of 74% and 26% respectively with 9.0 MMTPA capacity is under progress.
- Post covid Indian refiners have increased their crude processing which led to processing of 126.3 MMT (excluding Other Inputs) in H 1 of FY 2022 – 23. which is 11.5 % higher than that of H 1 of FY 2021 – 22. Overall Capacity utilization by Indian refineries was 101.0 % as compared to 90.9 % in H 1 of FY 2021 – 22.
- Further, in H 1 of FY 2022 – 23, High Sulfur crude processed by Indian refineries was 77.8 % whereas it was 75.2 % in H 1 of FY 2021 – 22.
- Due to recovery of demand, the total production of petroleum products by Indian refineries increased by 10.1% during H 1 of FY 2022-23 compared to Last Year and stood at 131.4 (including fractionator production of 1.8 MMT). This increase in production was mainly contributed by major petroleum products like LPG by 10.7 %; MS by 13.8 %; ATF by 65.9 %; HSD by 11.8 %.
- Exports of POL products increased by 6.4% during H1 of FY 2022-23 as compared to previous year. Increase in POL products exports during H1 of FY 2022-23 were due to increase in exports of all products except bitumen, superior kerosene oil (SKO), naphtha and fuel oil (FO) etc. In value terms, during H1 of FY 2022-23, exports were increased from 17.9 billion US\$ to 33.1 billion US\$, an increase of 84.8% compared to H1 of FY 2021-22. During H1 of FY 2022-23, high speed diesel (HSD), motor spirit (MS) and aviation turbine fuel (ATF) were the top 3 products in export basket of petroleum products having share of 49%, 20.7% and 10.8% respectively.
- POL products imports increased by 11.3% during H1 of FY 2022-23 as compared to the previous year. Increase in POL products imports during H1 of FY 2022-23 were due to increase in imports of all products except aviation turbine fuel (ATF), superior kerosene oil (SKO) and others etc. During H1 of FY 2022-23, in import basket of petroleum products, LPG bags the highest share of 41% followed by fuel Oil (19.2%) and petcoke (13.5%).

Map of refineries in India





**Table 4.1 : Refineries: Installed capacity and crude oil processing**

Sl. no.	Refinery	Installed capacity (MMTPA)			Crude oil processing (MMT)					
		01.04.2021	01.04.2022 (P)	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	Apr-Sep 2021	Apr-Sep 2022 (P)
1	Barauni	6.0	6.0	13.8	6.7	6.5	5.5	5.6	2.4	3.4
2	Koyali	13.7	13.7	9.2	13.5	13.1	11.6	13.5	6.3	7.8
3	Haldia	8.0	8.0	15.7	8.0	6.5	6.8	7.3	3.9	4.2
4	Mathura	8.0	8.0	7.7	9.7	8.9	8.9	9.1	4.2	4.6
5	Panipat	15.0	15.0	5.8	15.3	15.0	13.2	14.8	7.3	7.2
6	Guwahati	1.0	1.0	0.7	0.9	0.9	0.8	0.7	0.2	0.5
7	Digboi	0.65	0.65	1.0	0.7	0.7	0.6	0.7	0.4	0.3
8	Bongaigaon	2.35	2.7	2.4	2.5	2.0	2.5	2.6	1.4	1.3
9	Paradip	15.0	15.0	12.7	14.6	15.8	12.5	13.2	6.0	5.6
	<b>IOCL total</b>	<b>69.7</b>	<b>70.1</b>	<b>69.0</b>	<b>71.8</b>	<b>69.4</b>	<b>62.4</b>	<b>67.7</b>	<b>32.0</b>	<b>35.0</b>
10	Mumbai	7.5	9.5	8.6	8.7	8.1	7.4	5.6	1.5	4.9
11	Visakh	8.3	8.3	9.6	9.8	9.1	9.1	8.4	3.5	4.4
12	HMEL-Bathinda	11.3	11.3	8.8	12.5	12.2	10.1	13.0	6.5	6.3
	<b>HPCL total</b>	<b>27.1</b>	<b>29.1</b>	<b>27.1</b>	<b>30.9</b>	<b>29.4</b>	<b>26.5</b>	<b>27.0</b>	<b>11.6</b>	<b>15.6</b>
13	Mumbai	12.0	12.0	14.1	14.8	15.0	12.9	14.4	6.9	6.6
14	Kochi	15.5	15.5	14.1	16.1	16.5	13.3	15.4	6.8	8.1
15	BPCL-Bina <sup>§</sup>	7.8	7.8	6.7	5.7	7.9	6.2	7.4	3.4	3.7
	<b>BPCL total</b>	<b>35.3</b>	<b>35.3</b>	<b>34.9</b>	<b>36.5</b>	<b>39.4</b>	<b>32.4</b>	<b>37.2</b>	<b>17.1</b>	<b>18.4</b>
16	Manali	10.5	10.5	10.3	10.3	10.2	8.2	9.0	4.0	5.8
17	CBR	0.0	0.0	0.5	0.4	0.0	0.0	0.0	0.0	0.0
	<b>CPCL total</b>	<b>10.5</b>	<b>10.5</b>	<b>10.8</b>	<b>10.7</b>	<b>10.2</b>	<b>8.2</b>	<b>9.0</b>	<b>4.0</b>	<b>5.8</b>
18	Numaligarh	3.0	3.0	2.8	2.9	2.4	2.7	2.6	1.3	1.6
19	Tatipaka	0.07	0.07	0.08	0.07	0.09	0.1	0.08	0.04	0.04
20	MRPL-Mangalore	15.0	15.0	16.1	16.2	14.0	11.5	14.9	6.2	8.3
	<b>ONGC total</b>	<b>15.1</b>	<b>15.1</b>	<b>16.2</b>	<b>16.3</b>	<b>14.0</b>	<b>11.6</b>	<b>14.9</b>	<b>6.2</b>	<b>8.3</b>
21	RIL-Jamnagar (DTA)	33.0	33.0	33.2	31.8	33.0	34.1	34.8	16.8	17.9
22	RIL-Jamnagar (SEZ)	35.2	35.2	37.3	37.4	35.9	26.8	28.3	14.3	13.6
23	NEL* -Vadinar	20.0	20.0	20.7	18.9	20.6	17.1	20.2	10.0	10.2
	<b>All India</b>	<b>248.9</b>	<b>251.2</b>	<b>251.9</b>	<b>257.2</b>	<b>254.4</b>	<b>221.8</b>	<b>241.7</b>	<b>113.3</b>	<b>126.3</b>

Source: Oil companies; \*Nayara Energy Limited (formerly Essar Oil Limited); § WEF 01.07.2022 BPCL & BORL got merged  
MMTPA: Million Metric Tonne Per Annum, MMT: Million Metric Tonne

**Table 4.2 : High Sulphur (HS) & Low Sulphur (LS) crude oil processing**

Sl. no.	Type of crude	(Million metric tonne)					
		2018-19	2019-20	2020-21	2021-22 (P)	Apr-Sep 2021	Apr-Sep 2022 (P)
1	HS crude	194.2	192.4	161.4	185.0	85.2	98.3
2	LS crude	63.0	62.0	60.3	56.7	28.1	28.0
	<b>Total crude</b>	<b>257.2</b>	<b>254.4</b>	<b>221.8</b>	<b>241.7</b>	<b>113.3</b>	<b>126.3</b>
	Share of HS crude in total crude processing	75.5%	75.6%	72.8%	76.6%	75.2%	77.8%

Source: Oil companies

**Table 4.3 : Imported crude & indigenous crude oil processing**

(Million metric tonne)

Sl. no.	Indigenous/ Imported crude	2018-19	2019-20	2020-21	2021-22 (P)	Apr-Sep 2021	Apr-Sep 2022 (P)
1	Imported crude	225.5	225.1	193.8	214.7	100.0	112.7
2	Indigenous crude	31.7	29.3	28.0	27.0	13.3	13.6
	<b>Total crude</b>	<b>257.2</b>	<b>254.4</b>	<b>221.8</b>	<b>241.7</b>	<b>113.3</b>	<b>126.3</b>
	Share of imported crude in total crude processing	87.7%	88.5%	87.4%	88.8%	88.3%	89.2%

Source: Oil companies

**Table 4.4 : Domestic Production of petroleum products**

(Million metric tonne)

Products	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
<b>A) From crude oil/refineries</b>						
<b>Light ends</b>	<b>85.1</b>	<b>87.4</b>	<b>83.0</b>	<b>89.3</b>	<b>42.2</b>	<b>44.6</b>
of which: LPG	10.7	10.9	10.2	10.6	4.9	5.6
MS	38.0	38.6	35.8	40.2	18.5	21.1
Naphtha	18.4	19.4	18.4	19.0	9.4	8.3
Others	18.0	18.5	18.6	19.5	9.4	9.7
<b>Middle distillates</b>	<b>136.3</b>	<b>135.5</b>	<b>115.4</b>	<b>125.4</b>	<b>58.5</b>	<b>67.0</b>
of which: SKO	4.0	3.2	2.4	1.9	0.9	0.5
ATF	15.5	15.2	7.1	10.3	4.2	7.0
HSD	110.5	111.1	100.4	107.1	50.5	56.4
LDO	0.7	0.6	0.7	0.8	0.4	0.3
Others	5.7	5.5	4.8	5.3	2.5	2.7
<b>Heavy ends</b>	<b>36.0</b>	<b>35.3</b>	<b>30.9</b>	<b>35.5</b>	<b>16.5</b>	<b>18.0</b>
of which: Furnace Oil	9.5	8.9	7.1	8.5	4.0	4.9
LSHS	0.4	0.4	0.4	0.4	0.2	0.3
Lube Oil	0.9	0.9	1.1	1.2	0.5	0.6
Bitumen	5.6	4.9	4.9	5.1	2.1	2.2
RPC/Petcoke	13.7	14.6	12.0	15.5	7.1	7.7
Others	5.9	5.5	5.5	4.8	2.6	2.3
<b>Sub total (A)</b>	<b>257.4</b>	<b>258.2</b>	<b>229.3</b>	<b>250.3</b>	<b>117.3</b>	<b>129.6</b>
<b>B) From natural gas/fractionators</b>						
<b>Sub total (B)</b>	<b>4.9</b>	<b>4.8</b>	<b>4.2</b>	<b>4.1</b>	<b>2.1</b>	<b>1.8</b>
of which: LPG	2.1	2.0	1.9	1.6	0.8	0.8
Naphtha	1.2	1.2	1.0	1.0	0.5	0.5
SKO	0.07	0.05	0.03	0.0	0.01	0.002
ATF	0.02	0.03	0.02	0.0	0.01	0.02
HSD	0.04	0.06	0.06	0.0	0.03	0.03
Others	1.5	1.5	1.3	1.3	0.7	0.4
<b>Total production (A+B)</b>	<b>262.4</b>	<b>262.9</b>	<b>233.5</b>	<b>254.3</b>	<b>119.3</b>	<b>131.4</b>

Source: Oil companies





**Table 4.5 : Production of petroleum products : All sources**

(Million metric tonne)

Major products	2018-19		2019-20		2020-21		2021-22		Apr-Sep 2021		Apr-Sep 2022 (P)	
	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage
HSD	110.6	42.1	111.1	42.3	100.4	43.0	107.2	42.1	50.5	42.3	56.5	43.0
MS	38.0	14.5	38.6	14.7	35.8	15.3	40.2	15.8	18.5	15.5	21.1	16.0
Naphtha	19.6	7.5	20.6	7.8	19.4	8.3	20.0	7.9	9.8	8.3	8.8	6.7
FO	9.5	3.6	8.9	3.4	7.1	3.0	8.5	3.3	4.0	3.4	4.9	3.7
ATF	15.5	5.9	15.2	5.8	7.1	3.0	10.3	4.0	4.2	3.6	7.0	5.4
LPG	12.8	4.9	12.8	4.9	12.1	5.2	12.2	4.8	5.7	4.8	6.4	4.8
SKO	4.1	1.5	3.2	1.2	2.4	1.0	1.9	0.8	0.9	0.8	0.5	0.4
Bitumen	5.6	2.1	4.9	1.9	4.9	2.1	5.1	2.0	2.1	1.8	2.2	1.7
LSHS	0.4	0.2	0.4	0.2	0.4	0.2	0.4	0.2	0.2	0.1	0.3	0.2
Lubes	0.9	0.4	0.9	0.4	1.1	0.5	1.2	0.5	0.5	0.4	0.6	0.4
LDO	0.7	0.3	0.6	0.2	0.7	0.3	0.8	0.3	0.4	0.3	0.3	0.2
RPC/Petcoke	13.7	5.2	14.6	5.6	12.0	5.2	15.5	6.1	7.1	5.9	7.7	5.8
Others <sup>#</sup>	31.0	11.8	31.0	11.8	30.2	12.9	30.9	12.2	15.3	12.8	15.1	11.5
<b>Total</b>	<b>262.4</b>	<b>100.0</b>	<b>262.9</b>	<b>100.0</b>	<b>233.5</b>	<b>100.0</b>	<b>254.3</b>	<b>100.0</b>	<b>119.3</b>	<b>100.0</b>	<b>131.4</b>	<b>100.0</b>

Source: Oil companies

#Others include products like Propylene, Solvents (Hexane, Benzene, Toluene, Xylene and Specialty solvents), Reformate, Mineral Turpentine Oil, Carbon Black Feed Stock, Waxes, Sulphur etc.

**Table 4.6 : Production vis a vis consumption of petroleum products**

(Million metric tonne)

Year	Consumption \$	Production from refineries & other sources*	Surplus (+) / Deficit (-)
	(A)	(B)	(B)-(A)
1997-98	84.3	64.7	-19.6
1998-99	90.6	68.4	-22.2
1999-00	97.1	82.9	-14.2
2000-01	100.1	99.6	-0.5
2001-02	100.4	104.3	3.9
2002-03	104.1	108.7	4.5
2003-04	107.8	117.6	9.9
2004-05	111.6	123.3	11.6
2005-06	113.2	124.6	11.4
2006-07	120.7	140.6	19.9
2007-08	128.9	150.4	21.5
2008-09	133.6	157.9	24.3
2009-10	137.8	185.5	47.7
2010-11	141.0	196.2	55.2
2011-12	148.1	204.5	56.3
2012-13	157.1	218.2	61.2
2013-14	158.4	220.7	62.3
2014-15	165.5	221.1	55.6
2015-16	184.7	231.9	47.2
2016-17	194.6	243.5	48.9
2017-18	206.2	254.3	48.1
2018-19	213.2	262.4	49.1
2019-20	214.1	262.9	48.8
2020-21	194.3	233.5	39.2
2021-22	204.7	254.3	49.6
Apr-Sep 2021	95.2	119.3	24.1
Apr-Sep 2022 (P)	108.0	131.4	23.4

Note: \$ includes direct imports by private parties<sup>#</sup>

\*Fractionators and gas processing plants

**Table 4.7 : Gross Refining Margins (GRM) of Refineries**

Company	2017-18	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
\$/bbl							
<b>PSU refineries</b>							
IOCL#	8.49	5.41	0.08	5.64	11.25	6.57	25.49
BPCL	6.85	4.58	2.50	4.06	9.09	5.11	22.30
HPCL	7.40	5.01	1.02	3.86	7.19	2.87	12.62
CPCL	6.42	3.70	(1.18)	7.14	8.85	5.75	14.58
MRPL	7.54	4.06	(0.23)	3.71	8.72	3.33	10.33
NRL#	31.92	28.11	24.55	37.23	43.46	45.31	40.51
BORL	11.70	9.80	5.60	6.20	11.00	5.70	*
RIL	11.60	9.20	8.90	*	*	*	*
NEL	8.95	6.97	5.88	*	*	*	*
Singapore	7.23	4.88	3.25	0.53	4.99	2.92	14.27

(P) - Provisional

# GRM of North-East refineries are including excise duty benefit \* Not available

\* BPCL figures for the period April- Sept 2022(P) includes BORL after its merger with BPCL

As per U.S. Energy Information Administration (EIA) , Gross Refining Margin is the difference between the revenue from the sale of petroleum products and the cost of the raw materials used to produce the products.

**Source :** Indian refineries - published results/ information provided by oil companies; Singapore - Reuters



**Table 4.8 : Distillate yield of PSU refineries**

		(Distillate %)						
Company	Refinery	2017-18	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
IOCL	Barauni	89.0	87.9	86.9	87.1	85.9	83.8	83.9
	Koyali	82.5	81	79.5	72.1	76.7	73.1	73.5
	Haldia	66.9	69.9	69.0	72.2	72.2	74.4	75.1
	Mathura	75.4	76.1	75.6	72.3	74.9	72.9	72.2
	Panipat	84.9	82.8	84.8	80.2	83.9	80.2	79.8
	Guwahati	82.7	81	83.5	82.1	86.4	68.5	79.7
	Digboi	77.9	75.8	72.5	67.9	79.2	71.9	72.3
	Bongaigaon	84.3	84.8	80.8	84.8	81.3	81.9	80.6
	Paradip	79.4	80.8	80.7	79.2	79.6	78.6	77.7
CPCL	Manali	72.3	75.3	77.6	78.4	74.9	77.3	78.4
	CBR	79.1	77.3	-	-	-	-	-
HPCL	Mumbai	77.4	77.6	77.0	76.2	70.4	61.6	75.4
	Visakh	74.5	74.5	72.1	74.4	70.7	68.0	64.9
BPCL	Mumbai	84.3	82.2	84.9	83.7	84.4	83.1	85.5
	Kochi	83.9	82.5	84.2	83.8	85.4	84.7	83.8
	Bina					84.3	-	85.1
NRL	Numaligarh	86.7	87.1	83.0	86.4	85.7	89.3	87.9
MRPL	Mangalore	76.5	76.8	76.7	78.1	78.8	78.4	79.2
<b>PSU oil cos. average</b>		<b>79.7</b>	<b>79.6</b>	<b>80.0</b>	<b>78.6</b>	<b>79.6</b>	<b>78.1</b>	<b>78.5</b>

Source : CHT

**Table 4.9 : Fuel & Loss**

(Million metric tonne)

Company	Refinery	2018-19			2019-20			2020-21			2021-22 (P)			Apr-Sep 2021			Apr-Sep 2022 (P)		
		Crude T'put + other inputs	Fuel & Loss Qty	%	Crude T'put + other inputs	Fuel & Loss Qty	%	Crude T'put + other inputs	Fuel & Loss Qty	%	Crude T'put + other inputs	Fuel & Loss Qty	%	Crude T'put + other inputs	Fuel & Loss Qty	%	Crude T'put + other inputs	Fuel & Loss Qty	%
IOCL	Barauni	6.9	0.6	9.0	6.7	0.6	8.8	5.7	0.6	9.8	5.7	0.5	9.6	2.4	0.2	10.2	3.4	0.3	8.9
	Koyali	14.2	1.3	9.0	13.9	1.3	9.3	12.4	1.2	10.0	14.2	1.4	9.6	6.7	0.7	10.1	8.1	0.7	8.3
	Haldia	8.1	0.7	8.3	6.6	0.6	9.6	6.9	0.7	10.5	7.5	0.8	10.7	4.0	0.4	10.7	4.4	0.4	10.1
	Mathura	10.2	0.7	6.6	9.5	0.6	6.7	9.4	0.7	7.0	9.7	0.7	6.8	4.5	0.3	7.1	4.9	0.3	6.6
	Panipat	17.3	1.4	7.9	16.7	1.4	8.3	14.9	1.4	9.2	16.7	1.4	8.5	8.2	0.7	8.3	8.0	0.7	8.6
	Guwahati	1.2	0.1	9.5	1.3	0.1	9.7	1.1	0.1	10.6	1.0	0.1	9.7	0.3	0.03	10.1	0.7	0.06	8.6
	Digboi	0.8	0.1	10.0	0.7	0.1	11.0	0.7	0.1	11.7	0.8	0.1	10.6	0.4	0.04	10.6	0.4	0.04	10.5
	Bongaigaon	2.6	0.2	8.2	2.1	0.2	8.5	2.5	0.3	11.1	2.8	0.3	11.9	1.5	0.2	11.7	1.3	0.2	12.7
	Paradip	14.6	1.4	9.8	15.8	1.5	9.6	12.5	1.4	11.0	13.4	1.5	11.0	6.1	0.7	11.4	5.6	0.6	10.5
	<b>IOCL Total</b>		<b>75.7</b>	<b>6.4</b>		<b>73.4</b>	<b>6.4</b>		<b>66.1</b>	<b>6.4</b>		<b>71.7</b>	<b>6.8</b>		<b>34.1</b>	<b>3.3</b>		<b>36.9</b>	<b>3.3</b>
HPCL	Mumbai	8.8	0.6	7.0	8.1	0.4	5.1	7.5	0.6	8.0	5.7	0.5	8.2	1.6	0.1	8.3	4.9	0.4	7.7
	Visakh	9.8	0.7	7.3	9.1	0.7	7.5	9.1	0.7	7.9	8.4	0.7	8.1	3.5	0.3	8.7	4.4	0.3	7.6
	HMEL-Bathinda	12.6	0.7	5.8	12.3	0.7	5.7	10.1	0.6	6.0	13.1	0.8	6.1	6.5	0.4	6.3	6.3	0.4	6.7
	<b>HPCL Total</b>	<b>31.2</b>	<b>2.1</b>		<b>29.5</b>	<b>1.8</b>		<b>26.7</b>	<b>1.9</b>		<b>27.2</b>	<b>1.9</b>		<b>11.7</b>	<b>0.9</b>		<b>15.6</b>	<b>1.1</b>	
BPCL	Mumbai	14.8	0.6	4.0	15.1	0.6	4.2	13.1	0.5	4.1	14.5	0.6	4.3	7.0	0.3	4.0	6.7	0.3	5.0
	Kochi	16.4	1.3	7.8	17.2	1.4	8.3	13.9	1.1	8.2	15.9	1.4	8.8	7.1	0.6	8.9	8.3	0.7	9.0
	BORL-Bina	5.7	0.6	10.2	7.9	0.8	9.9	6.2	0.7	11.8	7.4	0.8	10.6	3.4	0.4	11.2	3.7	0.4	11.0
	<b>BPCL Total</b>	<b>37.0</b>	<b>2.4</b>		<b>40.2</b>	<b>2.8</b>		<b>33.1</b>	<b>2.4</b>		<b>37.8</b>	<b>2.8</b>		<b>17.5</b>	<b>1.3</b>		<b>18.6</b>	<b>1.5</b>	
CPCL	<b>Numaligarh</b>	<b>3.2</b>	<b>0.3</b>	<b>9.5</b>	<b>2.7</b>	<b>0.3</b>	<b>10.0</b>	<b>3.0</b>	<b>0.3</b>	<b>9.9</b>	<b>2.9</b>	<b>0.3</b>	<b>9.8</b>	<b>1.4</b>	<b>0.1</b>	<b>9.8</b>	<b>1.7</b>	<b>0.2</b>	<b>9.2</b>
	Manali	10.3	1.1	10.3	10.3	1.0	10.0	8.5	0.9	10.7	9.4	0.9	9.7	4.2	0.4	10.1	5.9	0.5	8.9
	CBR	0.4	0.02	5.1	0.002	0.00	52.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>CPCL Total</b>	<b>10.8</b>	<b>1.1</b>		<b>10.3</b>	<b>1.0</b>		<b>8.5</b>	<b>0.9</b>		<b>9.4</b>	<b>0.9</b>		<b>4.2</b>	<b>0.4</b>		<b>5.9</b>	<b>0.5</b>		
ONGC	Tatipaka	0.1	0.003	5.1	0.1	0.007	7.8	0.1	0.004	5.1	0.1	0.003	4.5	0.04	0.002	4.2	0.04	0.001	4.1
	MRPL-Mangalore	16.5	1.7	10.2	14.1	1.5	10.6	11.5	1.4	11.9	15.0	1.6	10.8	6.2	0.7	12.0	8.3	0.9	11.4
	<b>ONGC Total</b>	<b>16.6</b>	<b>1.7</b>		<b>14.2</b>	<b>1.5</b>		<b>11.6</b>	<b>1.4</b>		<b>15.0</b>	<b>1.6</b>		<b>6.3</b>	<b>0.7</b>		<b>8.3</b>	<b>0.9</b>	
RIL	Jamnagar (DTA)	37.0	2.8	7.5	40.1	3.8	9.5	40.7	4.0	9.9	41.1	4.0	9.7	19.9	1.9	9.7	21.3	2.2	10.5
	Jamnagar (SEZ)	48.9	3.6	7.4	52.1	4.6	8.9	45.1	4.4	9.8	50.5	5.0	9.8	24.9	2.6	10.3	25.2	2.7	10.7
NEL*	Vadinar	19.2	1.1	6.0	21.1	1.2	5.7	17.5	1.0	6.0	20.5	1.1	5.5	10.2	0.5	5.3	10.4	0.6	5.8
<b>Total</b>		<b>279.6</b>	<b>21.6</b>		<b>283.5</b>	<b>23.5</b>		<b>252.3</b>	<b>22.8</b>		<b>276.1</b>	<b>24.4</b>		<b>130.1</b>	<b>11.8</b>		<b>143.9</b>	<b>13.1</b>	

\*Nayara Energy Limited (formerly Essar Oil Limited) Source: Oil companies

**Table 4.10: Specific energy consumption of PSU Refineries**

(MBTU/Bbl/NRGF)

Company	Refinery	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
IOCL	Barauni	77.9	75.9	78.1	76.8	82.7	72.1
	Koyali	75.3	77.4	82.6	79.5	85.7	69.4
	Haldia	76.6	88.3	89.3	86.9	89.8	78.7
	Mathura	63.9	65.8	63.1	62.7	63.8	60.0
	Panipat	64.1	64.5	68.0	63.6	65.0	61.1
	Guwahati	112.3	121.2	123.7	121.4	167.1	106.5
	Digboi	101.8	101.7	98.1	88.4	99.1	98.2
	Bongaigaon	88.6	96.8	108.5	111.1	112.7	114.4
	Paradip	66.8	64.1	69.0	68.4	69.1	65.9
CPCL	Manali	83.0	81.5	86.7	82.8	87.6	73.2
	CBR	118.1	-	-	-	-	-
HPCL	Mumbai	82.8	84.8	98.2	105.8	132.2	87.6
	Visakhapatnam	77.3	84.4	81.2	85.3	90.3	82.4
BPCL	Mumbai	64.7	63.0	64.4	64.1	65.2	64.9
	Kochi	71.6	68.2	71.7	67.1	68.9	64.3
	Bina	-	-	-	69.9	-	72.6
NRL	Numaligarh	65.9	64.8	64.4	63.5	64.1	61.6
MRPL	Mangalore	74.2	75.3	81.4	73.5	80.0	71.2
<b>PSU average</b>		<b>72.7</b>	<b>72.8</b>	<b>76.6</b>	<b>73.7</b>	<b>71.7</b>	<b>70.6</b>

(P): Provisional; MBN values are as per New MBN methodology with normalisation for grid power import and BS-IV/VI production from 2015-16 onwards  
Specific Energy Consumption written as SEC or MBN; mbn=MBTU/Bbl/NRGF; MBTU: Net energy & loss in Refinery (Thousand British Thermal Unit);  
Bbls: Barrels of crude processed; NRGF: Composite energy factor for the Refinery

**Table 4.11 : Import / export of crude oil and petroleum products**

Import / export	Crude oil & petroleum products	2019-20			2020-21			2021-22 (P)			Apr-Sep 2021 (P)			Apr-Sep 2022 (P)		
		Quantity Million tonne	Value		Quantity Million tonne	Value		Quantity Million tonne	Value		Quantity Million tonne	Value		Quantity Million tonne	Value	
			US\$ (Billion)	Rs. (Crores)		US\$ (Billion)	Rs. (Crores)		US\$ (Billion)	Rs. (Crores)		US\$ (Billion)	Rs. (Crores)		US\$ (Billion)	Rs. (Crores)
I M P O R T	<b>Crude oil</b>	<b>227.0</b>	<b>101.4</b>	<b>717001</b>	<b>196.5</b>	<b>62.2</b>	<b>459779</b>	<b>212.4</b>	<b>120.7</b>	<b>901262</b>	<b>101.4</b>	<b>51.5</b>	<b>381065</b>	<b>115.4</b>	<b>89.0</b>	<b>698219</b>
	of which, PSU/JVs	141.4	64.7	458073	121.8	39.7	292718	134.7	77.3	577372	63.7	32.6	241053	75.1	59.2	465711
	Private	85.5	36.7	258928	74.7	22.6	167060	77.7	43.4	323890	37.8	18.9	140012	40.3	29.8	232509
	Products															
	LPG	14.8	7.1	50347	16.5	7.2	53752	17.1	12.3	91899	8.2	4.9	36497	8.7	6.8	53508
	Petrol	2.1	1.4	9610	1.4	0.7	4950	0.7	0.5	3895	0.2	0.1	943	0.3	0.3	2723
	Naphtha	1.7	0.9	6678	1.2	0.5	3844	1.3	1.0	7137	0.6	0.4	3121	0.8	0.6	4434
	Aviation Turbine Fuel	0.1	0.04	309	0.0	0.0	0.01	0.0	0.0	0.1	0.0	0.0	0.03	0.0	0.0	0.04
	Kerosene	0.0	0.0	0.0	0.003	0.002	12	0.0	0.0	1	0.0	0.0	1	0.0	0.0	1
	Diesel	2.8	1.6	11619	0.6	0.3	1960	0.1	0.1	425	0.03	0.02	144	0.3	0.4	3199
	Lubes/LOBS	2.7	1.7	11869	2.7	1.6	12170	3.1	2.7	20166	1.5	1.3	9642	1.6	1.4	10248
	Fuel Oil	4.6	1.6	11791	6.5	1.9	14312	9.0	4.4	32958	4.0	1.7	12731	4.1	2.4	18976
	Bitumen	1.6	0.5	3634	2.1	0.6	4325	2.6	1.1	7850	1.2	0.4	3269	1.3	0.5	3946
	Petcoke	10.7	1.4	9713	8.3	0.9	6410	5.7	1.6	11741	1.8	0.5	3475	2.9	0.8	5870
	Others**	2.7	1.4	10172	4.1	1.0	7695	2.4	1.7	12564	1.5	1.0	7225	1.3	0.9	6847
	<b>Total product import</b>	<b>43.8</b>	<b>17.7</b>	<b>125742</b>	<b>43.2</b>	<b>14.8</b>	<b>109430</b>	<b>42.1</b>	<b>25.2</b>	<b>188636</b>	<b>19.1</b>	<b>10.4</b>	<b>77048</b>	<b>21.2</b>	<b>14.2</b>	<b>109752</b>
	of which, PSU/JVs	20.0	10.2	72699	18.7	8.3	61332	18.1	13.0	97082	8.6	5.2	38273	9.3	7.6	59596
Private	23.8	7.5	53042	24.6	6.5	48098	24.0	12.3	91555	10.5	5.2	38775	11.9	6.6	50156	
<b>Total import (crude oil + product)</b>	<b>270.7</b>	<b>119.1</b>	<b>842743</b>	<b>239.7</b>	<b>77.0</b>	<b>569208</b>	<b>254.4</b>	<b>145.9</b>	<b>1089899</b>	<b>120.5</b>	<b>61.9</b>	<b>458113</b>	<b>136.7</b>	<b>103.2</b>	<b>807971</b>	
E X P O R T	<b>Products</b>															
	LPG	0.5	0.3	1970	0.5	0.2	1797	0.5	0.4	3214	0.2	0.2	1325	0.3	0.3	2075
	Petrol	12.7	7.7	54512	11.6	5.0	36530	13.5	10.9	81649	6.2	4.3	31662	6.5	7.3	57085
	Naphtha	8.9	4.4	31509	6.5	2.5	18643	6.9	5.0	37231	3.3	2.1	15732	3.2	2.5	19790
	Aviation Turbine Fuel	6.9	4.0	28458	3.5	1.3	9377	5.2	3.7	27112	2.1	1.2	9033	3.4	3.8	29774
	Kerosene	0.2	0.1	560	0.02	0.01	48	0.01	0.01	77	0.01	0.005	35	0.01	0.01	56
	Diesel	31.7	17.5	123919	30.6	11.1	81611	32.4	22.1	164741	15.3	8.8	64860	15.4	17.2	135129
	LDO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Lubes/LOBS	0.01	0.01	96	0.01	0.01	93	0.01	0.02	114	0.002	0.004	27	0.1	0.2	590
	Fuel Oil	1.5	0.5	3811	1.2	0.3	2318	1.8	0.9	6633	1.1	0.5	3858	0.8	0.5	3646
	Bitumen	0.03	0.01	89	0.01	0.003	23	0.01	0.004	28	0.002	0.001	9	0.001	0.001	6
	Petcoke / CBFS	0.5	0.2	1096	0.6	0.04	292	0.2	0.1	553	0.1	0.04	311	0.1	0.04	351
	Others***	2.9	1.1	7998	2.3	0.9	6436	2.3	1.4	10449	1.2	0.7	5152	1.6	1.3	9852
	<b>Total product export</b>	<b>65.7</b>	<b>35.8</b>	<b>254018</b>	<b>56.8</b>	<b>21.4</b>	<b>157168</b>	<b>62.8</b>	<b>44.4</b>	<b>331801</b>	<b>29.6</b>	<b>17.9</b>	<b>132005</b>	<b>31.5</b>	<b>33.1</b>	<b>258354</b>
	of which, PSU/JVs	14.2	7.5	53276	10.6	4.0	29708	14.2	10.3	76775	5.8	3.5	26164	6.9	7.0	54085
	Private	51.5	28.4	200742	46.1	17.4	127460	48.6	34.2	255026	23.8	14.3	105842	24.6	26.0	204269
	<b>Net import</b>	<b>205.1</b>	<b>83.2</b>	<b>588725</b>	<b>182.9</b>	<b>55.6</b>	<b>412041</b>	<b>191.7</b>	<b>101.5</b>	<b>758098</b>	<b>90.9</b>	<b>44.0</b>	<b>326108</b>	<b>105.2</b>	<b>70.2</b>	<b>549617</b>
<b>Net product export</b>	<b>21.9</b>	<b>18.2</b>	<b>128276</b>	<b>13.5</b>	<b>6.6</b>	<b>47738</b>	<b>20.7</b>	<b>19.2</b>	<b>143165</b>	<b>10.5</b>	<b>7.5</b>	<b>54957</b>	<b>10.3</b>	<b>18.8</b>	<b>148602</b>	

Source: Oil companies & DGCIS, (P) : Provisional

Note:

\*Import does not include LNG imports

\*\*Other imports include Paraffin Wax, Petroleum Jelly, Aviation Gas, MTBE, Reformate etc.

\*\*\*Other exports include VGO, Benzene, Hexane, MTO, Sulphur etc.

"Others" in exports include RIL-SEZ exports of "Others" with unspecified heavy ends.

Crude oil imports decreased by 6.5% and increased by 13.8% during September 2022 and April-September 2022 respectively as compared to the corresponding period of the previous year.

Imports made due to deficit in production viz. LPG and Lubes/LOBS accounted for 48.4% share of total POL products import during April to September 2022 as compared to 50.6% during April to September 2021.

Imports of naphtha and FO were done for commercial and technical considerations and accounted for 22.9% share of total POL products import during April to September 2022 as compared to 24.2% during April to March 2021.

Increase of 6.4% was recorded in POL products export during April to September 2022 as compared to during April to September 2021 mainly due to increase in exports of all products except for naphtha, superior kerosene oil (SKO), fuel oil (FO) and bitumen etc.

**Table 4.12 : Exchange rates of Indian rupee (₹)**

Year	US dollar(\$)	British pound(£)	Euro(€)	Japanese yen (¥)
<b>Indian rupee (₹) / foreign currency</b>				
2002-03	48.41	74.84	48.07	0.40
2003-04	45.92	77.74	54.01	0.41
2004-05	44.95	82.95	56.55	0.42
2005-06	44.28	79.02	53.88	0.39
2006-07	45.29	85.72	58.11	0.39
2007-08	40.24	80.80	56.99	0.35
2008-09	45.91	78.45	65.14	0.46
2009-10	47.42	75.88	67.08	0.51
2010-11	45.58	70.88	60.21	0.53
2011-12	47.95	76.40	65.90	0.61
2012-13	54.45	86.02	70.06	0.66
2013-14	60.50	96.23	81.14	0.60
2014-15	61.15	98.56	77.47	0.56
2015-16	65.46	98.76	72.31	0.55
2016-17	67.09	87.71	73.61	0.62
2017-18	64.45	85.47	75.42	0.58
2018-19	69.89	91.74	80.93	0.63
2019-20	70.88	90.15	78.80	0.65
2020-21	74.20	97.06	86.67	0.70
2021-22	74.51	101.78	86.56	0.66
2022-23 (upto 30.11.2022)	79.40	95.16	81.52	0.58
<b>2022 : Month wise</b>				
January	74.44	100.96	84.30	0.65
February	75.00	101.52	84.97	0.65
March	76.24	100.39	83.93	0.64
April	76.17	98.47	82.29	0.60
May	77.32	96.31	81.81	0.60
June	78.07	96.24	82.56	0.58
July	79.60	95.49	81.15	0.58
August	79.56	95.41	80.50	0.59
September	80.23	90.85	79.46	0.56
October	82.34	92.82	80.88	0.56
November	81.81	96.09	83.46	0.58

**Source:** Reserve Bank of India (RBI)/ Financial Benchmark India Private Limited (FBIL) website.

**Note:** The rates are average for the period.



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# Chapter-5 Major Pipelines in India





## Chapter-highlights

### Major Pipelines in India

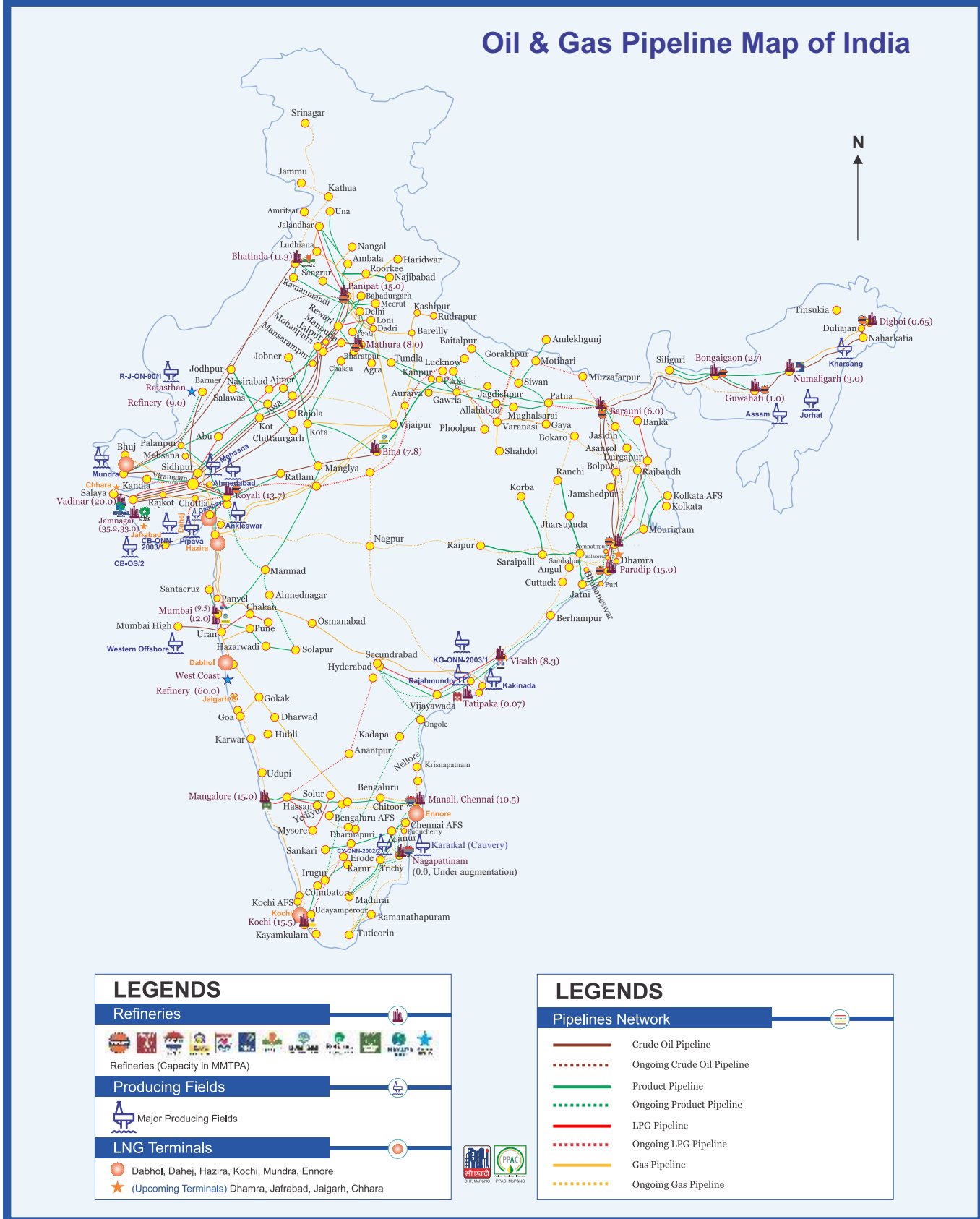
The pipelines play an essential role in maintaining the supply chain of crude oil, petroleum products and gas in the country. The onshore cross-country pipelines are laid underground at a depth of about 1.5 m. in a corridor of about 18 m wide and is operated normally at high pressure. As of 01.09.2022, the total length of crude oil pipeline network across India is 10419.6 km with a capacity of 147.9 MMTPA. During H1 of FY 2022-23, the utilization of the crude oil pipelines was 72.4%. The utilization of Crude oil pipeline increased by 7.4 percentage points during H1 of FY 2022-23 as compared to the previous year. Product pipelines, including LPG, have a total network of 19072 km and 117.2 MMTPA capacity. During H1 of FY 2022-23, product pipeline utilization stands at 79.9% as compared to 67.5% in H1 of FY 2021-22. Installed capacity of the Product/LPG pipeline increased by 5 MMTPA during FY H1 of FY 2022-23.





Map of Pipeline Network in India

Oil & Gas Pipeline Map of India



**Table 5.1 : Natural Gas Pipelines in the Country - 01.10.2022**

S. N.	Network/Region	Entity	Length (Kms)	Authorized capacity/ Declared capacity (mmscmd)	Pipeline size	Pipeline Status	Average flow 2021-22 (mmscmd)	% Capacity utilisation 2021-22	Average flow Apr 2022-Sep 2022 (P) (mmscmd)	% Capacity utilisation Apr 2022-Sep 2022 (P)
1	Assam Natural Gas Pipeline Network	Assam Gas Company Limited (AGCL)	106.713	2.428	800 mm/500 mm/ 400 mm/ 350 mm	Operational	1.18	48.6%	1.15	47.4%
2	Cauvery Basin Network	GAIL	240	4.33	18"/ 12"/ 8"/ 6"/ 4"/3"/2"	Operational	2.01	46.4%	2.01	46.4%
3	Hazira-Vijaipur-Jagdishpur -GREP (Gas Rehabilitation and Expansion Project)-Dahej-Vijaipur HVJ/VDPL	GAIL	4222	107.0	42"/36"/30"/18"/16"/ 14"/12"/10"/8"/6"/4"/2"	Operational	72.58	67.8%	72.75	68.0%
4	Dahej-Vijaipur (DVPL)-Vijaipur-Dadri (GREP) Upgradation DVPL 2 & VDPL	GAIL	1280		48"/ 16"/12"	Operational				
5	Dahej-Uran-Panvel-Dhabhol	GAIL	815	19.90	30"/24"/18"/12"/6"/4"	Operational	16.84	84.6%	16.97	85.3%
6	KG Basin Network	GAIL	877.9	16.00	18"/16"/14"/12"/ 8"/6"/4"/2"	Operational	3.8	23.8%	4.63	28.9%
7	Gujarat Regional Network	GAIL	608.8	8.31	24"/18"/14"/12"/ 8"/6"/5"/2"/1"	Operational	3.14	37.8%	3.16	38.0%
8	Agartala Regional Network	GAIL	55.4	2.00	12"/10"/8"	Operational	1.03	51.5%	0.89	44.5%
9	Mumbai Regional Network	GAIL	128.7	7.04	26"/20"/18"/12"/4"	Operational	4.46	63.4%	4.34	61.7%
10	Dukli - Maharajganj	GAIL	5.2	0.08	4"	Operational	0.06	80.0%	0.041	54.7%
11	Chainsa-Jhajjar-Hissar	GAIL	455	12.00	36"/18"/16"/ 12"/10"/8"/4"	Under Construction	1.36	11.3%	1.75	14.6%
12	Dadri-Bawana-Nangal	GAIL	921	31.00	36"/30"/18"/10"/8"	Under Construction	6.95	22.4%	7.57	24.4%
13	Kochi-Koottanad-Bangalore-Mangalore #	GAIL	1104	12.00	30"/ 24"/ 18"/ 8"/ 4"	Operational	3.87	32.3%	3.02	25.2%
14	Dabhol-Bangalore	GAIL	1414	16.00	36"/30"/24"/18"/10"/8"	Under Construction/ Part Operational	1.69	10.6%	1.71	10.7%
15	Jagdishpur-Haldia-Bokaro Dhamra-Paradip- Barauni-Guwahati #	GAIL	3546	7.44	36"/30"/24"/ 18"/12"/8"/6"/4"	Under Construction / Part Operational	1.605	21.6%	4.183	56.2%
16	Hazira-Ankleshwar (HAPI) 1	GGL	73.2	4.20	18"	Operational	0.98	23.3%	0.78	18.5%
17	Mehsana - Bhatinda^	GIGL	1673	45.94	36"/24"/18"/12"	Partially Commissioned**	3.61	7.9%	3.23	7.0%
18	Bhatinda - Gurdaspur\$	GIGL	305.43	33.93	24"/18"/16"/12"/8"/6"	Partially Commissioned\$	0.03	0.1%	0.05	0.1%
19	Mallavaram - Bhopal - Bhilwara - Vijaipur#	GITL	2042	78.25	42"/36"/30"/24"/18"/12"	Under Construction	1.22	1.6%	1.93	2.5%
20	High Pressure Gujarat Gas Grid	GSPL	2657.4	31	36"/30"/24"/20"/ 18"/12"/8"/6"/4"	Operational*	33.89	78.8%	27.00	62.8%
21	Low Pressure Gujarat Gas Grid	GSPL	57.6	12	36"/30"/24"/12"	Operational*				
22	Dadri-Panipat	IOCL	132	9.50	30"	Operational (under operation 141 KM)	5.49	58.0%	4.81	50.6%
23	Ennore-Thiruvallur-Bengaluru-Puducherry-Nagapattinam-Madurai-Tuticorn	IOCL	1421	84.67 (installed capacity 34)	30"/24"/ 18"/16"/14"/6"	Under Construction / Part Operational (under operation 285 Km)	2.91	23.0%	3.17	20.8%
24	Dahej-Koyali	IOCL	106	5.23	16"	Operational (106 Km)	0.03	0.6%	1.05	20.0%
25	Uran-Trombay	ONGC	24	6.00	20"	Operational	2.71	45.0%	2.84	47.0%
26	Kakinada-Bharuch Natural Gas Pipeline (erstwhile East - West Pipeline)	Pipeline Infrastructure Limited	1480	85.00	48"/30"/28"/24"/16"	Operational	20.56	24.2%	23.92	28.1%
27	Shahdol-Phulpur	RGPL	304	3.50	16"	Operational	0.71	2027.2%	0.67	19.0%

Source: Pipeline entities

Note:

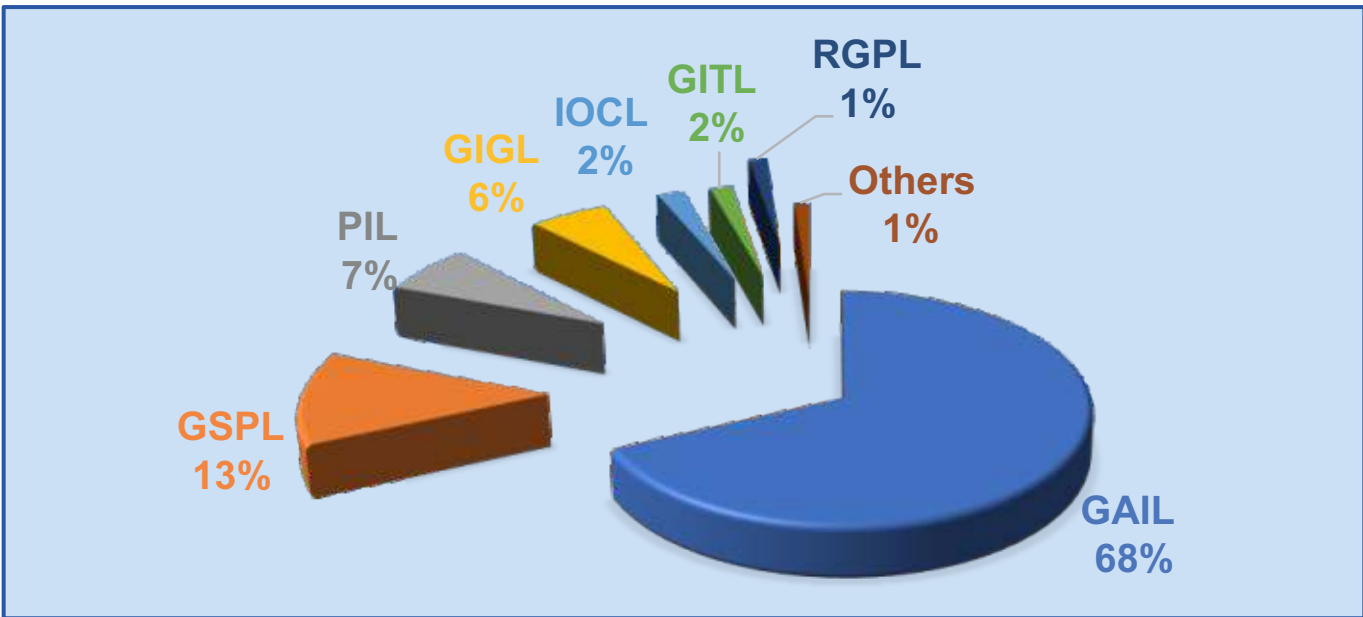
1. GGL Pipeline - Pipeline capacity as determined by GGL
2. GSPL/GIGL/GITL pipelines



**Comment Continued**

- ^Natural Gas flowing through (i) Barmer - Pali - Palanpur Pipeline (ii) Pali - Ajmer - Jaipur - Sikar - Hanumangarh - Sirsa - Bhatinda Pipeline (iii) Hanumangarh - Sonipat - Panipat Pipeline
  - \*\* 1153 km of the pipeline commissioned, approx. 71 km of the pipeline is completed, approx. 9 km of mainline and approx. 17 km of spurline in Punjab is pending due to persistent RoU issues
  - \$101 km of Jalandhar Amritsar pipeline commissioned, approx. 10 km of spurline in Punjab completed, approx. 20 km is pending due to RoU issues.
  - # Please note that the gas is flowing through 365 km x 18" pipeline Kunchanapally in Andhra Pradesh to RFCL, Ramagundam in Telanagana State which was commissioned on 14.10.2019
  - \* Information for the period Apr to Sep 2022. Data for the period July - September 2022 is on provisional basis as GSPL's financial results for Q2 2022-23 is not published
3. Pipeline Infrastructure Limited Pipeline:
- 1) For the period April 2021 - March 2022 conversion factor of 38263.11 Btu/SCM is used for computing volumes in MMSCMD, while for the period April 2022 - September 2022 conversion factor of 37000 Btu/SCM is used.
  - 2) The capacity above (85 MMSCMD) is as per the authorization letter issued by PNGRB for Kakinada - Bharuch Natural Gas Pipeline (erstwhile East-West Pipeline). Last weighted average annual capacity assessed and submitted to PNGRB is 83.5 mmscmd for FY 2021-22 and 76.4 MMSCMD for FY 2022-23.
4. GAIL  
 # Capacity of commissioned section  
 \*Total flow will not match with sum of individual pipeline network quantity as some quantity have travelled more than one pipeline network.

**Share of pipeline-operators in operational & partially commissioned NG pipelines**



**Table 5.2 : Existing major crude oil pipelines in India**

Type of Pipeline -Onshore/ Offshore	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during
			01.10.2022	01.10.2022	Apr-Sep 2022 (P)	Apr-Sep 2022 (P)
Onshore	CTF (Central Tank Farm) Kalol to CTF Nawagam - New (New line commissioned in Aug'2010)	ONGC	63	3.1	0.5	34.1
Onshore	Nawagam-Koyali (18" line) New		80	5.4	1.8	68.2
Onshore	Nawagam-Koyali (14" line) ( Old)		78	3.3	0.0	0.0
Onshore	MHN-NGM (Mehsana-Nawagam) trunk line - New (New crude oil trunk line commissioned. Under operation since Dec'2010)		77	2.3	1.1	92.8
Onshore	CTF (Central Tank Farm), Ankleshwar to Koyali oil pipeline (AKCL- Ankleshwar Koyali Crude Line)		95	2.2	0.3	25.2
Onshore	CTF (Central Tank Farm), Ankleshwar to CPF (Central Processing Facility), Gandhar		44	0.4	0.0	0.0
Onshore	CPF (Central Processing Facility), Gandhar to Saraswani 'T' point		57	1.8	0.2	23.7
Onshore	Akholjuni- Koyali oil pipe line (Commissioned in July 2010). Akholjuni to Laxmipura T' point		66	0.5	0.2	95.9
Onshore	Lakwa-Moran oil line (New)		15	1.5	0.2	33.0
Onshore	Lakwa-Moran oil line (Old)		18	1.5	0.0	0.0
Onshore	Geleki-Jorhat oil line		49	1.5	0.0	0.0
Onshore	Geleki-Jorhat oil line (New)		48	1.5	0.1	18.6
Onshore	Borholla- Jorhat oil line		43	0.6	0.0	0.0
Onshore	Borholla- Jorhat new TPL (New)		43	0.6	0.1	34.5
Onshore	NRM (Narimanam) to CPCL (Chennai Petroleum Corporation Limited)		5	0.7	0.2	44.0
Onshore	KSP-WGGS to TPK Refinery (Kesnapalli-West-Group Gathering Station to Tatipaka)		14	0.1	0.0	71.6
Onshore	GMAA EPT (Gopavaram Early Production Terminal) to S. Yanam Unloading Terminal (3.5 Km long and 4"). New line commissioned on 28.07.10		4	0.1	0.0	27.5
Offshore	Mumbai High - Uran - Trunk (MUT) 30" pipeline		204	15.6	2.1	26.8
Offshore	Heera - Uran - Trunk (HUT) 24" pipeline		81	11.5	3.1	54.7
Offshore	Bombay-Uran Trunk (BUT) 30" pipeline		203	6.4	0.0	1.4
		<b>Sub total ONGC</b>	<b>1284</b>	<b>60.6</b>	<b>10.1</b>	<b>33.4</b>
Onshore	Salaya-Mathura pipeline (SMPL)	IOCL	2646	25.0	14.1	113.1
Onshore	Paradip-Haldia-Barauni pipeline (PHBPL)		1355	15.2	9.4	123.9
Onshore	Mundra-Panipat pipeline		1194	8.4	3.2	76.3
Offshore	Salaya Mathura Pipeline ( Offshore segment)		14	-	0.0	-
Offshore	Paradip Haldia Barauni Pipeline ( Offshore segment)		92	-	0.0	-
		<b>Sub total IOCL</b>	<b>5301</b>	<b>48.6</b>	<b>26.8</b>	<b>110.1</b>
Onshore	Duliajan-Digboi-Bongaigaon-Barauni pipeline	OIL	1193	9.0	3.2	72.4
Onshore	Mangla-Bhogat pipeline	CAIRN	660	8.7	2.7	61.5
Offshore	Bhogat Marine	CAIRN	28	2.0	0.8	79.5
		<b>Sub total CAIRN</b>	<b>688</b>	<b>10.7</b>	<b>3.5</b>	<b>64.8</b>
Onshore	Mundra- Bathinda pipeline	HMPL	1017	11.3	6.3	112.1
Onshore	Vadinar-Bina pipeline	BORL	937	7.8	3.6	93.4
	<b>Total Crude pipelines</b>		<b>10420</b>	<b>147.9</b>	<b>53.5</b>	<b>72.4</b>

Source : Oil companies (P): Provisional

Notes: Pipeline utilisation is calculated using formula = (Throughput in MMT \* 100) / (Annual capacity in MMTPA X 0.5)

### 5.3 Existing major POL pipelines in India

Type of Pipeline	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during	
			01.10.2022	01.10.2022	Apr-Sep 2022 (P)	Apr-Sep 2022 (P)	
<b>Petroleum Products Pipelines</b>							
Onshore	Barauni - Kanpur pipeline	IOCL	1227	3.5	1.8	100.4	
Onshore	Guwahati -Siliguri pipeline		435	1.4	1.0	143.4	
Onshore	Haldia-Barauni pipeline		526	1.3	0.8	126.1	
Onshore	Haldia-Mourigram-Rajbandh pipeline		277	1.4	1.0	141.9	
Onshore	Koyali-Ahmedabad pipeline		79	1.1	0.4	72.2	
Onshore	Koyali-Sanganer pipeline (Incl. JPNPL)		1644	5.0	2.5	100.8	
Onshore	Koyali-Ratlam pipeline		265	2.0	0.9	86.5	
Onshore	Koyali-Dahej pipeline		197	2.6	0.4	31.2	
Onshore	Mathura-Tundla pipeline extended upto Gawria (3)		311	1.2	0.3	54.7	
Onshore	Mathura-Bharatpur pipeline		21		0.1		
Onshore	Mathura-Delhi pipeline		147	3.7	1.3	72.2	
Onshore	Panipat-Amabala-Jalandhar (Including Kurukshetra-Roorkee-Najibabad branch line)		495	3.5	1.7	98.6	
Onshore	Panipat-Delhi (Including Sonapat-Meerut branch line) pipeline		189	3.0	0.4	29.7	
Onshore	Panipat Bijwasan ATF pipeline (4)		111	1.0	0.03	6.4	
Onshore	Panipat-Bathinda pipeline		219	3.0	0.8	54.3	
Onshore	Panipat-Rewari pipeline		155	2.1	0.8	77.5	
Onshore	Chennai-Trichy-Madurai pipeline		683	2.3	1.5	133.1	
Onshore	Chennai - Meenambakkam ATF pipeline		95	0.2	0.1	131.1	
Onshore	Chennai-Bengaluru pipeline		290	2.5	1.2	101.8	
Onshore	Devangonthi - Devanhalli pipeline		36	0.7	0.3	75.8	
Onshore	Paradip Raipur Ranchi pipeline(PRRPL)		1073	5.0	2.1	83.7	
Onshore	Kolkata ATF Pipeline		27	0.2	0.1	77.0	
Onshore	Lucknow ATF Pipeline (1)		6	0.2	0.02	16.2	
			<b>Sub total IOCL</b>	<b>8508</b>	<b>46.7</b>	<b>19.6</b>	<b>84.0</b>
Onshore	Mumbai-Manmad-Bijwasan pipeline (MMBPL)		BPCL	1389	6.0	3.9	130.2
Onshore	Bina-Kota pipeline (BKPL)			259	4.4	1.6	73.7
Onshore	Bina Panki Pipeline	355		3.5	0.7	38.0	
Onshore	ATF P/L Mumbai Refinery (MR)-Santacruz	15		1.4	0.2	31.2	
Onshore	ATF P/L Kochi Refinery (KR)-Kochi Airport	34		0.6	0.2	69.9	
Onshore	Kota - Jobner branch pipeline(1)	211		1.7			
Onshore	Mumbai Refinery- Wadilube Pipeline	12		1.3	0.1	14.8	
Onshore	Cochin-Coimbatore-Karur (CCK) pipeline (2)	293		3.3	2.1	125.2	
		<b>Sub total BPCL</b>		<b>2568</b>	<b>22.2</b>	<b>8.8</b>	<b>79.1</b>
Onshore	Mumbai-Pune-Solapur pipeline		508	4.3	1.9	87.2	
Onshore	Vizag-Vijaywada-Secunderabad pipeline		572	7.7	2.6	68.7	

### 5.3 Existing major POL pipelines in India

Type of Pipeline	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during
			01.10.2022	01.10.2022	Apr-Sep 2022 (P)	Apr-Sep 2022 (P)
Onshore	Mundra-Delhi pipeline (1)	HPCL	1054	6.9	1.6	45.7
Onshore	Ramanmandi-Bahadurgarh pipeline (2)		243	7.1	3.2	90.0
Onshore	Ramanmandi-Bathinda pipeline		30	2.1	0.6	59.4
Onshore	Awa-Salawas pipeline		93			
Onshore	Bahadurgarh-Tikrikalan pipeline		14			
Onshore	Rewari- Kanpur Pipeline		443			
Onshore	ATF pipeline from Mumbai Refinery to Mumbai Airport		20	0.5	0.2	60.2
Onshore	Black Oil Pipeline (BOPL)		22	1.5	0.5	62.7
Onshore	Lube Oil Pipeline : Trombay to Wadibundar (3)		17	1.0	0.2	46.9
Onshore	Palanpur-Vadodara Pipeline		235			
	<b>Sub total HPCL</b>		<b>3250</b>	<b>31.1</b>	<b>10.8</b>	<b>69.3</b>
Onshore	Mangalore-Hassan-Bengaluru (MHB) pipeline (1)	Petronet MHB	363	5.6	1.8	63.8
Onshore	Numaligarh-Siliguri pipeline	OIL	654	1.7	0.8	87.4
	<b>Total Petroleum product pipelines (w/o LPG pipelines )</b>		<b>15343</b>	<b>107.3</b>	<b>41.7</b>	<b>77.7</b>
<b>LPG Pipelines</b>						
Onshore	Panipat-Jalandhar pipeline	IOCL	280	0.7	0.3	87.1
Onshore	Paradip Haldia Durgapur pipeline (2)		873	1.6	0.6	78.1
	<b>Sub total IOCL</b>		<b>1153</b>	<b>2.3</b>	<b>0.9</b>	<b>80.9</b>
Onshore/ offshore	Mumbai-Uran pipeline	BPCL	28	0.8	0.9	224.4
Onshore	Jamnagar-Loni pipeline	GAIL	1414	2.5	1.5	120.5
Onshore	Vizag-Secunderabad pipeline		609	1.3	0.6	97.3
	<b>Sub total GAIL</b>		<b>2023</b>	<b>3.8</b>	<b>2.2</b>	<b>112.5</b>
Onshore	Mangalore-Hassan-Mysore-Bangalore LPG	HPCL	356	1.9	0.6	60.1
Onshore	Uran-Chakan-Shikrapur LPG Pipeline (4)		169	1.0	0.5	108.3
	<b>Sub total HPCL</b>		<b>525</b>	<b>2.9</b>	<b>1.1</b>	<b>76.5</b>
	<b>Total LPG pipelines</b>		<b>3729</b>	<b>9.8</b>	<b>5.1</b>	<b>103.6</b>
	<b>Total POL pipelines</b>		<b>19072</b>	<b>117.2</b>	<b>46.8</b>	<b>79.9</b>

Source: Oil Companies (P): Provisional

**Notes:**

Pipeline utilisation is calculated using formula = (Throughput in MMT \* 100) / (Annual capacity in MMTPA \* 0.5)

**IOCL**

(1) Lucknow ATF Pipeline commissioned on 22nd June 2022.

(2) Under PHDPL augmentation project, all Balasore MLPUs commissioned on 29th June 2022. Augmented capacity is 1.55 MMTPA.

(3) MTPL extended upto Gawria with commissioning of Tundla-Gawria section, length 255 Km, on 16th August 2022.

(4) Dedicated MLPUs commissioned for PBAPL line on 20th September 2022. Throughput of PBAPL up-to 19th September 2022 is included in throughput of PDPL.

**BPCL**

(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) Petronet CCK was merged with BPCL w.e.f 1st June 2018

(3) Bina Panki pipeline is commissioned in Oct 2021

**HPCL**

(1) Thruput of Mundra-Delhi pipeline includes thruputs of branchlines viz. Awa Salawas Pipeline, Rewari Kanpur pipeline, Palanpur-Vadodara Pipeline.

(2) Thruput of Ramanmandi Bahadurgarh pipeline is including thruput of branchlines viz. Bahadurgarh-Tikrikalan Pipeline & Rewari-Kanpur pipeline.

(3) Lube Oil pipeline and ATF pipeline from Mumbai Refinery to Mazgaon Terminal and Mumbai Airport are speciality product pipelines.

(4) Thruput of UCSPL includes both HPCL & BPCL volumes.

**Petronet MHB**

(1) Petronet MHB JV- ONGC & HPCL 26% each, Petronet- 12%, Public- 36%.



Analysis • Knowledge • Information



# Chapter-6 Sales





## Chapter-highlights

### Sales

- Overall consumption of POL for the FY2022-23 H1 in India was recorded at 108 MMT with a growth of 13.4% over the same period of previous financial year.
- This growth has come riding on High Speed Diesel (HSD), the product contributing 38.35% to POL consumption, achieved a growth of ~16% over same period last year. With 41.4 MMT the product left behind the pre pandemic levels.
- Motor Spirit (MS), which has 16.14% share in POL basket grew by 18.5% in FY2022-23 H1 over same period last year.
- The sales of Aviation Turbine Fuel (ATF) in FY2022-23 H1 grew by huge 71.3% and inched towards pre-pandemic levels.
- The country achieved target of 10% Ethanol Blending in Petrol in June 2022, five months ahead of target of November 2022.
- India has network of 84614 retail outlets as of FY2022-23 H1, which means one outlet at every 15 miles. 23889 of these outlets are rural outlets.
- More than 10% of total outlets have alternate fuels at 8904 Retail Outlets across India. Of these 4104 outlets make EV charging facilities available to commuters.
- 310 depots and terminals spread throughout the country ensure uninterrupted supply of fuels to consumers.





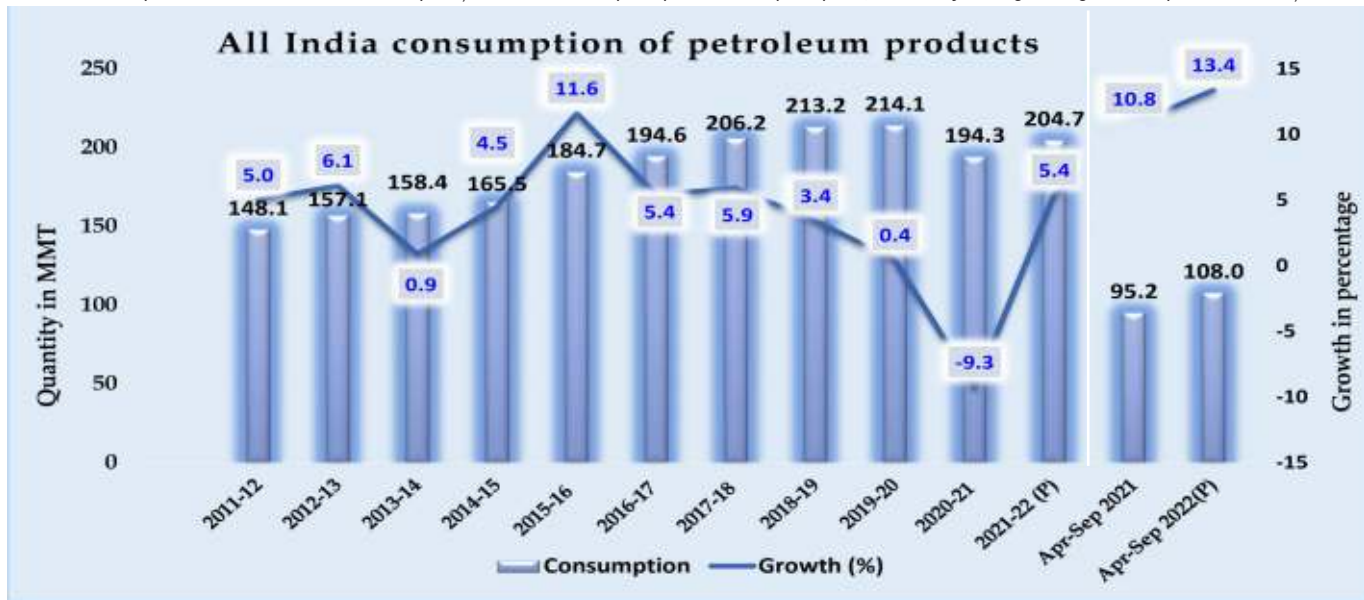
**Table 6.1 : Domestic Consumption of petroleum products**

(Million metric tonne)

Products	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
LPG	15.3	15.6	16.3	18.0	19.6	21.6	23.3	24.9	26.3	27.6	28.3	13.6	13.8
MS	15.0	15.7	17.1	19.1	21.8	23.8	26.2	28.3	30.0	28.0	30.8	14.7	17.4
Naphtha	11.2	12.3	11.3	11.1	13.3	13.2	12.9	14.1	14.3	14.1	14.3	7.0	6.4
ATF	5.5	5.3	5.5	5.7	6.3	7.0	7.6	8.3	8.0	3.7	5.0	2.0	3.5
SKO	8.2	7.5	7.2	7.1	6.8	5.4	3.8	3.5	2.4	1.8	1.5	0.8	0.3
HSD	64.7	69.1	68.4	69.4	74.6	76.0	81.1	83.5	82.6	72.7	76.7	35.7	41.4
LDO	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.9	1.0	0.5	0.4
Lubes	2.6	3.2	3.3	3.3	3.6	3.5	3.9	3.7	3.8	4.1	4.6	2.1	2.1
FO/LSHS	9.3	7.7	6.2	6.0	6.6	7.2	6.7	6.6	6.3	5.6	6.3	3.0	3.4
Bitumen	4.6	4.7	5.0	5.1	5.9	5.9	6.1	6.7	6.7	7.5	7.9	3.2	3.5
Petcoke	6.1	10.1	11.8	14.6	19.3	24.0	25.7	21.3	21.7	15.6	15.8	6.5	7.7
Others*	4.9	5.5	6.0	5.9	6.4	6.6	8.3	11.7	11.4	12.8	12.5	6.2	8.1
All India	148.1	157.1	158.4	165.5	184.7	194.6	206.2	213.2	214.1	194.3	204.7	95.2	108.0
Growth (%)	5.0	6.1	0.9	4.5	11.6	5.4	5.9	3.4	0.4	-9.3	5.4	10.8	13.4

**Note:** \*Others include sulphur, propylene, propane, reformat, butane, MTO (Mineral Turpentine oil) etc. P : Provisional

**Source:** Oil Companies, Directorate General of Commercial Intelligence and Statistics (DGCIS) & online SEZ data (included from 2017-18 onwards). (Oil company sales+Private imports+SEZ sales to DTA= Consumption). Private direct imports prorated for Apr-Sept'22, which may undergo change on receipt of actual data)



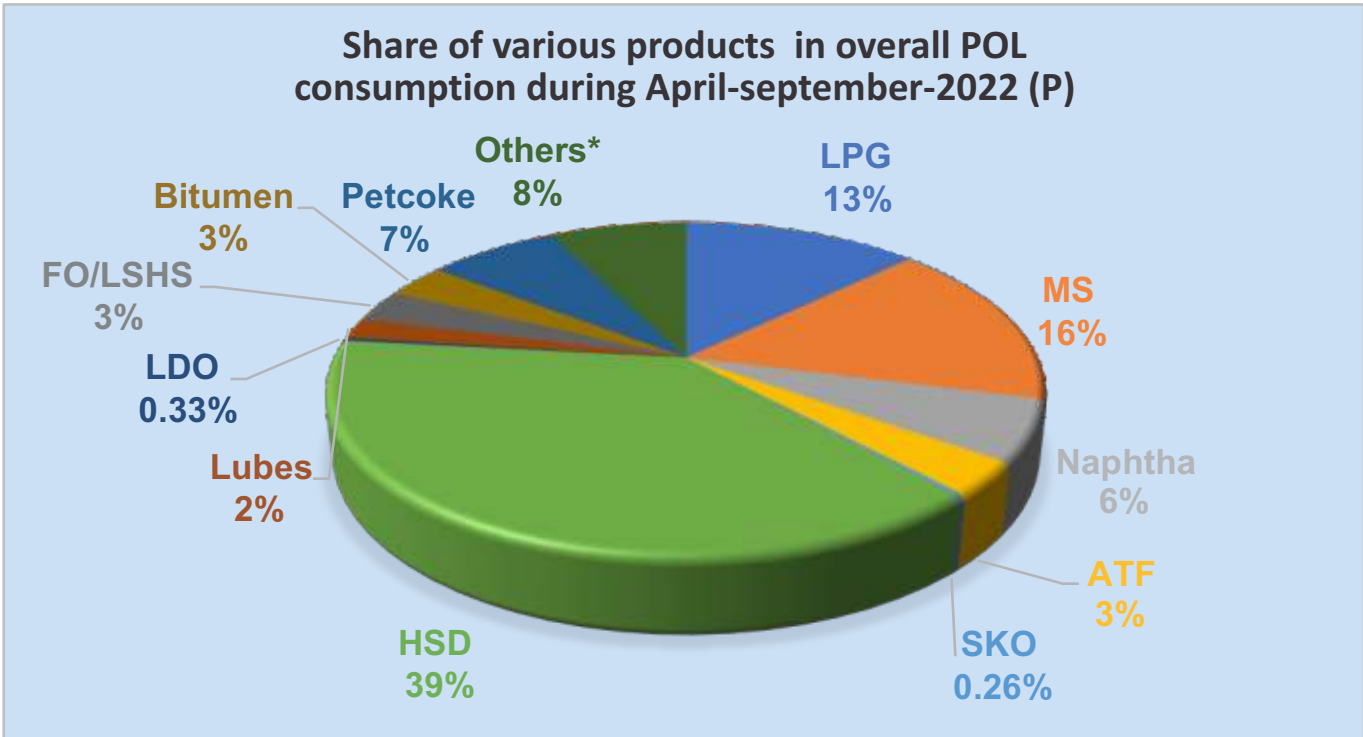
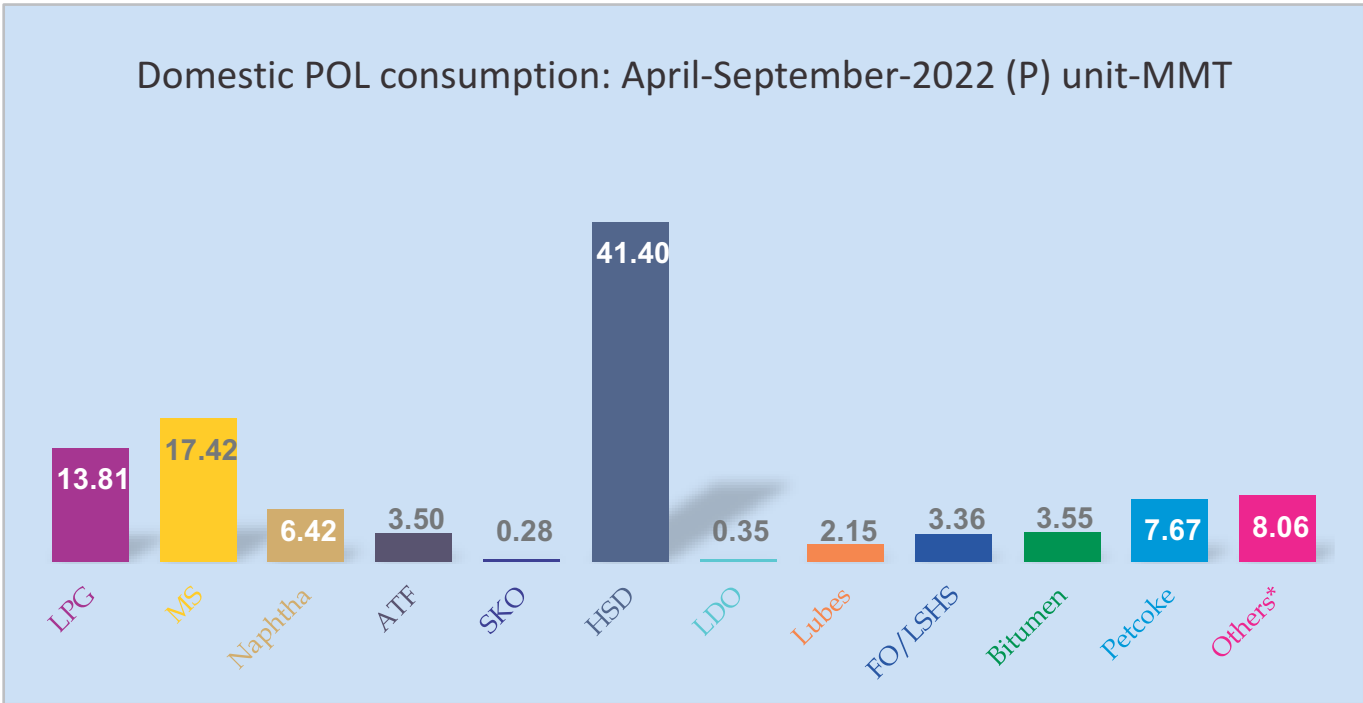
The consumption of petroleum products has gone up from 71.8 MMT in H1 FY2010-11 to 198 MMT in H1 FY2022-23. The compounded annual growth rate (CAGR) of H1 total POL consumption in the last decade has been 4.2%. The H1 consumption based CAGR was highest in "Others" category, marking 12.3% among POL products in the last decade followed by Petcoke (10.3%), MS (8.9%), LPG (6.5%), Bitumen (6.6%), Lubes (5.7%), LDO (4.4%), HSD (3%), ATF (2.7%) and Naphtha (1.3%). Negative CAGR in the last decade was observed in the consumption of FO/LSHS (-3.6%) and SKO (-23.6%). Half-yearly consumption recorded a growth of 13.4% with a volume of 108 MMT in 2022-23 as compared to 95 MMT during the same period in 2021-22. The Half-yearly consumption during 2022-23 is the highest consumption ever in POL history since FY1997-98 to FY 2022-23.

**Table 6.2 : Domestic Consumption growth of petroleum products**

Products	(Growth in percentage)													
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)	CAGR calculated April-Sept -11-12 to 21-22
LPG	7.1	1.6	4.4	10.5	9.0	10.1	8.0	6.7	5.7	4.7	2.8	2.5	1.7	6.5
MS	5.6	5.0	8.8	11.4	14.5	8.8	10.1	8.1	6.0	-6.7	10.3	21.3	18.5	8.9
Naphtha	5.1	9.5	-8.0	-2.0	19.8	-0.2	-2.7	9.6	1.0	-1.2	1.3	8.6	-8.1	1.3
ATF	9.0	-4.8	4.4	4.0	9.4	11.7	9.1	8.7	-3.7	-53.8	35.4	71.5	71.3	2.7
SKO	-7.8	-8.8	-4.5	-1.1	-3.7	-20.9	-28.8	-10.0	-30.7	-25.0	-16.9	-17.4	-63.4	-23.6
HSD	7.8	6.7	-1.0	1.5	7.5	1.8	6.6	3.0	-1.1	-12.0	5.5	15.5	16.1	3.0
LDO	-8.9	-3.9	-3.1	-5.4	11.5	10.3	16.7	14.2	5.0	36.2	19.3	46.4	-31.2	4.4
Lubes	8.4	21.4	3.4	0.1	7.9	-2.8	11.9	-5.6	4.5	6.9	11.9	24.5	3.4	5.7
FO/LSHS	-13.7	-17.7	-18.6	-4.4	11.3	7.8	-6.0	-2.3	-4.0	-11.3	12.9	15.3	12.3	-3.6
Bitumen	2.2	0.8	7.1	1.3	17.1	0.0	2.5	10.2	0.2	12.0	4.6	22.5	10.3	6.6
Petcoke	23.2	65.1	16.0	23.8	32.6	24.2	7.1	-16.8	1.7	-28.1	1.1	-26.7	18.3	10.3
Others	7.7	11.9	8.1	-1.4	8.2	3.8	26.5	40.6	-3.0	12.6	-2.1	23.1	30.0	12.3
<b>All India</b>	<b>5.0</b>	<b>6.0</b>	<b>0.9</b>	<b>4.5</b>	<b>11.6</b>	<b>5.4</b>	<b>5.9</b>	<b>3.4</b>	<b>0.4</b>	<b>-9.3</b>	<b>5.4</b>	<b>10.8</b>	<b>13.4</b>	<b>4.2</b>



**Domestic Consumption of Petroleum Products : April-September 2022 (P) (MMT)**

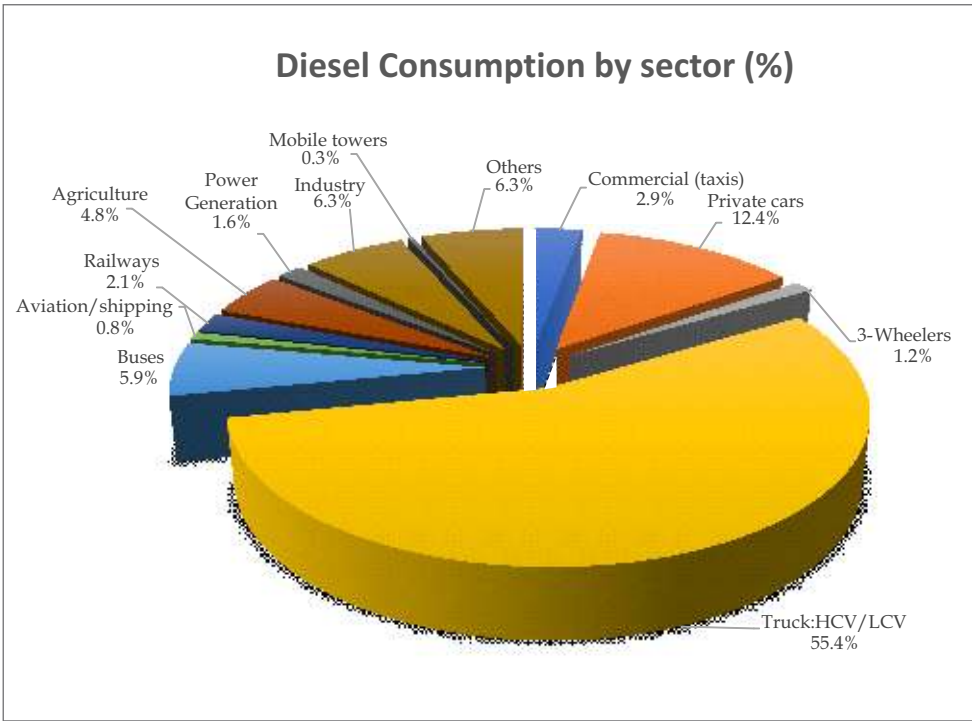


Note: \*Others include sulphur, propylene, propane, reformat, butane, MTO (Mineral Turpentine oil) etc

**End-use sectoral analysis of POL Domestic Consumption**

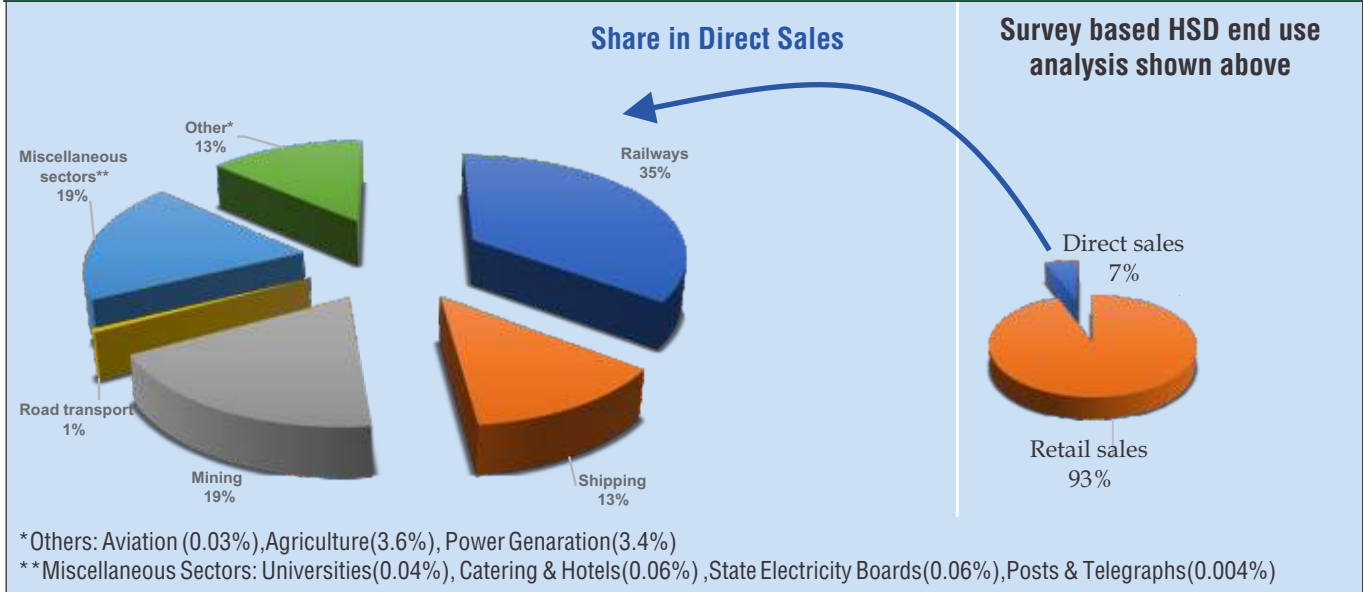
**End-use analysis of HSD sales (Oct 2020- Sep 2021)**

Sl. no.	End-use Sectors	% of total sales *
(I)	(II)	(III)
1	Transport, of which	
a	Commercial (taxi)	2.90
b	Private cars	12.40
c	3 - Wheelers	1.20
d	Truck:HCV/LCV	55.40
e	Buses	5.90
2	Aviation/shipping	0.80
3	Railways	2.10
4	Agriculture	4.80
	Power Generation	1.60
	Industry	6.30
5	Mobile towers	0.30
6	Others	6.30
	<b>Total</b>	<b>100.0</b>



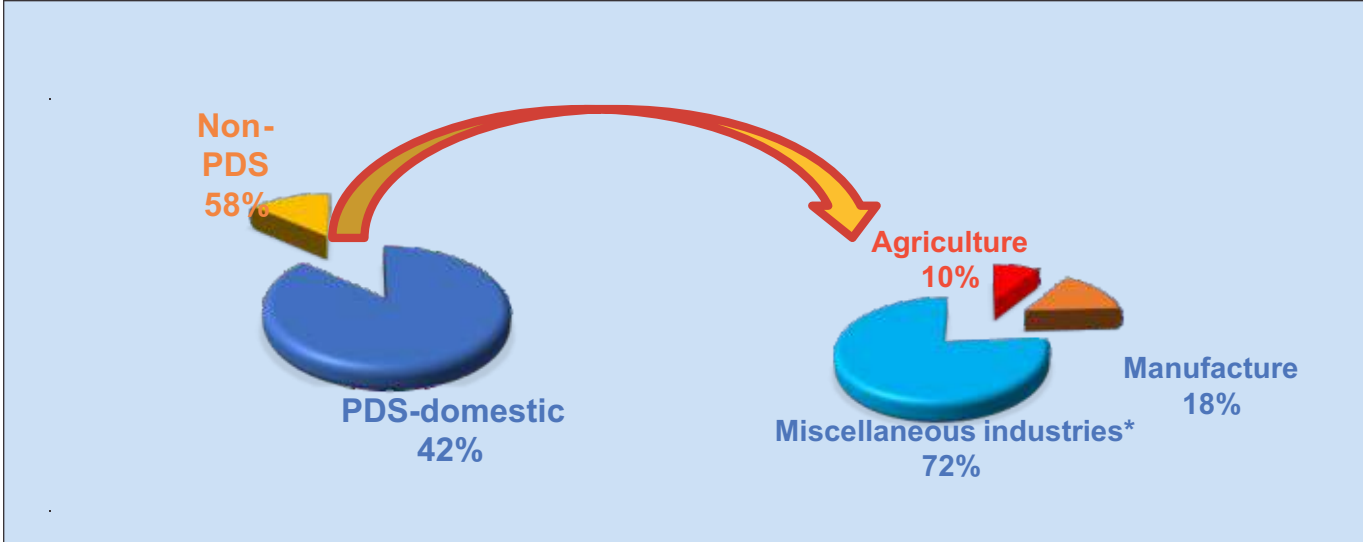
\*Figures include consumption through retail & direct imports End use sector wise break up as per PPAC survey and direct & retail sales as reported by oil companies during October-2020 till September-2021

**Sector-wise HSD consumption for April-September-2022 (P)**



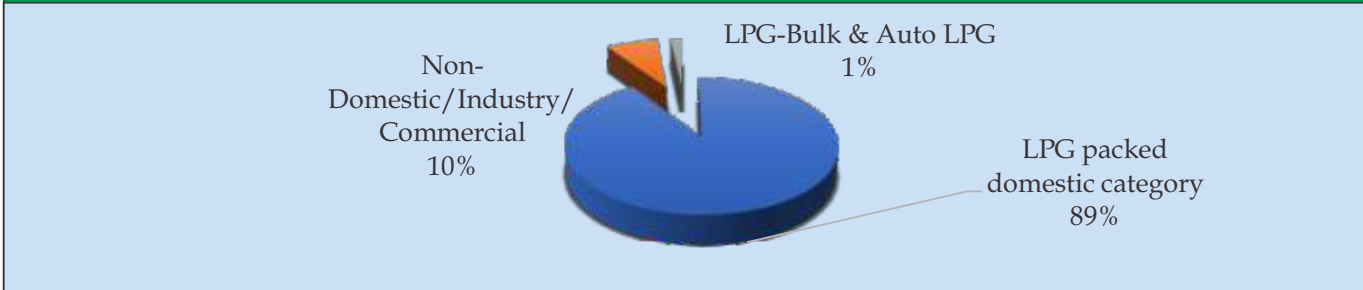
**End-use sectoral analysis of POL Domestic Consumption ...Continued**

**PDS domestic, non-PDS commercial SKO sales & their breakup for April-September-2022 (P)**

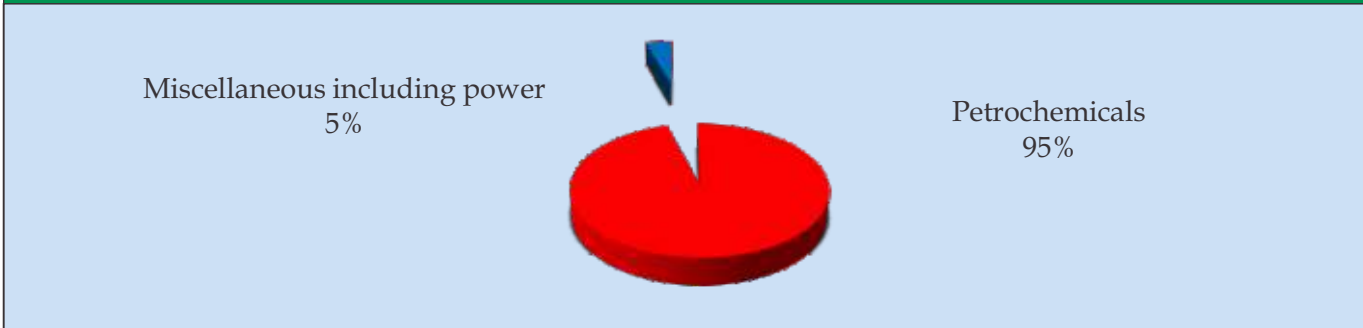


\*\*Miscellaneous industries include aviation (0.2%) , mining (2.0%), shipping (1.2%), power generation (2.2%), railways (0.8%) etc.

**Sector wise LPG consumption for April – September 2022 (P)**

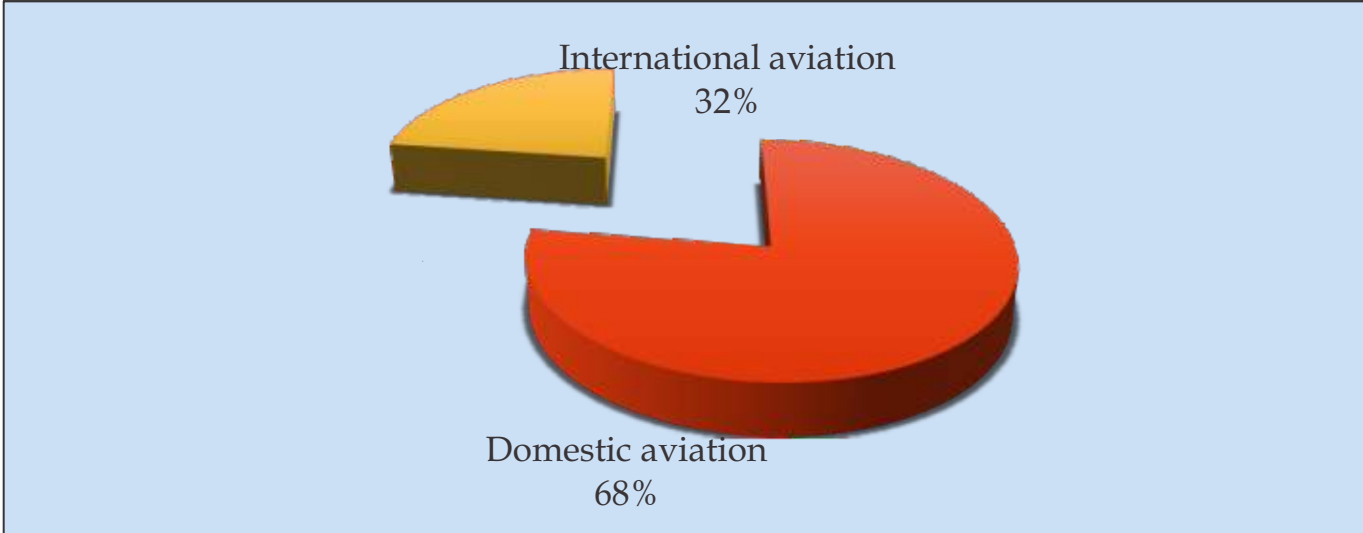


**Sector wise naphtha consumption for April – September 2022 (P)**

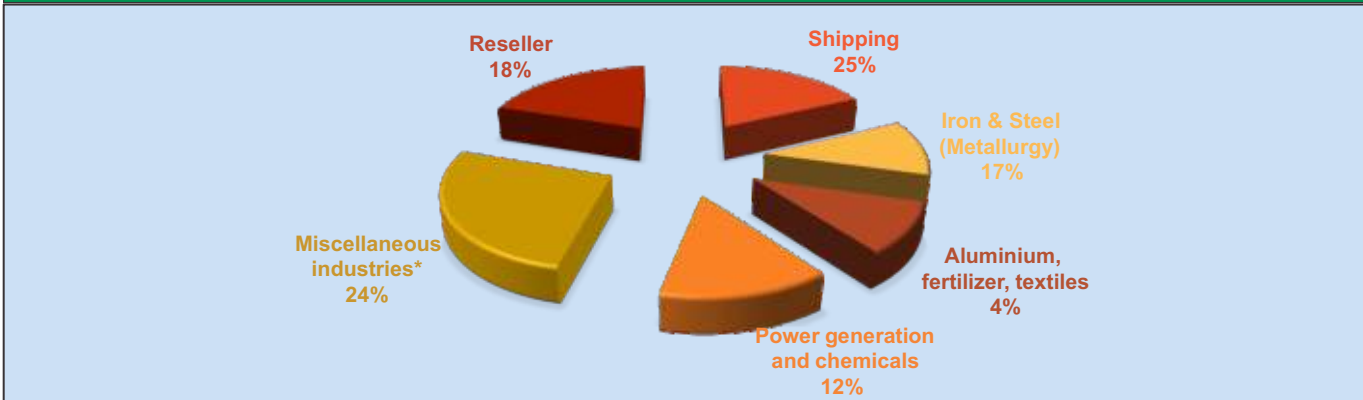


**End-use sectoral analysis of POL Domestic Consumption ...Continued**

**Sector wise ATF consumption for April – September 2022 (P)**

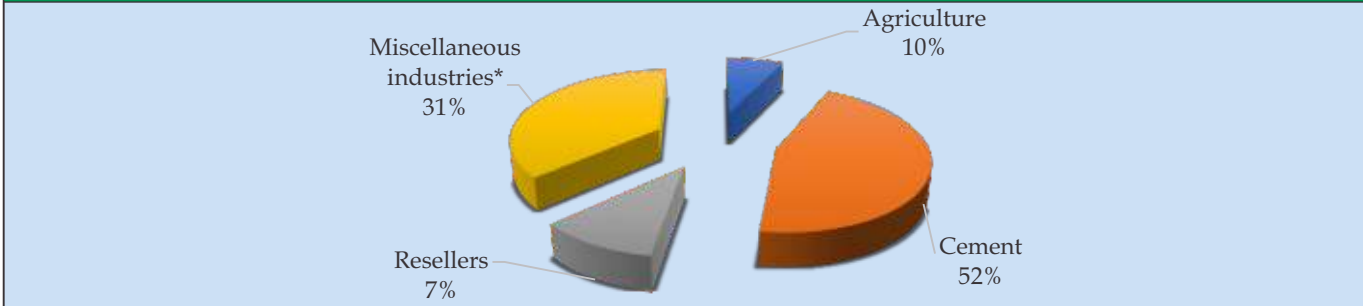


**Sector wise FO+LSHS consumption for April – September 2022 (P)**



\*Miscellaneous usage includes Civil Engineering (1.1%), Elec./Electronics (1.8%), Mechanical (0.8%) etc.

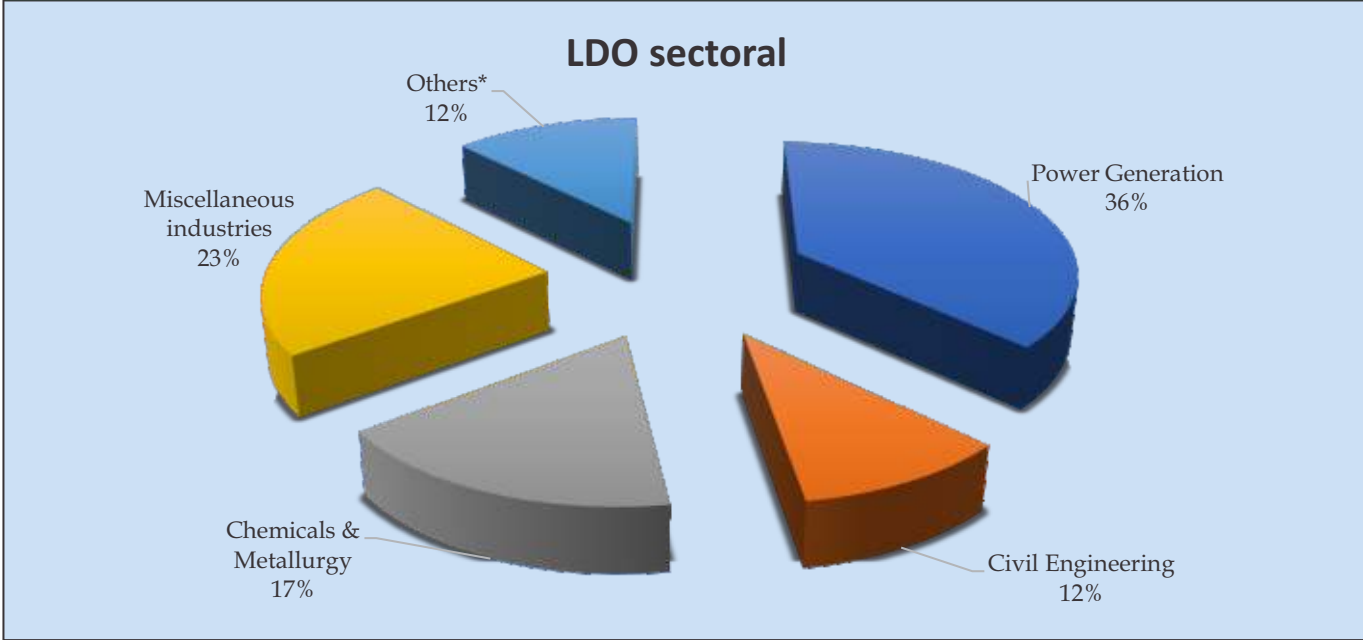
**Sector wise Petcoke consumption for April-September 2022 (P)**



\*Miscellaneous industries include power (3.1%), civil (1.9%), metallurgy (2.5%), mining (1.1%) etc.

End-use sectoral analysis of POL Domestic Consumption ...Continued

Sector wise LDO consumption for April-September 2022 (P)



\*Others: Mechanical (1.1%), Textiles (0.4%), Mining (1.7%), Railways (0.1%), Shipping (0.7%), Electricals/Electronics (0.2%) etc.



**Table 6.3A : State-wise sales of petroleum products consumption: April - September 2022 (P)**

(Figures in thousand metric tonnes)

State/UT	LPG		Naphtha		MS		SKO		HSD		ATF	
	Sales	Per capita sales (Kg)	Sales	Per capita sales (Kg)	Sales	Per capita sales (Kg)	Sales	Per capita sales (Kg)	Sales	Per capita sales (Kg)	Sales	Per capita sales (Kg)
Chandigarh	25.4	20.8	0.0	0.0	59.3	48.5	0.0	0.0	106.4	87.0	12.2	10.0
Delhi	369.6	17.5	0.0	0.0	456.3	21.6	0.1	0.0	343.5	16.3	930.2	44.1
Haryana	431.6	14.4	1544.3	51.5	607.3	20.3	0.2	0.0	2112.2	70.5	15.5	0.5
Himachal Pradesh	97.6	13.1	0.0	0.0	154.8	20.8	1.1	0.2	532.7	71.6	2.8	0.4
Jammu and Kashmir	99.6	7.4	0.0	0.0	183.4	13.6	12.5	0.9	408.7	30.2	56.3	4.2
Ladakh	5.7	19.1	0.0	0.0	13.7	45.9	39.2	131.2	62.0	207.4	4.9	16.4
Punjab	451.4	14.8	0.0	0.0	570.9	18.7	0.2	0.0	1561.6	51.0	88.2	2.9
Rajasthan	728.4	9.1	2.8	0.0	906.6	11.3	0.7	0.0	2409.7	30.0	67.5	0.8
Uttar Pradesh	1806.9	7.7	5.0	0.0	2087.6	8.9	1.0	0.0	4739.0	20.2	137.1	0.6
Uttarakhand	161.7	14.0	0.0	0.0	209.4	18.1	1.5	0.1	392.8	34.0	15.3	1.3
<b>SUB TOTAL NORTH</b>	<b>4178.1</b>	<b>9.7</b>	<b>1552.1</b>	<b>3.6</b>	<b>5249.3</b>	<b>12.2</b>	<b>56.5</b>	<b>0.1</b>	<b>12668.7</b>	<b>29.4</b>	<b>1330.0</b>	<b>3.1</b>
Andaman & Nicobar Islands	6.4	15.9	0.0	0.0	9.3	23.1	0.0	0.0	75.3	187.4	8.9	22.1
Bihar	772.1	6.2	0.0	0.0	523.7	4.2	27.6	0.2	1161.0	9.2	17.3	0.1
Jharkhand	196.2	5.0	0.0	0.0	332.5	8.5	7.9	0.2	840.7	21.5	17.6	0.4
Odisha	308.4	7.0	0.1	0.0	487.8	11.0	13.0	0.3	1372.9	31.1	38.6	0.9
West Bengal	955.8	9.7	270.3	2.7	591.6	6.0	86.8	0.9	1679.1	17.0	166.2	1.7
<b>SUB TOTAL EAST</b>	<b>2238.8</b>	<b>7.3</b>	<b>270.4</b>	<b>0.9</b>	<b>1944.9</b>	<b>6.3</b>	<b>135.3</b>	<b>0.4</b>	<b>5129.0</b>	<b>16.7</b>	<b>248.5</b>	<b>0.8</b>
Arunachal Pradesh	13.3	8.6	0.0	0.0	32.2	20.8	3.4	2.2	96.8	62.4	0.4	0.3
Assam	252.6	7.1	97.3	2.7	294.5	8.3	6.5	0.2	608.7	17.2	65.2	1.8
Manipur	27.9	8.7	0.0	0.0	42.9	13.4	0.8	0.3	66.1	20.7	3.2	1.0
Meghalaya	15.5	4.7	0.0	0.0	60.3	18.1	1.1	0.3	180.5	54.3	0.5	0.2
Mizoram	15.7	12.7	0.0	0.0	17.0	13.8	0.0	0.0	42.4	34.5	1.8	1.4
Nagaland	14.1	6.4	0.0	0.0	23.8	10.7	0.7	0.3	47.0	21.2	2.9	1.3
Sikkim	10.0	14.5	0.0	0.0	12.6	18.5	3.9	5.7	44.1	64.5	0.2	0.4
Tripura	29.0	7.0	0.0	0.0	31.6	7.7	3.5	0.9	44.9	10.9	8.3	2.0
<b>SUB TOTAL NORTH EAST</b>	<b>378.1</b>	<b>7.3</b>	<b>97.3</b>	<b>1.9</b>	<b>515.0</b>	<b>9.9</b>	<b>20.1</b>	<b>0.4</b>	<b>1130.6</b>	<b>21.8</b>	<b>82.5</b>	<b>1.6</b>
Chhattisgarh	163.0	5.4	0.0	0.0	367.2	12.3	4.7	0.2	899.3	30.0	18.2	0.6
Dadra & Nagar Haveli and Daman & Diu	16.2	13.5	0.0	0.0	21.9	18.2	0.0	0.0	102.1	85.0	0.6	0.5
Goa	35.8	22.8	0.0	0.0	97.3	62.0	0.0	0.0	145.3	92.6	52.0	33.2
Gujarat	647.0	9.1	3625.0	51.1	1180.1	16.6	5.4	0.1	3298.8	46.5	136.0	1.9
Madhya Pradesh	560.2	6.5	0.0	0.0	853.3	9.9	2.1	0.0	1832.3	21.3	61.6	0.7
Maharashtra	1628.1	12.9	159.3	1.3	1861.6	14.8	3.1	0.0	4333.6	34.5	488.5	3.9
<b>SUB TOTAL WEST</b>	<b>3050.3</b>	<b>9.7</b>	<b>3784.3</b>	<b>12.0</b>	<b>4381.4</b>	<b>13.9</b>	<b>15.4</b>	<b>0.0</b>	<b>10611.4</b>	<b>33.7</b>	<b>757.0</b>	<b>2.4</b>
Andhra Pradesh	641.8	12.1	10.0	0.2	747.2	14.1	0.5	0.0	1744.7	32.9	39.9	0.8
Karnataka	993.1	14.7	0.0	0.0	1293.2	19.2	5.2	0.1	3855.9	57.2	330.2	4.9
Kerala	567.6	15.9	0.0	0.0	861.5	24.1	11.3	0.3	1189.3	33.3	244.0	6.8
Lakshadweep	0.4	6.2	0.0	0.0	0.2	3.1	0.0	0.0	6.5	93.9	0.1	1.2
Puducherry	22.8	14.0	0.0	0.0	85.6	52.8	0.0	0.0	268.0	165.3	0.1	0.05
Tamil Nadu	1155.2	15.1	0.0	0.0	1585.7	20.7	36.5	0.5	3021.6	39.4	241.1	3.1
Telangana	548.0	14.4	0.0	0.0	759.9	20.0	0.1	0.0	1742.2	45.9	221.2	5.8
<b>SUB TOTAL SOUTH</b>	<b>3929.0</b>	<b>14.4</b>	<b>10.0</b>	<b>0.0</b>	<b>5333.2</b>	<b>19.6</b>	<b>53.8</b>	<b>0.2</b>	<b>11828.2</b>	<b>43.4</b>	<b>1076.6</b>	<b>4.0</b>
<b>All India</b>	<b>13774.2</b>	<b>10.0</b>	<b>5714.1</b>	<b>4.1</b>	<b>17423.8</b>	<b>12.6</b>	<b>281.0</b>	<b>0.2</b>	<b>41367.9</b>	<b>30.0</b>	<b>3494.6</b>	<b>2.5</b>

State wise highest/lowest per capita (only for significant cases) **Highest** **Lowest**

Source: Oil companies; P-Provisional

Note:

1-Per capita sales figures are based on provisional sales figures for the period April 2022 - September 2022

2-Population figures have been taken from table no.11 of 'Report of the Technical Group on Population Projections

3- SKO includes both PDS & non PDS sales



**Table 6.3B : State-wise sales of petroleum products consumption: April - September 2022 (P)**

(Figures in thousand metric tonnes)

State/UT	LDO		FO/LSHS		LUBES & GREASES		BITUMEN		PET COKE		OTHERS		TOTAL (All POL Products)*	
	Sales	Per capita sales (Kg)	Sales	Per capita sales (Kg)	Sales	Per capita sales (Kg)	Sales	Per capita sales (Kg)	Sales	Per capita sales (Kg)	Total Sales	Per capita sales (Kg)	Total Sales	Per capita sales (Kg)
Chandigarh	0.2	0.2	0.5	0.4	0.9	0.7	0.2	0.1	1.2	1.0	0.0	0.0	206.3	168.7
Delhi	0.0	0.0	0.0	0.0	4.9	0.2	0.8	0.0	0.0	0.0	4.1	0.2	2109.7	100.0
Haryana	10.5	0.4	38.2	1.3	24.0	0.8	107.2	3.6	0.0	0.0	68.4	2.3	4959.2	165.5
Himachal Pradesh	0.3	0.0	15.1	2.0	3.6	0.5	43.7	5.9	286.3	38.5	4.3	0.6	1142.3	153.5
Jammu and Kashmir	0.1	0.0	1.9	0.1	2.1	0.2	16.0	1.2	39.6	2.9	2.7	0.2	822.8	60.8
Ladakh	0.0	0.0	0.0	0.0	0.2	0.6	11.1	37.1	0.0	0.0	0.0	0.0	136.9	457.7
Punjab	3.7	0.1	61.3	2.0	17.7	0.6	54.9	1.8	337.3	11.0	33.0	1.1	3180.2	103.9
Rajasthan	20.5	0.3	34.3	0.4	23.1	0.3	125.2	1.6	819.1	10.2	39.7	0.5	5177.6	64.4
Uttar Pradesh	45.9	0.2	64.4	0.3	36.5	0.2	293.6	1.3	31.8	0.1	163.9	0.7	9412.5	40.2
Uttarakhand	0.3	0.0	47.3	4.1	7.3	0.6	13.7	1.2	14.4	1.2	4.8	0.4	868.6	75.2
<b>SUB TOTAL NORTH</b>	<b>81.4</b>	<b>0.2</b>	<b>262.9</b>	<b>0.6</b>	<b>120.1</b>	<b>0.3</b>	<b>666.3</b>	<b>1.5</b>	<b>1529.7</b>	<b>3.6</b>	<b>321.1</b>	<b>0.7</b>	<b>28016.2</b>	<b>65.1</b>
Andaman & Nicobar Islands	0.0	0.0	0.0	0.0	0.3	0.9	2.4	6.0	0.0	0.0	0.0	0.0	102.7	255.4
Bihar	14.2	0.1	13.3	0.1	5.6	0.0	100.6	0.8	69.0	0.5	3.3	0.0	2707.8	21.6
Jharkhand	26.4	0.7	59.9	1.5	14.5	0.4	84.1	2.1	0.8	0.0	52.2	1.3	1632.9	41.7
Odisha	25.5	0.6	503.9	11.4	10.7	0.2	39.8	0.9	252.7	5.7	101.4	2.3	3154.7	71.4
West Bengal	22.0	0.2	178.0	1.8	32.2	0.3	81.9	0.8	93.7	0.9	135.2	1.4	4292.6	43.5
<b>SUB TOTAL EAST</b>	<b>88.2</b>	<b>0.3</b>	<b>755.2</b>	<b>2.5</b>	<b>63.3</b>	<b>0.2</b>	<b>308.8</b>	<b>1.0</b>	<b>416.2</b>	<b>1.4</b>	<b>292.0</b>	<b>0.9</b>	<b>11890.7</b>	<b>38.6</b>
Arunachal Pradesh	0.0	0.0	0.0	0.0	0.3	0.2	8.6	5.5	0.0	0.0	0.0	0.0	155.0	100.0
Assam	1.3	0.0	3.5	0.1	13.8	0.4	7.8	0.2	77.2	2.2	17.7	0.5	1446.2	40.7
Manipur	0.1	0.0	0.3	0.1	0.2	0.0	1.9	0.6	0.0	0.0	0.0	0.0	143.3	44.8
Meghalaya	0.2	0.0	0.0	0.0	0.5	0.1	0.4	0.1	0.0	0.0	0.0	0.0	259.0	77.9
Mizoram	0.0	0.0	0.1	0.1	0.1	0.1	0.8	0.6	0.0	0.0	0.0	0.0	77.9	63.3
Nagaland	0.0	0.0	0.0	0.0	0.3	0.1	1.4	0.6	0.0	0.0	0.0	0.0	90.3	40.7
Sikkim	2.0	2.9	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	73.1	106.8
Tripura	0.0	0.0	0.0	0.0	0.4	0.1	2.5	0.6	0.0	0.0	0.0	0.0	120.3	29.2
<b>SUB TOTAL NORTH EAST</b>	<b>3.5</b>	<b>0.1</b>	<b>3.8</b>	<b>0.1</b>	<b>15.5</b>	<b>0.3</b>	<b>23.5</b>	<b>0.5</b>	<b>77.2</b>	<b>1.5</b>	<b>17.8</b>	<b>0.3</b>	<b>2365.0</b>	<b>45.6</b>
Chhattisgarh	22.7	0.8	75.0	2.5	9.4	0.3	73.6	2.5	221.4	7.4	13.5	0.4	1868.0	62.4
Dadra & Nagar Haveli and Daman & Diu	0.5	0.4	20.8	17.3	62.1	51.7	0.8	0.7	0.0	0.0	2.6	2.1	227.4	189.4
Goa	0.8	0.5	10.2	6.5	2.2	1.4	10.5	6.7	3.4	2.2	2.7	1.7	360.2	229.6
Gujarat	40.3	0.6	635.2	9.0	48.7	0.7	308.0	4.3	575.6	8.1	1861.3	26.2	12361.5	174.3
Madhya Pradesh	10.5	0.1	39.9	0.5	16.4	0.2	87.1	1.0	458.1	5.3	71.7	0.8	3993.2	46.5
Maharashtra	56.1	0.4	412.3	3.3	152.2	1.2	229.2	1.8	156.4	1.2	537.5	4.3	10018.1	79.7
<b>SUB TOTAL WEST</b>	<b>130.8</b>	<b>0.4</b>	<b>1193.4</b>	<b>3.8</b>	<b>291.1</b>	<b>0.9</b>	<b>709.2</b>	<b>2.2</b>	<b>1414.9</b>	<b>4.5</b>	<b>2489.2</b>	<b>7.9</b>	<b>28828.4</b>	<b>91.4</b>
Andhra Pradesh	10.1	0.2	211.1	4.0	15.7	0.3	94.3	1.8	361.5	6.8	83.8	1.6	3960.6	74.7
Karnataka	6.7	0.1	143.5	2.1	24.8	0.4	41.6	0.6	411.0	6.1	173.2	2.6	7278.5	108.0
Kerala	3.7	0.1	197.5	5.5	18.3	0.5	70.5	2.0	5.5	0.2	129.4	3.6	3298.8	92.5
Lakshadweep	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	7.2	104.4
Puducherry	0.3	0.2	19.0	11.7	1.4	0.9	0.5	0.3	0.0	0.0	4.4	2.7	402.0	248.0
Tamil Nadu	12.7	0.2	278.4	3.6	65.8	0.9	256.6	3.3	373.2	4.9	156.0	2.0	7182.7	93.6
Telangana	11.9	0.3	80.9	2.1	18.6	0.5	61.1	1.6	116.7	3.1	19.3	0.5	3579.8	94.3
<b>SUB TOTAL SOUTH</b>	<b>45.3</b>	<b>0.2</b>	<b>930.4</b>	<b>3.4</b>	<b>144.6</b>	<b>0.5</b>	<b>524.6</b>	<b>1.9</b>	<b>1267.8</b>	<b>4.7</b>	<b>566.1</b>	<b>2.1</b>	<b>25709.6</b>	<b>94.4</b>
<b>All India</b>	<b>349.3</b>	<b>0.3</b>	<b>3145.7</b>	<b>2.3</b>	<b>634.7</b>	<b>0.5</b>	<b>2232.5</b>	<b>1.6</b>	<b>4705.9</b>	<b>3.4</b>	<b>3686.3</b>	<b>2.7</b>	<b>96809.9</b>	<b>70.3</b>

^ Others include sulfur, propylene, propane, reformate, LABS, CBFS, butane, MTO etc.

\* Total (all product) sales includes all petroleum oil and lubricants

State wise highest/lowest per capita (only for significant cases) Highest Lowest

Source: Oil companies; P-Provisional

Note:

1-Per capita sales figures are based on provisional sales figures for the period April 2022 - September 2022

2-Population figures have been taken from table no. 11 of 'Report of the Technical Group on Population Projections

3- SKO includes both PDS & non PDS sales

**Table 6.4 : PDS SKO allocation**

(Figures in thousand kilo litres)

State/UT	2018-19		2019-20		2020-21		2021-22		Apr-Sep 2022 (P)	
	Alloc <sup>n</sup>	Sales	Alloc <sup>n</sup>	Sales	Alloc <sup>n</sup>	Sales	Alloc <sup>n</sup>	Sales	Alloc <sup>n</sup>	Sales
Chandigarh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delhi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haryana	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Himachal Pradesh	14.5	14.3	11.4	10.8	9.8	6.8	6.9	2.3	2.0	0.0
Jammu & Kashmir	58.5	53.9	45.0	40.9	45.0	36.5	38.3	29.2	12.2	0.7
Ladakh			3.5	1.0	3.5	3.5	3.5	3.3	2.8	0.0
Punjab	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rajasthan	138.0	69.3	40.0	16.2	14.2	0.9	0.0	0.0	0.0	0.0
Uttar Pradesh	887.9	873.5	517.9	449.5	181.7	26.5	0.0	0.0	0.0	0.0
Uttarakhand	25.3	10.0	8.0	0.5	2.2	0.4	0.7	0.0	0.1	0.0
<b>SUB TOTAL NORTH</b>	<b>1124.2</b>	<b>1021.0</b>	<b>625.8</b>	<b>518.8</b>	<b>256.4</b>	<b>74.6</b>	<b>49.3</b>	<b>34.9</b>	<b>17.2</b>	<b>0.8</b>
Andaman & Nicobar Islands	4.1	3.8	1.9	1.5	0.0	0.0	0.0	0.0	0.0	0.0
Bihar	332.6	329.6	263.0	243.9	212.7	212.4	170.2	169.8	63.8	35.3
Jharkhand	186.8	150.3	135.2	107.2	90.0	83.2	72.0	68.9	27.0	10.0
Odisha	248.4	247.7	210.6	208.3	194.3	190.3	155.4	150.3	58.3	16.7
West Bengal	704.0	699.3	704.0	692.7	704.0	696.5	704.0	689.7	352.0	110.7
<b>SUB TOTAL EAST</b>	<b>1476.0</b>	<b>1430.7</b>	<b>1314.8</b>	<b>1253.5</b>	<b>1201.1</b>	<b>1182.4</b>	<b>1101.6</b>	<b>1078.6</b>	<b>501.1</b>	<b>172.8</b>
Arunachal Pradesh	7.9	7.2	6.4	5.2	4.8	3.7	3.3	2.9	1.5	0.1
Assam	245.9	242.6	181.9	176.9	155.6	153.1	124.5	117.3	49.8	8.0
Manipur	17.9	17.7	13.3	12.7	11.1	11.3	10.0	10.0	4.5	1.1
Meghalaya	19.4	19.3	19.3	18.9	18.9	17.9	17.0	16.0	7.7	1.4
Mizoram	4.8	4.8	3.6	3.6	3.2	3.2	2.9	2.7	1.3	0.1
Nagaland	10.3	9.8	9.3	8.9	8.6	8.4	7.7	7.7	3.5	0.9
Sikkim	3.5	3.4	2.6	2.5	2.3	2.1	22.7	22.5	0.9	0.1
Tripura	29.4	29.3	26.4	26.2	25.2	25.1	2.0	2.0	10.2	4.5
<b>SUB TOTAL NORTH EAST</b>	<b>339.0</b>	<b>334.0</b>	<b>262.7</b>	<b>254.9</b>	<b>229.5</b>	<b>224.8</b>	<b>190.0</b>	<b>181.0</b>	<b>79.3</b>	<b>16.1</b>
Chhattisgarh	115.1	91.5	82.4	69.1	58.3	56.1	46.6	43.9	17.5	5.9
Dadra & Nagar Haveli and Daman & Diu	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goa	2.1	1.4	0.8	0.6	0.4	0.4	0.3	0.3	0.1	0.0
Gujarat	249.7	248.7	138.8	120.8	84.0	83.1	55.8	53.7	16.7	6.0
Madhya Pradesh	336.2	325.9	260.7	238.5	213.4	187.1	160.0	116.8	60.0	2.6
Maharashtra	286.7	241.9	106.5	52.9	46.5	21.6	27.9	15.6	8.4	2.6
<b>SUB TOTAL WEST</b>	<b>989.8</b>	<b>909.5</b>	<b>589.3</b>	<b>482.1</b>	<b>402.6</b>	<b>348.2</b>	<b>290.7</b>	<b>230.2</b>	<b>102.7</b>	<b>17.2</b>
Andhra Pradesh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Karnataka	156.0	112.5	84.3	66.4	42.5	38.7	5.0	0.4	8.9	2.5
Kerala	55.6	55.6	41.7	41.7	37.1	37.1	29.8	17.8	7.8	7.8
Lakshadweep	0.8	0.8	0.8	0.6	0.8	0.9	25.9	25.9	0.4	0.0
Puducherry	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0
Tamil Nadu	193.8	193.8	145.3	145.3	129.2	129.2	0.0	0.0	27.1	27.1
Telangana	97.9	94.3	56.6	29.8	16.0	2.9	90.4	90.4	0.7	0.0
<b>SUB TOTAL SOUTH</b>	<b>504.1</b>	<b>456.9</b>	<b>328.7</b>	<b>283.8</b>	<b>225.5</b>	<b>208.8</b>	<b>151.7</b>	<b>135.1</b>	<b>45.0</b>	<b>37.4</b>
<b>All India</b>	<b>4433.0</b>	<b>4152.1</b>	<b>3121.3</b>	<b>2793.2</b>	<b>2315.0</b>	<b>2038.8</b>	<b>1783.3</b>	<b>1659.9</b>	<b>745.2</b>	<b>244.3</b>

Alloc<sup>n</sup>= Allocation; ■ States/UTs currently under nil PDS SKO quota

Source: MoP&NG

• Delhi and Chandigarh have been declared kerosene-free from Q3, 2013-14 and Q1, 2016-17 respectively. Punjab and Haryana have been declared kerosene-free from Q1, 2017-18. PDS SKO allocation for Dadra & Nagar Haveli and Daman & Diu PDS SKO allocation has been reduced to "Zero" from Q2, 2017-18. PDS SKO allocation of Puducherry and Andhra Pradesh has been reduced to "Zero" wef 01.09.2017 and 01.10.2017 respectively. PDS SKO allocation for Andaman & Nicobar islands has been reduced to "Zero" effective from 01.09.2019.

• On an all India basis, the drop in allocation in the last five years (till 2021-22) has been 64.5% due to voluntary surrender of PDS SKO allocation by some of the states in addition to nil PDS SKO allocation to the above states. The allocation drop has been steepest in the Northern region (96.1%) followed by Western region (75.6%), Northern region (44.3%), Eastern region (32.8%). Allocation in 2020-21 also decreased by 23% as compared with the same period in the year 2021-22. Overall India based PDS SKO upliftment with respect to allocation during H1 FY2022-23 was 32%. Highest upliftment was observed in South zone 83% followed by East zone 34%, North East zone 20%, West zone 17% and North zone 5%.

**Table 6.5 : Oil industry retail outlets & SKO / LDO agencies**

State/UT	Number of Retail Outlets (as on)					No of SKO /LDO agencies (as on)				
	1.4.2019	1.4.2020	1.04.2021	1.04.2022	1.10.2022 (P)	1.4.2019	1.4.2020	1.04.2021	1.04.2022	1.10.2022 (P)
Chandigarh	42	42	47	47	48	12	12	12	12	12
Delhi	398	398	400	400	400	116	116	111	111	111
Haryana	2933	3060	3412	3660	3711	141	141	139	139	139
Himachal Pradesh	439	494	563	638	661	26	26	26	26	26
Jammu and Kashmir	504	530	552	581	610	45	45	45	45	45
Ladakh	3	3	12	27	31	2	2	2	2	2
Punjab	3453	3551	3772	3920	3963	237	237	237	237	237
Rajasthan	4661	4967	5615	6028	6188	250	250	248	248	248
Uttar Pradesh	7762	8210	9315	10162	10360	695	691	675	674	674
Uttarakhand	601	629	686	763	771	73	73	69	69	69
<b>SUB TOTAL NORTH</b>	<b>20796</b>	<b>21884</b>	<b>24374</b>	<b>26226</b>	<b>26743</b>	<b>1597</b>	<b>1593</b>	<b>1564</b>	<b>1563</b>	<b>1563</b>
Andaman & Nicobar Islands	14	16	16	19	19	2	2	2	2	2
Bihar	2860	2968	3158	3341	3436	371	371	362	362	362
Jharkhand	1216	1358	1535	1634	1660	87	87	87	87	87
Odisha	1704	1894	2070	2246	2289	177	177	176	176	176
West Bengal	2363	2523	2750	2894	2938	458	457	455	455	455
<b>SUB TOTAL EAST</b>	<b>8157</b>	<b>8759</b>	<b>9529</b>	<b>10134</b>	<b>10342</b>	<b>1095</b>	<b>1094</b>	<b>1082</b>	<b>1082</b>	<b>1082</b>
Arunachal Pradesh	94	116	152	178	186	33	33	33	33	33
Assam	897	979	1104	1312	1348	359	359	359	359	359
Manipur	104	136	160	178	182	36	36	36	36	36
Meghalaya	208	225	238	270	271	35	35	35	35	35
Mizoram	43	45	55	72	78	19	19	19	19	19
Nagaland	79	94	120	150	154	19	19	19	19	19
Sikkim	51	55	57	63	64	12	12	12	12	12
Tripura	72	79	94	108	110	40	40	40	40	40
<b>SUB TOTAL NORTH EAST</b>	<b>1548</b>	<b>1729</b>	<b>1980</b>	<b>2331</b>	<b>2393</b>	<b>553</b>	<b>553</b>	<b>553</b>	<b>553</b>	<b>553</b>
Chhattisgarh	1280	1462	1808	1969	2010	108	108	108	108	108
Dadra & Nagar Haveli and Daman & Diu	62	61	61	64	65	7	7	7	7	7
Goa	118	118	122	127	129	22	22	22	22	22
Gujarat	4159	4573	5149	5502	5597	473	473	470	470	470
Madhya Pradesh	3832	4230	4981	5566	5691	284	284	284	284	284
Maharashtra	6148	6457	7048	7667	7817	767	766	752	752	752
<b>SUB TOTAL WEST</b>	<b>15599</b>	<b>16901</b>	<b>19169</b>	<b>20895</b>	<b>21309</b>	<b>1661</b>	<b>1660</b>	<b>1643</b>	<b>1643</b>	<b>1643</b>
Andhra Pradesh	3430	3721	4047	4230	4277	394	394	384	384	384
Karnataka	4385	4811	5500	5929	6008	315	315	311	309	309
Kerala	2140	2238	2396	2559	2608	237	237	234	234	234
Lakshadweep	0	0	0	1	2	0	0	0	0	0
Puducherry	165	164	174	179	180	8	8	8	8	8
Tamil Nadu	5638	5804	6355	6745	6893	466	465	458	458	458
Telangana	2767	3078	3571	3798	3859	202	202	202	202	202
<b>SUB TOTAL SOUTH</b>	<b>18525</b>	<b>19816</b>	<b>22043</b>	<b>23441</b>	<b>23827</b>	<b>1622</b>	<b>1621</b>	<b>1597</b>	<b>1595</b>	<b>1595</b>
<b>All India</b>	<b>64625</b>	<b>69089</b>	<b>77095</b>	<b>83027</b>	<b>84614</b>	<b>6528</b>	<b>6521</b>	<b>6439</b>	<b>6436</b>	<b>6436</b>

Source: Oil companies (Includes dealers of private oil companies); P-Provisional

- On all India basis the percentage growth in the number of retail outlets from 01.04.2019 to 01.10.2022 has been 30.9%. The region wise growth is highest for the North Eastern region (54.6%), followed by Western region (36.6%). Southern region and Northern region showed similar growth pattern (28.6%) whereas Eastern region growth rate was 26.8%
- As many states have become kerosene free in the last five years and due to voluntary surrender of PDS kerosene quota by some others there has been a decline in the number of kerosene dealers in the country.

**Table 6.6 : Industry marketing infrastructure as on 01.10.2022**

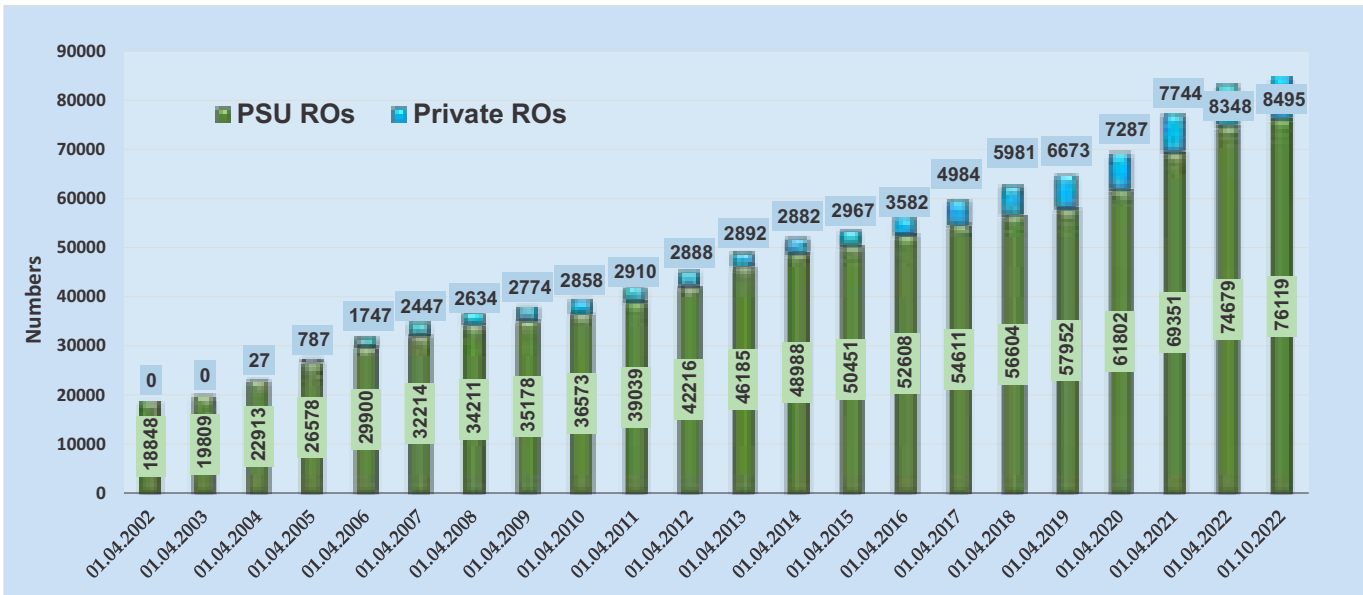
Particulars	IOCL	BPCL	HPCL	RIL/RBML/ RSIL	NEL	SHELL	Others	Total
POL terminal/depots (Nos.)\$	120	82	81	18	3		6	310
Aviation fuel stations (Nos.)@	128	61	52	30			2	273
Retail Outlets (total) (Nos.)^	35135	20442	20503	1486	6674	335	39	84,614
Out of which, Rural ROs (Nos.)	11296	5005	5181	130	2180	84	13	23,889
SKO/LDO agencies (Nos.)	3871	927	1638					6,436
LPG distributors (total) (Nos.) (PSUs only)	12838	6231	6257					25,326
LPG bottling plants (Nos.) (PSUs only)#	95	54	53				3	205
LPG bottling capacity (TMTPA) (PSUs only)&	10598	4890	6170				203	21,861
LPG active domestic consumers (Nos. crore) (PSUs only)	14.6	8.1	8.6					31.2

\$(Others=4 MRPL & 2 NRL); @(Others=ShellMRPL -2); ^ (Others=MRPL); # (Others=NRL-1, OIL-1, CPCL-1); & (Others=NRL-60, OIL-23, CPCL-120); \*RBML- Reliance BP Mobility Limited; RSIL-RBML Solutions India Ltd.\*

Source: Oil companies; P-Provisional

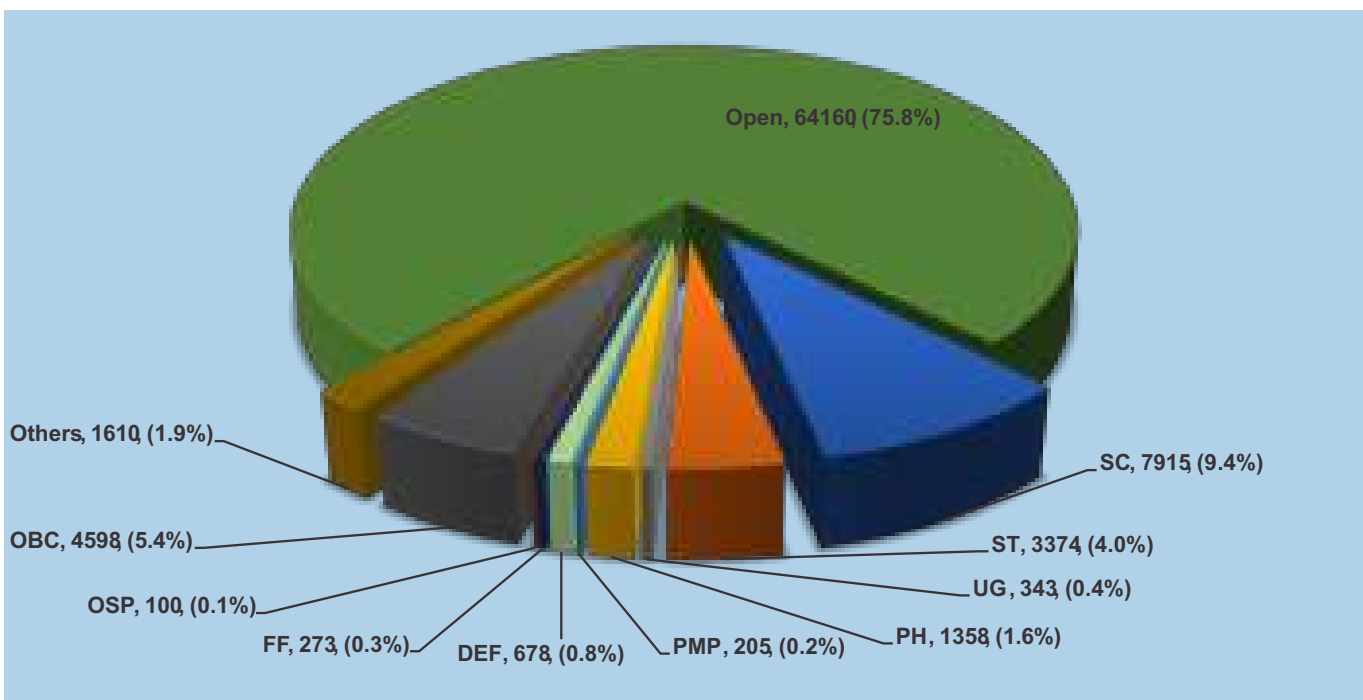


**All India number of retail outlets in PSU and private category**



On 1.10.2022 the number of public sector oil company owned retail outlets was 76119 out of a total of 84614 outlets on all India basis, whereas the number of retail outlets owned by private oil companies was 8495. Participation by private sector in retail outlet business started in FY 2004 with 27 retail outlets. As on 01.10.2022 it accounted for 10% of the total market representation.

**Category wise retail outlets (Total 84614) as on 01.10.2022**



**Note:** (1) SC: Scheduled Caste; ST: Scheduled Tribe; UG: Unemployed Graduate; UEG: Unemployed Engineering Graduate.; PH: Physically Handicapped; DEF: Defence Category; FF: Freedom Fighter; OSP: Outstanding Sports Persons; OBC: Other Backward Classes; PMP: Para Military/Police/Govt. Personnel; Others: Includes Social Worker Category, Dealerships given on compassionate grounds/ under discretionary quota, 2/3 wheeler outlets and Company Owned and Operated outlets, Operation Vijay. (2) Open category also includes private oil company retail outlets. (3) OP: Open Category

**Table 6.7 : Oil industry Alternate fuel infrastructure at retail outlets [as on 01.10.2022 (P)]**

State/UT	CNG_CBG_LNG	EV CHARGING	AUTO LPG	TOTAL
Chandigarh	11	19	5	35
Delhi	257	98	3	358
Haryana	227	242	2	471
Himachal Pradesh	15	37	0	52
Jammu and Kashmir	0	36	3	39
Ladakh	0	0	0	0
Punjab	204	156	9	369
Rajasthan	196	327	29	552
Uttar Pradesh	658	385	37	1080
Uttarakhand	26	54	5	85
<b>SUB TOTAL NORTH</b>	<b>1594</b>	<b>1354</b>	<b>93</b>	<b>3041</b>
Andaman & Nicobar Islands	0	2	0	2
Bihar	75	101	0	176
Jharkhand	62	109	0	171
Odisha	47	165	4	216
West Bengal	44	221	46	311
<b>SUB TOTAL EAST</b>	<b>228</b>	<b>598</b>	<b>50</b>	<b>876</b>
Arunachal Pradesh	0	19	0	19
Assam	2	98	0	100
Manipur	0	17	0	17
Meghalaya	0	9	0	9
Mizoram	0	0	0	0
Nagaland	0	9	0	9
Sikkim	0	0	0	0
Tripura	18	24	0	42
<b>SUB TOTAL NORTH EAST</b>	<b>20</b>	<b>176</b>	<b>0</b>	<b>196</b>
Chhattisgarh	0	118	8	126
Dadra & Nagar Haveli and Daman & Diu	10	2	0	12
Goa	14	33	2	49
Gujarat	739	239	21	999
Madhya Pradesh	202	243	24	469
Maharashtra	560	258	68	886
<b>SUB TOTAL WEST</b>	<b>1525</b>	<b>893</b>	<b>123</b>	<b>2541</b>
Andhra Pradesh	134	194	13	341
Karnataka	206	302	155	663
Kerala	112	111	66	289
Lakshadweep	0	2	0	2
Puducherry	1	4	2	7
Tamil Nadu	164	238	122	524
Telangana	121	233	70	424
<b>SUB TOTAL SOUTH</b>	<b>738</b>	<b>1084</b>	<b>428</b>	<b>2250</b>
<b>All India</b>	<b>4105</b>	<b>4105</b>	<b>694</b>	<b>8904</b>

Source: Oil companies

**Table 6.8 : Break-up of consumption data (PSU and Private)**

(Thousand metric tonne)

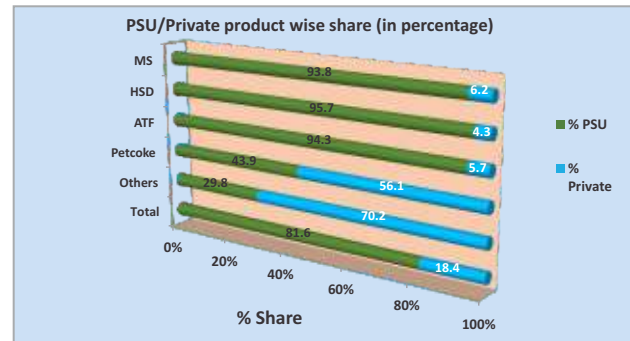
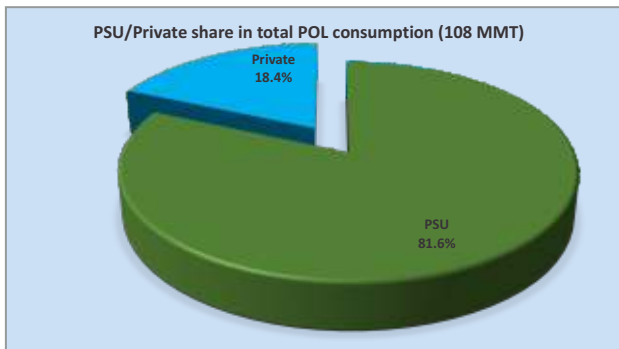
Product	2019-20			2020-21			2021-22			Apr-Sep 2021			Apr-Sep 2022		
	PSU/JV	Private	Total	PSU	Private	Total	PSU	Private	Total	PSU	Private	Total	PSU	Private	Total
LPG	26126	204	26330	27494	64	27558	28253	76	28330	13539	44	13583	13774	38	13812
MS	27179	2797	29975	25168	2801	27969	27905	2944	30849	13267	1440	14706	16336	1088	17424
Naphtha	6479	7789	14268	6050	8051	14100	6426	7851	14277	3156	3833	6989	2900	3520	6420
ATF	7598	400	7999	3525	172	3698	4707	301	5008	1933	107	2040	3295	200	3495
SKO	2397	0	2397	1795	3	1798	1493	0	1494	769	0	769	281	0	281
HSD	73825	8777	82602	64504	8208	72713	68411	8277	76688	31726	3939	35665	39617	1784	41402
LDO	602	25	628	713	142	855	765	255	1021	379	135	514	308	45	353
Lubes	1317	2517	3833	1475	2622	4097	1561	3025	4587	635	1441	2077	635	1513	2147
FO/LSHS	5172	1129	6302	4925	662	5586	5542	763	6305	2654	338	2992	3029	332	3361
Bitumen	4995	1725	6720	5356	2168	7524	5093	2781	7874	1965	1254	3218	2208	1341	3549
PetCoke	6500	15208	21708	5034	10571	15605	6101	9671	15772	2686	3798	6484	3364	4306	7670
Others	4626	6739	11365	4149	8643	12791	5062	7455	12518	2348	3847	6194	2397	5658	8055
<b>Total</b>	<b>166815</b>	<b>47312</b>	<b>214127</b>	<b>150189</b>	<b>44107</b>	<b>194295</b>	<b>161321</b>	<b>43399</b>	<b>204720</b>	<b>75054</b>	<b>20176</b>	<b>95231</b>	<b>88144</b>	<b>19825</b>	<b>107969</b>

**Source:** Oil companies, Directorate General of Commercial Intelligence and Statistics (DGCIS) & SEZ data (included from FY 2017-18 onwards).

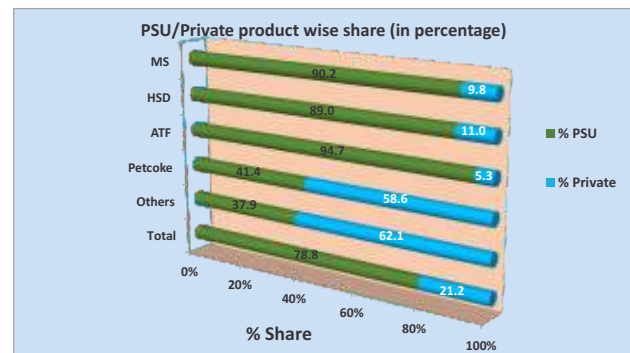
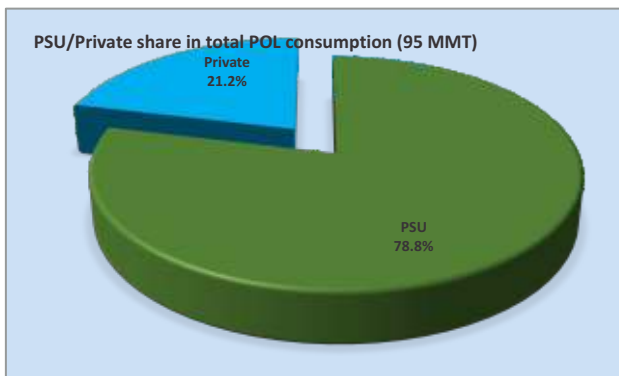
(Oil company sales+Private imports+SEZ sales to DTA=Consumption)

**Note:** Private consumption includes direct imports as well as marketing by private oil companies.

**April - September 2022 (P)**



**April - September 2021**



**Note:** In the above bar charts; others include all other products except MS, HSD, ATF & Petcoke.

- The share of the public sector in total consumption increased during April-September 2022 by 2.8% as compared to the same period last year.
- The share of the public sector during April-September 2022 increased in HSD (6.2%) MS (3.6%), Petcoke (2.5%) as compared to FY 2020-21.
- In the private sector the growth has been observed for ATF (0.4%) and 'Others' category (8.1%).

**Table 6.9 : Ethanol blending programme**

Si.no.	State	(1st December 2020 to 30th November 2021) Ethanol Supply Year*		(1st December 2021 to 30th November 2022 (P) )	
		Ethanol received by PSU OMCs under EBP program (Quantity Cr. Litrs)	Average percentage blending sales (EBP%)**	Ethanol received by PSU OMCs under EBP program (Quantity Cr. Litrs)	Average percentage blending sales (EBP%)**
1	Andhra Pradesh	13.57	8.5%	17.20	10.16%
2	Andaman & Nicobar	0.00	0.0%	0.00	0.00%
3	Arunachal Pradesh	0.00	0.0%	0.00	5.96%
4	Assam	0.00	0.0%	3.93	5.78%
5	Bihar	9.90	8.0%	13.88	10.56%
6	Chandigarh	0.00	8.9%	0.00	9.82%
7	Chhattisgarh	7.62	8.4%	7.69	9.31%
8	Dadar & Nagar Haveli and Daman & Diu	0.00	8.9%	0.00	10.04%
10	Delhi	7.02	9.4%	11.51	10.42%
11	Goa	2.12	9.0%	2.34	9.27%
12	Gujarat	18.45	9.5%	21.95	10.47%
13	Haryana	14.48	9.7%	21.56	10.53%
14	Himachal Pradesh	2.75	9.4%	2.72	9.18%
15	Jammu & Kashmir	0.52	7.0%	0.89	9.81%
16	Jharkand	4.17	6.1%	6.06	8.81%
17	Karnataka	24.81	9.0%	32.50	10.51%
18	Lakshadweep	0.00	0.0%	0.00	0.00%
19	Kerala	8.97	4.4%	19.04	9.67%
20	Ladakh	0.00	0.0%	0.00	0.00%
21	Madhya Pradesh	13.78	8.6%	17.02	10.25%
22	Maharashtra	39.53	9.0%	52.66	10.48%
23	Manipur	0.00	0.0%	0.00	5.27%
24	Meghalaya	0.00	0.0%	0.00	6.30%
25	Mizoram	0.00	0.0%	0.00	5.73%
26	Nagaland	0.00	0.0%	0.00	4.31%
27	Odisha	4.43	4.0%	9.76	9.04%
28	Puducherry	0.00	4.3%	0.00	8.84%
29	Punjab	14.25	9.9%	16.56	10.33%
30	Rajasthan	12.92	6.7%	19.91	10.03%
31	Sikkim	0.00	0.0%	0.00	4.00%
32	Tamil Nadu	23.42	7.7%	34.99	10.09%
33	Telangana	14.24	8.2%	17.92	10.23%
34	Tripura	0.00	0.0%	0.00	7.24%
35	Uttar Pradesh	53.20	9.8%	63.11	10.74%
36	Uttarakhand	2.82	9.3%	2.65	10.31%
37	West Bengal	3.10	2.4%	12.26	8.75%
	<b>Grand Total</b>	<b>296.1</b>	<b>8.10%</b>	<b>408.1</b>	<b>10.02%</b>

\* Ethanol Supply Year : Ethanol supplies take place between 1st December of the present year to 30th November of the following year.

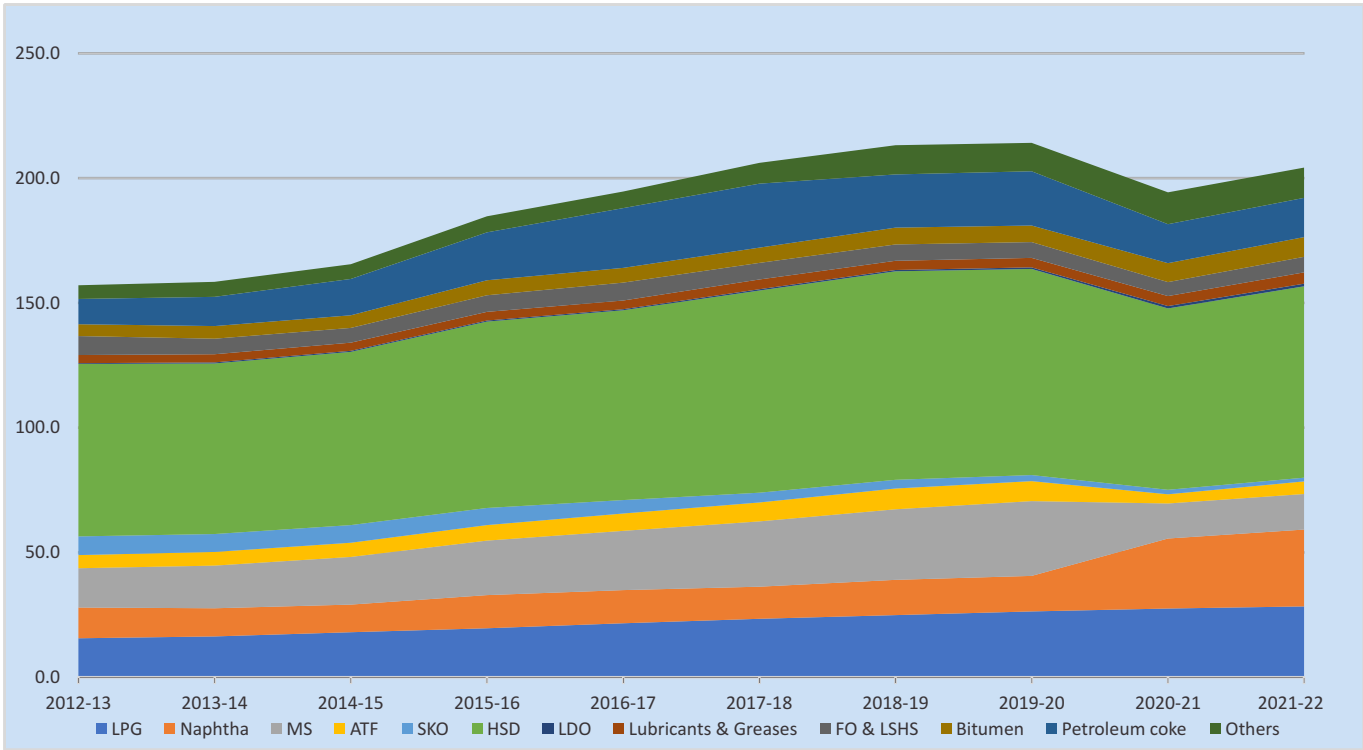
\*\*EBP %age in all the States has been calculated based on the MS sale in the geographical limit of the respective State. In the States/UTs where receipt is zero but EBP %age has been calculated is due to the fact that sale of Ethanol blended MS which comes from nearby supply locations of other States contribute to the EBP %age in this State/UTs.

**Note:** With effect from 01.04.2019, EBP Programme has been extended to whole of India except UTs of Andaman & Nicobar Islands and Lakshadweep.

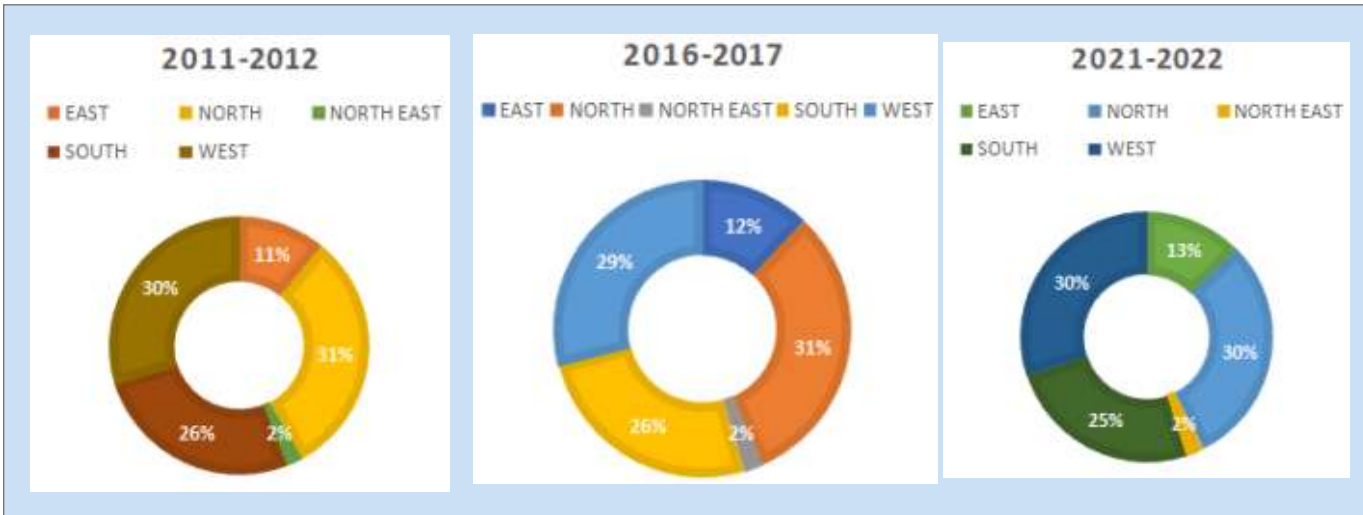


### Domestic POL consumption by product

Million metric tonnes



### Distribution of total domestic POL sales in India







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# Chapter-7 LPG





## Chapter-highlights

### LPG

- The PMUY scheme has covered around 9.54 crore beneficiaries since its launch in May 2016. As on 1.10.2022, the highest percentage of PMUY connections since inception of the scheme on 1.5.2016 have been released in Eastern region (33.5%), followed by Northern region (29.8%), Western region (21.4%), Southern region (9.9%) and North-east region (5.4%).
- Highest consumption of LPG in Northern region (30%) followed by Southern (28%), Western (23%), Eastern (16%) and North-eastern region (3%) during April -Sep 2022
- PSU OMCs sold nearly 14.09 MMT of LPG during April-Sep 2022 out of which about 87.9% was sold in the domestic sector.
- PSU OMCs have a total of 205 LPG bottling plants all over India with rated bottling capacity of around 21.86 million metric tonne per annum (MMTPA).
- 70.0 lakh new domestic customers were enrolled by PSU OMCs during April -Sep 2022. During the same period, PSU OMCs have added 57 distributorships.
- The total LPG tankage on all-India basis is around 1115.82 TMT which is equivalent to about 14 days of consumption
- PSU OMCs have a total of 570 Auto LPG Dispensing Stations (ALDS) all over India for catering to LPG demand in the automotive sector. The total auto LPG sales of PSU OMCs was about 55.2 TMT during April -Sep 2022 out of which around 85.6% sales were in the Southern region.
- Packed domestic segment dominated LPG consumption on All India basis with a share of around 87.9% followed by Packed non-domestic segment (8.1%), Bulk sales (3.5%) and Auto LPG sales (0.4%) during April-Sep 2022.
- As on 1.10.2022 PSU OMCs (IOCL, BPCL and HPCL) together have 31.23 crore active LPG customers in the domestic category who are being served by 25,326 LPG distributors.

**Table 7.1 : LPG marketing at a glance**

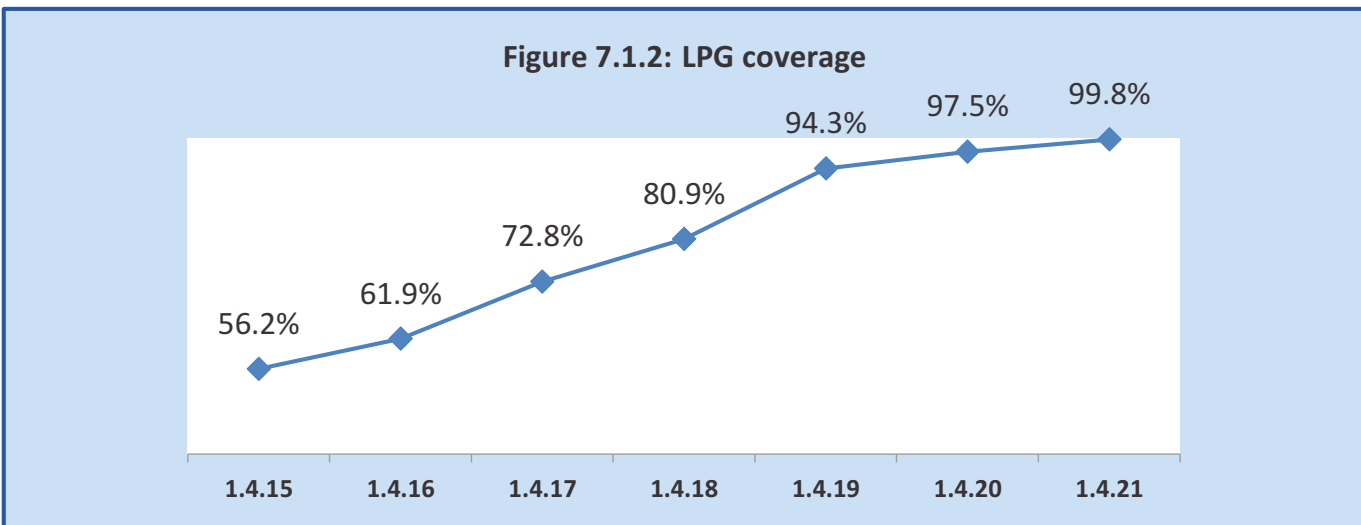
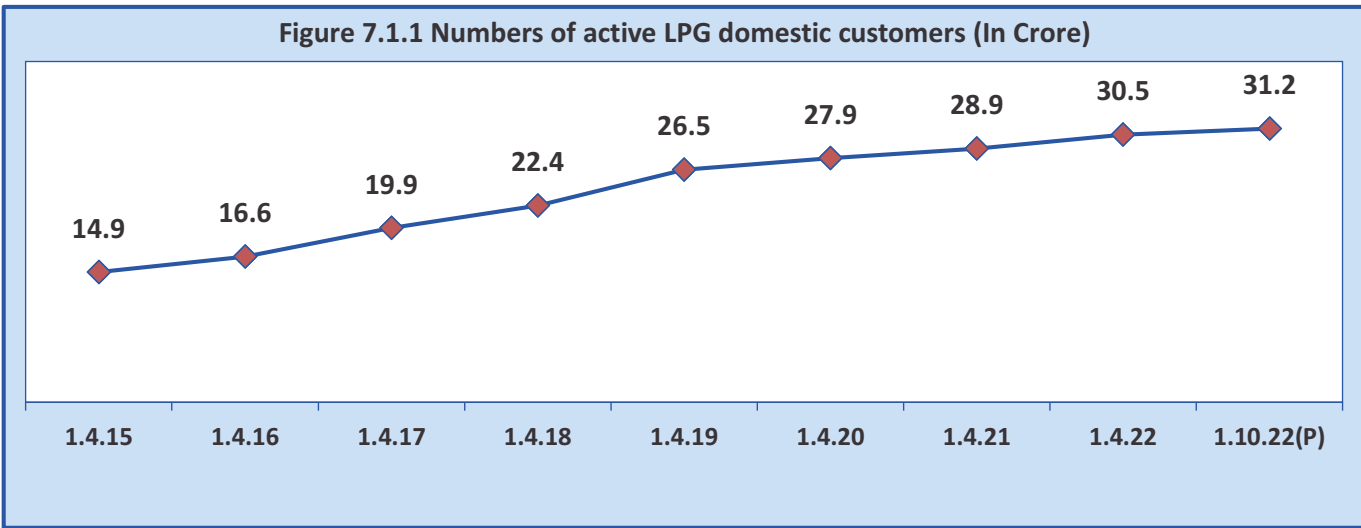
Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
(Thousand metric tonne)							
<b>LPG production</b>	<b>12364</b>	<b>12786</b>	<b>12823</b>	<b>12072</b>	<b>12238</b>	<b>5746</b>	<b>6364</b>
<b>LPG consumption</b>	<b>23342</b>	<b>24907</b>	<b>26330</b>	<b>27591</b>	<b>28335</b>	<b>13646</b>	<b>13812</b>
<b>PSU sales</b>	<b>22977</b>	<b>24591</b>	<b>26126</b>	<b>27476</b>	<b>28253</b>	<b>13602</b>	<b>13774</b>
of which:							
Domestic	20352	21728	23076	25117	25502	12308	12392
Non-Domestic	2086	2364	2614	1885	2239	995	1148
Bulk	355	318	263	355	391	242	179
Auto LPG	184	180	172	118	122	57	55
<b>Imports</b>	<b>11379</b>	<b>13235</b>	<b>14809</b>	<b>16527</b>	<b>17207</b>	<b>8183</b>	<b>8703</b>
of which:							
PSU imports	11015	12919	14605	16412	17125	8139	8664
Private imports	364	316	204	115	82	44	38
<b>Import dependency of LPG*</b>	<b>47.2%</b>	<b>51.9%</b>	<b>55.5%</b>	<b>59.6%</b>	<b>60.1%</b>	<b>60.0%</b>	<b>62.9%</b>
(Lakh)							
<b>Enrolment (domestic)</b>	<b>284.7</b>	<b>455.1</b>	<b>161.1</b>	<b>85.8</b>	<b>158.4</b>	<b>62.4</b>	<b>78.6</b>
As on	1.4.2018	1.4.2019	1.4.2020	1.4.2021	1.4.2022	01.10.2021	1.10.2022
<b>LPG active domestic customers</b>	<b>2243</b>	<b>2654</b>	<b>2787</b>	<b>2895</b>	<b>3053</b>	<b>2957</b>	<b>3123</b>
<b>PMUY beneficiaries</b>	<b>356</b>	<b>719</b>	<b>802</b>	<b>800</b>	<b>899</b>	<b>833</b>	<b>954</b>
<b>Non-domestic customers</b>	<b>27.9</b>	<b>30.2</b>	<b>32.4</b>	<b>33.9</b>	<b>35.2</b>	<b>34.5</b>	<b>35.5</b>
(Percent)							
<b>LPG coverage (Estimated)</b>	<b>80.9</b>	<b>94.3</b>	<b>97.5</b>	<b>99.8</b>	#	#	#
(Nos.)							
<b>LPG distributors</b>	<b>20146</b>	<b>23737</b>	<b>24670</b>	<b>25083</b>	<b>25269</b>	<b>25156</b>	<b>25326</b>
of which:							
Shehri Vitrak	7821	7908	7914	7899	7894	7902	7923
Rurban Vitrak	3463	3626	3671	3697	3720	3705	3715
Gramin & Durgam Kshetriya Vitrak	8862	12203	13085	13487	13655	13549	13688
<b>Auto LPG dispensing stations (ALDS)</b>	<b>672</b>	<b>661</b>	<b>657</b>	<b>651</b>	<b>601</b>	<b>634</b>	<b>570</b>
(Thousand metric tonne per annum)							
<b>Bottling capacity (rated)</b>	<b>17395</b>	<b>18338</b>	<b>20292</b>	<b>21249</b>	<b>21573</b>	<b>21309</b>	<b>21658</b>
(Thousand metric tonne)							
<b>Gross tankage</b>	<b>912</b>	<b>929</b>	<b>978</b>	<b>994</b>	<b>1088</b>	<b>1008</b>	<b>1116</b>

Source: Oil companies & Directorate General of Commercial Intelligence and Statistics (DGCIS);

\*PSU OMCs

**Note:**

1. Data in respect of enrolment, customers, distributors, ALDS and rated bottling capacity pertain to PSU OMCs only.
2. Gross tankage includes LPG tankage at LPG bottling plants owned by PSU oil companies, all refineries, fractionators and LPG import terminals.
3. MOPNG vide letter no. P-20019/2/2016-LPG dated 23 June 2016 had issued unified guidelines for selection of LPG distributors. In the said guidelines, LPG distributor categories have been redefined. The historical data on LPG distributors has been rearranged in line with the new classification for comparison.
4. # "The LPG coverage is calculated by PSU OMCs based upon the active LPG domestic connections and the estimated number of households. The number of households has been projected by PSU OMCs based on 2011 census data. Factors like increasing nuclearization of families, migration of individuals/ families due to urbanization and reduction in average size of households etc. impact the growth of number of households. Due to these factors, the estimated no. of households through projection of 2011 census data may slightly differ from the actual no. of households in a State/UT. Further, this methodology does not include PNG (domestic) connections."



**Table 7.2: LPG coverage (estimated) as on 01.04.2021 (P)**

(Number in lakhs)				
State/UT	No. of households Census 2011	Estimated households as on 1.4.2021	Active connections as on 1.4.2021	LPG coverage (%)
CHANDIGARH	2.35	2.76	2.82	102.1%
DELHI	33.41	40.55	50.53	124.6%
HARYANA	47.18	56.65	72.11	127.3%
HIMACHAL PRADESH	14.77	16.69	20.53	123.0%
JAMMU & KASHMIR	19.76	24.46	32.43	132.5%
LADAKH	0.39	0.48	0.84	174.5%
PUNJAB	54.10	61.68	88.51	143.5%
RAJASTHAN	125.81	152.83	167.03	109.3%
UTTAR PRADESH	329.24	396.30	423.19	106.8%
UTTARAKHAND	19.97	23.76	27.87	117.3%
<b>SUB TOTAL NORTH</b>	<b>646.98</b>	<b>776.16</b>	<b>885.85</b>	<b>114.1%</b>
ARUNACHAL PRADESH	2.62	3.30	2.84	86.1%
ASSAM	63.67	74.65	73.69	98.7%
MANIPUR	5.07	6.02	5.93	98.5%
MEGHALAYA	5.38	6.90	3.32	48.2%
MIZORAM	2.21	2.73	3.21	117.4%
NAGALAND	4.00	3.98	2.81	70.6%
SIKKIM	1.28	1.45	1.60	110.3%
TRIPURA	8.43	9.69	7.59	78.4%
<b>SUB TOTAL NORTH EAST</b>	<b>92.66</b>	<b>108.72</b>	<b>100.99</b>	<b>92.9%</b>
ANDAMAN & NICOBAR ISLANDS	0.93	1.00	1.17	116.9%
BIHAR	189.41	237.92	186.49	78.4%
JHARKHAND	61.82	75.78	57.67	76.1%
ODISHA	96.61	110.25	88.87	80.6%
WEST BENGAL	200.67	228.60	228.19	99.8%
<b>SUB TOTAL EAST</b>	<b>549.44</b>	<b>653.54</b>	<b>562.38</b>	<b>86.1%</b>
CHHATTISGARH	56.23	69.04	53.21	77.1%
DADRA & NAGAR HAVELI and DAMAN & DIU	1.33	2.07	1.63	78.4%
GOA	3.23	3.49	5.19	148.5%
GUJARAT	121.82	145.52	108.95	74.9%
MADHYA PRADESH	149.68	180.31	153.73	85.3%
MAHARASHTRA	238.31	276.75	287.57	103.9%
<b>SUB TOTAL WEST</b>	<b>570.59</b>	<b>677.20</b>	<b>610.27</b>	<b>90.1%</b>
ANDHRA PRADESH	126.04	140.02	142.89	102.0%
KARNATAKA	131.80	152.53	167.03	109.5%
KERALA	77.16	80.98	91.00	112.4%
LAKSHADWEEP	0.11	0.11	0.10	88.5%
PUDUCHERRY	3.01	3.87	3.81	98.4%
TAMILNADU	184.93	214.02	216.87	101.3%
TELANGANA	84.21	93.55	113.64	121.5%
<b>SUB TOTAL SOUTH</b>	<b>607.26</b>	<b>685.07</b>	<b>735.34</b>	<b>107.3%</b>
<b>ALL INDIA</b>	<b>2466.93</b>	<b>2900.68</b>	<b>2894.83</b>	<b>99.8%</b>

Source: PSU OMCs (IOCL, BPCL and HPCL)

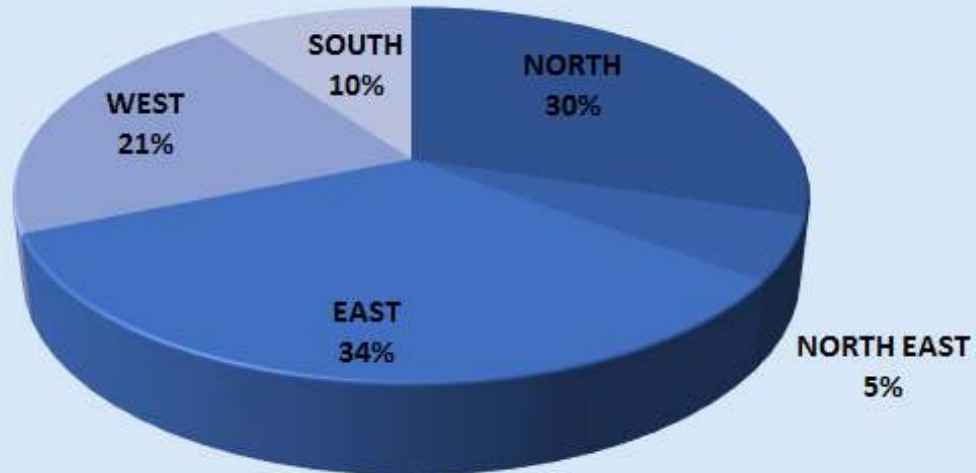
**Table 7.3: State-wise PMUY connections as on 01.10.2022(P)**

(Number in lakhs)	
State/UT	Number of PMUY connections
Chandigarh	0.00092
Delhi	0.99
Haryana	7.39
Himachal Pradesh	1.38
J & K	12.39
LADAKH	0.11
Punjab	12.36
Rajasthan	66.20
Uttar Pradesh	167.18
Uttarakhand	4.50
<b>Sub Total North</b>	<b>272.51</b>
Arunachal Pradesh	0.48
Assam	39.80
Manipur	1.78
Meghalaya	1.73
Mizoram	0.30
Nagaland	0.77
Sikkim	0.12
Tripura	2.72
<b>Sub Total North East</b>	<b>47.70</b>
Andaman & Nicobar Islands	0.13
Bihar	100.95
Jharkhand	34.75
Odisha	51.88
West Bengal	109.08
<b>Sub Total East</b>	<b>296.80</b>
Chhattisgarh	33.51
Dadra & Nagar Haveli and Daman & Diu	0.15
Goa	0.01
Gujarat	34.38
Madhya Pradesh	79.39
Maharashtra	46.98
<b>Sub Total West</b>	<b>203.87</b>
Andhra Pradesh	5.09
Karnataka	37.28
Kerala	3.40
Lakshadweep	0.00
Puducherry	0.15
Tamil Nadu	36.94
Telangana	11.49
<b>Sub Total South</b>	<b>94.35</b>
<b>All India</b>	<b>953.93</b>

**Source:** PSU OMCs (IOCL, BPCL and HPCL) "PMUY connections" refer to those households where subscription vouchers have been issued



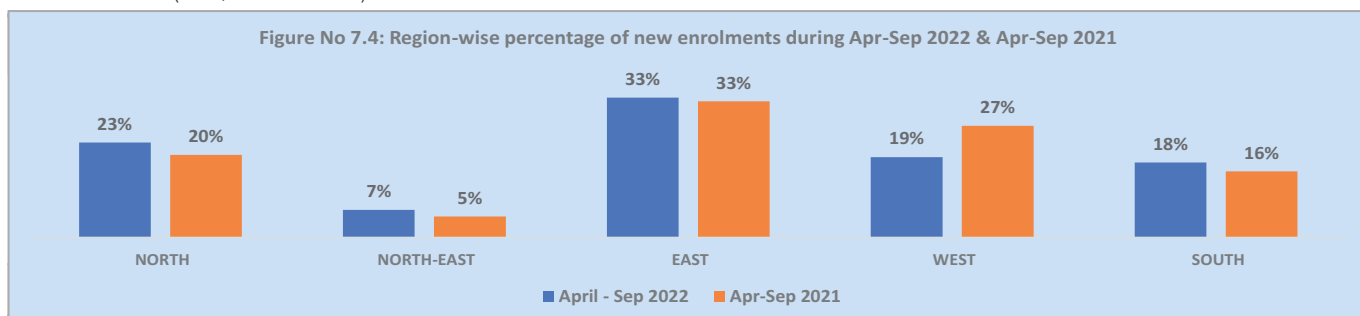
**Figure 7.3: Region-wise percentage of PMUY connections as on 1.10.2022**



**Table 7.4 : LPG domestic customers enrolment (14.2 kg/5 kg) by PSU OMCs**

State/UT	(Number in lakhs)					
	April - September 2021 (P)			April - September 2022 (P)		
	14.2 Kg	5 Kg	Total	14.2 Kg	5 Kg	Total
Chandigarh	0.03	0.0001	0.03	0.06	0.0002	0.06
Delhi	0.34	0.0007	0.34	1.01	0.0021	1.02
Haryana	0.92	0.0012	0.92	2.24	0.0116	2.25
Himachal Pradesh	0.34	0.0009	0.34	0.59	0.0018	0.59
Jammu & Kashmir				0.46	0.0050	0.46
Ladakh	0.20	0.0029	0.20	0.04	0.0001	0.04
Punjab	0.81	0.0024	0.81	1.80	0.0157	1.81
Rajasthan	1.20	0.0050	1.21	4.28	0.0220	4.30
Uttar Pradesh	7.98	0.0192	8.00	27.44	0.0846	27.52
Uttarakhand	0.52	0.0013	0.52	1.25	0.0024	1.26
<b>Sub Total North</b>	<b>12.33</b>	<b>0.03</b>	<b>12.36</b>	<b>39.17</b>	<b>0.15</b>	<b>39.32</b>
Arunachal Pradesh	0.08	0.0002	0.08	0.17	0.0003	0.17
Assam	2.52	0.0012	2.52	6.45	0.0037	6.45
Manipur	0.12	0.0001	0.12	0.40	0.0003	0.40
Meghalaya	0.11	0.0004	0.12	0.33	0.0008	0.33
Mizoram	0.05	0.0001	0.05	0.11	0.0002	0.11
Nagaland	0.09	0.0001	0.09	0.34	0.0002	0.34
Sikkim	0.05	0.0001	0.05	0.11	0.0002	0.11
Tripura	0.09	0.0003	0.09	0.21	0.0008	0.2
<b>Sub Total North-East</b>	<b>3.11</b>	<b>0.002</b>	<b>3.12</b>	<b>8.12</b>	<b>0.01</b>	<b>8.13</b>
Andaman & Nicobar Islands	0.03	0.0000	0.03	0.06	0.0000	0.06
Bihar	9.35	0.0111	9.36	20.54	0.0393	20.58
Jharkhand	1.41	0.0008	1.41	3.26	0.0032	3.26
Odisha	2.65	0.0037	2.66	5.94	0.0109	5.95
West Bengal	6.91	0.0112	6.92	24.32	0.3138	24.63
<b>Sub Total East</b>	<b>20.35</b>	<b>0.03</b>	<b>20.38</b>	<b>54.12</b>	<b>0.37</b>	<b>54.49</b>
Chhattisgarh	1.75	0.0028	1.75	4.41	0.0066	4.41
Dadra & Nagar Haveli and Daman & Diu	0.03	0.0000	0.03	0.06	0.0000	0.06
Goa	0.08	0.0000	0.08	0.16	0.0001	0.16
Gujarat	4.42	0.0035	4.42	7.74	0.0093	7.75
Madhya Pradesh	5.41	0.0079	5.42	9.66	0.0450	9.70
Maharashtra	4.98	0.0079	4.99	5.28	0.0314	5.32
<b>Sub Total West</b>	<b>16.67</b>	<b>0.02</b>	<b>16.70</b>	<b>14.85</b>	<b>0.26</b>	<b>15.11</b>
Andhra Pradesh	1.55	0.0014	1.55	1.94	0.0015	1.94
Karnataka	2.58	0.0118	2.60	4.46	0.0416	4.50
Kerala	1.04	0.0011	1.05	1.31	0.0066	1.32
Lakshadweep	0.00	0.0000	0.00	0.00	0.0000	0.00
Puducherry	0.04	0.0001	0.04	0.04	0.0001	0.04
Tamil Nadu	3.08	0.0453	3.13	4.40	0.0495	4.45
Telangana	1.52	0.0015	1.53	1.84	0.0028	1.84
<b>Sub Total South</b>	<b>9.83</b>	<b>0.06</b>	<b>9.89</b>	<b>13.98</b>	<b>0.10</b>	<b>14.09</b>
<b>All India</b>	<b>62.30</b>	<b>0.15</b>	<b>62.44</b>	<b>77.65</b>	<b>0.92</b>	<b>78.57</b>

Source: PSU OMCs (IOCL, BPCL and HPCL)



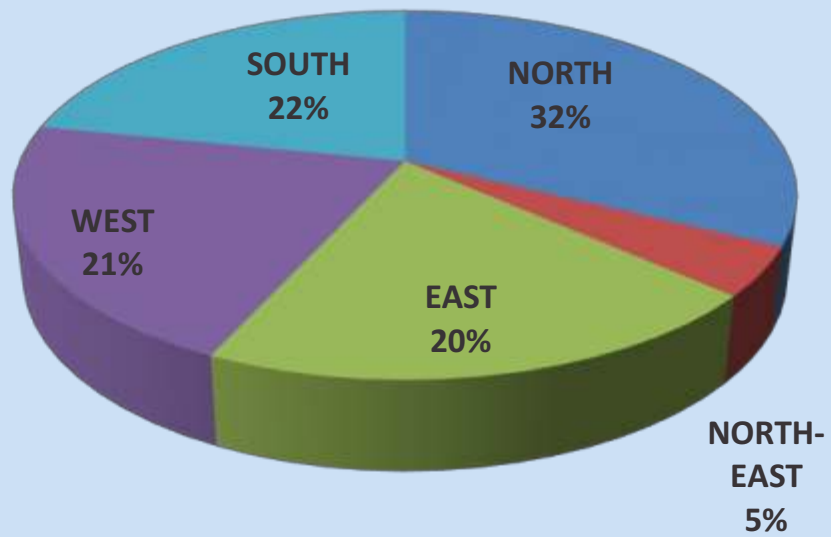
**Table 7.5 : Number of LPG distributors as on 01.10.2022 (P) (New Scheme)**

(Nos.)					
State/UT	Sheheri Vitrak	Rurban Vitrak	Gramin Vitrak	Durgam Kshetriya Vitrak	Total
Chandigarh	26	0	0	0	26
Delhi	319	0	0	0	319
Haryana	282	101	233	9	625
Himachal Pradesh	69	13	93	32	207
Jammu & Kashmir	126	33	73	35	267
Ladakh	0	13	2	9	24
Punjab	334	256	245	26	861
Rajasthan	436	163	658	130	1387
Uttar Pradesh	1004	705	2238	187	4134
Uttarakhand	114	105	65	31	315
<b>Sub Total North</b>	<b>2710</b>	<b>1389</b>	<b>3607</b>	<b>459</b>	<b>8165</b>
Arunachal Pradesh	6	6	32	41	85
Assam	128	104	308	56	596
Manipur	15	13	36	37	101
Meghalaya	22	9	19	14	64
Mizoram	11	6	26	16	59
Nagaland	15	11	17	40	83
Sikkim	9	1	10	7	27
Tripura	18	9	43	10	80
<b>Sub Total North-East</b>	<b>224</b>	<b>159</b>	<b>491</b>	<b>221</b>	<b>1095</b>
Andaman & Nicobar Islands	0	4	4	1	9
Bihar	239	252	1468	50	2009
Jharkhand	163	51	333	35	582
Odisha	173	101	550	136	960
West Bengal	399	166	935	60	1560
<b>Sub Total East</b>	<b>974</b>	<b>574</b>	<b>3290</b>	<b>282</b>	<b>5120</b>
Chhattisgarh	105	76	164	189	534
Dadra & Nagar Haveli and Daman & Diu	5	1	0	0	6
Goa	44	4	6	1	55
Gujarat	416	119	461	24	1020
Madhya Pradesh	469	212	419	443	1543
Maharashtra	1005	190	833	191	2219
<b>Sub Total West</b>	<b>2055</b>	<b>602</b>	<b>1972</b>	<b>765</b>	<b>5394</b>
Andhra Pradesh	316	247	417	108	1088
Karnataka	536	139	544	51	1270
Kerala	225	131	316	24	696
Lakshadweep	1	0	0	0	1
Puducherry	15	11	3	0	29
Tamil Nadu	567	364	607	105	1643
Telangana	288	101	330	79	798
<b>Sub Total South</b>	<b>1948</b>	<b>993</b>	<b>2217</b>	<b>367</b>	<b>5525</b>
<b>All India</b>	<b>7923</b>	<b>3715</b>	<b>11678</b>	<b>2010</b>	<b>25326</b>

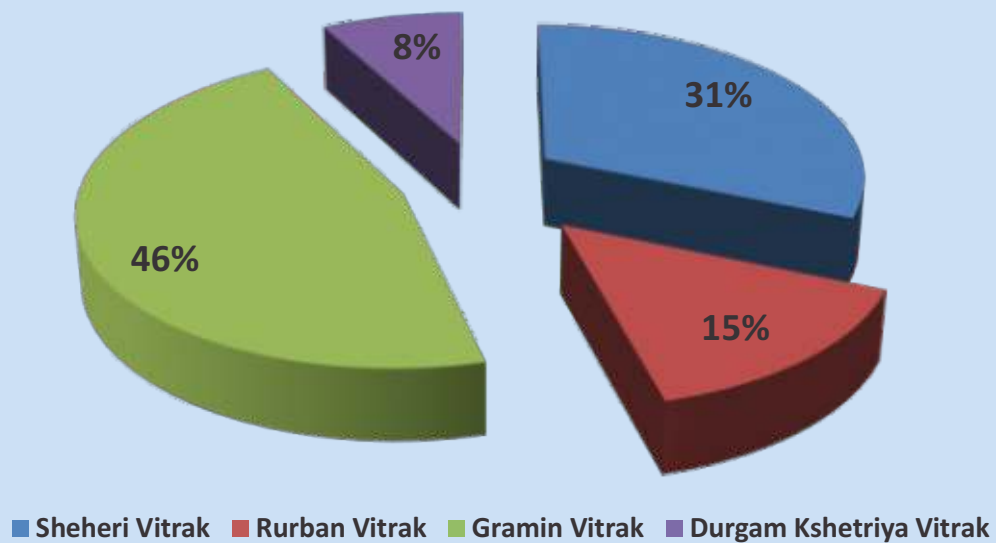
Source: PSU OMCs (IOCL, BPCL and HPCL)

Note: MOPNG vide letter no. P-20019/2/2016-LPG dated 23 June 2016 has issued unified guidelines for selection of LPG distributors. In the said guidelines, LPG distributor categories have been redefined as above.

**Figure 7.5.1: Region-wise distribution of distributors as on 1.10.2022**



**Figure 7.5.2: Category wise distribution of distributors as on 1.10.2022**





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# Chapter-8 Prices and Taxes





## Chapter-highlights

### Prices and Taxes

- The Year 2022 has started with very turbulent period for Oil with huge fluctuations in International Prices of Crude Oil and Petroleum Products due to various global events including lower than expected production restorations by OPEC nations, increase in demand as the world economy recovers from disruption caused due to Covid-19 and its variants, Geo-political tensions, lower than usual inventory levels in major consuming nations, effects of reduced investments in Crude Oil production facilities over past few years, further OPEC+ cut of 2 million bpd announced effective November 2022 , etc.
- Oil prices rose significantly as the Russia-Ukraine conflict drags on, after Russia's invasion of Ukraine began in the last week of February 2022 and supply concerns weighing on the global oil market.
- The monthly average prices of Indian basket of crude oil rose to \$112.87/bbl at the end of the financial year 2021-22 in March 2022 from \$63.40/bbl at the beginning in April 2021 and finally averaging \$87.55/bbl in November 2022.
- The Indian basket of crude oil has averaged \$99.86/bbl during April to November 2022, an increase of 123% from the average of \$44.82/bbl during 2020-21 and an increase of 26% from the average of \$79.18/bbl during 2021-22.
- Oil & Gas industry is one of the most important contributors to Central & State Exchequers. During the FY2021-22, Petroleum sector contributed Rs. 492303 crores to Central exchequer by way of various Taxes /duties on crude oil & petroleum products, Corporate Income tax and other ways like dividend, etc. The Contribution of petroleum sector to State exchequer during 2021-22 was Rs. 282122 crores by way of VAT and other taxes, royalty, etc.
- Further, the contribution of petroleum sector to central and state exchequers has been Rs. 197055 crores and Rs. 160242 crores during April to September 2022.
- The subsidy burden on petroleum products has been on continuous decline since 2019-20 indicating better fiscal management. The same has been reduced to Rs. 2237 crore during 2021-22 from Rs. 43814 crores during 2018-19.

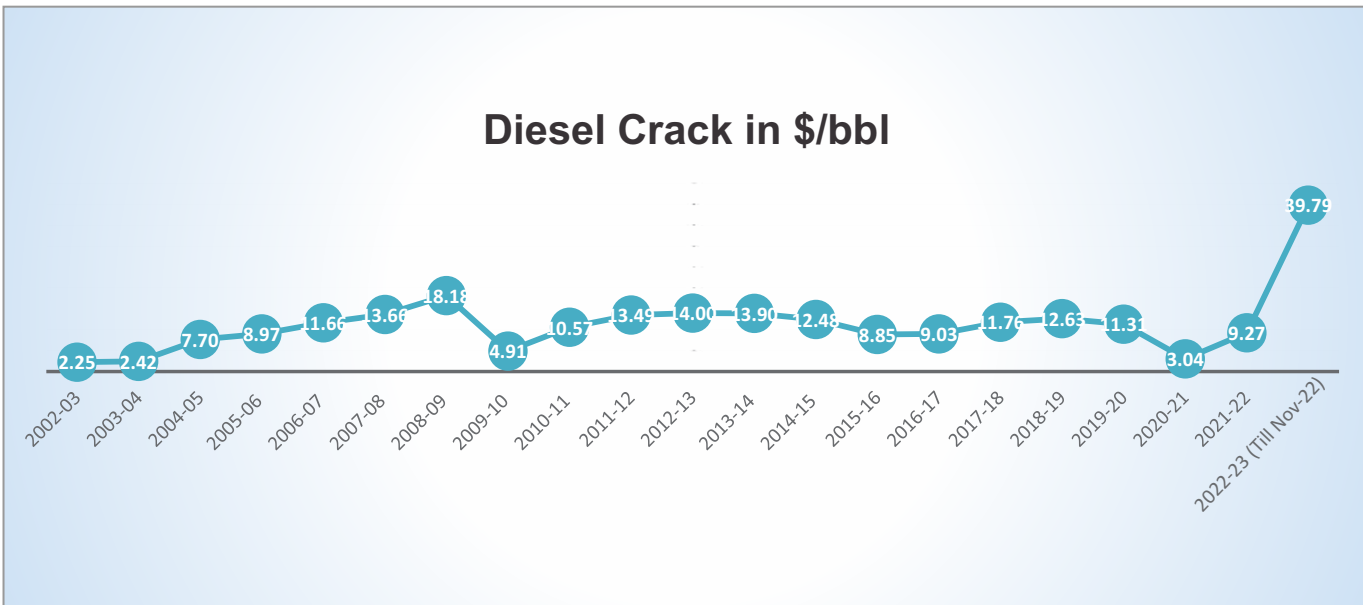
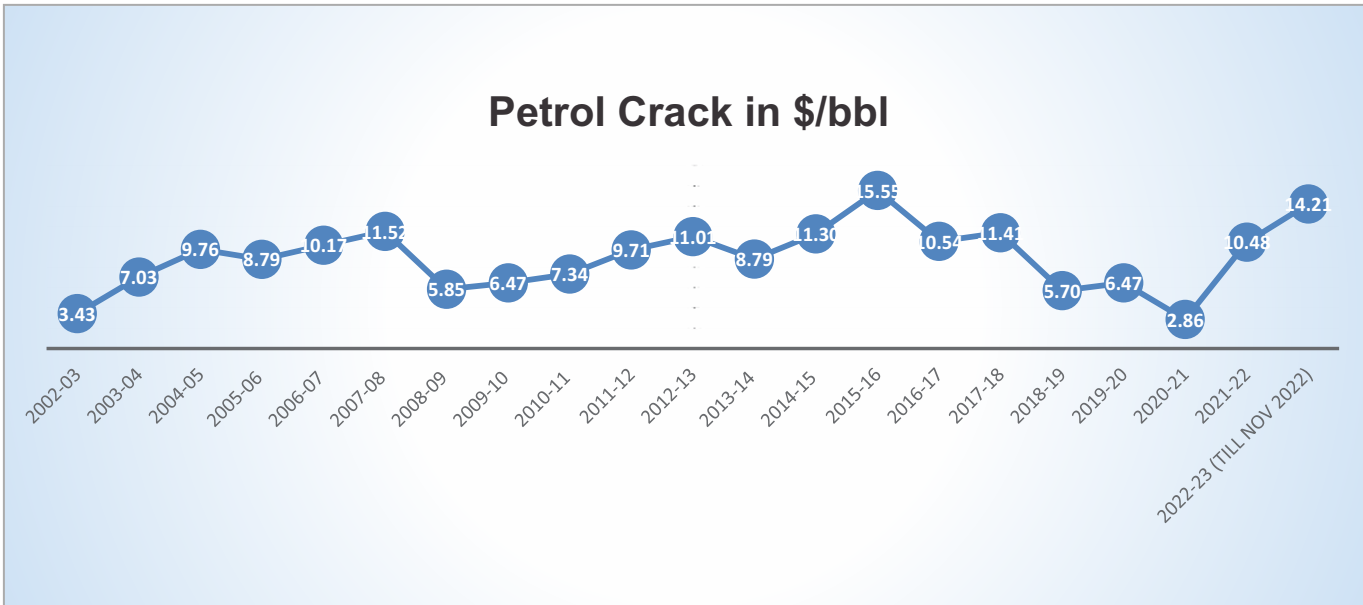
**Table 8.1 : Price of crude oil in the international market**

Year	Indian basket (\$/bbl)
2002-03	26.60
2003-04	27.98
2004-05	39.21
2005-06	55.72
2006-07	62.46
2007-08	79.25
2008-09	83.57
2009-10	69.76
2010-11	85.09
2011-12	111.89
2012-13	107.97
2013-14	105.52
2014-15	84.16
2015-16	46.17
2016-17	47.56
2017-18	56.43
2018-19	69.88
2019-20	60.47
2020-21	44.82
2021-22	79.18
2022-23 (upto 30.11.2022)	99.86
<b>2022 : Month wise</b>	
January	84.67
February	94.07
March	112.87
April	102.97
May	109.51
June	116.01
July	105.49
August	97.40
September	90.71
October	91.70
November	87.55

**Notes:**

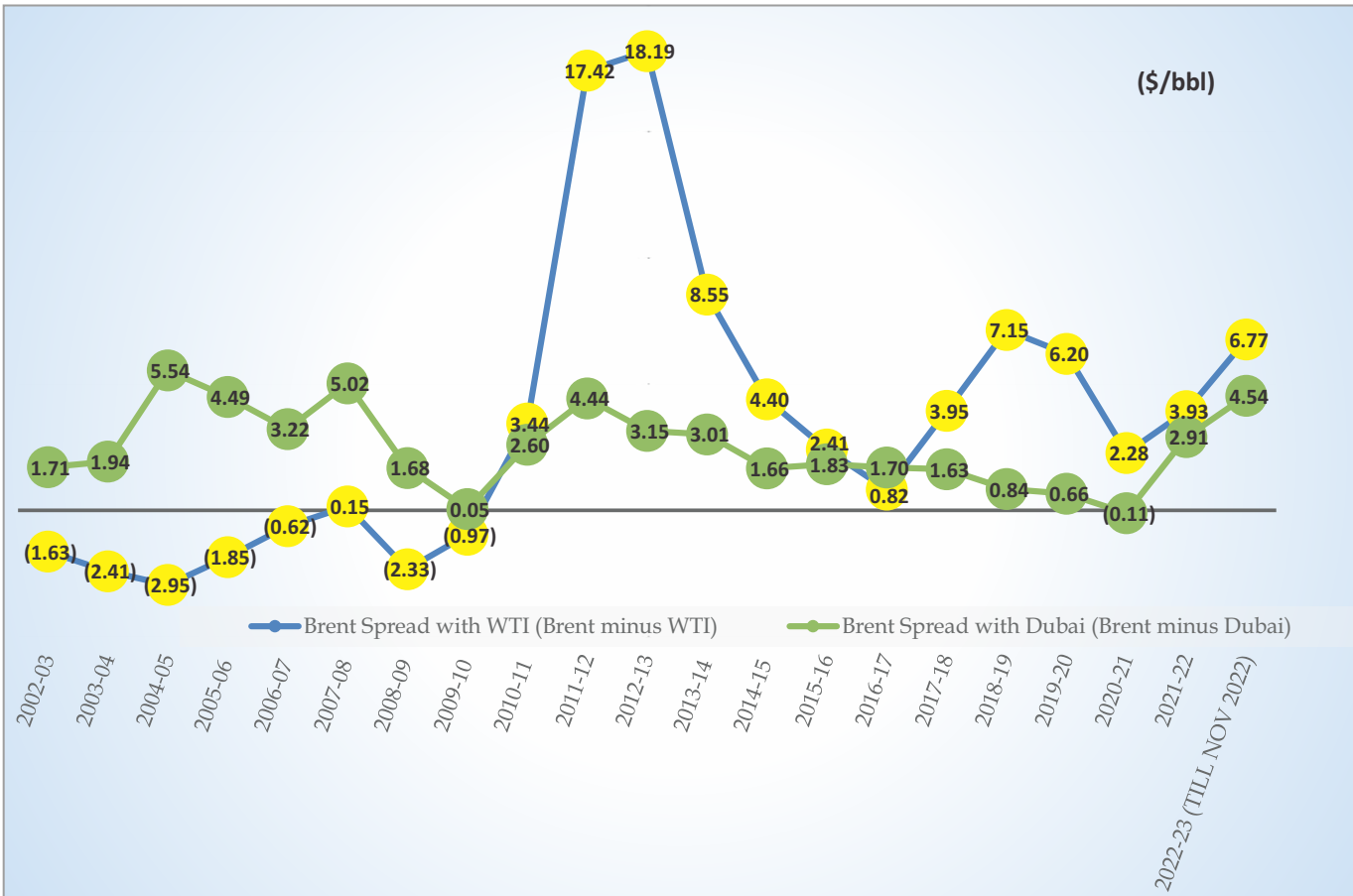
1. The Indian basket of crude oil for the year 2020-21 & subsequent period is calculated based on a weightage of 75.62% for the price of sour grades of crude oil (average of Oman & Dubai) and 24.38% sweet grade of crude oil (Brent Dated). The percentages of 75.62 and 24.38 was based on the ratio of low sulphur and high sulphur crude oil processed (indigenous and imported) by all the Indian refineries (PSU and Pvt.) during the financial year i.e. 2019-20.

**Trend in spreads of petroleum products vs Indian basket of crude oil**





**Trend in spreads of international benchmark crude oils**



**Table 8.2 : Price built-up of PDS kerosene at Mumbai**

Elements	Unit	As on 1.12.2022
Price before taxes and dealers' commission	₹ / litre	72.74
Add : Dealers' commission	₹ / litre	2.67
Add : GST (incl GST on dealers' commission)	₹ / litre	3.77
<b>Retail selling price</b>	<b>₹ / litre</b>	<b>79.18</b>

**Table 8.3 : Price built-up of domestic LPG at Delhi**

Elements	Unit	As on 1.12.2022
Price before taxes and distributors' commission	₹ / 14.2 kg cylinder	938.02
Add : Distributors' commission	₹ / 14.2 kg cylinder	64.84
Add : GST (including GST on distributors' commission)	₹ / 14.2 kg cylinder	50.14
<b>Retail selling price</b>	<b>₹ / 14.2 kg cylinder</b>	<b>1053.00</b>

**Table 8.4 : Price built-up of petrol at Delhi**

Elements	Unit	As on 01.12.2022
Price charged to dealers (excluding excise duty and VAT)	₹ / litre	57.36
Add : Excise duty	₹ / litre	19.90
Add : Dealers' commission (average)	₹ / litre	3.75
Add : VAT (including VAT on dealers' commission)	₹ / litre	15.71
<b>Retail selling price</b>	<b>₹ / litre</b>	<b>96.72</b>

-As per IOCL.

**Table 8.5 : Price built-up of diesel at Delhi**

Elements	Unit	As on 01.12.2022
Price charged to dealers (excluding excise duty and VAT)	₹ / litre	58.16
Add : Excise duty	₹ / litre	15.80
Add : Dealers' commission (average)	₹ / litre	2.55
Add : VAT (including VAT on dealer's commission)	₹ / litre	13.11
<b>Retail selling price</b>	<b>₹ / litre</b>	<b>89.62</b>

-As per IOCL.

**Table 8.6 : Break up of Central excise duty on Petrol & Diesel (As on 01.12.2022)**

Particulars	₹/litre	
	Petrol	Diesel
Basic duty	1.40	1.80
Additional excise duty (Road & Infrastructure Cess)	5.00	2.00
Special additional excise duty	11.00	8.00
Agriculture Infrastructure and Development Cess	2.50	4.00
<b>Total excise duty</b>	<b>19.90</b>	<b>15.80</b>

**Table 8.6A : Excise duty on Export of MS, HSD & ATF and Special Additional Excise Duty (SAED) on Domestic Crude Production**

Effective Date	Excise duty on Export			SAED on production of Crude oil
	Motor Spirit	High Speed Diesel	Aviation Turbine Fuel	
	₹ /Ltr	₹ /Ltr	₹ /Ltr	₹ /MT
01-Jul-22	6.00	13.00	6.00	23,250.00
20-Jul-22	-	11.00	4.00	17,000.00
03-Aug-22	-	5.00	-	17,750.00
19-Aug-22	-	7.00	2.00	13,000.00
01-Sep-22	-	13.50	9.00	13,300.00
17-Sep-22	-	10.00	5.00	10,500.00
02-Oct-22	-	5.00	-	8,000.00
16-Oct-22	-	12.00	3.50	11,000.00
02-Nov-22	-	13.00	5.00	9,500.00
17-Nov-22	-	10.50	5.00	10,200.00
02-Dec-22	-	8.00	5.00	4,900.00
16-Dec-22	-	5.00	1.50	1,700.00



Share of taxes in retail selling price of petroleum products

**Table 8.7 : Share of taxes in retail selling price of PDS kerosene as on 1.12.2022 at Mumbai**

Particulars	₹/litre	Share in RSP (%)
Price before taxes and dealers' commission	72.74	91.9%
Customs duty	-	
GST (Including GST on dealers' commission)	3.77	
<b>Total taxes</b>	<b>3.77</b>	<b>4.8%</b>
Dealers' commission	2.67	3.4%
<b>Retail selling price</b>	<b>79.18</b>	<b>100.0%</b>

**Table 8.8 : Share of taxes in retail selling price of domestic LPG as on 1.12.2022 at Delhi**

Particulars	₹/14.2 kg cylinder	Share in RSP (%)
Price before taxes and distributors' commission	938.02	89.1%
Customs duty	-	
GST (including GST on distributors' commission)	50.14	
Total taxes	50.14	4.8%
Distributors' commission	64.84	6.2%
<b>Retail selling price</b>	<b>1053.00</b>	<b>100.0%</b>

**Table 8.9 : Weightage of crude oil, natural gas and petroleum products in Wholesale Price Index (WPI)**

Product	Weight in %
Crude Petroleum	1.95
Natural Gas	0.46
High Speed Diesel (HSD)	3.10
Petrol	1.60
Naphtha	0.87
Furnace Oil (FO)	0.67
LPG	0.64
Aviation Turbine Fuel (ATF)	0.32
Lube Oils	0.29
Bitumen	0.23
Kerosene	0.19
Petroleum Coke	0.05
<b>Total</b>	<b>10.37</b>

Source: Website of Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade



**Dealers' / Distributors' commission on petroleum products**

**Table 8.10 : Dealers' commission on petrol & diesel**

(₹/KL)		
Particulars	Petrol	Diesel
1-Apr-04	707.00	425.00
21-Jun-05	778.00	467.00
01-Aug-05	848.00	509.00
01-Mar-07	894.00	529.00
16-May-07	1024.00	600.00
23-May-08	1052.00	631.00
27-Oct-09	1125.00	673.00
07-Sep-10	1218.00	757.00
01-Jul-11	1499.00	912.00
27-Oct-12	1794.00	1089.00
21-Dec-13	₹ 1390.15/KL + 0.883% of product billable price	1186.00
23-Oct-14	₹ 1499.37/KL + 0.887% of product billable price	₹ 1116.09/KL + 0.290% of product billable price
01-Aug-15	₹ 1749.86/KL + 0.883% of product billable price	₹ 1301.70/KL + 0.286% of product billable price
16-Nov-15	₹ 1750.08/KL + 0.883% of product billable price	₹ 1301.88/KL + 0.286% of product billable price
01-Jun-16	₹ 1750.29/KL + 0.883% of product billable price	₹ 1302.06/KL + 0.286% of product billable price
05-Oct-16	₹ 1868.14/KL + 0.875% of product billable price	₹ 1389.35/KL + 0.280% of product billable price
16-Nov-16	₹ 2006.33/KL + 0.875% of product billable price	₹ 1491.72/KL + 0.280% of product billable price
01-Apr-17	₹ 2020.38/KL + 0.859% of product billable price	₹ 1502.13/KL + 0.267% of product billable price
01-Jul-17	₹ 2025.97/KL + 0.859% of product billable price	₹ 1506.81/KL + 0.267% of product billable price
01-Aug-17	₹ 2674.74/KL + 0.859% of product billable price	₹ 2031.38/KL + 0.257% of product billable price
19-Feb-19	₹ 2637.80/KL + 0.859% of product billable price	₹ 2000.60/KL + 0.257% of product billable price

**Note:** In addition to above, effective 1st Aug 2017, slab based incentive is also given to eligible dealers through credit notes.

**Table 8.11 : Wholesale dealers' commission on PDS kerosene**

(₹/KL)		
Effective date	With form XV	Other than form XV
01-Apr-04	204.00	161.00
01-Mar-07	243.00	200.00
24-May-08	255.00	212.00
07-Jul-09	263.00	220.00
07-Sep-10	275.00	232.00
28-Dec-12	438.24	377.73
21-Oct-14	536.09	475.58
05-Feb-16	714.18	649.16
28-Oct-16	787.82	723.87
05-Sep-17	1008.83	928.10
04-Oct-18	1016.37	1005.95
22-Feb-19	1341.88	1230.98

**Table 8.12: Distributors' commission on domestic LPG**

Effective date	(₹/ cylinder)		
	14.2 KG cyl.	Additional commission for sale at market determined price (₹/14.2 KG cyl.)	5 KG cyl.
01-April-04	16.71	NA	8.60
01-Mar-07	19.05	NA	9.81
04-Jun-08	20.54	NA	10.58
30-Jun-09	21.94	NA	11.30
01-Jul-11	25.83	NA	13.30
07-Oct-12	37.25	0.75	18.63
11-Dec-13	40.71	0.75	20.36
23-Oct-14	44.06	0.82	22.03
09-Dec-15	45.83	0.26	22.67
01-Jan-16	45.83	0.33	22.67
01-Feb-16	45.83	0.22	22.67
01-Mar-16	45.83	0.13	22.67
01-May-16	45.83	0.15	22.67
01-Jun-16	45.83	0.18	22.67
01-Jul-16	45.83	0.16	22.67
01-Aug-16	45.83	0.09	22.67
01-Sep-16	45.83	0.06	22.67
01-Oct-16	45.83	0.09	22.67
28-Oct-16	47.48	0.09	23.74
01-Nov-16	47.48	0.14	23.74
01-Dec-16	47.48	0.21	23.74
01-Feb-17	47.48	0.30	23.74
01-Mar-17	47.48	0.43	23.74
01-Apr-17	47.48	0.40	23.74
01-May-17	47.48	0.27	23.74
01-Jun-17	47.48	0.15	23.74
01-Jul-17	47.48	0.13	23.74
01-Aug-17	47.48	0.06	23.74
01-Sep-17	47.48	0.16	23.74
30-Sep-17	48.89	0.16	24.20
01-Oct-17	48.89	0.23	24.20
01-Nov-17	48.89	0.36	24.20
01-Jan-18	48.89	0.35	24.20
01-Feb-18	48.89	0.34	24.20



Table 8.12 : Continued

Effective date	(₹/ cylinder)		
	14.2 KG cyl.	Additional commission for sale at market determined price (₹/14.2 KG cyl.)	5 KG cyl.
01-Mar-18	48.89	0.28	24.20
01-Apr-18	48.89	0.23	24.20
01-Jun-18	48.89	0.29	24.20
01-Jul-18	48.89	0.36	24.20
01-Aug-18	48.89	0.42	24.20
01-Sep-18	48.89	0.46	24.20
01-Oct-18	48.89	0.54	24.20
01-Nov-18	48.89	0.63	24.20
07-Nov-18	50.58	0.63	25.29
01-Dec-18	50.58	0.45	25.29
01-Jan-19	50.58	0.28	25.29
01-Feb-19	50.58	0.24	25.29
01-Mar-19	50.58	0.30	25.29
01-Apr-19	50.58	0.31	25.29
01-Jun-19	50.58	0.35	25.29
01-Jul-19	50.58	0.21	25.29
01-Aug-19	56.20	-	28.10
01-Sep-19	59.02	-	29.51
01-Oct-19	61.84	-	30.92
19-May-22	64.84	-	32.42

Source: MoP&NG circulars & OMCs

Table 8.13 : Retail selling price of major petroleum products in India & neighbouring countries

Indian rupees (₹)/ litre/ 14.2 kg cyl.

Country	Petrol (₹/ltr)	Diesel (₹/ltr)	Kerosene (₹/ltr)	Domestic LPG (₹/14.2 kg cyl.)
India (Delhi)	96.72 <sup>^</sup>	89.62 <sup>^</sup>	79.18 <sup>#</sup>	1053.00 <sup>**</sup>
Pakistan	80.80	85.53	66.09	1114.66
Bangladesh	101.53	88.54	88.54	545.33
Sri Lanka	82.43	95.80	81.32	1103.45
Nepal (Kathmandu)	114.10	112.21	112.21	1134.73

<sup>^</sup> Petrol and Diesel at Delhi as on 01.12.2022 as per IOCL

<sup>#</sup> at Mumbai as on 01.12.2022 for PDS Kerosene

<sup>\*\*</sup> Non subsidised Domestic LPG at Delhi as on 01.12.2022

Note - Prices for neighboring countries as available on their respective website as on 01.12.2022.

Sources: Websites: Pakistan- Pakistan State Oil ([www.psopk.com](http://www.psopk.com)) and Oil and Gas Regulatory Authority ([www.ogra.org.pk](http://www.ogra.org.pk)); Bangladesh- Bangladesh Petroleum Corporation ([www.bpc.gov.bd](http://www.bpc.gov.bd)); Nepal- Nepal Oil Corporation ([www.nepaloil.com.np](http://www.nepaloil.com.np)); Sri Lanka- Petrol, Diesel & Kerosene- Ceylon Petroleum Corporation ([www.ceypetco.gov.lk](http://www.ceypetco.gov.lk)); LPG- Litro Gas Lanka ([www.litrogas.com](http://www.litrogas.com)) or [colombopage.com](http://colombopage.com); Exchange rate - [www.oanda.com](http://www.oanda.com)

**Table 8.14 : Retail selling price of petroleum products at State capitals / UTs as on 01.12.2022**

State/Union Territory	City	Petrol	Diesel	Domestic LPG (₹/14.2 KG Cylinder)
		(₹/litre)		Non subsidized
Andaman & Nicobar Islands	Port Blair	84.10	79.74	1129.00
Andhra Pradesh	Amaravathi	111.87	99.61	1085.50
Arunachal Pradesh	Itanagar	93.29	82.35	1118.50
Assam	Guwahati	97.02	86.95	1102.00
Bihar	Patna	107.24	94.04	1151.00
Chandigarh	Chandigarh	96.20	84.26	1062.50
Chhattisgarh	Raipur	102.45	95.44	1124.00
Dadra and Nagar Haveli and Daman & Diu	Daman	94.31	89.86	1062.50
Delhi	New Delhi	96.72	89.62	1053.00
Goa	Panjim	97.68	90.23	1067.00
Gujarat	Gandhinagar	96.63	92.38	1078.50
Haryana	Ambala	97.48	90.31	1070.50
Himachal Pradesh	Shimla	97.22	83.10	1097.50
Jammu & Kashmir	Srinagar	101.74	86.83	1169.00
Jharkhand	Ranchi	99.84	94.65	1110.50
Karnataka	Bengaluru	101.94	87.89	1055.50
Kerala	Thiruvananthapuram	107.71	96.52	1062.00
Ladakh	Leh	104.48	89.37	1290.00
Madhya Pradesh	Bhopal	108.65	93.90	1058.50
Maharashtra	Mumbai	106.31	94.27	1052.50
Manipur	Imphal	101.24	87.16	1204.50
Meghalaya	Shillong	96.46	84.69	1120.00
Mizoram	Aizwal	95.84	82.25	1205.00
Nagaland	Kohima	99.50	87.59	1072.00
Odisha	Bhubaneswar	103.19	94.76	1079.00
Puducherry	Puducherry	96.16	86.33	1065.00
Punjab	Jullunder	96.18	86.55	1082.50
Rajasthan	Jaipur	108.48	93.72	1056.50
Sikkim	Gangtok	102.70	89.80	1205.50
Tamil Nadu	Chennai	102.63	94.24	1068.50
Telangana	Hyderabad	109.66	97.82	1105.00
Tripura	Agartala	99.49	88.44	1213.50
Uttar Pradesh	Lucknow	96.57	89.76	1090.50
Uttarakhand	Dehradun	95.28	90.29	1072.00
West Bengal	Kolkata	106.03	92.76	1079.00

Source: IOCL **Highest** **Lowest**

**Table 8.15 : Retail selling price of PDS kerosene at major cities as on 01.12.2022**

State	City	(₹/litre)
Maharashtra	Mumbai	79.18
Tamil Nadu	Chennai	15.00
West Bengal	Kolkata	82.83

Source: OMCs

Note: The allocation of PDS kerosene in Delhi is nil presently.



**Table 8.16 : Customs ,excise duty and GST rates on petroleum products as on 02.12.2022**

**Customs duty and Excise duty (Petroleum products on which GST is not levied)**

Particulars	Customs duty			Central excise duty			
	Basic customs duty	Additional customs duty (CVD)	Additional customs duty	Basic centvat duty	Special additional excise duty	Additional excise duty (Road and Infrastructure Cess)	Additional excise duty (Agriculture Infrastructure & Development Cess)
Crude oil	₹ 1/MT + Rs. 50/MT as NCCD	₹ 1/MT	-	₹ 1/MT+ Cess @ 20% +Rs.50/MT as NCCD	₹ 4900/MT		-
Petrol	2.50%	₹ 1.40/ltr. + ₹ 11.00/ ltr SAD+ ₹ 2.50/ ltr AIDC	₹ 5.00/ltr.	₹ 1.40/ltr	₹ 11.00/ltr	₹ 5.00/ltr.	₹ 2.50/ltr
Petrol (branded)	2.50%	₹ 2.60/ltr. + ₹ 11.00/ ltr SAD+ ₹ 2.50/ ltr AIDC	₹ 5.00/ltr.	₹ 2.60/ltr	₹ 11.00/ltr	₹ 5.00/ltr.	₹ 2.50/ltr
High speed diesel	2.50%	₹ 1.80/ltr. + ₹ 8.00/ ltr SAD+ ₹ 4.00/ ltr AIDC	₹ 2.00/ltr.	₹ 1.80/ltr	₹ 8.00/ltr	₹ 2.00/ltr.	₹ 4.00/ltr
High speed diesel (branded)	2.50%	₹ 4.20/ltr. + ₹ 8.00/ ltr SAD+ ₹ 4.00/ ltr AIDC	₹ 2.00/ltr.	₹ 4.20/Ltr	₹ 8.00/ltr	₹ 2.00/ltr.	₹ 4.00/ltr
Aviation Turbine Fuel (ATF) (note-2)	5.00%	11%	-	11%	-		-
Liquefied Natural Gas (LNG)	2.50%	Nil	-	Nil	-		-
Natural gas [gaseous state]	5.00%	Nil	-	Nil	-		-
Natural gas [compressed]	5.00%	14.00%	-	14.00%	-		-

Note - An additional Basic Excise duty @ ₹ 2/ltr has been levied on unblended petrol ( not blended with ethanol or methonal) intended for retail sale w.e.f. 01.11.2022.

**Customs duty and GST rates (Petroleum products on which GST is levied)**

Particulars	Customs		GST
	Basic Customs Duty	CVD (in lieu of IGST)	
LPG	Domestic (Note-3)	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	1.00%	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 Residue	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 . However, where CVD is payable in lieu of IGST, social welfare surcharge is not applicable on the amount of CVD.
- In case of ATF, Basic Excise Duty /Additional Customs Duty (CVD) is 2% in place of 11%, for supply to scheduled 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 non domestic exempted category) by PSU OMCs. Basic Customs duty rate is 5% for other importers of domestic LPG

**Table 8.17 : Actual rate of sales tax/ VAT/GST and other taxes levied by State/UT Governments on major petroleum products as on 01.12.2022**

Sl. no.	State/Union Territory	Petrol	Diesel	PDS kerosene	Domestic LPG
		Sales Tax /VAT		GST	
1	Andaman & Nicobar Islands	1%	1%		
2	Andhra Pradesh	31% VAT + Rs.4/litre VAT+Rs.1/litre Road Development Cess and Vat thereon	22.25% VAT + Rs.4/litre VAT+Rs.1/litre Road Development Cess and Vat thereon		
3	Arunachal Pradesh	14.50%	7.00%		
4	Assam	20.67% or Rs.15.50 per litre whichever is higher	16.69% or Rs. 10.25 per litre whichever is higher Rebate of Rs. 1.92 per litre subject to minimum tax of Rs. 10.25 per litre		
5	Bihar	23.58% or Rs 16.65/Litre whichever is higher (30% Surcharge on VAT as irrecoverable tax)	16.37% or Rs 12.33/Litre whichever is higher (30% Surcharge on VAT as irrecoverable tax)		
6	Chandigarh	Rs.10/KL cess +15.24% or Rs.12.42/Litre whichever is higher	Rs.10/KL cess + 6.66% or Rs.5.07/Litre whichever is higher		
7	Chhattisgarh	24% VAT + Rs.2/litre VAT	23% VAT + Rs.1/litre VAT		
8	Dadra & Nagar Haveli and Daman & Diu	12.75% VAT	13.50% VAT		
9	Delhi	19.40% VAT	Rs.250/KL air ambience charges + 16.75% VAT		
10	Goa	20% VAT + 0.5% Green cess	17% VAT + 0.5% Green cess		
11	Gujarat	13.7% VAT+ 4% Cess on Town Rate & VAT	14.9% VAT + 4 % Cess on Town Rate & VAT		
12	Haryana	18.20% or Rs.14.50/litre whichever is higher as VAT+5% additional tax on VAT	16.00% VAT or Rs.11.86/litre whichever is higher as VAT+5% additional tax on VAT		
13	Himachal Pradesh	17.5% or Rs 13.50/Litre- whichever is higher	6% or Rs 4.40/Litre- whichever is higher		
14	Jammu & Kashmir	24% MST+ Rs.2/Litre employment cess, Rebate of Rs.4.50/Litre	16% MST+ Rs.1.00/Litre employment cess, Rebate of Rs.6.50/Litre		
15	Jharkhand	22% on the sale price or Rs. 17.00 per litre, which ever is higher + Cess of Rs 1.00 per Ltr	22% on the sale price or Rs. 12.50 per litre, which ever is higher + Cess of Rs 1.00 per Ltr		
16	Karnataka	25.92% sales tax	14.34% sales tax		
17	Kerala	30.08% sales tax+ Rs.1/litre additional sales tax +1% cess	22.76% sales tax+ Rs.1/litre additional sales tax +1% cess		
18	Ladakh	15% MST+ Rs.5/Litre employment cess, Reduction of Rs.2.5/Litre	6% MST+ Rs.1/Litre employment cess, Reduction of Rs.0.50/Litre		
19	Lakshadweep	Nil	Nil		
20	Madhya Pradesh	29 % VAT + Rs.2.5/litre VAT+1%Cess	19% VAT+ Rs.1.5/litre VAT+1% Cess	5%	5%
21	Maharashtra – Mumbai, Thane, Navi Mumbai, & Aurangabad	26% VAT+ Rs.5.12/Litre additional tax	24% VAT		
22	Maharashtra (Rest of State)	25% VAT+ Rs.5.12/Litre additional tax	21% VAT		
23	Manipur	25% VAT	13.5% VAT		
24	Meghalaya	13.5% or Rs 12.50/Litre- whichever is higher (Rs.0.10/Litre pollution surcharge)	5% or Rs 5.50/Litre- whichever is higher (Rs.0.10/Litre pollution surcharge)		
25	Mizoram	16.36% VAT	5.23% VAT		
26	Nagaland	25% VAT or Rs. 16.04/litre whichever is higher +5% surcharge + Rs.2.00/Litre as road maintenance cess, Rebate Rs. 5.5 per litre	16.50% VAT or Rs. 10.51/litre whichever is higher+5% surcharge + Rs.2.00/Litre as road maintenance cess, Rebate Rs. 5.1 per litre		
27	Odisha	28% VAT	24% VAT		
28	Puducherry	14.55% VAT	8.65% VAT		
29	Punjab	Rs.2050/KL (cess)+ Rs.0.10 per Litre (Urban Transport Fund) + 0.25 per Litre (Special Infrastructure Development Fee)+13.77% VAT plus 10% additional tax or Rs.12.50/Litre whichever is higher	Rs.1050/KL (cess) + Rs.0.10 per Litre (Urban Transport Fund) +0.25 per Litre (Special Infrastructure Development Fee) + 9.92% VAT plus 10% additional tax or Rs.8.24/Litre whichever is higher		
30	Rajasthan	31.04% VAT+Rs 1500/KL road development cess	19.30% VAT+ Rs.1750/KL road development cess		
31	Sikkim	20% VAT+ Rs.3000/KL cess	10% VAT + Rs.2500/KL cess		
32	Tamil Nadu	13% + Rs.11.52 per litre	11% + Rs.9.62 per litre		
33	Telangana	35.20% VAT	27% VAT		
34	Tripura	17.50% VAT+ 3% Tripura Road Development Cess	10.00% VAT+ 3% Tripura Road Development Cess		
35	Uttar Pradesh	19.36% or Rs 14.85/Litre whichever is higher	17.08% or Rs 10.41/Litre whichever is higher		
36	Uttarakhand	16.97% or Rs 13.14 Per Ltr whichever is greater	17.15% or Rs Rs 10.41 Per Ltr whichever is greater		
37	West Bengal	25% or Rs.13.12/litre whichever is higher as sales tax+ Rs.1000/KL cess – Rs 1000/KL sales tax rebate (20% Additional tax on VAT as irrecoverable tax)	17% or Rs.7.70/litre whichever is higher as sales tax + Rs 1000/KL cess – Rs 1000/KL sales tax rebate (20% Additional tax on VAT as irrecoverable tax)		

**Note:**

- As per details provided by IOCL/HPCL
- For Petrol & Diesel, VAT/Sales Tax at applicable rates is also levied on Dealer's commission in Arunachal Pradesh, Delhi, Gujarat, Dadra & Nagar Haveli and Daman & Diu, Punjab, Haryana, Madhya Pradesh, Rajasthan, Chandigarh, Puducherry, Andaman & Nikobar, Meghalaya

**Table 8.18 : Contribution of petroleum sector to exchequer**

							(₹/ Crore)
Particulars	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)	
<b>1. Contribution to Central exchequer</b>							
<b>A.</b>	<b>Tax/ duties on crude oil &amp; petroleum products</b>						
	Cess on crude oil	17741	14789	10676	19214	7062	10213
	Royalty on crude oil / natural gas	6062	5602	3590	5639	2570	4886
	Customs duty	16035	22927	13514	11423	3263	6426
	NCCD on Crude Oil	1180	1130	1016	1121	514	584
	Excise duty	214369	223057	372970	363305	170894	134025
	Service tax	340	17	0	0	0	0
	IGST	16479	13099	11594	19726	8703	11518
	CGST	7437	6831	6158	10843	4801	6801
	Others	204	88	365	338	314	19
	<b>Sub total (A)</b>	<b>279847</b>	<b>287540</b>	<b>419884</b>	<b>431609</b>	<b>198121</b>	<b>174471</b>
<b>B.</b>	<b>Dividend to Government/ income tax etc.</b>						
	Corporate/ income tax	38561	23134	21909	29219	11910	11932
	Dividend income to Central Government	15525	12270	10393	22612	2133	5069
	Dividend distribution tax	6415	5462	0	0	0	0
	Profit petroleum on exploration of oil/ gas*	7694	5909	2883	8862	4630	5584
	<b>Sub total (B)</b>	<b>68194</b>	<b>46775</b>	<b>35185</b>	<b>60694</b>	<b>18673</b>	<b>22584</b>
	<b>Total contribution to Central exchequer (A+B)</b>	<b>348041</b>	<b>334315</b>	<b>455069</b>	<b>492303</b>	<b>216794</b>	<b>197055</b>
<b>2. Contribution to State exchequer</b>							
<b>C.</b>	<b>Tax/ duties on crude oil &amp; petroleum products</b>						
	Royalty on crude oil / natural gas	13371	11882	7179	13526	6341	10512
	Sales tax/ VAT	201265	200493	202937	256248	121341	142092
	SGST/UTGST	7961	7345	6121	11017	4850	6892
	Octroi/ duties (incl. electricity duty)	685	716	706	827	414	409
	Entry tax / others	4114	405	329	354	169	206
	<b>Sub total (C)</b>	<b>227396</b>	<b>220841</b>	<b>217271</b>	<b>281972</b>	<b>133115</b>	<b>160112</b>
<b>D.</b>	<b>Dividend to Government/ direct tax etc.</b>						
	Dividend income to State Government	195	215	379	151	14	130
	<b>Sub total (D)</b>	<b>195</b>	<b>215</b>	<b>379</b>	<b>151</b>	<b>14</b>	<b>130</b>
	<b>Total contribution to State exchequer (C+D)</b>	<b>227591</b>	<b>221056</b>	<b>217650</b>	<b>282122</b>	<b>133130</b>	<b>160242</b>
	<b>Total contribution of petroleum sector to exchequer (1+2)</b>	<b>575632</b>	<b>555370</b>	<b>672719</b>	<b>774425</b>	<b>349923</b>	<b>357296</b>

\* as provided by MOP&NG. (P)- Provisional

Source: Based on data provided by 15 oil & gas companies

Note: Totals may not tally due to round off

**Table 8.19 : State/UT wise collection of sales tax/ VAT by petroleum sector**

(₹/ Crore)							
Sl. no.	State/Union territory	Sales tax/VAT					
		2018-19	2019-20	2020-21	2021-22 (P)	Apr-Sep 2021	Apr-Sep 2022 (P)
1	Andaman & Nicobar Islands	92	94	74	80	45	31
2	Andhra Pradesh	10784	10168	11014	14724	7216	8694
3	Arunachal Pradesh	49	26	104	136	69	74
4	Assam	3879	3641	3747	3901	1908	2428
5	Bihar	6584	6238	5854	6867	3131	4654
6	Chandigarh	62	60	60	87	45	52
7	Chhattisgarh	3986	3877	4107	5178	2183	2849
8 & 9	Dadra and Nagar Haveli and Daman & Diu	2	2	1	2	1	0
10	Delhi	4379	3833	2653	3659	1628	2194
11	Goa	694	754	682	994	459	625
12	Gujarat	16229	15337	15141	20697	9927	12046
13	Haryana	8286	7648	7923	10067	5218	5213
14	Himachal Pradesh	364	440	882	1313	659	606
15	Jammu & Kashmir	1449	1459	1444	1859	1049	809
16	Jharkhand	2796	3296	3619	4392	2174	2780
17	Karnataka	14417	15381	15476	18310	9413	9140
18	Kerala	7995	8074	6924	9265	3363	5137
19	Ladakh		14	49	81	45	39
20	Lakshadweep	0	0	0	0	0	0
21	Madhya Pradesh	9485	10720	11908	14157	6474	7309
22	Maharashtra	27191	26791	25430	34002	15993	20335
23	Manipur	181	192	265	319	158	167
24	Meghalaya	0	0	0	0	0	0
25	Mizoram	88	91	84	120	68	42
26	Nagaland	97	116	148	180	94	84
27	Odisha	5660	5495	6224	7656	3426	4067
28	Puducherry	8	5	10	11	6	5
29	Punjab	6576	5548	6291	7890	4224	3506
30	Rajasthan	12714	13319	15119	17401	8554	9069
31	Sikkim	134	129	111	155	79	89
32	Tamil Nadu	18143	18175	17063	20586	10048	12182
33	Telangana	10037	10045	8691	13171	6386	7634
34	Tripura	277	384	445	474	202	254
35	Uttar Pradesh	19168	20112	21956	26333	11914	13275
36	Uttarakhand	1595	1495	1524	1847	902	1096
37	West Bengal	7866	7534	7916	10335	4277	5606
<b>TOTAL</b>		<b>201265</b>	<b>200493</b>	<b>202937</b>	<b>256248</b>	<b>121341</b>	<b>142092</b>

(P)- Provisional

Source: Based on data provided by 15 oil & gas companies

Note: As the amounts have been rounded off to the nearest crore, hence some amounts are shown as zero. Totals may not tally due to round off

**Table 8.20 : State/UT wise collection of SGST/UTGST by petroleum sector**

(₹/ Crore)							
Sl. no.	State/Union territory/Others	2018-19	2019-20	2020-21	2021-22 (P)	Apr-Sep 2021	Apr-Sep 2022 (P)
1	Andaman & Nicobar Islands	0	0	0	1	0	0
2	Andhra Pradesh	257	156	112	204	75	143
3	Arunachal Pradesh	6	0	0	0	0	0
4	Assam	559	475	332	414	208	222
5	Bihar	159	145	122	147	87	94
6	Chandigarh	1	1	1	1	1	0
7	Chhattisgarh	18	9	14	26	16	11
8 & 9	Dadra and Nagar Haveli and Daman & Diu	12	20	20	15	3	34
10	Delhi	52	51	37	54	23	26
11	Goa	3	9	11	15	9	5
12	Gujarat	2060	1801	1566	3180	1388	2039
13	Haryana	659	685	529	1064	471	698
14	Himachal Pradesh	3	4	6	8	4	7
15	Jammu & Kashmir	20	17	40	35	20	10
16	Jharkhand	13	16	12	10	5	7
17	Karnataka	356	269	260	461	179	304
18	Kerala	146	171	136	255	91	184
19	Ladakh		1	1	1	0	5
20	Lakshadweep	0	0	0	1	1	0
21	Madhya Pradesh	87	98	68	117	50	78
22	Maharashtra	1272	1126	932	1822	766	1030
23	Manipur	1	1	2	2	1	1
24	Meghalaya	1	0	0	0	0	0
25	Mizoram	1	1	0	0	0	0
26	Nagaland	1	1	0	1	0	0
27	Odisha	93	192	195	421	177	300
28	Puducherry	1	1	1	1	1	2
29	Punjab	116	128	43	346	162	96
30	Rajasthan	205	176	145	196	90	146
31	Sikkim	2	0	0	0	0	0
32	Tamil Nadu	642	562	439	640	308	451
33	Telangana	19	21	22	45	21	15
34	Tripura	20	17	38	17	8	11
35	Uttar Pradesh	616	619	603	827	366	501
36	Uttarakhand	6	7	8	7	4	4
37	West Bengal	545	553	418	674	313	462
<b>Others</b>							
1	Other territory (Offshore areas of India beyond 12 Nautical Miles)	11	11	7	9	5	4
<b>TOTAL</b>		<b>7961</b>	<b>7345</b>	<b>6121</b>	<b>11017</b>	<b>4850</b>	<b>6892</b>

(P)- Provisional

Source: Based on data provided by 15 oil & gas companies

Note: As the amounts have been rounded off to the nearest crore, hence some amounts are shown as zero. Totals may not tally due to round off

**Table 8.21: Profit After Tax (PAT) of oil companies**

(₹/ Crore)						
Sl. no.	2018-19	2019-20	2020-21	2021-22	Apr-Sep 2021	Apr-Sep 2022 (P)
<b>PSU upstream/midstream companies</b>						
ONGC	26765	13464	11246	40306	22682	28032
OIL	2590	2584	1742	3887	1012	3276
GAIL	6026	6621	4890	10364	4393	4452
<b>Total</b>	<b>35380</b>	<b>22668</b>	<b>17878</b>	<b>54557</b>	<b>28088</b>	<b>35760</b>
<b>PSU downstream Oil Marketing Companies (OMCs)</b>						
IOCL	16894	1313	21836	24184	12301	-2265
BPCL	7132	2683	19042	8789	4196	-6567
HPCL	6029	2637	10664	6383	3719	-12369
<b>Total</b>	<b>30055</b>	<b>6634</b>	<b>51542</b>	<b>39355</b>	<b>20216</b>	<b>-21201</b>
<b>PSU stand alone refineries</b>						
MRPL	332	-2740	-240	2955	-329	918
CPCL	-213	-2078	238	1342	119	2387
NRL	1968	1381	3036	3562	1635	2134
<b>Total</b>	<b>2087</b>	<b>-3437</b>	<b>3033</b>	<b>7859</b>	<b>1426</b>	<b>5439</b>
<b>PSU consultancy company</b>						
EIL	370	430	260	344	150	136
<b>Total</b>	<b>370</b>	<b>430</b>	<b>260</b>	<b>344</b>	<b>150</b>	<b>136</b>
<b>Private sector companies</b>						
RIL	35163	30903	31944	39084	17823	22011
NEL	344	2518	467	1030	-230	5357
<b>Total</b>	<b>35507</b>	<b>33421</b>	<b>32411</b>	<b>40114</b>	<b>17593</b>	<b>27368</b>

**Source:** Published results/ information provided by oil companies.

**Note:** Financials are on standalone basis

**Table 8.22 : Financial details of oil companies**

2021-22										
Particulars	IOCL	BPCL	HPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL	RIL
(₹ Crore)										
Sales turnover	724602	432258	372642	109962	14237	91426	86036	60402	23546	466425
Profit Before Interest and Tax (PBIT)	36562	13774	9176	43400	5770	13765	3916	2244	4852	55909
Interest	4829	1860	973	2360	783	174	1207	412	4	9123
Tax	7549	3125	1821	734	1099	3226	(247)	489	1286	7702
Profit After Tax (PAT)	24184	8789	6383	40306	3887	10364	2955	1342	3562	39084
Net worth	131286	49670	38677	237148	26979	55587	7196	2790	736	471527
Borrowings (loan fund)	110799	24123	43193	6397	11636	6353	21085	9223	1000	194563
<b>Ratios</b>										
PAT as % of turnover (net sales)	3.34%	2.03%	1.71%	36.65%	27.30%	11.34%	3.43%	2.22%	15.13%	8.38%
Debt (loan fund) to equity ratio	0.84	0.49	1.12	0.03	0.43	0.11	2.93	3.31	1.36	0.41
Earnings Per Share (EPS)	26.34	41.31	44.94	32.04	35.85	23.34	16.86	90.15	48.42	59.24

Apr-Sep 2021										
Particulars	IOCL	BPCL	HPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL	RIL
(₹ Crore)										
Sales turnover	323239	190783	164619	47218	6187	38829	32825	25857	10587	203553
Profit Before Interest and Tax (PBIT)	18412	6473	5167	19101	1760	5825	(145)	367	2201	25980
Interest	2243	881	409	1198	409	89	377	203	1	4838
Tax	3867	1396	1040	(4780)	339	1343	(194)	44	565	3319
Profit After Tax (PAT)	12301	4196	3719	22682	1012	4393	(329)	119	1635	17823
Net worth	126548	47337	36097	229352	25363	52831	7201	1544	736	487971
Borrowings (loan fund)	84002	21001	37724	7897	12991	5849	16580	11022	17	216623
<b>Ratios</b>										
PAT as % of turnover (net sales)	3.81%	2.20%	2.26%	48.04%	16.36%	11.31%	-1.00%	0.46%	15.45%	8.76%
Debt (loan fund) to equity ratio	0.66	0.44	1.05	0.03	0.51	0.11	2.30	7.14	0.02	0.44
Earnings Per Share (EPS)	13.40	19.74	26.15	18.03	9.34	9.89	(1.88)	8.00	22.23	27.37

Apr-Sep 2022										
Particulars	IOCL	BPCL	HPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL	RIL
(₹ Crore)										
Sales turnover	467164	266059	234885	80310	11355	75976	64357	50278	16307	304026
Profit Before Interest and Tax (PBIT)	392	(6602)	(15548)	38005	4631	5887	2195	3372	2889	34996
Interest	3166	1426	928	1302	416	116	618	138	6	5532
Tax	(509)	(1460)	(4106)	8671	940	1318	659	848	749	7453
Profit After Tax (PAT)	(2265)	(6567)	(12369)	28032	3276	4452	918	2387	2134	22011
Net worth	121168	43755	24135	258056	31643	56761	8116	5147	736	481452
Borrowings (loan fund)	140322	48237	68546	9822	11587	11141	18212	7486	1794	211963
<b>Ratios</b>										
PAT as % of turnover (net sales)	-0.48%	-2.47%	-5.27%	34.90%	28.85%	5.86%	1.43%	4.75%	13.09%	7.24%
Debt (loan fund) to equity ratio	1.16	1.10	2.84	0.04	0.37	0.20	2.24	1.45	2.44	0.44
Earnings Per Share (EPS)	(1.64)	(30.84)	(87.20)	22.28	30.21	6.73	5.24	160.27	29.01	32.53

**Table 8.23 : Total subsidy on Petroleum Products & Natural Gas**

(₹ Crore)					
Particulars	2017-18	2018-19	2019-20	2020-21	2021-22 (P)
PDS kerosene	4672	5950	1833	0	0
Domestic LPG	0	0	0	0	0
<b>Total under-recoveries (A)</b>	<b>4672</b>	<b>5950</b>	<b>1833</b>	<b>0</b>	<b>0</b>
Direct Benefit Transfer for LPG (DBTL) subsidy	20880	31447	22635	3559	0
Project Management Expenditure (PME)*	25	92	91	99	242
<b>Total DBTL related subsidies (B)</b>	<b>20905</b>	<b>31539</b>	<b>22726</b>	<b>3658</b>	<b>242</b>
Pradhan Mantri Ujjwala Yojana (PMUY) claims	2496	5636	1403	(34)	1569
Project Management Expenditure (PME) & Information Education and Communication (IEC) expenditure under PMUY*	63	34	43	110	0
<b>Total PMUY related subsidy (C)</b>	<b>2559</b>	<b>5670</b>	<b>1446</b>	<b>76</b>	<b>1569</b>
<b>Direct Benefit Transfer of Kerosene (DBTK) subsidy (D)</b>	<b>113</b>	<b>98</b>	<b>42</b>	<b>0</b>	<b>0</b>
<b>PMGKY (E)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8162</b>	<b>0</b>
Natural gas subsidy for North East	435	557	574	336	405
Scheme for Promotion of Flagging of Merchant Ships in India	0	0	0	0	22
<b>Other subsidies (F)</b>	<b>435</b>	<b>557</b>	<b>574</b>	<b>336</b>	<b>427</b>
<b>Total subsidy/ under-recovery on petroleum products &amp; natural gas (A+B+C+D+E+F)</b>	<b>28684</b>	<b>43814</b>	<b>26621</b>	<b>12231</b>	<b>2237</b>

(P)- Provisional

\*on payment basis.

**Note:** DBTK subsidy excludes cash incentive/assistance for establishment of institutional mechanism for direct transfer of subsidy paid to States/UTs. DBTK subsidy for 2019-20 is till October 2019.

Advance of Rs. 1568 Crores was sanctioned by the govt. to OMCs under PMUY during Aug 2021 to Nov 2021

**Table 8.24 : Quantity and value of Indian crude oil imports**

Year	Quantity (MMT)	Quantity (Million Bbl)	\$ Million	Rs. Crore	\$/bbl (approx)
2018-19	226.5	1660.2	111,915	7,83,183	67.4
2019-20	227.0	1663.9	101,376	7,17,001	60.9
2020-21	196.5	1440.3	62,248	4,59,779	43.2
2021-22	212.4	1556.9	120,675	9,01,262	77.5
April-Sept 2021	101.4	743.5	51,497	3,81,065	69.3
April-Sept 2022(P)	115.7	848.4	89,266	7,00,225	105.2

(P) Provisional

Conversion factor taken 1 MT = 7.33 bbl





Analysis • Knowledge • Information

# Chapter-9 Miscellaneous



**Table 9.1 : Average international Calorific Values of different fuels**

A.	Oil products	M Cals/tonne or K Cal/Kg
	NGL *	12135
	Kerosene	10638
	Motor Gasoline	11135
	Fuel Oil	10440
<b>B.</b>	<b>Natural gas production (average) - India</b>	<b>8000-9480 K cal/SCM</b>
<b>C.</b>	<b>India</b>	<b>M Cals/tonne or K Cal/Kg</b>
	Charcoal	6900
	Hard coal	5000
	Firewood	4750
	Lignite-Brown coal	2310

Source: Indian Petroleum & Natural Gas Statistics, MOP&NG

Conversion factor: 1 K Cal = 4.19 K Joules \*NGL: Natural gas Liquids

**Conversion factors**

**Table 9.2 : Weight to volume conversion**

Product	Weight (MT)	Volume (KL)	BBL	To convert volume at 29.5° C to volume at 15° C multiply by
Petrol	1	1.4110	8.88	0.9830
Diesel	1	1.2100	7.61	0.9879
Kerosene	1	1.2850	8.08	0.9864
ATF	1	1.2880	8.10	0.9862
Light Diesel Oil	1	1.1720	7.37	0.9877
Furnace Oil	1	1.0424	6.74	0.9899
Crude Oil	1	1.1700	7.33	

Note: Petrol and Diesel are as per BS-IV norms

**Table 9.3 : Volume conversion**

1 US Bbl.	159 Litres
1 US Gallon	3.78 Litres
1 Kilo Litre (KL)	6.29 Bbl.
1 US Bbl.	42 Gallons
1 MBD (million barrels per day)	50 MMTPA

**Table 9.4 : Contents of LPG & Natural Gas**

Natural Gas	Contains 60-95 % Methane
LPG	Contains Propane (40%) & Butane (60%)

**Table 9.5 : 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	= 4541 SCM per day	Station Heat Rate (SHR);~1720 Kcal/Kwh-NCV (50% Thermal Efficiency); Natural Gas GCV-@10000Kcal/SCM
Power Generation from 1 MMSCMD Gas	= 220 MWH	Station Heat Rate (SHR);~1720 Kcal/Kwh-NCV (50% Thermal Efficiency); Natural Gas GCV-@10000Kcal/SCM

Source : GAIL (India) Ltd.

**Table 9.6 : Major end use of petroleum products**

Product	Major end use
LPG	Domestic and auto fuel. Also for industrial application where technically essential. Now permitted as auto fuel.
Naphtha	Feedstock/fuel for fertiliser units, feedstock for petrochemical sector and fuel for power plants.
MS	Fuel for passenger cars, taxis, two & three wheelers.
ATF	Fuel for aircrafts.
SKO	Fuel for cooking & lighting.
HSD	Fuel for transport sector (railways/road), agriculture (tractors, pumpsets, threshers, etc.) and captive power generation.
LDO	Fuel for agricultural pumpsets, small industrial units, start up fuel for power generation.
FO/LSHS	Secondary fuel for thermal power plants, fuel/feedstock for fertiliser plants, industrial units.
Bitumen	Surfacing of roads.
Lubes	Lubrication for automotive and industrial applications.
Petroleum coke	Fuel grade petcoke is used as fuel for cement kilns and electric power plants. Calcined petcoke is used in manufacturing aluminium, graphite electrode, steel, titanium dioxide and other carbon consuming industries.
Other products (Benzene, Toluene, MTO, LABFS, CBFS, Paraffin wax etc.)	Feedstock for value added products.

### List of Abbreviations

BBL	Barrel	MMT	Million Metric Tonne
BCM	Billion Cubic Meter	MMTPA	Million Metric Tonne Per Annum
BPCL	Bharat Petroleum Corporation Limited	MoA	Ministry of Agriculture
BPRL	Bharat Petro Resources Limited	MoC&I	Ministry of Commerce & Industry
CBM	Coal Bed Methane	MoF	Ministry of Finance
CBR	Cauvery Basin Refinery	MoP&NG	Ministry of Petroleum & Natural Gas
CGD	City Gas Distribution	MoSPI	Ministry of Statistics and Programme Implementation
CNG	Compressed Natural Gas	MRPL	Mangalore Refinery and Petrochemicals Limited
DBTL	Direct Benefit Transfer for LPG	Mtoe	Million tonnes of oil equivalent,
DGCIS	Directorate General of Commercial Intelligence and Statistics	NELP	New Exploration Licensing Policy
DGH	Directorate General of Hydrocarbons	NGLs	Natural Gas Liquids
DSF	Discovered Small Field	NRL	Numaligarh Refinery Limited
EBP	Ethanol Blending Programme	OALP	Open Acreage Licensing Policy
FBIL	Financial Benchmark India Private Limited	OECD	Organisation for Economic Co-operation and Development
GA	Geographical Areas	OIL	Oil India Limited
GAIL	Gas Authority of India Limited	OMCs	Oil Marketing Companies
GREP	Gas Rehabilitation and Expansion Project	ONGC	Oil and Natural Gas Corporation Limited
GRM	Gross Refining Margins	OPEC	Organization of the Petroleum Exporting Countries
GSPL	Gujarat State Petronet Limited	PDS	Public Distribution System
GST	Goods & Service Tax	PMUY	Pradhan Mantri Ujjwala Yojana
HELP	Hydrocarbon Exploration and Licensing Policy	PNG	Piped Natural Gas
HPCL	Hindustan Petroleum Corporation Limited	POL	Petroleum, Oil and Lubricants
IEA	International Energy Agency	PPAC	Petroleum Planning & Analysis Cell
IOCL	Indian Oil Corporation Limited	PSC	Production Sharing Contracts
KL	Kilo Litre	PSU	Public Sector Undertaking
LNG	Liquefied Natural Gas	R/P ratio	Reserves-to-production ratio
LPG	Liquefied Petroleum Gas	RBI	Reserve Bank of India
MBN	MBTU/Bbl/NRGF	SEZ	Special Economic Zone
MBTU	Thousand British Thermal Unit	TCF	Trillion cubic feet
MMBTU	Metric Million British Thermal Unit	Toe	Tonnes of oil equivalent
MMSCMD	Million Standard Cubic Meter Per Day	WPI	Wholesale Price Index









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