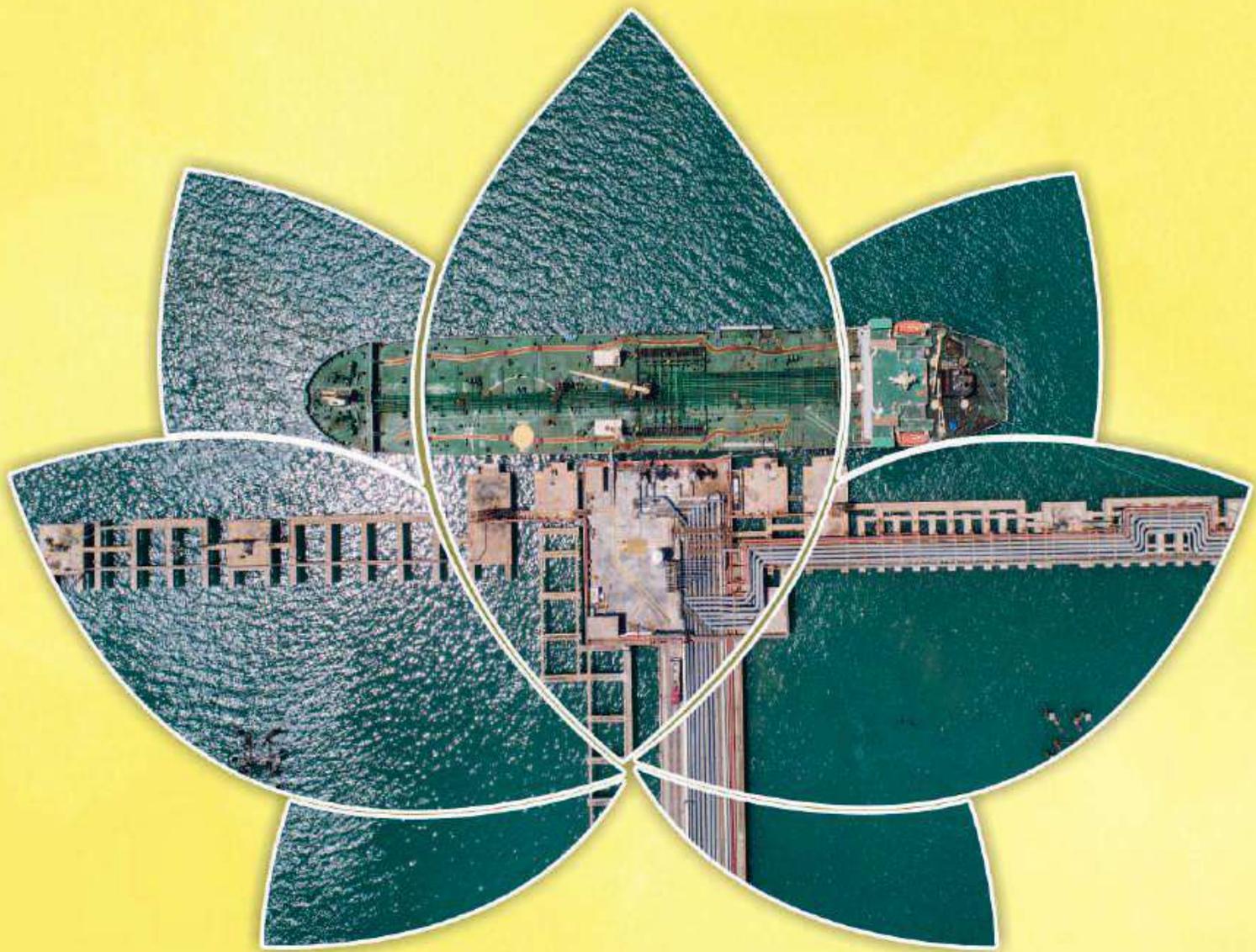




India's Oil & Gas READY RECKONER Oil & Gas Industry Information at a Glance FY 2022-23 [April 2022-March 2023] Petroleum Planning & Analysis Cell (Ministry of Petroleum & Natural Gas, Government of India)

India's Oil & Gas READY RECKONER

Oil & Gas Industry Information at a Glance
FY 2022-23
[April 2022 - March 2023]



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, is pleased to bring out its flagship publication, annual edition of India's Oil & Gas Ready Reckoner - Oil & Gas Industry Information at a Glance for the year 2022-23.

PPAC collects, compiles, analyses, and disseminates data on the Oil and Gas Sector on regular basis through various daily, monthly, biannual and annual reports. The data is collected from Public & Private Sector Oil Companies, Government Agencies and international agencies to make it authentic and accurate.

Annual Ready Reckoner has emerged as a comprehensive databank on Oil & Gas industry of the country. Over the years, the Ready reckoner has expanded its coverage to fill the gap of the data requirements of the Government and other stakeholders. The edition contains the latest information for FY2022-23 (April 2022 – March 2023) and five years historical time series data along with sectoral details and graphical representations covered in nine broad chapters.

The current edition of Ready Reckoner is getting released when India is planning for the G20 summit, which brings together the world's major and most important economies. Its members represent 85% of global GDP, 75% of international trade and two-thirds of the world's population.

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 :

- India leads the G20 with pious motto of 'One earth, One family, One future' in tradition of our ethos 'Vasudhaiva Kutumbakam'.
- Mission LiFE was launched by our Hon'ble Prime Minister on 20th October 2022. Mission LiFE envisions replacing the prevalent 'use-and-dispose' behaviour by nudging individuals to undertake simple acts that can contribute significantly to climate change and create a circular economy. The Mission plans to create and nurture a global network of individuals, namely 'Pro-Planet People' (P3).
- 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. The blending is currently clocking 12% mark in direction of achieving advanced target to sell 20% Ethanol Blended Petrol (EBP).
- Oil and Gas Marketing Companies participating in SATAT have issued 4090 Letters of Intent (LoI) to entrepreneurs for procurement of CBG produced by them. 46 CBG/biogas plants have been commissioned by LoI holders.
- 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 play active role in Energy Transition and have alternate fuel at over 12000 outlets including CNG, CBG, LPG and EV charging.
- Leaving behind pandemic setbacks, the FY2022-23 has seen resurgent POL consumption with 222.3 MMT, which is highest in the history.
- At the end of the year 2022-23, there are 31.4 cr 'domestic LPG' connections including 9.59 cr PMUY Ujjawala connections. Along with over 1 cr PNG, this glorious achievement adds to meeting SDG7 of ensuring access to affordable, reliable, sustainable and modern energy for all. SDG 7 also is a key to many other SDGs like poverty eradication (SDG 1), gender equality (SDG 5), climate action (SDG 13), food security (SDG 2), health (SDG 3), education (SDG 4), sustainable cities (SDG 11), jobs (SDG 8) and transport (SDG 9).
- After completion of 11-A City Gas Distributions bidding round, 295 Geographical Areas covering about 98% of the population and 88% of total geographical area of the Country covered under the CGD network. There are plan in place for balance for balance areas.
- The government approved 'Deregulation of Sale of Domestically Produced Crude Oil', whereby Government has decided to cease allocation of crude oil and condensate w.e.f. 01.10.2022. This will ensure marketing freedom for all Exploration and Production (E&P) operators.
- MoPNG successfully organised first India Energy Week (IEW) at Bengaluru. During IEW, PPAC signed a Statement of Intent (Sol) with IEA to strengthen cooperation in field of data and research in energy sector. The intent will also help in joint studies and capacity building.

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

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 including Energy Institute 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/ dirgen@ppac.gov.in.



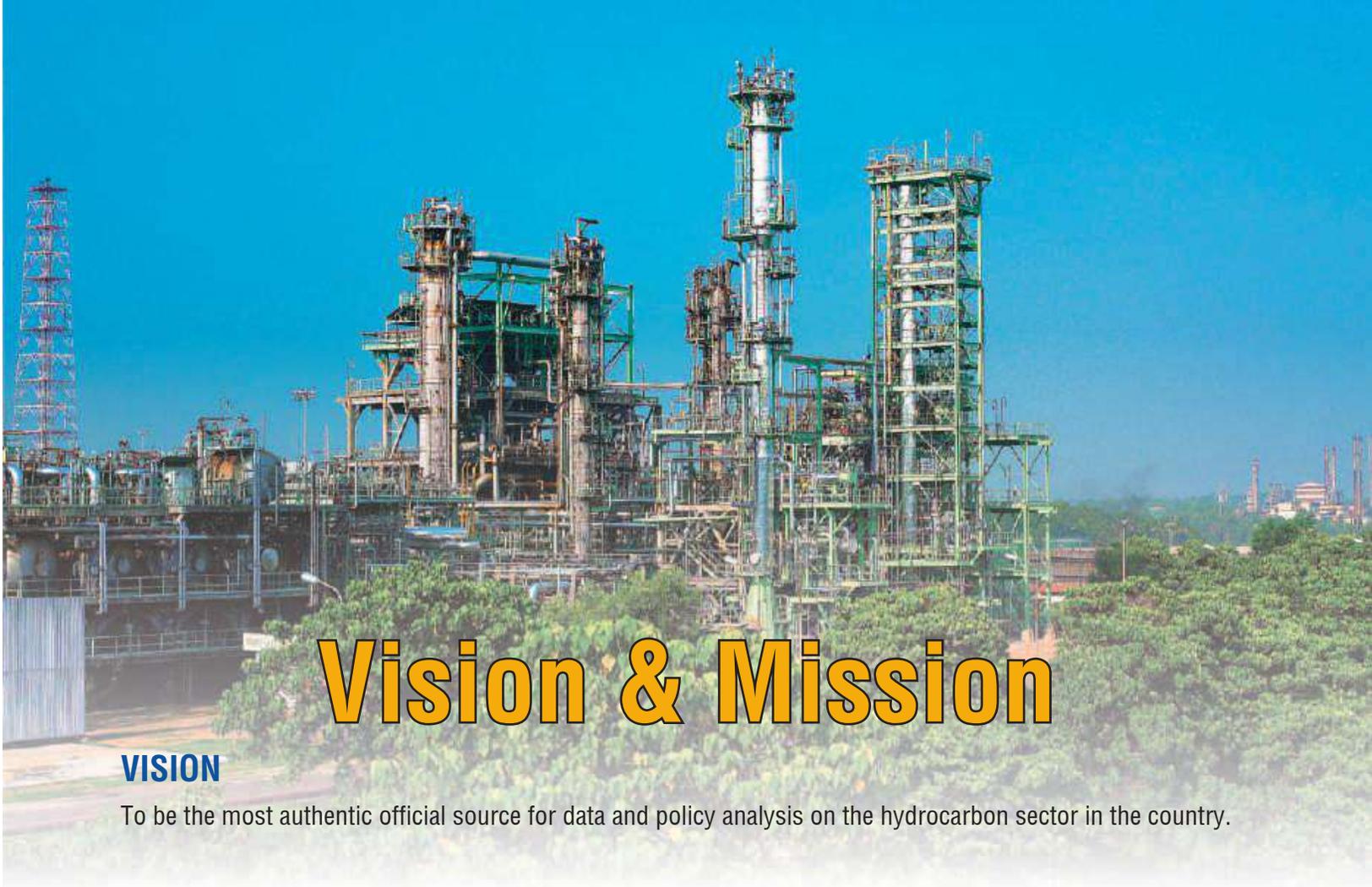
P. Manoj Kumar

Director General

Petroleum Planning & Analysis Cell (PPAC)
(Ministry of Petroleum & Natural Gas)

New Delhi

Date: 11.07.2023



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

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.	Particulars	Source	Unit/ Base	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
1	Projected Total Population as on 1st July of the financial year	"Report of the Technical Group on Population Projections"	('000)	13,38,995	13,53,378	13,67,173	13,79,750	13,92,329
2	GDP At constant (2011-12 Prices)	MoC&I	Growth %	6.5 2nd RE	4.0 1st RE	-6.6 1st RE	9.1 1st RE	7.2 PE
3	Agricultural production (Foodgrains)	MoA	Million tonne	285.2	297.5	310.7	315.7 4th AE	323.6 2nd AE
			Growth %	0.1	4.3	4.5	1.6	2.5
4	Index of Industrial Production (Base: 2011-12)	MoSPI	Growth %	3.8	-0.8	-8.4	11.4	5.5#
5	Imports [^]	MoC&I	\$ Billion	514.1	474.7	394.4	611.9	714.2
6	Exports [^]	MoC&I	\$ Billion	330.1	313.4	291.8	419.7	447.5
7	Trade balance	MoC&I	\$ Billion	-184.0	-161.3	-102.6	-192.2	-266.8
8	Wholesale Price Index (all commodities) (average)	MoC&I	2011-12 = 100	119.8	121.8	123.4	139.4	152.5
All India Consumer Price Index (average):								
9	i) Industrial workers	Labour Bureau, Govt. of India	2001=100 2016=100 (wef Sep.2020)	299.9	322.5	119.0	127.7	121.9
	ii) Agricultural labourers		1986-87=100	907.3	979.6	1033.7	1108.0	1108.0
	iii) Rural labourers		1986-87=100	915.1	986.0	1039.9	1119.0	1119.0
10	Foreign exchange reserves-Total	RBI	\$ Billion	411.9	475.6	579.3	606.5	578.4
11	Outstanding external liabilities (as of end of financial year)	MoF	₹ Crore	2,69,961	2,99,250	3,88,472	4,29,403	4,69,035 2022-23 (BE)
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	1,47,77,724.43 2022-23 (RE)
13	Centrally Sponsored Schemes & other transfers	MoF	₹ Crore	4,77,967	6,31,969	7,61,408	6,41,686	4,51,901 2022-23 (RE)
14	Gross fiscal deficit	MoF	%	3.4	4.6	9.5	6.7	6.4 2022-23 (RE)

Note : \$: Population figures have been taken from table no.11 of 'Report of the Technical Group on Population Projections'; #Population projection by RGI is taken as on 1st July for the year. IIP is for the month of *Feb and #April-Feb; @2020-21-as on March 26, 2021, 2021-22 - as on March 26, 2022, Mar 2022 as on Mar 25, 2022 and Mar 2023-as on Mar 31, 2023; ^Imports & Exports are for Merchandise for the month of March 23; Average 'Consumer Price Index' is the arithmetic average of monthly CPI for April to March;

(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; AE-Advanced Estimates; RE-Revised Estimates; QE-Quick Estimates.



Petroleum

Sl. no.	Particulars	Source	Unit/ Base	2018-19	2019-20	2020-21	2021-22(P)	2022-23(P)
1	Crude oil production in India	ONGC/OIL/DGH	MMT	34.2	32.2	30.5	29.7	29.2
2	Consumption of petroleum products in India	OMCs/PPAC	MMT	213.2	214.1	194.3	201.7	223.0
3	Petroleum products production in India	Oil Cos	MMT	262.4	262.9	233.5	254.3	266.5
4	Imports & exports							
	Crude oil imports	Oil Cos	\$ Billion	111.9	101.4	62.2	120.7	157.6
	Petroleum products imports	Oil Cos & DGCIS	\$ Billion	16.3	17.7	14.8	23.7	26.8
	“Total petroleum imports (crude oil + petroleum products)”	Oil Cos & DGCIS	\$ Billion	128.3	119.1	77.0	144.3	184.4
	Petroleum products exports	Oil Cos	\$ Billion	38.2	35.8	21.4	44.4	57.3
5	Gross petroleum imports as % of India’s gross imports in value terms	MOC&I/PPAC	%	24.9	25.1	19.5	23.6	25.8
6	Gross petroleum exports as % of India’s gross exports in value terms*	MOC&I/PPAC	%	11.6	11.4	7.3	10.6	12.8
7	Import dependency (based on consumption)	PPAC	%	83.8	85.0	84.4	85.5	87.3

Note : (P): Provisional,

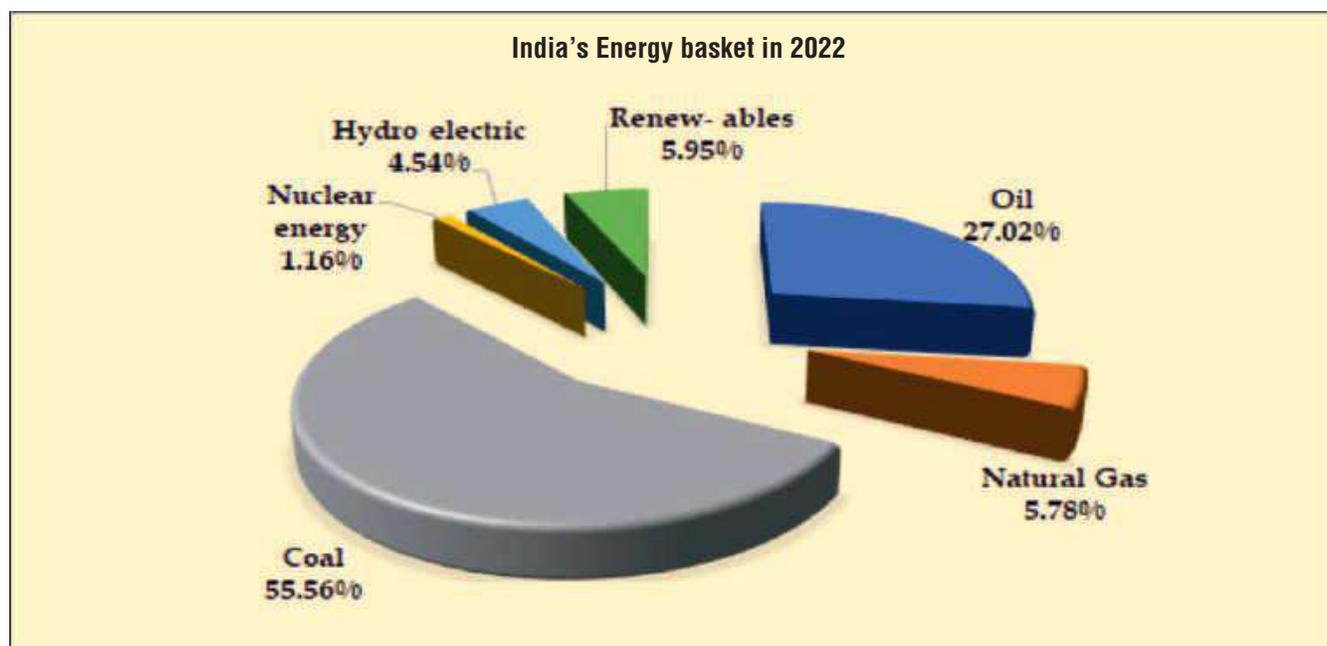
* Petroleum export data are based on Oil Refining Companies' reported data.

Natural gas

Sl. no.	Particulars	Source	Unit/ Base	2018-19	2019-20	2020-21	2021-22(P)	2022-23(P)
1	Gross Production	ONGC/OIL/DGH	MMSCM	32,873	31,184	28,672	34,024	34,450
2	Net Production (net of flare and loss)	ONGC/OIL/DGH	MMSCM	32,056	30,257	27,784	33,131	33,664
3	LNG Import	LNG importing Cos, DGCIS	MMSCM	28,740	33,887	33,198	31,028	26,304
4	Total Consumption including internal use (Net Production+ LNG import)		MMSCM	60,796	64,144	60,982	64,159	59,969
5	Import dependency (based on consumption) {(sl no.3/sl no.4)*100}	PPAC	%	47.3	52.8	54.4	48.4	43.9

Note : MMSCMD : Million Standard Cubic Meter Per Day

(P) - Provisional



Source: Energy Institute Statistical Review of World Energy, 2023.

Table 1.2 : Global primery energy consumption, 2022

Sl. no.	Country	Unit	Oil	Natural Gas	Coal	Nuclear Energy	Hydro Electricity	Renewables	Total Energy
1	China	Mtoe	653.36	322.91	2110.02	89.74	291.89	317.42	3785.35
	Percentage share	%	17.26	8.53	55.74	2.37	7.71	8.39	100%
	Per capita consumption	Toe	0.46	0.23	1.49	0.06	0.21	0.22	2.68
2	USA	Mtoe	836.61	757.04	235.56	174.46	58.00	201.19	2262.86
	Percentage share	%	36.97	33.45	10.41	7.71	2.56	8.89	100%
	Per capita consumption	Toe	2.51	2.27	0.71	0.52	0.17	0.60	6.79
3	India	Mtoe	233.18	49.88	479.47	10.02	39.14	51.31	863.01
	Percentage share	%	27.02	5.78	55.56	1.16	4.54	5.95	100%
	Per capita consumption	Toe	0.16	0.04	0.34	0.01	0.03	0.04	0.62
4	Russian Federation	Mtoe	163.57	350.60	76.13	47.97	44.39	1.91	684.58
	Percentage share	%	23.89	51.21	11.12	7.01	6.48	0.28	100%
	Per capita consumption	Toe	1.14	2.44	0.53	0.33	0.31	0.01	4.77
5	Japan	Mtoe	153.36	86.40	117.42	11.22	16.71	36.52	421.62
	Percentage share	%	36.37	20.49	27.85	2.66	3.96	8.66	100%
	Per capita consumption	Toe	1.23	0.69	0.94	0.09	0.13	0.29	3.37
6	Canada	Mtoe	99.07	104.53	9.31	18.62	89.26	14.08	334.87
	Percentage share	%	29.59	31.22	2.78	5.56	26.66	4.20	100%
	Per capita consumption	Toe	2.54	2.69	0.24	0.48	2.29	0.36	8.60
7	Germany	Mtoe	98.84	66.35	55.61	7.40	3.82	58.47	290.49
	Percentage share	%	34.03	22.84	19.14	2.55	1.31	20.13	100%
	Per capita consumption	Toe	1.18	0.79	0.66	0.09	0.05	0.70	3.45
8	Brazil	Mtoe	116.24	27.45	14.08	3.10	95.70	60.38	316.96
	Percentage share	%	36.67	8.66	4.44	0.98	30.19	19.05	100%
	Per capita consumption	Toe	2.25	0.53	0.27	0.06	1.85	1.17	6.14
9	Iran	Mtoe	85.61	196.66	1.91	1.43	1.67	0.48	287.76
	Percentage share	%	29.75	68.34	0.66	0.50	0.58	0.17	100%
	Per capita consumption	Toe	0.40	0.91	0.01	0.01	0.01	0.00	1.34
10	South Korea	Mtoe	126.91	53.22	68.50	37.95	0.72	12.41	299.71
	Percentage share	%	42.35	17.76	22.85	12.66	0.24	4.14	100%
	Per capita consumption	Toe	1.43	0.60	0.77	0.43	0.01	0.14	3.38
11	Saudi Arabia	Mtoe	165.89	103.34	0.00	0.00	0.00	0.24	269.47
	Percentage share	%	61.56	38.35	0.00	-	-	0.09	100%
	Per capita consumption	Toe	4.56	2.84	0.00	-	-	0.01	7.40
12	France	Mtoe	67.52	32.94	5.01	63.25	10.02	19.33	198.07
	Percentage share	%	34.09	16.63	2.53	31.93	5.06	9.76	100%
	Per capita consumption	Toe	0.99	0.48	0.07	0.93	0.15	0.28	2.92
13	Indonesia	Mtoe	71.00	31.74	104.53	0.00	6.21	17.66	231.14
	Percentage share	%	30.72	13.73	45.23	-	2.68	7.64	100%
	Per capita consumption	Toe	1.06	0.47	1.56	-	0.09	0.26	3.45
14	United Kingdom	Mtoe	61.95	61.81	5.01	10.26	1.19	32.46	172.69
	Percentage share	%	35.87	35.79	2.90	5.94	0.69	18.80	100%
	Per capita consumption	Toe	0.92	0.92	0.07	0.15	0.02	0.48	2.57
15	Mexico	Mtoe	95.59	83.05	5.97	2.39	8.11	10.74	205.85
	Percentage share	%	46.44	40.35	2.90	1.16	3.94	5.22	100%
	Per capita consumption	Toe	0.35	0.30	0.02	0.01	0.03	0.04	0.75
	Sub total	Mtoe	3028.72	2327.92	3288.54	477.80	666.83	834.61	10624.43
	Others	Mtoe	1395.64	1058.47	565.16	98.09	304.03	243.68	86.80
	Total World	Mtoe	4424.36	3386.40	3853.70	575.89	970.86	1078.28	10537.05
	Percentage share	%	40.56	32.92	36.26	5.73	9.12	9.04	100%
	Per capita consumption	Toe	0.56	0.43	0.48	0.07	0.12	0.14	1.36

Source: Energy Institute Statistical Review of World Energy, 2023.

Note: For calculation of per capita consumption, population figure of India have been taken from table no.11 of 'Report of the Technical Group on Population Projections' and for all other countries & the world from World Bank International Data Base for 2022

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, 2022)

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

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 monetize the unmonetized/ relinquished discoveries of Nomination and PSC regimes.

After the success of DSF I (2016) & II (2018), MoPNG closed round for DSF III for 32 contract areas in 31st May 2022. In DSF round III, a total of 32 blocks were offered. Out of this 32 Blocks, 1 Block is in Ultra Deep-Water, 19 Blocks are in Shallow Water and 11 Blocks are in Onland and 1 block has been relinquished.

Further to the above, MoPNG has introduced OLAP (Open Acreage Licensing Policy) under HELP policy in 2016.

After the 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 closed on 31st December 2022. It is to be noted in FY 2021 – 22, OALP VI & VII was awarded for 21 & 8 Blocks respectively.

The Government now plans for OLAP bid round IX for 26 Blocks spread over 9 Sedimentary Basins, covering an area of 2,23,031.4 Sq. Km. Out of 26 Blocks, 15 Blocks are in Ultra Deep-Water, 8 Blocks are in Shallow Water, 3 Blocks are in Onland Spread over Category-I (11 Blocks) and Category-II (13 Blocks) and Category-III (2 Blocks) Basins.

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 2022 – 23 (P) was 29.2 MMT, with share of ONGC was 66.8 %, share of OIL was 10.8 % and PSC was 22.4 %.

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
16	Brazil	1.7	11.9	10.8
15	Algeria	1.5	12.2	25.0
18	Angola	1.1	7.8	16.1
17	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
22	India	0.6	4.5	16.1
23	Vietnam	0.6	4.4	58.1
24	Other Africa	0.5	3.8	33.2
26	South Sudan	0.5	3.5	56.4
27	Egypt	0.4	3.1	14.0
25	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
	Sub total	240.5	1703.3	
	Others	3.9	29.0	
	Total World	244.4	1732.4	53.5
	of which: OECD	38.3	260.0	25.2
	Non-OECD	206.1	1472.4	66.9
	OPEC	171.8	1214.7	108.3
	Non-OPEC	72.6	517.7	24.5
	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: Energy Institute Statistical Review of World Energy, 2023. Latest data available for this table is for 2020.

Source of data - The estimates in this table have been compiled using a combination of primary official sources, third-party data from the OPEC Secretariat, World Oil, Oil & Gas Journal and Chinese reserves based on official data and information in the public domain.

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.

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 the EI'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. 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.

*Less than 0.05%.

Figures are for calendar year

Table 2.2: World top 30 crude oil producing countries, 2022

S.no.	Country	Production*	
		Million tonnes	Million barrels daily
1	US	759.5	17.8
2	Saudi Arabia	573.1	12.1
3	Russian Federation	548.5	11.2
4	Canada	274.0	5.6
5	Iraq	221.3	4.5
6	China	204.7	4.1
7	United Arab Emirates	181.1	4.0
8	Iran	176.5	3.8
9	Brazil	163.1	3.1
10	Kuwait	145.7	3.0
11	Mexico	97.7	1.9
12	Norway	89.0	1.9
13	Kazakhstan	84.1	1.8
14	Qatar	74.1	1.8
15	Nigeria	69.0	1.5
16	Algeria	63.6	1.5
17	Angola	57.8	1.2
18	Oman	51.4	1.1
19	Libya	51.0	1.1
20	Colombia	39.7	0.8
21	Venezuela	37.3	0.7
22	United Kingdom	36.2	0.8
23	Azerbaijan	33.3	0.7
24	India	33.0	0.7
25	Argentina	32.8	0.7
26	Indonesia	31.4	0.6
27	Egypt	29.9	0.6
28	Ecuador	25.8	0.5
29	Malaysia	25.5	0.6
30	Australia	17.5	0.4
	Sub total	4227.6	90.1
	Others	179.6	3.8
	Total World	4407.2	93.8
	of which: OECD	1331.8	29.5
	Non-OECD	3075.4	64.3
	OPEC	1605.3	34.0
	Non-OPEC	2801.9	59.8
	European Union	16.7	0.3

Source: Energy Institute Statistical Review of World Energy, 2023.

* 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.

Figures are for calendar year

Table 2.3: World top 30 crude oil consuming countries, 2022

S.no.	Million tonnes	Consumption*	
		Million tonnes	Million barrels daily
1	US	822.7	19.1
2	China	659.2	14.3
3	India	236.9	5.2
4	Saudi Arabia	166.0	3.9
5	Russian Federation	161.5	3.57
6	Japan	151.8	3.34
7	South Korea	123.7	2.86
8	Brazil	116.0	2.51
9	Canada	98.2	2.29
10	Germany	97.3	2.08
11	Mexico	95.4	2.10
12	Iran	84.0	1.91
13	Indonesia	69.7	1.59
14	France	66.9	1.42
15	Singapore	63.0	1.20
16	Spain	62.0	1.27
17	United Kingdom	61.2	1.32
18	Italy	57.2	1.22
19	Thailand	53.8	1.28
20	United Arab Emirates	50.3	1.13
21	Turkey	49.7	1.04
22	Australia	47.3	1.01
23	Western Africa	40.9	0.91
24	Netherlands	40.7	0.89
25	Taiwan	40.2	0.91
26	Malaysia	39.4	0.89
27	Iraq	37.0	0.77
28	Egypt	34.9	0.75
29	Poland	33.6	0.72
30	Argentina	31.9	0.68
	sub total	3692.4	82.1
	Others	702.5	15.2
	Total World	4394.9	97.3
	of which: OECD	2014.8	45.1
	Non-OECD	2380.1	52.2
	European Union	510.4	10.8

Source: Energy Institute Statistical Review of World Energy, 2023.

* 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.

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.

Figures are for calendar year

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

(Thousand barrels daily)

S.no..	Country	2012	2022	ADDITION	% CHANGE
1	US	17823	18061	238	1.3
2	China	13681	17259	3578	26.2
3	Russian Federation	5767	6821	1054	18.3
4	India	4279	5045	766	17.9
5	South Korea	2878	3363	485	16.9
6	Saudi Arabia	2107	3312	1205	57.2
7	Japan	4254	3164	1090	(25.6)
8	Iran	2042	2670	628	30.8
9	Brazil	2004	2304	300	15.0
10	Germany	2097	2121	24	1.1
11	Canada	2015	1954	(61)	(3.0)
12	Italy	2098	1794	(304)	(14.5)
13	Spain	1546	1591	45	2.9
14	Mexico	1606	1558	(48)	(3.0)
15	Venezuela	1303	1303	0	0.0
16	Singapore	1422	1302	(120)	(8.4)
17	United Kingdom	1526	1251	(275)	(18.0)
18	United Arab Emirates	712	1246	534	75.0
19	Thailand	1230	1244	14	1.1
20	Netherlands	1279	1241	(38)	(3.0)
21	France	1513	1140	(373)	(24.7)
22	Kuwait	936	1118	182	19.4
23	Indonesia	1099	1104	5	0.5
24	Taiwan	1197	1083	(114)	(9.5)
25	Malaysia	606	955	349	57.6
26	Iraq	971	919	(52)	(5.4)
27	Egypt	810	825	15	1.9
28	Turkey	596	822	226	37.9
29	Other Africa	1014	731	(283)	(27.9)
30	Algeria	652	657	5	0.8
	Sub total	81063	87958	6895	8.5
	Others	14358	13944	(414)	(2.9)
	Total World	95421	101902	6481	9.7
	of which: OECD	45376	43416	(1960)	(4.3)
	Non-OECD	50045	58486	8441	16.9
	European Union	13143	12210	(933)	(7.1)

Source: Energy Institute Statistical Review of World Energy, 2023.

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

Figures are for calendar year

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

(Thousand metric tonne)					
State	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
Onshore					
Assam	4309	4093	3902	3991	4166
Arunachal Pradesh	43	56	53	48	47
Andhra Pradesh	296	243	195	202	236
Gujarat	4626	4707	4651	4626	4849
Rajasthan	7667	6653	5891	5885	5074
Tamil Nadu	395	415	410	367	324
West Bengal	0.00	0.00	0.13	0.05	0.01
A. Onshore Total Production	17336	16167	15103	15120	14697
Offshore					
Eastern Offshore	654	557	744	626	550
Western Offshore	15478	14857	14236	13604	13552
Gujarat Offshore	736	589	411	338	379
B. Offshore Total Production	16868	16003	15391	14569	14482
Total Production (A+B)	34203	32170	30494	29688	29179

Note: Source: ONGC, OIL & DGH

(P) Provisional

Table 2.5B : Indigenous crude oil and condensate production

(Million metric tonne)					
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23(P)
PSU companies					
ONGC	19.6	19.2	19.1	18.5	18.4
OIL	3.3	3.1	2.9	3.0	3.2
PSU total	22.9	22.4	22.0	21.5	21.6
PSC total	9.6	8.2	7.1	7.0	6.2
Total crude oil	32.5	30.5	29.1	28.4	27.8
Condensate	1.7	1.6	1.4	1.2	1.4
Total (crude oil + condensate)	34.2	32.2	30.5	29.7	29.2
Total (crude oil + condensate) (crore barrels)	25.1	23.6	22.4	21.8	21.4

Note: Source: ONGC, OIL & DGH

(P) Provisional



Table 2.6 : Self sufficiency in petroleum products

(Million metric tonne)

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23(P)
i) Indigenous crude oil processing	31.7	29.3	28.0	27.0	26.5
a) Products from indigeneous crude	29.6	27.3	26.1	25.2	24.7
b) Products from fractionators	4.9	4.8	4.2	4.1	3.5
ii) Total production from indigenous crude and condensate (a+b)	34.5	32.1	30.3	29.3	28.2
iii) Total domestic consumption	213.2	214.1	194.3	201.7	223.0
Percentage of self sufficiency (ii/iii)	16.2%	15.0%	15.6%	14.5%	12.6%

“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 01.04.2023)

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	11	12	31	0	0	1	1
NELP-IX	2010	34	1	3	15	19	1	3	10	14	0	0	5	5
TOTAL		360	81	59	114	254	79	53	90	222	2	6	24	32

Source: DGH



Table 2.7(B): Status of blocks under OALP round of HELP and DSF Rounds (As on 01.04.2023)

ROUND	LAUNCH YEAR	OFFERED	AWARDED				RELINQUISHED/ PROPOSED FOR RELINQUISHMENT				OPERATIONAL				PEL Awaited			
			DEEP/ ULTRA DEEP WATER	SHALLOW WATER	ONLAND	TOTAL	DEEP/ ULTRA DEEP WATER	SHALLOW WATER	ONLAND	TOTAL	DEEP/ ULTRA DEEP WATER	SHALLOW WATER	ONLAND	TOTAL	DEEP/ ULTRA DEEP WATER	SHALLOW WATER	ONLAND	TOTAL
OALP																		
OALP Round-I	2018	55	1	8	46	55	0	0	4	4	1	8	42	51	0	0	0	0
OALP Round-II	2019	14	1	5	8	14	0	0	0	0	1	5	7	13	0	0	1	1
OALP Round-III	2019	23	1	3	14	18	0	0	3	3	1	3	9	13	0	0	2	2
OALP Round-IV	2019	7	0	0	7	7	0	0	0	0	0	0	7	7	0	0	0	0
OALP Round-V	2020	11	1	2	8	11	0	0	0	0	1	2	8	11	0	0	0	0
OALP Round-VI	2021	21	2	4	15	21	0	0	0	0	2	4	15	21	0	0	0	0
OALP Round-VII	2021	8	1	2	5	8	0	0	0	0	1	2	4	7	0	0	1	1
OALP Total		139	7	24	103	134	0	0	7	7	7	24	92	123	0	0	4	4
DSF																		
DSF Round-I	2016	46	0	7	23	30	0	4	7	11	0	3	12	15	0	0	4	4
DSF Round-II	2018	25	0	9	15	24	0	1	4	5	0	8	7	15	0	0	4	4
DSF Round-III*	2021	32	1	19	11	31	0	1	0	1	0	17	2	19	1	1	9	11
DSF Total		103	1	35	49	85	0	6	11	17	0	28	21	49	1	1	17	19
TOTAL		242	8	59	152	219	0	6	18	24	7	52	113	172	1	1	21	23

Source: DGH

Note: NELP: New Exploration Licensing Policy

HELP: Hydrocarbon Exploration Licensing Policy

OALP: Open Acreage Licensing Policy

DSF: Discovered Small Fields



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

Year	2018-19	2019-20	2020-21	2021-22	2022-23(P)
Total domestic production (MMTOE)	67.1	63.4	59.2	63.7	31.8
Overseas production by Indian Companies (MMTOE)	24.8	24.5	21.9	21.8	19.5
Overseas production as percentage of domestic production	37.0	38.6	37.0	34.3	61.4

Source: OVL, OIL, GAIL, BPRL, IOCL and Prize Petroleum Company Ltd.

(P) Provisional

Table 2.9 : Coal Bed Methane (CBM) Gas development in India as on 01.04.2023

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	17652.00	Sq. KM
Area awarded**	20460.00	Sq. KM
Blocks awarded*	36#	Nos.
Exploration initiated (Area considered if any boreholes were drilled in the awarded block)	10670***	Sq. KM
Production of CBM gas	April 2022- March 2023(P)	673.45
		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 01.04.2023)

Policy	Details				
Policy Guidelines for Exploration & exploitation of Shale gas and oil	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.				
	Under Hydrocarbon Exploration and Licensing Policy (HELP), 2016, all types of hydrocarbon resources, both Conventional and Unconventional including CBM, shale gas/oil, tight gas and gas hydrates were allowed to be explored and exploited.				
	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.				
Exploration Activities					
	Basin	Phase-I Blocks	MWP* Wells	Blocks Taken up for Drilling	Actual Wells Drilled
Oil and Natural Gas Corporation Limited (ONGC): Activities up to 2022-23	Cambay	28	29	16	17
	KG	10	13	6	8
	Cauvery	9	12	1	3
	Assam	3	3	2	2
	Total	50	57	25	30
Oil India Limited (OIL): Activities up to 2022-23	Jaisalmer	1	2	1	1
	Assam	5	6	0	3
	Total	6	8	1	4
Grand Total		56	65	26	34

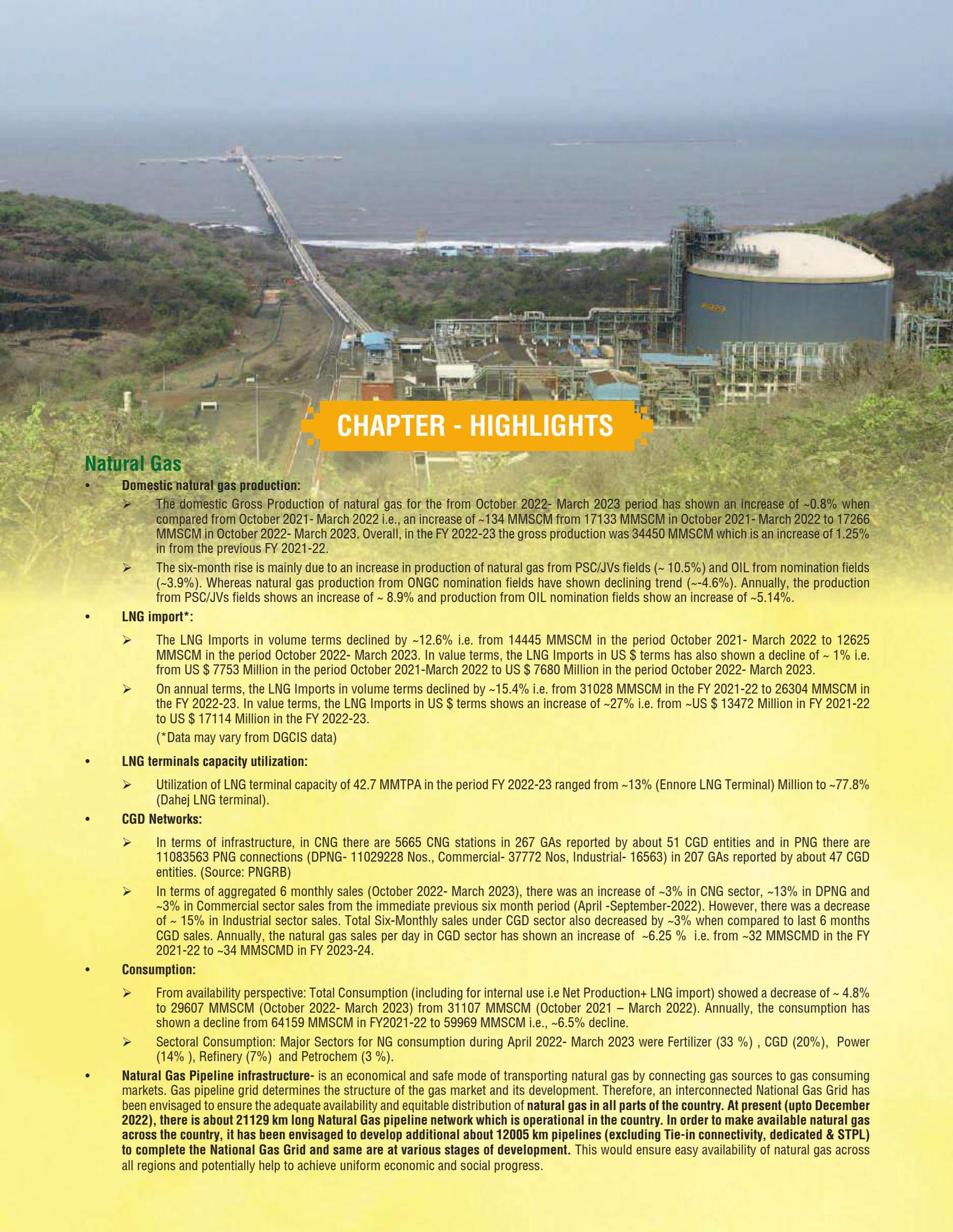
*MWP : Minimum Work Programme

Source: DGH

Chapter-3

Natural Gas





CHAPTER - HIGHLIGHTS

Natural Gas

- **Domestic natural gas production:**
 - The domestic Gross Production of natural gas for the from October 2022- March 2023 period has shown an increase of ~0.8% when compared from October 2021- March 2022 i.e., an increase of ~134 MMSCM from 17133 MMSCM in October 2021- March 2022 to 17266 MMSCM in October 2022- March 2023. Overall, in the FY 2022-23 the gross production was 34450 MMSCM which is an increase of 1.25% in from the previous FY 2021-22.
 - The six-month rise is mainly due to an increase in production of natural gas from PSC/JVs fields (~ 10.5%) and OIL from nomination fields (~3.9%). Whereas natural gas production from ONGC nomination fields have shown declining trend (~-4.6%). Annually, the production from PSC/JVs fields shows an increase of ~ 8.9% and production from OIL nomination fields show an increase of ~5.14%.
- **LNG import*:**
 - The LNG Imports in volume terms declined by ~12.6% i.e. from 14445 MMSCM in the period October 2021- March 2022 to 12625 MMSCM in the period October 2022- March 2023. In value terms, the LNG Imports in US \$ terms has also shown a decline of ~ 1% i.e. from US \$ 7753 Million in the period October 2021-March 2022 to US \$ 7680 Million in the period October 2022- March 2023.
 - On annual terms, the LNG Imports in volume terms declined by ~15.4% i.e. from 31028 MMSCM in the FY 2021-22 to 26304 MMSCM in the FY 2022-23. In value terms, the LNG Imports in US \$ terms shows an increase of ~27% i.e. from ~US \$ 13472 Million in FY 2021-22 to US \$ 17114 Million in the FY 2022-23.
(*Data may vary from DGCIS data)
- **LNG terminals capacity utilization:**
 - Utilization of LNG terminal capacity of 42.7 MMTPA in the period FY 2022-23 ranged from ~13% (Ennore LNG Terminal) Million to ~77.8% (Dahej LNG terminal).
- **CGD Networks:**
 - In terms of infrastructure, in CNG there are 5665 CNG stations in 267 GAs reported by about 51 CGD entities and in PNG there are 11083563 PNG connections (DPNG- 11029228 Nos., Commercial- 37772 Nos, Industrial- 16563) in 207 GAs reported by about 47 CGD entities. (Source: PNGRB)
 - In terms of aggregated 6 monthly sales (October 2022- March 2023), there was an increase of ~3% in CNG sector, ~13% in DPNG and ~3% in Commercial sector sales from the immediate previous six month period (April -September-2022). However, there was a decrease of ~ 15% in Industrial sector sales. Total Six-Monthly sales under CGD sector also decreased by ~3% when compared to last 6 months CGD sales. Annually, the natural gas sales per day in CGD sector has shown an increase of ~6.25 % i.e. from ~32 MMSCMD in the FY 2021-22 to ~34 MMSCMD in FY 2023-24.
- **Consumption:**
 - From availability perspective: Total Consumption (including for internal use i.e Net Production+ LNG import) showed a decrease of ~ 4.8% to 29607 MMSCM (October 2022- March 2023) from 31107 MMSCM (October 2021 – March 2022). Annually, the consumption has shown a decline from 64159 MMSCM in FY2021-22 to 59969 MMSCM i.e., ~6.5% decline.
 - Sectoral Consumption: Major Sectors for NG consumption during April 2022- March 2023 were Fertilizer (33 %) , CGD (20%), 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 December 2022), there is about 21129 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

		(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
22	India	1320
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
	Total World	187977
	of which: OECD	20280
	Non-OECD	167795
	European Union	442

Source: Energy Institute Statistical Review of World Energy, 2023. Latest data available for this table is for 2020.

Figures are for Calendar year

Table 3.2 : World top 30 natural gas producing countries

		(Billion cubic metres)
Sl. no.	Country	2022
Sl. no.	Country	2022
1	US	979
2	Russian Federation	618
3	Iran	259
4	China	222
5	Canada	185
6	Qatar	178
7	Australia	153
8	Norway	123
9	Saudi Arabia	120
10	Algeria	98
11	Malaysia	82
12	Turkmenistan	78
13	Egypt	65
14	United Arab Emirates	58
15	Indonesia	58
16	Uzbekistan	49
17	Oman	42
18	Argentina	42
19	Mexico	40
20	Nigeria	40
21	United Kingdom	38
22	Azerbaijan	34
23	India	30
24	Venezuela	29
25	Pakistan	29
26	Trinidad & Tobago	26
27	Kazakhstan	26
28	Thailand	26
29	Bangladesh	23
	Sub total	3774
	Others	270
	Total World	4044
	of which: OECD	1589
	Non-OECD	2455
	European Union	41

Source: Energy Institute Statistical Review of World Energy, 2023.

Note: As per Energy Statistics India is at 23th position with Natural Gas Production at 29.8 BCM in calendar year 2022 while as per MoPNG/PPAC Net Natural Gas Production of India (after excluding flare & loss and internal consumption) during 2022 has been 33.36 BCM

Figures are for calendar year

Table 3.3 : World top 30 natural gas consuming countries

		(Billion cubic metres)
Sl. no.	Country	2022
1	US	881
2	Russian Federation	408
3	China	376
4	Iran	229
5	Canada	122
6	Saudi Arabia	120
7	Japan	101
8	Mexico	97
9	Germany	77
10	United Kingdom	72
11	United Arab Emirates	70
12	Italy	65
13	South Korea	62
14	Egypt	61
15	India	58
16	Turkey	51
17	Malaysia	49
18	Uzbekistan	48
19	Argentina	46
20	Algeria	44
21	Thailand	44
22	Australia	42
23	France	38
24	Pakistan	38
25	Turkmenistan	38
26	Indonesia	37
27	Qatar	37
28	Spain	33
29	Brazil	32
30	Venezuela	29
	Sub total	3405
	Others	536
	Total World	3942
	of which: OECD	1797
	Non-OECD	2145
	European Union	343

Source: Energy Institute Statistical Review of World Energy, 2023. . Totals may not tally due to rounding off.
 Figures are for Calendar year

Table 3.4 : Natural gas at a glance

(MMSCM)

	2018-19	2019-20	2020-21	2021-22	2022-23(P)
Gross production	32873	31184	28672	34024	34450
Net Production (net of flare and loss)	32056	30257	27784	33131	33664
LNG import	28740	33887	33198	31028	26304
Total Consumption including internal use (Net Production+ LNG import)	60796	64144	60982	64159	59969
Total consumption (in BCM)	60.8	64.1	61.0	64.2	60.0

Table 3.5 : Natural gas production

(MMSCM)

	2018-19	2019-20	2020-21	2021-22	2022-23(P)
ONGC					
A) Gross Production	24675	23746	21872	20629	19969
B) Flared	449	520	458	515	389
C) Internal Use	4629	4697	4432	4239	4073
D) Loss	0	0	0	0	0
D) =A-B-C Net Production for Sale	19597	18529	16982	15875	15507
Oil India Limited					
A) Gross Production	2722	2668	2480	2893	3041
B) Flared	122	155	164	200	231
C) Internal Use	382	377	371	471	473
D) Loss	12	13	14	32	48
D) =A-B-C Net Production for Sale	2207	2123	1930	2189	2289
PSC/JVs fields					
A) Gross Production	5477	4770	4321	10502	11440
B) Flared	153	185	199	98	76
C) Internal Use	1007	978	925	1047	957
D) Loss	81	54	53	47	43
E) =A-B-C-D Net Production for Sale	4235	3552	3143	9310	10365
Grand Total					
A) Gross Production	32873	31184	28672	34024	34450
B) Flared	724	860	822	813	695
C) Internal Use	6017	6052	5729	5756	5504
D) Loss	93	67	67	80	91
E) =A-B-C-D Net Production for Sale	26039	24205	22055	27374	28160

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

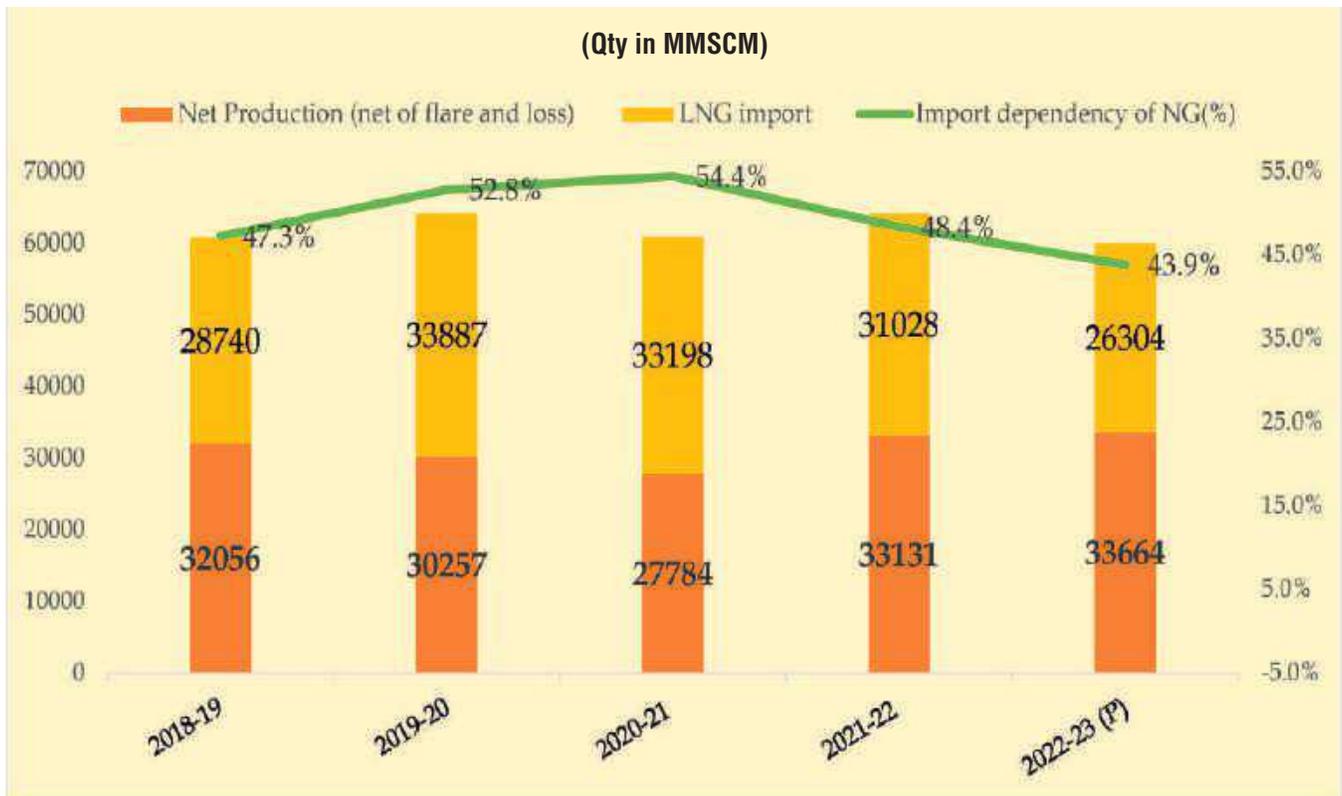
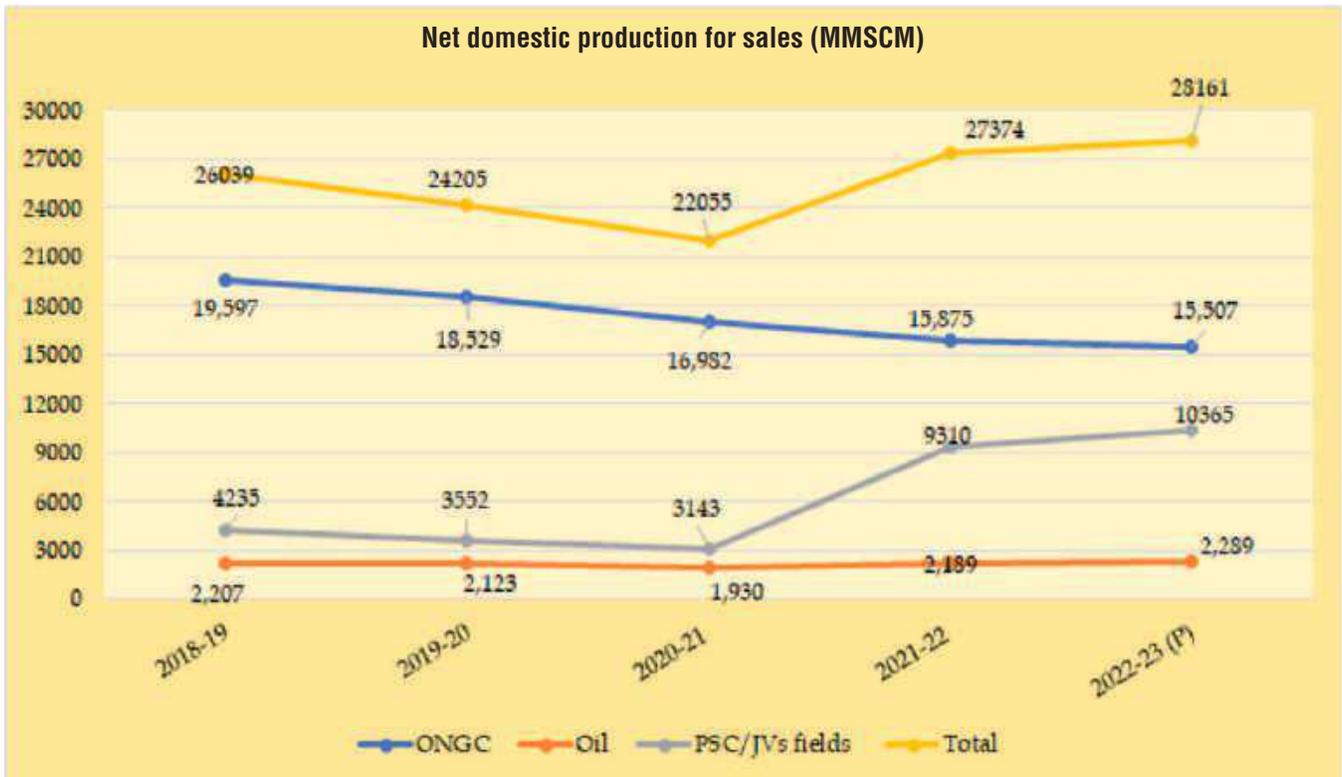


Table 3.5A: State wise Natural Gas Production in MMSCM

State	Onshore/ CBM/ Offshore	FY	Gross Production	Net Production
Andhra Pradesh	A. Onshore	2018-19	1082	1045
		2019-20	912	874
		2020-21	827	783
		2021-22	809	767
		2022-23(P)	710	680
Assam & Arunachal Pradesh		2018-19	3317	3093
		2019-20	3187	2942
		2020-21	3051	2815
		2021-22	3429	3136
		2022-23(P)	3611	3274
Gujarat		2018-19	1402	1349
		2019-20	1342	1287
		2020-21	1138	1059
		2021-22	1017	969
		2022-23(P)	923	882
Rajasthan	2018-19	1483	1378	
	2019-20	1883	1772	
	2020-21	2040	1938	
	2021-22	2619	2541	
	2022-23(P)	2340	2289	
Tamil Nadu	2018-19	1208	1168	
	2019-20	1097	1051	
	2020-21	911	857	
	2021-22	1067	1043	
	2022-23(P)	1109	1078	
Tripura	2018-19	1554	1554	
	2019-20	1473	1472	
	2020-21	1634	1634	
	2021-22	1531	1530	
	2022-23(P)	1675	1675	
Jharkhand (CBM)	B. CBM	2018-19	4	4
		2019-20	5	5
		2020-21	2	2
		2021-22	4	4
		2022-23(P)	10	9
Madhya Pradesh (CBM)		2018-19	357	356
		2019-20	345	344
		2020-21	334	333
		2021-22	389	365
		2022-23(P)	264	263
West Bengal (CBM)		2018-19	350	309
		2019-20	306	277
		2020-21	307	250
		2021-22	290	290
		2022-23(P)	399	387

Table 3.5A Continued

State	Onshore/ CBM/ Offshore	FY	Gross Production	Net Production
Onshore Total	A+B	2018-19	10756	10254
		2019-20	10549	10025
		2020-21	10243	9670
		2021-22	11155	10646
		2022-23(P)	11042	10536
Mumbai High + Eastern Offshore	C	2018-19	19042	18771
		2019-20	18576	18226
		2020-21	17086	16810
		2021-22	15943	15581
		2022-23(P)	15325	15065
Private / JVCs	C	2018-19	3075	3030
		2019-20	2059	2006
		2020-21	1343	1303
		2021-22	6926	6904
		2022-23(P)	8084	8063
Offshore Total	C	2018-19	22117	21802
		2019-20	20635	20232
		2020-21	18429	18113
		2021-22	22869	22485
		2022-23(P)	23409	23128
Grand Total	A+B+C	2018-19	32873	32056
		2019-20	31184	30257
		2020-21	28672	27784
		2021-22	34024	33131
		2022-23(P)	34450	33664

Source: ONGC, OIL & DGH (Pvt/JVs)

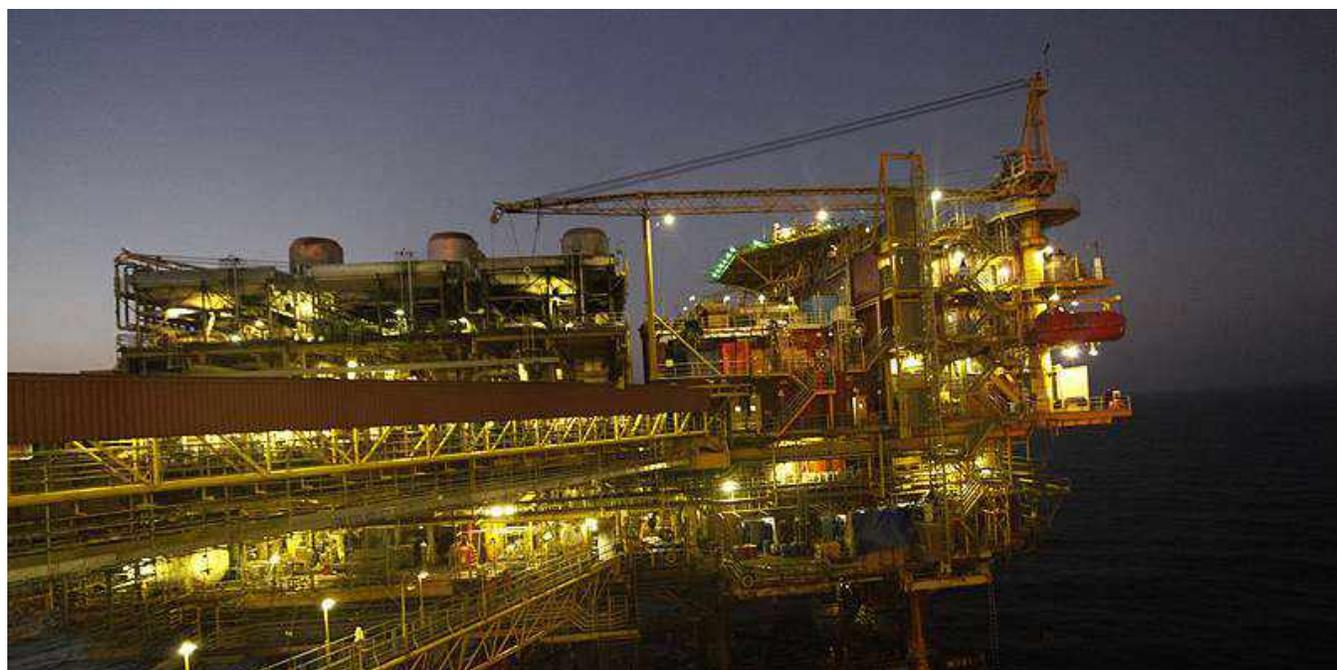


Table No. 3.6 : PNG connections in number as on 01.04.2023

State/Union Territory	"Geographical Area/ CGD Networks"	Authorized CGD Entity	Domestic	Commercial	Industrial
Andhra Pradesh	Anantapur and YSR (Kadapa) Districts	AGP City Gas Private Limited	3577	0	0
	East Godavari District (EAAA)	Godavari Gas Private Limited	49809	6	1
	Kakinada	Bhagyanagar Gas Limited	64613	157	4
	Krishna District (EAAA)	Megha City Gas Distribution Private Limited	22744	167	25
	Srikakulam, Visakhapatnam & Vizianagaram Districts	Indian Oil Corporation Limited	4067	0	0
	Vijaywada	Bhagyanagar Gas Limited	57436	87	1
	West Godavari District	Godavari Gas Private Limited	51115	12	2
Andhra Pradesh Total			253361	429	33
Andhra Pradesh, Karnataka & Tamil Nadu	Chittoor, Kolar and Vellore Districts	AGP City Gas Private Limited	51115	12	2
Andhra Pradesh, Karnataka & Tamil Nadu Total			51115	12	2
	Cachar, Hailakandi & Karimganj Districts	Purba Bharati Gas Private Limited	499	0	0
	Upper Assam	Assam Gas Company Limited	45610	1307	437
Assam Total			46109	1307	437
Bihar	Araria, Purnia, Katihar and Kishanganj Districts	Indian Oil Corporation Limited	1092	0	0
	Arwal, Jehanabad, Bhojpur and Buxar Districts	Indian Oil Corporation Limited	8000	6	1
	Aurangabad, Kaimur & Rohtas Districts	Indian Oil Corporation Limited	3136	9	0
	Begusarai District	Think Gas Begusarai Private Limited	7019	9	1
	Khagaria, Saharsa and Madhepura Districts	Indian Oil Corporation Limited	587	0	0
	Lakhisarai, Munger and Bhagalpur Districts	Indian Oil Corporation Limited	6519	0	0
	Muzaffarpur, Vaishali, Saran and Samastipur Districts	Indian Oil Corporation Limited	17510	0	0
	Patna District	GAIL (India) Limited	58671	50	2
Bihar Total			102534	74	4
Bihar & Jharkhand	Nawada and Koderma Districts	Indian Oil Corporation Limited	1209	0	0
	Sheikhpura, Jamui and Deoghar Districts	Indian Oil Corporation Limited	6052	0	0
Bihar & Jharkhand Total			7261	0	0
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	Chandigarh	Indian-Oil Adani Gas Private Limited	25540	118	24
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh Total			25540	118	24
Dadra & Nagar Haveli (UT)	UT of Dadra & Nagar Haveli	Gujarat Gas Limited	11171	55	58
Dadra & Nagar Haveli (UT) Total			11171	55	58
Daman & Diu (UT)	UT of Daman	Indian-Oil Adani Gas Private Limited	5134	47	43
Daman & Diu (UT) Total			5134	47	43
Daman and Diu & Gujarat	Diu & Gir Somnath Districts	IRM Energy Private Limited	1852	7	0
Daman and Diu & Gujarat Total			1852	7	0
Goa	North Goa District	Goa Natural Gas Private Limited	10204	14	23
	South Goa District	Indian-Oil Adani Gas Private Limited	499	1	8

Table 3.6 Continued

State/Union Territory	"Geographical Area/ CGD Networks"	Authorized CGD Entity	Domestic	Commercial	Industrial
Goa Total			10703	15	31
	Ahmedabad City and Daskroi Area	Adani Total Gas Limited	555074	3412	855
	Ahmedabad District (EAAA)	Gujarat Gas Limited	4832	0	5
	Amreli District	Gujarat Gas Limited	9554	43	1
	Anand area including Kanjari & Vadtal Villages (in Kheda District)	Charotar Gas Sahakari Mandali Limited	45997	724	166
	Anand District (EAAA)	Gujarat Gas Limited	42575	350	30
	Banaskantha District	IRM Energy Private Limited	42615	186	13
	Bhavnagar	Gujarat Gas Limited	61225	410	84
	Dahej Vagra Taluka	Gujarat Gas Limited	1307	15	51
	Dahod District	Gujarat Gas Limited	6785	13	25
	Gandhinagar Mehsana Sabarkantha	Sabarmati Gas Limited	250699	1080	414
	Gandhinagar***	Gujarat Gas Limited	147733	595	24
	Hazira	Gujarat Gas Limited	39080	135	21
	Jamnagar	Gujarat Gas Limited	45196	209	133
	Junagadh District	Torrent Gas Private Limited	2699	13	0
	Kheda District (EAAA) & Mahisagar District	Adani Total Gas Limited	417	3	0
	Kutch (West)	Gujarat Gas Limited	7686	56	5
	Nadiad	Gujarat Gas Limited	71912	488	26
	Narmada (Rajpipla) District	Gujarat Gas Limited	2511	5	0
	Navsari	Gujarat Gas Limited	115095	268	52
	Navsari District (EAAA), Surat District (EAAA), Tapi District (EAAA) & the Dangs District	Adani Total Gas Limited	191	1	0
	Panchmahal District	Gujarat Gas Limited	22412	145	87
	Patan District	Sabarmati Gas Limited	18606	60	9
	Rajkot	Gujarat Gas Limited	331141	1202	1513
	Surat, Bharuch, Ankleshwar	Gujarat Gas Limited	774794	9448	1055
	Surendranagar	Gujarat Gas Limited	29674	321	366
	Vadodara	Vadodara Gas Limited	221661	2829	25
	Vadodara**	Adani Total Gas Limited	616	1	85
	Valsad	Gujarat Gas Limited	123107	407	720
Gujarat Total			2975194	22419	5765
Haryana	Ambala & Kurukshetra Districts	HPOIL Gas Private Limited	13871	9	2
	Faridabad***	Adani Total Gas Limited	100732	386	601
	Gurugram***	Haryana City Gas Distribution Limited	30074	176	427
	Jhajjar District	Haryana City Gas (KCE) Private Limited	24	0	81
	Kaithal District	Indraprastha Gas Limited	27386	0	0
	Karnal District	Indraprastha Gas Limited	17255	16	50
	Nuh and Palwal Districrts	Adani Total Gas Limited	18584	12	59
	Panipat District	Indian-Oil Adani Gas Private Limited	17205	16	53
	Rewari District	Indraprastha Gas Limited	16435	59	130
Rohtak District	Bharat Petroleum Corporation Limited	8098	0	1	
Sonipat	GAIL Gas Limited	29661	38	210	
Sonipat District (EAAA) & Jind District	Hindustan Petroleum Corporation Limited	6729	1	11	
Yamunanagar District	Bharat Petroleum Corporation Limited	11770	0	1	
Gurugram(IGL)***	Indraprastha Gas Limited	20447	114	44	
Haryana Total			318271	827	1670
Haryana & Punjab	Sirsa, Fatehabad and Mansa (Punjab) Districts	Gujarat Gas Limited	2	0	0
Haryana & Punjab Total			2	0	0
Himachal Pradesh	Bilaspur, Hamirpur & Una Districts	Bharat Petroleum Corporation Limited	5461	4	0

Table 3.6 Continued

State/Union Territory	"Geographical Area/ CGD Networks"	Authorized CGD Entity	Domestic	Commercial	Industrial
Himachal Pradesh Total			5461	4	0
Jharkhand	Bokaro, Hazaribagh & Ramgarh Districts	Indian Oil Corporation Limited	7396	4	0
	Chatra and Palamu Districts	Bharat Petroleum Corporation Limited	1800	0	0
	East Singhbhum District	GAIL (India) Limited	32053	0	0
	Giridih & Dhanbad Districts	GAIL Gas Limited	11875	0	0
	Ranchi District	GAIL (India) Limited	45227	1	0
	Seraikela-Kharsawan District	GAIL Gas Limited	13058	0	0
	West Singhbhum District	GAIL Gas Limited	125	0	0
Jharkhand Total			111534	5	0
Karnataka	Bagalkot, Koppal and Raichur Districts	AGP City Gas Private Limited	1164	0	0
	Ballari & Gadag Districts	Bharat Petroleum Corporation Limited	8486	0	0
	Belgaum District	Megha City Gas Distribution Private Limited	27072	138	36
	Bengaluru Rural and Urban Districts	GAIL Gas Limited	243774	197	162
	Bidar District	Bharat Petroleum Corporation Limited	2944	0	0
	Chitradurga & Davanagere Districts	Unison Enviro Private Limited	2195	0	0
	Dakshina Kannada District*	GAIL Gas Limited	26612	8	9
	Dharwad District	Indian-Oil Adani Gas Private Limited	19160	15	8
	Mysuru, Mandya and Chamarajanagar Districts	AGP City Gas Private Limited	761	2	11
	Ramanagara District	Maharashtra Natural Gas Limited	25326	2	13
	Tumkur District	Megha City Gas Distribution Private Limited	28789	161	61
Karnataka Total			386283	523	300
Kerala	Alapuzha, Kollam and Thiruvananthapuram Districts	AGP City Gas Private Limited	3138	1	3
	Ernakulam District	Indian-Oil Adani Gas Private Limited	40762	19	12
	Kozhikode & Wayanad Districts	Indian-Oil Adani Gas Private Limited	188	0	0
	Malappuram District	Indian-Oil Adani Gas Private Limited	96	0	0
	Palakkad & Thrissur Districts	Indian-Oil Adani Gas Private Limited	114	0	1
Kerala Total			44298	20	16
Kerala & Puducherry	Kannur, Kasaragod & Mahe Districts	Indian-Oil Adani Gas Private Limited	361	0	0
Kerala & Puducherry Total			361	0	0
Madhya Pradesh	Ashoknagar District	Indian Oil Corporation Limited	707	0	0
	Bhopal & Rajgarh Districts	Think Gas Bhopal Private Limited	33133	42	6
	Dewas	GAIL Gas Limited	18038	28	30
	Dhar District	Naveriya Gas Private Limited	1355	20	4
	Guna District	Indian Oil Corporation Limited	987	0	0
	Gwalior	Aavantika Gas Limited	47608	58	13
	Indore (including Ujjain City)	Aavantika Gas Limited	90014	188	384
	Morena District	Indian Oil Corporation Limited	1398	0	0
	Raisen, Shajapur and Sehore Districts	GAIL Gas Limited	2967	3	4
	Rewa District	Indian Oil Corporation Limited	2015	2	0
	Satna & Shandol Districts	Bharat Petroleum Corporation Limited	2746	0	0
	Shivpuri District	Think Gas Bhopal Private Limited	3108	2	0
	Sidhi and Singrauli Districts	Bharat Petroleum Corporation Limited	2134	0	0
	Ujjain (EAAA) District, Dewas (EAAA) District and Indore (EAAA) District	Gujarat Gas Limited	487	0	0
Madhya Pradesh Total			206697	343	441
Madhya Pradesh and Rajasthan	Jhabua, Banswara, Ratlam and Dungarpur Districts	Gujarat Gas Limited	320	0	0
Madhya Pradesh and Rajasthan Total			320	0	0

Table 3.6 Continued

State/Union Territory	"Geographical Area/ CGD Networks"	Authorized CGD Entity	Domestic	Commercial	Industrial
Madhya Pradesh and Uttar Pradesh	Jhansi (EAAA) District, Bhind, Jalaun, Lalitpur and Datia Districts	Adani Total Gas Limited	0	0	2
Madhya Pradesh and Uttar Pradesh Total			0	0	2
Maharashtra	Ahmednagar & Aurangabad Districts	Bharat Petroleum Corporation Limited	30418	4	1
	Kolhapur District	HPOIL Gas Private Limited	19554	2	12
	Latur & Osmanabad Districts	Unison Enviro Private Limited	1604	0	0
	Mumbai & Greater Mumbai	Mahanagar Gas Limited	1136918	3199	122
	Palghar District & Thane Rural	Gujarat Gas Limited	46182	26	98
	Pune City including Pimpri - Chichwad & adjoining contiguous areas Hinjewadi, Chakan, Talegaon	Maharashtra Natural Gas Limited	509765	444	276
	Pune District (EAAA)	Torrent Gas Pune Limited	10186	10	37
	Raigarh District (EAAA)	Mahanagar Gas Limited	68033	1	3
	Ratnagiri District	Unison Enviro Private Limited	8202	7	40
	Sangli & Satara Districts	Bharat Petroleum Corporation Limited	30094	0	1
	Sindhudurg District	Maharashtra Natural Gas Limited	5063	0	0
	Solapur District	IMC Limited	9948	0	2
Thane urban and adjoining Municipalities	Mahanagar Gas Limited	964671	959	275	
Maharashtra Total			2840638	4652	867
Maharashtra & Gujarat	Valsad (EAAA), Dhule & Nashik Districts	Maharashtra Natural Gas Limited	150004	4	17
Maharashtra & Gujarat Total			150004	4	17
National Capital Territory of Delhi (UT)	National Capital Territory of Delhi	Indraprastha Gas Limited	1438659	3582	1799
National Capital Territory of Delhi (UT) Total			1438659	3582	1799
Odisha	Angul & Dhekanal Districts	Bharat Petroleum Corporation Limited	1328	0	0
	Bargarh, Debagarh & Sambalpur Districts	Bharat Petroleum Corporation Limited	2023	0	0
	Cuttack District	GAIL (India) Limited	20915	2	0
	Ganjam, Nayagarh & Puri Districts	GAIL Gas Limited	5913	0	0
	Jagatsinghpur & Kendrapara Districts	Bharat Petroleum Corporation Limited	1817	0	0
	Jajpur & Kendujhar Districts	Bharat Petroleum Corporation Limited	2342	0	0
	Khordha District	GAIL (India) Limited	45199	3	0
	Sundargarh & Jharsuguda Districts	GAIL Gas Limited	7339	0	0
Odisha Total			86876	5	0
Puducherry & Tamil Nadu	Karaikal & Nagapattinam Districts	Torrent Gas Private Limited	175	0	0
Puducherry & Tamil Nadu Total			175	0	0
Punjab	Amritsar District	Gujarat Gas Limited	24988	180	11
	Bhatinda District	Gujarat Gas Limited	4034	10	0
	Fatehgarh Sahib District	IRM Energy Private Limited	3705	55	166
	Ferozepur, Faridkot and Sri Muktsar Sahib Districts	Gujarat Gas Limited	96	1	0
	Hoshiarpur and Gurdaspur Districts	Gujarat Gas Limited	1003	1	0
	Jalandhar District (EAAA), Kapurthala & SBS Nagar Districts	Think Gas Ludhiana Private Limited	12472	17	17
	Ludhiana District (EAAA), Barnala & Moga Districts	Think Gas Ludhiana Private Limited	11322	33	36
Rupnagar District	Bharat Petroleum Corporation Limited	7042	4	0	
SAS Nagar District (EAAA), Patiala & Sangrur Districts	Torrent Gas Private Limited	2682	23	14	
Punjab Total			67344	324	244

Table 3.6 Continued

State/Union Territory	"Geographical Area/ CGD Networks"	Authorized CGD Entity	Domestic	Commercial	Industrial
Rajasthan	Ajmer, Pali and Rajsamand Districts	Indraprastha Gas Limited	144589	3	0
	Alwar (Other than Bhiwadi) & Jaipur Districts	Torrent Gas Jaipur Private Limited	62	1	14
	Barmer, Jaisalmer & Jodhpur Districts	AGP CGD India Private Limited	37806	34	48
	Bhilwara & Bundi Districts	Adani Total Gas Limited	609	3	2
	Bhiwadi (in Alwar District)	Haryana City Gas Distribution (Bhiwadi) Limited	5017	3	170
	Dholpur District	Dholpur CGD Private Limited	283	0	0
	Jalore and Sirohi Districts	Gujarat Gas Limited	3197	3	0
	Kota	Rajasthan State Gas Limited	21825	35	1285
	Kota District (EAAA), Baran & Chittorgarh (Only Rawatbhata Taluka) Districts	Torrent Gas Private Limited	442	1	0
Rajasthan Total			213830	83	1519
Tamil Nadu	Chennai & Tiruvallur Districts	Torrent Gas Chennai Private Limited	42	0	0
	Coimbatore District	Indian Oil Corporation Limited	300	0	0
	Kanchipuram District	AGP CGD India Private Limited	72	0	8
	Ramanathapuram District	AGP CGD India Private Limited	66	0	0
	Salem District	Indian Oil Corporation Limited	258	0	0
	Tamil Nadu Total			738	0
Telangana	Bhadradri Kothagudem & Khamman Districts	Megha City Gas Distribution Private Limited	1245	0	0
	Hyderabad	Bhagyanagar Gas Limited	178314	66	72
	Jagtial, Peddapalli, Karimnagar & Rajanna Sircilla Districts	Indian Oil Corporation Limited	29	0	0
	Jangaon, Jayashankar Bhupalpally, Mahabubabad, Warangal Urban & Warangal Rural Districts	Megha City Gas Distribution Private Limited	2780	1	0
	Medak, Siddipet & Sangareddy Districts	Torrent Gas Private Limited	1440	2	19
	Medchal-Malkajgiri, Ranga Reddy & Vikarabad Districts	Megha City Gas Distribution Private Limited	4698	1	4
	Nalgonda Suryapet & Yadadri Bhuvanagiri Districts	Megha City Gas Distribution Private Limited	4520	7	3
Telangana Total			193026	77	98
Tripura	Agartala	Tripura Natural Gas Company Limited	45720	500	62
	Gomati District	Tripura Natural Gas Company Limited	442	0	0
	West Tripura (EAAA) District	Tripura Natural Gas Company Limited	12969	6	0
Tripura Total			59131	506	62
Uttar Pradesh	Agra	Green Gas Limited	114770	61	17
	Allahabad	Indian-Oil Adani Gas Private Limited	15320	65	11
	Allahabad District (EAAA), Bhadohi & Kaushambi Districts	Indian-Oil Adani Gas Private Limited	1669	3	0
	Amethi, Pratapgarh & Raebareli Districts	Bharat Petroleum Corporation Limited	1824	0	0
	Auraiya, Kanpur Dehat & Etawah Districts	Torrent Gas Private Limited	4063	5	7
	Azamgarh, Mau and Ballia Districts	Torrent Gas Private Limited	1963	3	0
	Bagpat District	Bagpat Green Energy Private Limited	5273	8	7
	Bareilly	Central UP Gas Limited	50335	155	25
	Bareilly (EAAA) District, Pilibhit and Rampur Districts	Hindustan Petroleum Corporation Limited	8119	0	0
	Basti and Ambedkarnagar Districts	Torrent Gas Private Limited	1140	0	1
	Bulandshahr (part) District	Indian-Oil Adani Gas Private Limited	636	0	24
	Faizabad & Sultanpur Districts	Green Gas Limited	1258	0	0
	Farrukhabad, Etah and Hardoi Districts	Hindustan Petroleum Corporation Limited	7800	0	0
	Gautam Budh Nagar District***	Indraprastha Gas Limited	327387	866	1332
Ghaziabad & Hapur Districts	Indraprastha Gas Limited	312051	438	554	

Table 3.6 Continued

State/Union Territory	"Geographical Area/ CGD Networks"	Authorized CGD Entity	Domestic	Commercial	Industrial
	Gonda and Barabanki Districts	Torrent Gas Private Limited	775	0	4
	Jaunpur and Ghazipur Districts	Indian-Oil Adani Gas Private Limited	300	0	0
	Jhansi	Central UP Gas Limited	14809	1	0
	Kanpur	Central UP Gas Limited	118255	316	100
	Kanpur (EAAA) District, Fatehpur and Hamirpur Districts	Indraprastha Gas Limited	30182	2	0
	Khurja	Adani Total Gas Limited	14118	19	252
	Lucknow	Green Gas Limited	100762	57	11
	Mainpuri and Kannauj Districts	Hindustan Petroleum Corporation Limited	7300	0	0
	Mathura	Sanwariya Gas Limited	5574	35	96
	Meerut	GAIL Gas Limited	53101	46	61
	Meerut District (EAAA), Muzaffarnagar & Shamli Districts	Indraprastha Gas Limited	33142	31	4
	Mirzapur, Chandauli and Sonbhadra Districts	GAIL Gas Limited	6311	0	0
	Moradabad	Torrent Gas Moradabad Limited	21677	43	160
	Moradabad (EAAA) District	Torrent Gas Private Limited	10075	3	8
	Saharanpur District	Bharat Petroleum Corporation Limited	24009	1	0
	Shahjahanpur and Budaun Districts	Hindustan Petroleum Corporation Limited	10066	0	0
	Unnao (EAAA) District	Green Gas Limited	241	0	0
	Varanasi District	GAIL (India) Limited	60725	55	10
	Gorakhpur, Sant Kabir Nagar & Kushinagar Districts	Torrent Gas Private Limited	2747	5	5
Uttar Pradesh Total			1367777	2218	2689
Uttar Pradesh & Rajasthan	Firozabad (Taj Trapezium Zone)	GAIL Gas Limited	18958	38	343
Uttar Pradesh & Rajasthan Total			18958	38	343
Uttar Pradesh and Uttrakhand	Bijnor and Nainital Districts	Hindustan Petroleum Corporation Limited	8019	0	0
Uttar Pradesh and Uttrakhand Total			8019	0	0
Uttrakhand	Dehradun District	GAIL Gas Limited	27738	0	0
	Haridwar District	Haridwar Natural Gas Limited	24723	13	10
	Udham Singh Nagar District	Indian-Oil Adani Gas Private Limited	16106	44	74
Uttrakhand Total			68567	57	84
West Bengal	Burdwan District	Indian-Oil Adani Gas Private Limited	260	0	0
West Bengal Total			260	0	0
Grand Total			11029228	37772	16563

Source: PNGRB

Note : EAAA stands for Excluding/Except Area Already Authorized ; * stands for the data not provided by the CGD Entity ;

Disclaimer: While every care has been taken to provide the accurate data as per submissions by the authorized entities, PNGRB/PPAC shall not be held responsible for any loss, damage etc. due to action taken by any one based on information collated by PNGRB/PPAC



Table 3.7: CNG Sales in India

(Sales in TMT) #

State (s) / Union Territory	Company name	No. of companies (as on 01.04.2023)	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
Andhra Pradesh*	AGP City Gas Private Limited, Bhagyanagar Gas Limited, Godavari Gas Private Limited, Indian Oil Corporation Limited, Megha City Gas Distribution Private Limited	5	31	21	13	33	48
Andhra Pradesh, Karnataka and Tamil Nadu	AGP City Gas Private Limited	1	0	0	0	0.1	2.5
Assam	Assam Gas Company Limited, Purba Bharati Gas Private Limited	2	0	0.02	0.05	0.06	0.5
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	38
Bihar & Jharkhand	Indian Oil Corporation Limited	1	0	0	0	0	0.04
Chandigarh, Haryana, Punjab & Himachal Pradesh	Indian Oil-Adani Gas Private Limited	1	15	21	14	25	35
Dadra & Nagar Haveli**	Gujarat Gas Limited	1	0	3	2	3	3.2
Daman and Diu	Indian Oil-Adani Gas Private Limited	1	2	2	1.37	3	2.2
Delhi NCT***	Indraprastha Gas Limited	1	1144	1033	785	1015	1210
Goa	Goa Natural Gas Private Limited, Indian Oil-Adani Gas Private Limited	2	0	0.03	0.15	1.05	2.9
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	1084
Gujarat & UT of Daman and Diu	IRM Energy Private Limited	1	0	0.07	1.36	3.82	5.7
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	428
Haryana & Himachal Pradesh	Indian Oil-Adani Gas Private Limited	1	0	0	0.08	0.7	1.2
Haryana & Punjab	Gujarat Gas Limited	1	0	0	1.4	5	6.7
Himachal Pradesh	Bharat Petroleum Corporation Limited	1	0	0	0	0.2	0.4
Jharkhand	GAIL (India) Limited, GAIL Gas Limited, Indian Oil Corporation Limited, Bharat Petroleum Corporation Limited	4	0	0.34	1.2	4	10
Karnataka	Adani Total Gas Limited, AGP City Gas Private Limited, GAIL Gas Limited, Indian Oil-Adani Gas Private Limited, Maharashtra Natural Gas Limited, Megha City Gas Distribution Private Limited, Unison Enviro Private Limited, Bharat Petroleum Corporation Limited	8	0.3	1	3	15	56
Kerala	AGP City Gas Private Limited, Indian Oil-Adani Gas Private Limited	2	1	6	4	12	28
Kerala & Puducherry	Indian Oil-Adani Gas Private Limited	1	0	0	0	0.2	1.5
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 Petroleum Corporation Limited	8	31	34	24	45	76
Madhya Pradesh & Rajasthan	Gujarat Gas Limited, Megha City Gas Distribution Private Limited	2	0	0	0.26	3	5.5
Madhya Pradesh and Chhattisgarh	Adani Total Gas Limited	1	0	0	0	0	0.01

Table 3.7 Continued

State (s) / Union Territory	Company name	No. of companies (as on 01.04.2023)	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
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, Harayana City Gas Nagpur Private Limited, IMC Limited	9	702	738	504	812	1022
Maharashtra & Gujarat	Maharashtra Natural Gas Limited	1	0	0	1.4	5.6	19
Odisha	Adani Total Gas Limited, GAIL (India) Limited, GAIL Gas Limited	3	1	3	2	4	6.9
Puducherry (UT) & Tamil Nadu	Torrent Gas Private Limited	1	0	0	0.001	0.04	0.18
Puducherry (UT)	East Coast Natural Gas Private Limited	1	0	0	0.000	0.00	0.01
Punjab	Bharat Petroleum Corporation Limited, Gujarat Gas Limited, IRM Energy Private Limited, Think Gas Ludhiana Private Limited, Torrent Gas Private Limited, Indian Oil Corporation Limited, Megha City Gas Distribution Private Limited	7	1	7	14	43	61
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, Indian Oil Corporation Limited"	10	7	9	15	47	94
Tamil Nadu	Adani Total Gas Limited, AGP CGD India Pvt Ltd, Indian Oil Corporation Limited, Torrent Gas Chennai Private Limited, Megha City Gas Distribution Private Limited	5	0	0	0.004	2	23
Telangana*	Bhagyanagar Gas Limited, Megha City Gas Distribution Private Limited, Torrent Gas Private Limited, Indian Oil Corporation Limited	4	0	13	9	33	68
Telangana & Karnataka	Megha City Gas Distribution Private Limited	1	0	0	0	0	0.16
Tripura	Tripura Natural Gas Company Limited	1	15	16	18	20	24
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	670
Uttar Pradesh & Uttarakhand	Hindustan Petroleum Corporation Limited	1	0	0	0.359	2	3.5
Uttar Pradesh & Madhya Pradesh	Adani Total Gas Limited	1	0	0.001	0.402	8	4.9
Uttar Pradesh & Rajasthan	Gail Gas Limited	1	0	0	0	0	36
Uttarakhand	GAIL Gas Limited, Haridwar Natural Gas Private Limited, Indian Oil-Adani Gas Private Limited,	3	0.1	1	5	12	18
West Bengal	Bengal Gas Company Limited, IndianOil-Adani Gas Private Limited, Hindustan Petroleum Corporation Limited	3	3	2	2	4	6.5
	Total		3076	3247	2589	3968	5103

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 in numbers as on 01.04.2023 (P)

State/Union Territory	"Geographical Area/ CGD Networks"	Authorized CGD Entity	CNG Stations
Andhra Pradesh	Anantapur and YSR (Kadapa) Districts	AGP City Gas Private Limited	22
	East Godavari District (EAAA)	Godavari Gas Private Limited	16
	Kakinada	Bhagyanagar Gas Limited	13
	Krishna District (EAAA)	Megha City Gas Distribution Private Limited	27
	Kurnool, Guntur, and Prakasam districts	Indian Oil Corporation Limited	3
	Sri Potti Sriramulu Nellore District	AGP City Gas Private Limited	17
	Srikakulam, Visakhapatnam & Vizianagaram Districts	Indian Oil Corporation Limited	13
	Vijaywada	Bhagyanagar Gas Limited	34
	West Godavari District	Godavari Gas Private Limited	16
Andhra Pradesh Total			161
Andhra Pradesh, Karnataka & Tamil Nadu	Chittoor, Kolar and Vellore Districts	AGP City Gas Private Limited	36
Andhra Pradesh, Karnataka & Tamil Nadu Total			36
Assam	Baksa, Barpeta, Bongaigaon, Chirang, Nalbari and Bajali districts	Adani Total Gas Limited	1
	Kamrup & Kamrup Metropolitan Districts	Purba Bharati Gas Private Limited	1
	Kokrajhar, Dhubri, South Salmara-Mankachar and Goalpara districts	Adani Total Gas Limited	1
	Nagaon, Morigaon, Hojai, Karbi Anglong, West Karbi Anglong and Dima Hasao districts	Adani Total Gas Limited	1
	Upper Assam	Assam Gas Company Limited	1
Assam Total			5
	Arwal, Jehanabad, Bhojpur and Buxar Districts	Indian Oil Corporation Limited	8
	Aurangabad, Kaimur & Rohtas Districts	Indian Oil Corporation Limited	6
	Begusarai District	Think Gas Begusarai Private Limited	8
	Darbhanga, Madhubani, Supaul, Sitamarhi and Sheohar districts	Bharat Petroleum Corporation Limited	9
	Gaya & Nalanda Districts	Indian-Oil Adani Gas Private Limited	10
	Lakhisarai, Munger and Bhagalpur Districts	Indian Oil Corporation Limited	5
	Muzaffarpur, Vaishali, Saran and Samastipur Districts	Indian Oil Corporation Limited	24
	Patna District	GAIL (India) Limited	23
Bihar Total			93
	Sheikhpura, Jamui and Deoghar Districts	Indian Oil Corporation Limited	2
Bihar & Jharkhand Total			2
Bihar & Uttar Pradesh	Gopalganj, Siwan, West Champaran, East Champaran and Deoria districts	Bharat Petroleum Corporation Limited	14
Bihar & Uttar Pradesh Total			14
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	Chandigarh	Indian-Oil Adani Gas Private Limited	25
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh Total			25
Chhattisgarh	Jashpur, Raigarh, Janjgir-Champa and Mahasamund districts	Adani Total Gas Limited	3
	Kabirdham, Raj Nandgaon and Kanker districts	Adani Total Gas Limited	3
	Koriya, Surajpur, Balrampur and Surguja districts	Bharat Petroleum Corporation Limited	2
	Mungeli, Bemetara, Durg, Balod and Dhamtari districts	Adani Total Gas Limited	1

Table 3.8 Continued

State/Union Territory	“Geographical Area/ CGD Networks”	Authorized CGD Entity	CNG Stations
Chhattisgarh Total			9
Dadra & Nagar Haveli (UT)	UT of Dadra & Nagar Haveli	Gujarat Gas Limited	7
Dadra & Nagar Haveli (UT) Total			7
Daman & Diu (UT)	UT of Daman	Indian-Oil Adani Gas Private Limited	4
Daman & Diu (UT) Total			4
Daman and Diu & Gujarat	Diu & Gir Somnath Districts	IRM Energy Private Limited	15
Daman and Diu & Gujarat Total			15
Goa	North Goa District	Goa Natural Gas Private Limited	7
	South Goa District	Indian-Oil Adani Gas Private Limited	5
Goa Total			12
Gujarat	Ahmedabad City (Only for CNG)##	Hindustan Petroleum Corporation Limited	22
	Ahmedabad City and Daskroi Area	Adani Total Gas Limited	84
	Ahmedabad District (EAAA)	Gujarat Gas Limited	8
	Amreli District	Gujarat Gas Limited	15
	Anand area including Kanjari & Vadtal Villages (in Kheda District)	Charotar Gas Sahakari Mandali Limited	13
	Anand District (EAAA)	Gujarat Gas Limited	37
	Banaskantha District	IRM Energy Private Limited	38
	Barwala & Ranpur Talukas	Adani Total Gas Limited	5
	Bhavnagar	Gujarat Gas Limited	39
	Dahej Vagra Taluka	Gujarat Gas Limited	5
	Dahod District	Gujarat Gas Limited	17
	Gandhinagar Mehsana Sabarkantha	Sabarmati Gas Limited	136
	Gandhinagar***	Gujarat Gas Limited	16
	Hazira	Gujarat Gas Limited	1
	Jamnagar	Gujarat Gas Limited	30
	Junagadh District	Torrent Gas Private Limited	17
	Kheda District (EAAA) & Mahisagar District	Adani Total Gas Limited	23
	Kutch (West)	Gujarat Gas Limited	19
	Nadiad	Gujarat Gas Limited	41
	Narmada (Rajpipla) District	Gujarat Gas Limited	9
	Navsari	Gujarat Gas Limited	27
	Navsari District (EAAA), Surat District (EAAA), Tapi District (EAAA) & the Dangs District	Adani Total Gas Limited	12
	Panchmahal District	Gujarat Gas Limited	32
	Patan District	Sabarmati Gas Limited	25
	Porbandar District	Adani Total Gas Limited	9
	Rajkot	Gujarat Gas Limited	90
	Surat, Bharuch, Ankleshwar	Gujarat Gas Limited	118
	Surendranagar	Gujarat Gas Limited	29
	Surendranagar District (EAAA) & Morbi District (EAAA)	Adani Total Gas Limited	12
	Vadodara	Vadodara Gas Limited	36
	Vadodara**	Adani Total Gas Limited	6
	Valsad	Gujarat Gas Limited	26
	Gujarat Total		

Table 3.8 Continued

State/Union Territory	“Geographical Area/ CGD Networks”	Authorized CGD Entity	CNG Stations
Haryana	Ambala & Kurukshetra Districts	HPOIL Gas Private Limited	18
	Bhiwani, Charkhi Dadri & Mahendragarh Districts	Adani Total Gas Limited	37
	Faridabad***	Adani Total Gas Limited	29
	Gurugram***	Haryana City Gas Distribution Limited	32
	Hisar District	HCG (KCE) Private Limited	4
	Jhajjar District	Haryana City Gas (KCE) Private Limited	6
	Kaithal District	Indraprastha Gas Limited	12
	Karnal District	Indraprastha Gas Limited	21
	Nuh and Palwal Distirct	Adani Total Gas Limited	31
	Panipat District	Indian-Oil Adani Gas Private Limited	15
	Rewari District	Indraprastha Gas Limited	34
	Rohtak District	Bharat Petroleum Corporation Limited	14
	Sonipat	GAIL Gas Limited	25
	Sonipat District (EAAA) & Jind District	Hindustan Petroleum Corporation Limited	30
	Yamunanagar District	Bharat Petroleum Corporation Limited	10
	Gurugram(IGL)***	Indraprastha Gas Limited	20
Haryana Total			338
Haryana & Himachal Pradesh	Panchkula District (EAAA), Sirmaur, Shimla & Solan (EAAA) Districts	Indian-Oil Adani Gas Private Limited	10
Haryana & Himachal Pradesh Total			10
Haryana & Punjab	Sirsa, Fatehabad and Mansa (Punjab) Districts	Gujarat Gas Limited	24
Haryana & Punjab Total			24
Himachal Pradesh	Bilaspur, Hamirpur & Una Districts	Bharat Petroleum Corporation Limited	8
Himachal Pradesh Total			8
Jharkhand	Bokaro, Hazaribagh & Ramgarh Districts	Indian Oil Corporation Limited	22
	Chatra and Palamu Districts	Bharat Petroleum Corporation Limited	6
	East Singhbhum District	GAIL (India) Limited	9
	Giridih & Dhanbad Districts	GAIL Gas Limited	8
	Gumla, Latehar, Lohardaga, Simdega, Garhwa and Khunti districts	Adani Total Gas Limited	6
	Ranchi District	GAIL (India) Limited	13
	Seraikela-Kharsawan District	GAIL Gas Limited	11
Jharkhand Total			75
Karnataka	Bagalkot, Koppal and Raichur Districts	AGP City Gas Private Limited	24
	Ballari & Gadag Districts	Bharat Petroleum Corporation Limited	21
	Belgaum District	Megha City Gas Distribution Private Limited	5
	Bengaluru Rural and Urban Districts	GAIL Gas Limited	83
	Bidar District	Bharat Petroleum Corporation Limited	10
	Chikkamagaluru, Hassan and Kodagu Districts	AGP City Gas Private Limited	18
	Chitradurga & Davanagere Districts	Unison Enviro Private Limited	15
	Dakshina Kannada District*	GAIL Gas Limited	28
	Dharwad District	Indian-Oil Adani Gas Private Limited	6
	Kalaburagi and Vijayapura Districts	AGP City Gas Private Limited	16
	Mysuru, Mandya and Chamarajanagar Districts	AGP City Gas Private Limited	23
	Ramanagara District	Maharashtra Natural Gas Limited	12
	Tumkur District	Megha City Gas Distribution Private Limited	3
	Udupi District	Adani Total Gas Limited	8
	Uttara Kannada, Haveri and Shivamogga Districts	AGP City Gas Private Limited	19
	Karnataka Total		

Table 3.8 Continued

State/Union Territory	“Geographical Area/ CGD Networks”	Authorized CGD Entity	CNG Stations
Kerala	Alapuzha, Kollam and Thiruvananthapuram Districts	AGP City Gas Private Limited	31
	Ernakulam District	Indian-Oil Adani Gas Private Limited	14
	Kozhikode & Wayanad Districts	Indian-Oil Adani Gas Private Limited	17
	Malappuram District	Indian-Oil Adani Gas Private Limited	15
	Palakkad & Thrissur Districts	Indian-Oil Adani Gas Private Limited	28
Kerala Total			105
Kerala & Puducherry	Kannur, Kasaragod & Mahe Districts	Indian-Oil Adani Gas Private Limited	9
Kerala & Puducherry Total			9
Madhya Pradesh	Ashoknagar District	Indian Oil Corporation Limited	2
	Bhopal & Rajgarh Districts	Think Gas Bhopal Private Limited	32
	Burhanpur, Khandwa, Khargone and Harda districts	Adani Total Gas Limited	2
	Dewas	GAIL Gas Limited	5
	Dhar District	Naveriya Gas Private Limited	4
	Guna District	Indian Oil Corporation Limited	4
	Gwalior	Aavantika Gas Limited	31
	Gwalior (EAAA) District and Sheopur District	Rajasthan State Gas Limited	2
	Hoshangabad, Narsinghpur, Sagar and Vidisha districts	Megha City Gas Distribution Private Limited	1
	Indore (including Ujjain City)	Aavantika Gas Limited	64
	Morena District	Indian Oil Corporation Limited	6
	Raisen, Shajapur and Sehore Districts	GAIL Gas Limited	19
	Rewa District	Indian Oil Corporation Limited	6
	Satna & Shandol Districts	Bharat Petroleum Corporation Limited	9
	Shivpuri District	Think Gas Bhopal Private Limited	6
	Sidhi and Singrauli Districts	Bharat Petroleum Corporation Limited	5
	Tikamgarh, Niwari, Chattarpur and Panna districts	Adani Total Gas Limited	1
Ujjain (EAAA) District, Dewas (EAAA) District and Indore (EAAA) District	Gujarat Gas Limited	22	
Madhya Pradesh Total			221
Madhya Pradesh and Chhattisgrah	Anuppur, Bilaspur and Korba Districts	Adani Total Gas Limited	7
Madhya Pradesh and Chhattisgrah Total			7
Madhya Pradesh and Rajasthan	Agar Malwa, Neemuch, Mandsaur and Jhalawar districts	Megha City Gas Distribution Private Limited	1
Madhya Pradesh and Rajasthan	Jhabua, Banswara, Ratlam and Dungarpur Districts	Gujarat Gas Limited	30
Madhya Pradesh and Rajasthan Total			31
Madhya Pradesh and Uttar Pradesh	Jhansi (EAAA) District, Bhind, Jalaun, Lalitpur and Datia Districts	Adani Total Gas Limited	16
Madhya Pradesh and Uttar Pradesh Total			16
Maharashtra	Ahmednagar & Aurangabad Districts	Bharat Petroleum Corporation Limited	87
	Akola, Hingoli and Washim districts	Adani Total Gas Limited	2
	Amravati and Yavatmal districts	Adani Total Gas Limited	3
	Bhandara, Gondiya and Garchiroli districts	Adani Total Gas Limited	3
	Buldana, Nanded and Parbhani districts	Maharashtra Natural Gas Limited	7
	Kolhapur District	HPOIL Gas Private Limited	22
	Latur & Osmanabad Districts	Unison Enviro Private Limited	15

Table 3.8 Continued

State/Union Territory	“Geographical Area/ CGD Networks”	Authorized CGD Entity	CNG Stations
	Mumbai & Greater Mumbai	Mahanagar Gas Limited	152
	Nagpur district	HCG Nagpur Private Limited	3
	Palghar District & Thane Rural	Gujarat Gas Limited	32
	Pune City including Pimpri - Chichwad & adjoining contigeneous areas Hinjewadi, Chakan, Talegaon	Maharashtra Natural Gas Limited	110
	Pune District (EAAA)	Torrent Gas Pune Limited	52
	Raigarh District (EAAA)	Mahanagar Gas Limited	28
	Ratnagiri District	Unison Enviro Private Limited	19
	Sangli & Satara Districts	Bharat Petroleum Corporation Limited	43
	Sindhudurg District	Maharashtra Natural Gas Limited	9
	Solapur District	IMC Limited	14
	Thane urban and adjoining Municipalities	Mahanagar Gas Limited	140
Maharashtra Total			741
Maharashtra & Gujarat	Valsad (EAAA), Dhule & Nashik Districts	Maharashtra Natural Gas Limited	60
Maharashtra & Gujarat Total			60
Maharashtra and Madhya Pradesh	Alirajpur, Nandurbar and Barwani districts	Adani Total Gas Limited	9
Maharashtra and Madhya Pradesh Total			9
National Capital Territory of Delhi (UT)	National Capital Territory of Delhi	Indraprastha Gas Limited	480
National Capital Territory of Delhi (UT) Total			480
Odisha	Angul & Dhekanal Districts	Bharat Petroleum Corporation Limited	5
	Balasore, Bhadrak & Mayurbhanj Districts	Adani Total Gas Limited	8
	Bargarh, Debagarh & Sambalpur Districts	Bharat Petroleum Corporation Limited	12
	Cuttack District	GAIL (India) Limited	9
	Ganjam, Nayagarh & Puri Districts	GAIL Gas Limited	5
	Jagatsinghpur & Kendrapara Districts	Bharat Petroleum Corporation Limited	2
	Jajpur & Kendujhar Districts	Bharat Petroleum Corporation Limited	7
	Khordha District	GAIL (India) Limited	13
	Koraput, Malkangiri, and Nabarangpur districts	Adani Total Gas Limited	1
	Sundargarh & Jharsuguda Districts	GAIL Gas Limited	4
Odisha Total			66
Puducherry	Puducherry District	East Coast Natural Gas Private Limited	1
Puducherry Total			1
Puducherry & Tamil Nadu	Karaikal & Nagapattinam Districts	Torrent Gas Private Limited	8
Puducherry & Tamil Nadu Total			8
Punjab	Amritsar District	Gujarat Gas Limited	19
	Bhatinda District	Gujarat Gas Limited	20
	Fatehgarh Sahib District	IRM Energy Private Limited	9
	Ferozepur, Faridkot and Sri Muktsar Sahib Districts	Gujarat Gas Limited	27
	Hoshiarpur and Gurdaspur Districts	Gujarat Gas Limited	40
	Jalandhar District (EAAA), Kapurthala & SBS Nagar Districts	Think Gas Ludhiana Private Limited	17
	Jalandhar*	Jay Madhok Energy Private Limited led Consortium	3
	Ludhiana District (EAAA), Barnala & Moga Districts	Think Gas Ludhiana Private Limited	20
	Ludhiana*	Jay Madhok Energy Private Limited led Consortium	3
Pathankot district	Indian Oil Corporation Limited	2	

Table 3.8 Continued

State/Union Territory	“Geographical Area/ CGD Networks”	Authorized CGD Entity	CNG Stations
	Rupnagar District	Bharat Petroleum Corporation Limited	18
	SAS Nagar District (EAAA), Patiala & Sangrur Districts	Torrent Gas Private Limited	24
	Tarn Taran district	Megha City Gas Distribution Private Limited	2
Punjab Total			204
Punjab & Rajasthan	Fazilka (except area already authorized), Ganganagar and Hanumangarh districts	Bharat Petroleum Corporation Limited	19
Punjab & Rajasthan Total			19
Rajasthan	Ajmer, Pali and Rajsamand Districts	Indraprastha Gas Limited	56
	Alwar (Other than Bhiwadi) & Jaipur Districts	Torrent Gas Jaipur Private Limited	44
	Barmer, Jaisalmer & Jodhpur Districts	AGP CGD India Private Limited	29
	Bhilwara & Bundi Districts	Adani Total Gas Limited	17
	Bhiwadi (in Alwar District)	Haryana City Gas Distribution (Bhiwadi) Limited	3
	Chittorgarh (Other than Rawatbhata Taluka) & Udaipur Districts	Adani Total Gas Limited	37
	Dholpur District	Dholpur CGD Private Limited	7
	Jalore and Sirohi Districts	Gujarat Gas Limited	28
	Jhunjhunu, Sikar and Nagaur districts	Indian Oil Corporation Limited	2
	Kota	Rajasthan State Gas Limited	9
	Kota District (EAAA), Baran & Chittorgarh (Only Rawatbhata Taluka) Districts	Torrent Gas Private Limited	15
Rajasthan Total			247
Tamil Nadu	Ariyalur and Perambalur districts	Megha City Gas Distribution Private Limited	2
	Chennai & Tiruvallur Districts	Torrent Gas Chennai Private Limited	60
	Coimbatore District	Indian Oil Corporation Limited	17
	Cuddalore, Nagapattinam & Tiruvarur Districts	Adani Total Gas Limited	23
	Dharmapuri and Krishnagiri districts	Indian Oil Corporation Limited	2
	Kanchipuram District	AGP CGD India Private Limited	28
	Kanyakumari, Thoothukudi, Tirunelveli Kattabo and Tenkasi districts	Indian Oil Corporation Limited	2
	Madurai, Theni and Virudhnagar districts	Indian Oil Corporation Limited	3
	Ramanathapuram District	AGP CGD India Private Limited	4
	Salem District	Indian Oil Corporation Limited	11
	The Nilgiris and Erode districts	Bharat Petroleum Corporation Limited	2
	Tiruppur District	Adani Total Gas Limited	33
Tamil Nadu Total			187
Telangana	Bhadradri Kothagudem & Khamman Districts	Megha City Gas Distribution Private Limited	4
	Hyderabad	Bhagyanagar Gas Limited	88
	Jagtial, Peddapalli, Karimnagar & Rajanna Sircilla Districts	Indian Oil Corporation Limited	3
	Jangaon, Jayashankar Bhupalpally, Mahabubabad, Warangal Urban & Warangal Rural Districts	Megha City Gas Distribution Private Limited	4
	Medak, Siddipet & Sangareddy Districts	Torrent Gas Private Limited	16
	Medchal-Malkajgiri, Ranga Reddy & Vikarabad Districts	Megha City Gas Distribution Private Limited	15
	Nalgonda Suryapet & Yadadri Bhuvanagiri Districts	Megha City Gas Distribution Private Limited	13
	Nizamabad, Adilabad, Nirmal, Mancherla Kumuram Bheem Asifabad and Kamareddy districts	Maharashtra Natural Gas Limited	4
Telangana Total			147

Table 3.8 Continued

State/Union Territory	“Geographical Area/ CGD Networks”	Authorized CGD Entity	CNG Stations
Telangana and Karnataka	Jogulamba Gadwal, Nagarkurnool, Mahabubnagar, Narayanpet, Wanaparthy and Yadgir districts	Megha City Gas Distribution Private Limited	2
Telangana and Karnataka Total			2
Tripura	Agartala	Tripura Natural Gas Company Limited	6
	Gomati District	Tripura Natural Gas Company Limited	6
	West Tripura (EAAA) District	Tripura Natural Gas Company Limited	6
Tripura Total			18
Uttar Pradesh	Agra	Green Gas Limited	29
	Allahabad	Indian-Oil Adani Gas Private Limited	7
	Allahabad District (EAAA), Bhadohi & Kaushambi Districts	Indian-Oil Adani Gas Private Limited	13
	Amethi, Pratapgarh & Raebareli Districts	Bharat Petroleum Corporation Limited	27
	Auraiya, Kanpur Dehat & Etawah Districts	Torrent Gas Private Limited	26
	Azamgarh, Mau and Ballia Districts	Torrent Gas Private Limited	22
	Bagpat District	Bagpat Green Energy Private Limited	11
	Banda, Chitrakoot and Mahoba	Indraprastha Gas Limited	1
	Bareilly	Central UP Gas Limited	21
	Bareilly (EAAA) District, Pilibhit and Rampur Districts	Hindustan Petroleum Corporation Limited	42
	Basti and Ambedkarnagar Districts	Torrent Gas Private Limited	13
	Bulandshahr (part) District	Indian-Oil Adani Gas Private Limited	14
	Bulandshahr District (EAAA), Aligarh & Hathras Districts	Indian-Oil Adani Gas Private Limited	17
	Faizabad & Sultanpur Districts	Green Gas Limited	9
	Farrukhabad, Etah and Hardoi Districts	Hindustan Petroleum Corporation Limited	32
	Gautam Budh Nagar District***	Indraprastha Gas Limited	57
	Ghaziabad & Hapur Districts	Indraprastha Gas Limited	66
	Gonda and Barabanki Districts	Torrent Gas Private Limited	21
	Jaunpur and Ghazipur Districts	Indian-Oil Adani Gas Private Limited	10
	Jhansi	Central UP Gas Limited	8
	Kanpur	Central UP Gas Limited	52
	Kanpur (EAAA) District, Fatehpur and Hamirpur Districts	Indraprastha Gas Limited	21
	Khurja	Adani Total Gas Limited	7
	Lakhimpur Kheri, Sitapur, Bahraich, Shrawasti, Balrampur, Siddharth Nagar & Maharajganj districts	Bharat Petroleum Corporation Limited	27
	Lucknow	Green Gas Limited	43
	Mainpuri and Kannauj Districts	Hindustan Petroleum Corporation Limited	19
	Mathura	Sanwariya Gas Limited	10
	Meerut	GAIL Gas Limited	19
	Meerut District (EAAA), Muzaffarnagar & Shamli Districts	Indraprastha Gas Limited	26
	Mirzapur, Chandauli and Sonbhadra Districts	GAIL Gas Limited	15
	Moradabad	Torrent Gas Moradabad Limited	7
	Moradabad (EAAA) District	Torrent Gas Private Limited	18
	Saharanpur District	Bharat Petroleum Corporation Limited	12
Shahjahanpur and Budaun Districts	Hindustan Petroleum Corporation Limited	31	
Unnao (EAAA) District	Green Gas Limited	2	
Varanasi District	GAIL (India) Limited	18	
Gorakhpur, Sant Kabir Nagar & Kushinagar Districts	Torrent Gas Private Limited	24	
Uttar Pradesh Total			797

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	40
Uttar Pradesh & Rajasthan Total			40
Uttar Pradesh and Uttarakhand	Bijnor and Nainital Districts	Hindustan Petroleum Corporation Limited	26
Uttar Pradesh and Uttarakhand Total			26
Uttarakhand	Dehradun District	GAIL Gas Limited	13
	Haridwar District	Haridwar Natural Gas Limited	7
	Udham Singh Nagar District	Indian-Oil Adani Gas Private Limited	10
Uttarakhand Total			30
West Bengal	Burdwan District	Indian-Oil Adani Gas Private Limited	21
	Darjeeling, Jalpaiguri and Uttar Dinajpur Districts	Hindustan Petroleum Corporation Limited	1
	Howrah (EAAA) District and Hoogly (EAAA) District	Hindustan Petroleum Corporation Limited	12
	Kolkata Municipal Corporation and Parts of Adjoining Districts	Bengal Gas Company Limited	8
	Nadia (EAAA) District and North 24 Parganas (EAAA) District	Hindustan Petroleum Corporation Limited	14
	Purulia and Bankura districts	Bharat Petroleum Corporation Limited	9
	South 24 Parganas (EAAA) District	Hindustan Petroleum Corporation Limited	3
West Bengal Total			68
Grand Total			5665

Source: PNGRB

Note : EAAA stands for Excluding/Except Area Already Authorized ; * stands for the data not provided by the CGD Entity ;

Disclaimer: While every care has been taken to provide the accurate data as per submissions by the authorized entities, PNGRB/PPAC shall not be held responsible for any loss, damage etc. due to action taken by any one based on information collated by PNGRB/PPAC

Table 3.9 : LNG terminals (Operational)

Location	Promoters	Capacity as on 01.04.2023 (MMTPA)	% Capacity utilisation (FY2022-23(P))
Dahej	Petronet LNG Ltd (PLL)	17.5	77.76
Hazira	Shell Energy India Pvt. Ltd.	5.2	36.60
Dabhol	Konkan LNG Limited	*5	39.20
Kochi	Petronet LNG Ltd (PLL)	5	18.58
Ennore	Indian Oil LNG Pvt Ltd	5	13.00
Mundra	GSPC LNG Limited	5	16.00
Total Capacity		42.7	

* 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	MMBtu	Value (Mn. USD)	USD / MMBtu
2017-18	20.7	27,439	1,08,88,47,280	8,051	7.4
2018-19	21.7	28,740	1,14,04,94,327	10,253	9.0
2019-20	25.6	33,886	1,34,46,84,149	9,489	7.1
2020-21	25.1	33,198	1,31,73,69,257	7,881	6.0
2021-22	23.4	31,028	1,23,12,52,501	13,472	10.9
2022-23(P)	19.9	26,304	1,04,38,25,872	17,114	16.4

Source: P: provisional; LNG importing companies & DGCIS. Import data may have some variations with DGCIS data on LNG imports.

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

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	
1 April 2023 - 7 April 2023	9.16		12.12	
Period	Domestic Gas calculated price in US\$/MMBTU	Domestic Gas ceiling price for ONGC/OIL in US\$/MMBTU	Period	HP-HT Gas price ceiling in US\$/MMBTU
8 April 2023 - 30 April 2023	7.92	6.5	April 2023 - September 2023	12.12
1 May 2023 - 31 May 2023	8.27	6.5		

Natural Gas prices are on GCV basis

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.

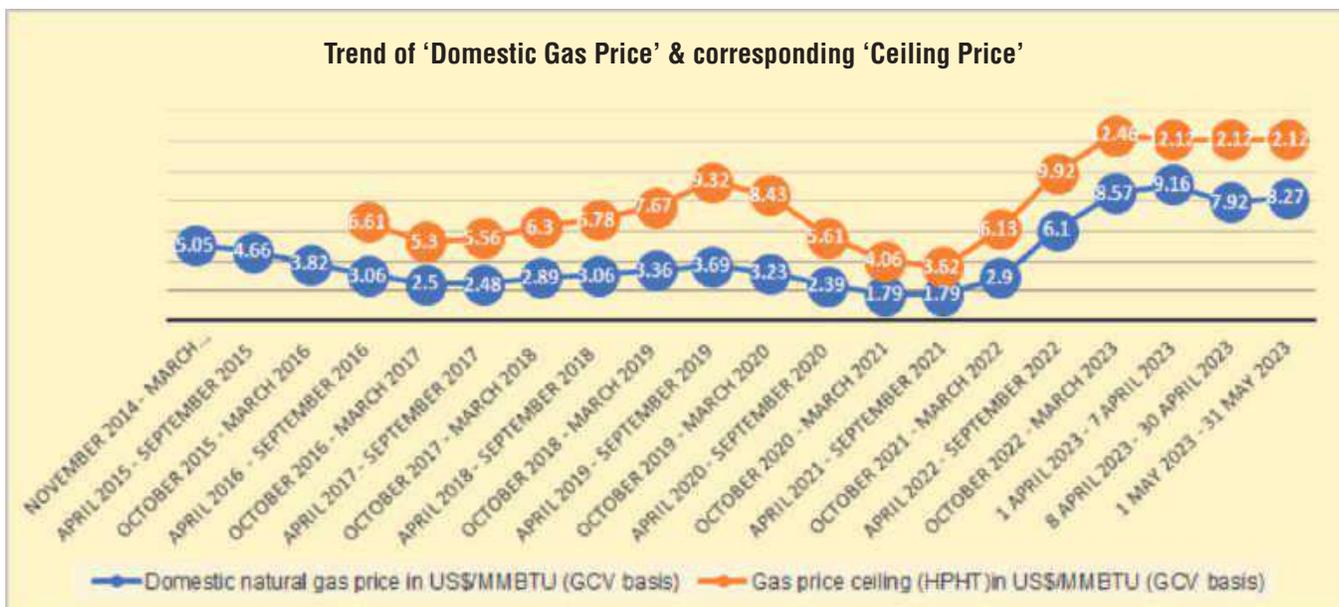


Table 3.12 Statewise CGD Sale Profile* (October 2022- March 2023 in SCMD)

State/Union Territory	CNG	“Domestic (PNG) “	“ Commercial (PNG) ”	“ Industrial (PNG) ”	“Total “
Andhra Pradesh	130153	35798	2728	44499	213180
Andhra Pradesh, Karnataka & Tamil Nadu	12002	14	0	16637	28652
Assam	3031	34223	20374	325960	383589
Bihar	162134	7558	1855	444	171991
Bihar & Jharkhand	309.5	19.47	0	0	328.9
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	132231	8737	4738	12167	157874
Dadra & Nagar Haveli (UT)	11098	3089	761	87976	102925
Daman & Diu (UT)	5926	1874	1392	15452	24644
Daman and Diu & Gujarat	22272	1095	53.72	0	23420
Goa	12241	1517	622	35084	49464
Gujarat	4181036	1189199	212253	5157230	10739718
Haryana	1655084	72135	26307	590042	2343568
Haryana & Himachal Pradesh	4298	0	0	0	4298
Haryana & Punjab	26207	0	0	0	26207
Himachal Pradesh	1867	639	0	0	2506
Jharkhand	44732	2210	36.73	0	46979
Karnataka	245148	57436	20721	337783	661087
Kerala	114451	2862	2675	6263	126251
Kerala & Puducherry	7623	0	0	0	7623
Madhya Pradesh	303082	47832	8490	158416	517820
Madhya Pradesh and Chhattisgrah	38.60	0	0	0	38.60
Madhya Pradesh and Rajasthan	21191	82.90	0	0	21274
Madhya Pradesh and Uttar Pradesh	22735	0	0	789	23524
Maharashtra	3790206.7	604996.2	137765.1	665350.4	5198318.4
Maharashtra & Gujarat	73926.6	525.6	265.6	15013.5	89731.3
National Capital Territory of Delhi (UT)	4543001.9	370175.8	159672.3	172425.1	5245275.1
Odisha	28746	3350	122.9	0.0	32219
Puducherry	41.7	0.0	0.0	0.0	41.7
Puducherry & Tamil Nadu	708	54.7	0.0	0.0	763
Punjab	231189	18513	6138	368972	624812
Rajasthan	380857	7753	980	169111	558700
Tamil Nadu	108095	11.66	0.01	18878	126985
Telangana	177651	56209	357	30400	264616
Telangana and Karnataka	1162	0	0	0	1162
Tripura	96988	45544	8890	19345	170768
Uttar Pradesh	2631755	315035	69815	669056	3685661
Uttar Pradesh & Rajasthan	134504	3325	2458	1289014	1429301
Uttar Pradesh and Uttrakhand	15688	4.38	0	0	15693
Uttrakhand	62815	17075	1234	66653	147777
West Bengal	27223	0	0	0	27223
Grand Total	19423450	2908893	690704	10272961	33296008

* Inputs based on the information submitted by CGD entities - subject to revisions, if any.
Sales of SCMD (SCM per day) calculated based on sale period

Table 3.12 A: CGD Sale Data* (in SCMD) - Six Months

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
October-2022 to March 2023	19423450	2908893	690704	10272961	33296008

* Inputs based on the information submitted by CGD entities - subject to revisions, if any.
Sales of SCMD (SCM per day) calculated based on sale period

Segment Trends- CGD Sale Profile vis-à-vis previous Six Months (in %)

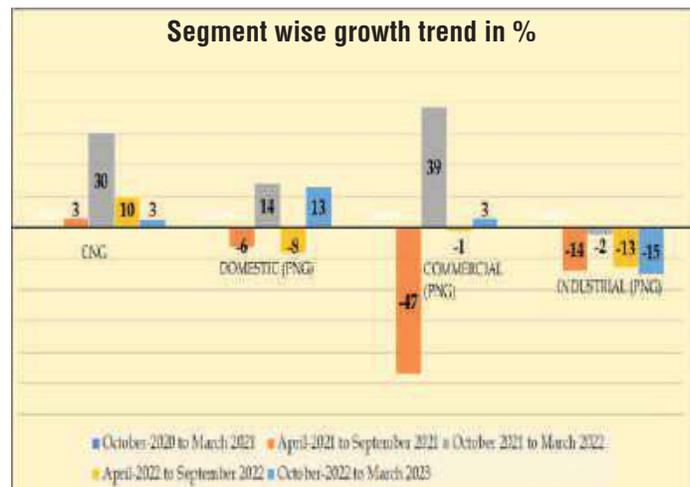
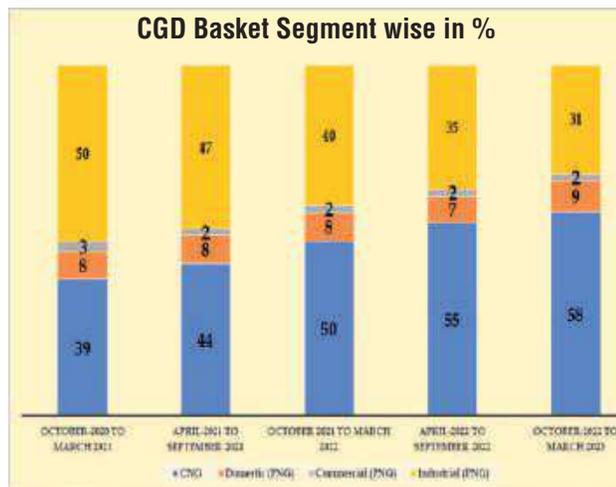


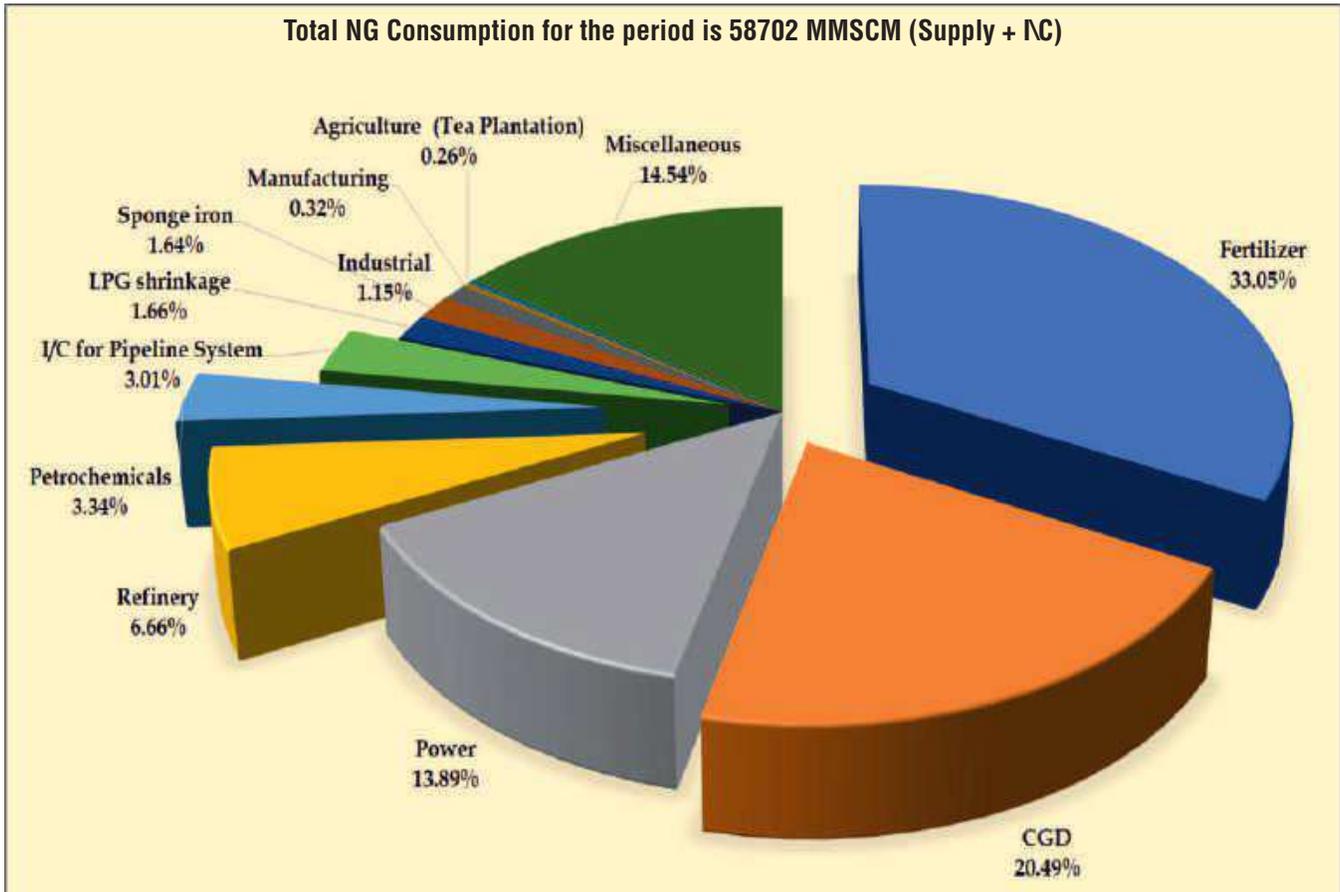
Table 3.12 B: Sector wise CGD Sale (Annual Sale Data* in MMSCM)

Period	CNG	Domestic (PNG)	Commercial (PNG)	Industrial (PNG)	Total	"Total (in MMSCMD)"
FY 2021-22	5563	959	213	5124	11859	32
FY 2022-23	7001	1000	249	4086	12336	34

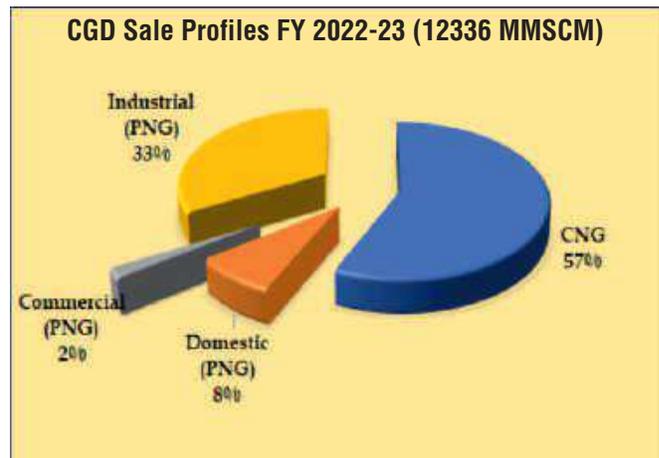
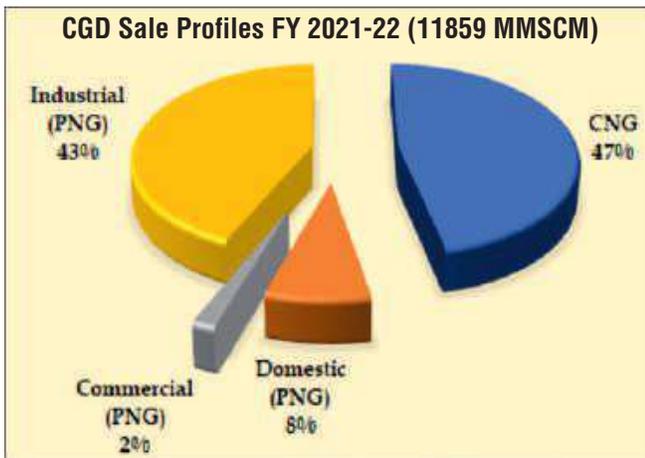
* Inputs based on the information submitted by CGD entities - subject to revisions, if any.
Sales of SCMD (SCM per day) calculated based on sale period



Sectoral Consumption of Natural Gas (in%) APRIL 22 - March 23



Sectoral Break up of CGD Sales Profile in FY2022-23 & its YoY comparison





Chapter-4

Refining & Production





CHAPTER - HIGHLIGHTS

Refining & Production

As of April 2023, India's oil refining capacity stood at 253.9 million metric tonnes per annum (MMTPA) from 251.2 MMTPA in FY 2022 – 23 as the Refining Capacity of HPCL – VISHAKH refinery has increased from 8.3 MMTPA to 11.0 MMTPA. HPCL - VISHAKH refiner will further increase its refining capacity from 11 MMTPA to 15 MMTPA in next phase. India is the second-largest refiner in Asia & fourth largest in the world. India has 23 Nos. of refineries presently Installed where Private companies owned about 34.7 % 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. Numaligarh Refinery is under capacity augmentation from 3.0 MMTPA to 9.0 MMTPA.

Post covid Indian refiners have increased their crude processing which led to processing of 255.2 MMT (excluding Other Inputs) in FY 2022 – 23. which is 5.6 % higher that of FY 2021 – 22. Overall Capacity utilization by Indian refineries was 101.6 % in FY 2022-23 as compared to 97.0 % FY 2021 –22.

Further, in FY 2022 – 23, High Sulfur crude processed by Indian refineries was 77.5 % whereas it was 76.6 % in FY 2021 – 22.

Due to recovery of demand, the total production of petroleum products by Indian refineries increased by 4.8% during FY 2022-23 compared to Last Year and stood at 266.5 (including fractionator production of 3.5 MMT). This increase in production was mainly contributed by major petroleum products like LPG by 4.8 %; MS by 6.4 %; ATF by 46.1 %; HSD by 6.2 %.

Export & Import

Crude Import

The crude oil imports increased by 9.6% during FY 2022-23 as compared to previous year are inline with increase in consumption of petroleum products.

Exports of POL products decreased by 2.7% during FY 2022-23 as compared to the previous year. The decrease in POL products export during FY 2022-23 was mainly due to decrease in export of high-speed diesel (HSD), naphtha and motor spirit (MS) whereas consumption of HSD and MS increased during the same period. In value terms, during FY 2022-23, exports increased from 44.4 billion US\$ to 57.3 billion US\$, an increase of 29.0% compared to FY 2021-22. During 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 46.7%, 21.5% and 11.9% respectively.

POL products imports increased by 14.2% during FY 2022-23 as compared to the previous year. The increase in POL products imports during FY 2022-23 was mainly due to increase in import of petcoke, liquified petroleum gas (LPG) and naphtha. During FY 2022-23, in import basket of petroleum products, LPG bags the highest share of 41.1% followed by petcoke (19.5%) and fuel oil (19.2%).

Map of refineries in India

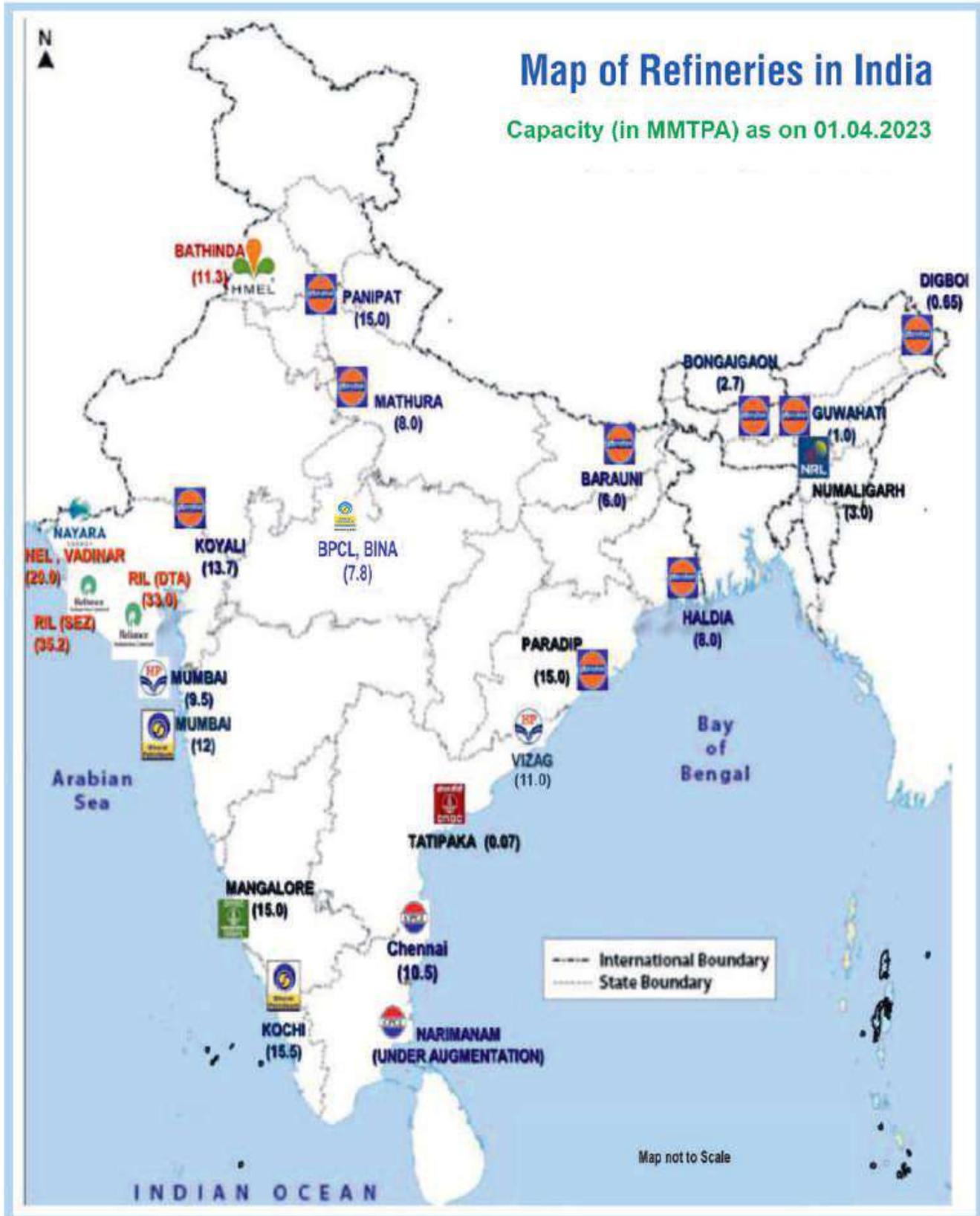


Table 4.1 : Refineries: Installed capacity and crude oil processing

Sl. no.	Refinery	Installed capacity (MMTPA)		Crude oil processing (MMT)				
		01.04.2022	01.04.2023	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
1	Barauni	6.0	6.0	6.7	6.5	5.5	5.6	6.8
2	Koyali	13.7	13.7	13.5	13.1	11.6	13.5	15.6
3	Haldia	8.0	8.0	8.0	6.5	6.8	7.3	8.5
4	Mathura	8.0	8.0	9.7	8.9	8.9	9.1	9.6
5	Panipat	15.0	15.0	15.3	15.0	13.2	14.8	13.8
6	Guwahati	1.0	1.0	0.9	0.9	0.8	0.7	1.1
7	Digboi	0.65	0.65	0.7	0.7	0.6	0.7	0.7
8	Bongaigaon	2.35	2.7	2.5	2.0	2.5	2.6	2.8
9	Paradip	15.0	15.0	14.6	15.8	12.5	13.2	13.6
	IOCL total	69.7	70.1	71.8	69.4	62.4	67.7	72.4
10	Mumbai	7.5	9.5	8.7	8.1	7.4	5.6	9.8
11	Visakh	8.3	11.0	9.8	9.1	9.1	8.4	9.3
12	HMEL-Bathinda	11.3	11.3	12.5	12.2	10.1	13.0	12.7
	HPCL total	27.1	31.8	30.9	29.4	26.5	27.0	31.8
13	Mumbai	12.0	12.0	14.8	15.0	12.9	14.4	14.5
14	Kochi	15.5	15.5	16.1	16.5	13.3	15.4	16.0
15	BORL-Bina	7.8	7.8	5.7	7.9	6.2	7.4	7.8
	BPCL total	35.3	35.3	36.5	39.4	32.4	37.2	38.4
16	Manali	10.5	10.5	10.3	10.2	8.2	9.0	11.3
17	CBR	0.0	0.0	0.4	0.0	0.0	0.0	0.0
	CPCL total	10.5	10.5	10.7	10.2	8.2	9.0	11.3
18	Numaligarh	3.0	3.0	2.9	2.4	2.7	2.6	3.1
19	Tatipaka	0.07	0.07	0.07	0.09	0.08	0.08	0.07
20	MRPL-Mangalore	15.0	15.0	16.2	14.0	11.5	14.9	17.1
	ONGC total	15.1	15.1	16.3	14.0	11.6	14.9	17.2
21	RIL-Jamnagar (DTA)	33.0	33.0	31.8	33.0	34.1	34.8	34.4
22	RIL-Jamnagar (SEZ)	35.2	35.2	37.4	35.9	26.8	28.3	27.9
23	NEL*-Vadinar	20.0	20.0	18.9	20.6	17.1	20.2	18.7
	All India	248.9	253.9	257.2	254.4	221.8	241.7	255.2

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

MMTPA: Million Metric Tonne Per Annum, MMT: Million Metric Tonne

(P) Provisional

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

(Million metric tonne)						
Sl. no.	Type of crude	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
1	HS crude	194.2	192.4	161.4	185.0	197.9
2	LS crude	63.0	62.0	60.3	56.7	57.4
	Total crude	257.2	254.4	221.8	241.7	255.2
	Share of HS crude in total crude processing	75.5%	75.6%	72.8%	76.6%	77.5%

Source: Oil companies

(P) Provisional

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	2022-23 (P)
1	Imported crude	225.5	225.1	193.8	214.7	228.8
2	Indigenous crude	31.7	29.3	28.0	27.0	26.5
	Total crude	257.2	254.4	221.8	241.7	255.2
	Share of imported crude in total crude processing	87.7%	88.5%	87.4%	88.8%	89.6%

Source: Oil companies

(P) Provisional

Table 4.4 : Domestic Production of petroleum products

(Million metric tonne)

	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
A) From crude oil/refineries					
Light ends	85.1	87.4	83.0	89.3	89.6
of which: LPG	10.7	10.9	10.2	10.6	11.2
MS	38.0	38.6	35.8	40.2	42.8
Naphtha	18.4	19.4	18.4	19.0	16.1
Others	18.0	18.5	18.6	19.5	19.5
Middle distillates	136.3	135.5	115.4	125.4	136.6
of which: SKO	4.0	3.2	2.4	1.9	0.9
ATF	15.5	15.2	7.1	10.3	15.0
HSD	110.5	111.1	100.4	107.1	113.7
LDO	0.7	0.6	0.7	0.8	0.6
Others	5.7	5.5	4.8	5.3	6.3
Heavy ends	36.0	35.3	30.9	35.5	36.8
of which: Furnace Oil	9.5	8.9	7.1	8.5	9.6
LSHS	0.4	0.4	0.4	0.4	0.7
Lube Oil	0.9	0.9	1.1	1.2	1.4
Bitumen	5.6	4.9	4.9	5.1	4.9
RPC/Petcoke	13.7	14.6	12.0	15.5	15.4
Others	5.9	5.5	5.5	4.8	4.8
Sub total (A)	257.4	258.2	229.3	250.3	263.0
B) From natural gas/fractionators					
Sub total (B)	4.9	4.8	4.2	4.1	3.5
of which: LPG	2.1	2.0	1.9	1.6	1.6
Naphtha	1.2	1.2	1.0	1.0	1.0
SKO	0.07	0.05	0.03	0.0	0.0
ATF	0.02	0.03	0.02	0.0	0.0
HSD	0.04	0.06	0.06	0.0	0.1
Others	1.5	1.5	1.3	1.3	0.8
Total production (A +B)	262.4	262.9	233.5	254.3	266.5

Source: Oil companies

(P) Provisional



Table 4.5 : Production of petroleum products : Refinery & Fractionator

Major products	(Million metric tonne)									
	2018-19		2019-20		2020-21		2021-22		2022-23 (P)	
	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
HSD	110.6	42.1	111.1	42.3	100.4	43.0	107.2	42.1	113.8	42.7
MS	38.0	14.5	38.6	14.7	35.8	15.3	40.2	15.8	42.8	16.1
Naphtha	19.6	7.5	20.6	7.8	19.4	8.3	20.0	7.9	17.0	6.4
FO	9.5	3.6	8.9	3.4	7.1	3.0	8.5	3.3	9.6	3.6
ATF	15.5	5.9	15.2	5.8	7.1	3.0	10.3	4.0	15.0	5.6
LPG	12.8	4.9	12.8	4.9	12.1	5.2	12.2	4.8	12.8	4.8
SKO	4.1	1.5	3.2	1.2	2.4	1.0	1.9	0.8	0.9	0.4
Bitumen	5.6	2.1	4.9	1.9	4.9	2.1	5.1	2.0	4.9	1.8
LSHS	0.4	0.2	0.4	0.2	0.4	0.2	0.4	0.2	0.7	0.3
Lubes	0.9	0.4	0.9	0.4	1.1	0.5	1.2	0.5	1.4	0.5
LDO	0.7	0.3	0.6	0.2	0.7	0.3	0.8	0.3	0.6	0.2
RPC/ Petcoke	13.7	5.2	14.6	5.6	12.0	5.2	15.5	6.1	15.4	5.8
Others#	31.0	11.8	31.0	11.8	30.2	12.9	30.9	12.2	31.4	11.8
Total	262.4	100.0	262.9	100.0	233.5	100.0	254.3	100.0	266.5	100.0

Source: Oil companies

Others include sulphur, propylene, propane, reformat, butane, MTO (Mineral Turpentine oil) etc

(P) Provisional

Table 4.6 : Production vis a vis consumption of petroleum products

Year	(Million metric tonne)		
	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	201.7	254.3	52.6
2022-23 (P)	223.0	266.5	43.5

Note:

* includes direct imports by private parties

*Fractionators and gas processing plants

(P) Provisional

Table 4.7 : Gross Refining Margins (GRM) of Refineries

							\$/bbl
Company	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23 (P)	
IOCL#	8.49	5.41	0.08	5.64	11.25	19.52	
BPCL	6.85	4.58	2.50	4.06	9.09	20.24	
HPCL	7.40	5.01	1.02	3.86	7.19	12.09	
CPCL	6.42	3.70	(1.18)	7.14	8.85	12.48	
MRPL	7.54	4.06	(0.23)	3.71	8.72	9.88	
NRL#	31.92	28.11	24.55	37.23	43.46	35.82	
BORL	11.70	9.80	5.60	6.20	11.00	**	
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	10.76	

(P) - Provisional

#GRM of North-East refineries are including excise duty benefit

* Not available

** BPCL figures for the period 2022-23 includes BORL also 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	2018-19	2019-20	2020-21	2021-22	2022-23(P)	
IOCL	Barauni	87.9	86.9	87.1	85.9	83.8	
	Koyali	81	79.5	72.1	76.7	74.0	
	Haldia	69.9	69.0	72.2	72.2	74.8	
	Mathura	76.1	75.6	72.3	74.9	71.8	
	Panipat	82.8	84.8	80.2	83.9	78.9	
	Guwahati	81	83.5	82.1	86.4	81.5	
	Digboi	75.8	72.5	67.9	79.2	72.8	
	Bongaigaon	84.8	80.8	84.8	81.3	80.0	
	Paradip	80.8	80.7	79.2	79.6	79.5	
CPCL	Manali	75.3	77.6	78.4	74.9	78.3	
	CBR	77.3	-	-	-	-	
HPCL	Mumbai	77.6	77.0	76.2	70.4	75.9	
	Visakh	74.5	72.1	74.4	70.7	67.9	
BPCL	Mumbai	82.2	84.9	83.7	84.4	85.5	
	Kochi	82.5	84.2	83.8	85.4	83.9	
	Bina	-	-	-	84.3	85.3	
NRL	Numaligarh	87.1	83.0	86.4	85.7	89.9	
MRPL	Mangalore	76.8	76.7	78.1	78.8	77.9	
PSU oil cos. average		79.6	80.0	78.6	79.6	78.7	

Source : CHT

(P) Provisional

Table 4.9 : Fuel & Loss

S. No.	Company	Refinery	2017-18		2018-19		2019-20		2020-21		2021-22		2022-23 (P)							
			Crude T'put + other inputs	Fuel & Loss		Crude T'put + other inputs	Fuel & Loss		Crude T'put + other inputs	Fuel & Loss		Crude T'put + other inputs	Fuel & Loss		Crude T'put + other inputs	Fuel & Loss				
				Qty	%		Qty	%		Qty	%		Qty	%		Qty	%	Qty	%	
1	IOCL	Barauni	6.0	0.5	9.2	6.9	0.6	9.0	6.7	0.6	8.8	5.7	0.6	9.8	5.7	0.5	9.6	6.9	0.6	8.8
2		Koyali	14.5	1.2	8.6	14.2	1.3	9.0	13.9	1.3	9.3	12.4	1.2	10.0	14.2	1.4	9.6	16.1	1.4	8.5
3		Haldia	7.8	0.7	8.4	8.1	0.7	8.3	6.6	0.6	9.6	6.9	0.7	10.5	7.5	0.8	10.7	8.9	0.9	9.8
4		Mathura	9.8	0.7	7.0	10.2	0.7	6.6	9.5	0.6	6.7	9.4	0.7	7.0	9.7	0.7	6.8	10.1	0.7	6.5
5		Panipat	17.3	1.4	8.1	17.3	1.4	7.9	16.7	1.4	8.3	14.9	1.4	9.2	16.7	1.4	8.5	15.1	1.4	9.0
6		Guwahati	1.3	0.1	10.2	1.2	0.1	9.5	1.3	0.1	9.7	1.1	0.1	10.6	1.0	0.1	9.7	1.4	0.13	8.7
7		Digboi	0.7	0.1	10.3	0.8	0.1	10.0	0.7	0.1	11.0	0.7	0.1	11.7	0.8	0.1	10.6	0.8	0.08	10.4
8		Bongaigaon	2.4	0.2	8.7	2.6	0.2	8.2	2.1	0.2	8.5	2.5	0.3	11.1	2.8	0.3	11.9	2.9	0.3	11.8
9		Paradip	12.7	1.4	10.9	14.6	1.4	9.8	15.8	1.5	9.6	12.5	1.4	11.0	13.4	1.5	11.0	13.7	1.4	10.0
		IOCL Total	72.6	6.4		75.7	6.4		73.4	6.4		66.1	6.4		71.7	6.8		76.0	6.8	
10	HPCL	Mumbai	8.6	0.6	7.2	8.8	0.6	7.0	8.1	0.4	5.1	7.5	0.6	8.0	5.7	0.5	8.2	9.8	0.7	7.4
11		Visakh	9.6	0.7	7.1	9.8	0.7	7.3	9.1	0.7	7.5	9.1	0.7	7.9	8.4	0.7	8.1	9.3	0.7	7.5
12		HMEL-Bathinda	8.9	0.6	6.2	12.6	0.7	5.8	12.3	0.7	5.7	10.1	0.6	6.0	13.1	0.8	6.1	12.8	0.9	7.3
		HPCL Total	27.2	1.9		31.2	2.1		29.5	1.8		26.7	1.9		27.2	1.9		31.9	2.4	
13	BPCL	Mumbai	14.3	0.7	4.6	14.8	0.6	4.0	15.1	0.6	4.2	13.1	0.5	4.1	14.5	0.6	4.3	14.6	0.7	4.9
14		Kochi	14.5	1.1	7.7	16.4	1.3	7.8	17.2	1.4	8.3	13.9	1.1	8.2	15.9	1.4	8.8	16.4	1.4	8.7
15		BORL-Bina	6.7	0.7	9.7	5.7	0.6	10.2	7.9	0.8	9.9	6.2	0.7	11.8	7.4	0.8	10.6	7.8	0.8	10.2
		BPCL Total	35.5	2.4		37.0	2.4		40.2	2.8		33.1	2.4		37.8	2.8		38.9	3.0	
16	CPCL	Numaligarh	3.1	0.3	10.1	3.2	0.3	9.5	2.7	0.3	10.0	3.0	0.3	9.9	2.9	0.3	9.8	3.4	0.3	9.5
17		Manali	10.4	1.0	9.7	10.3	1.1	10.3	10.3	1.0	10.0	8.5	0.9	10.7	9.4	0.9	9.7	11.6	1.0	9.1
18		CBR	0.5	0.0	5.0	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
		CPCL Total	10.9	1.0		10.8	1.1		10.3	1.0		8.5	0.9		9.4	0.9		11.6	1.0	
19	ONGC	Tatipaka	0.08	0.004	5.3	0.1	0.003	5.1	0.1	0.007	7.8	0.1	0.004	5.1	0.1	0.003	4.5	0.07	0.003	4.2
20		MRPL-Mangalore	16.4	1.7	10.2	16.5	1.7	10.2	14.1	1.5	10.6	11.5	1.4	11.9	15.0	1.6	10.8	17.1	1.9	11.1
		ONGC Total	16.4	1.7		16.6	1.7		14.2	1.5		11.6	1.4		15.0	1.6		17.2	1.9	
21		Jamnagar (DTA)	36.4	2.7	7.4	37.0	2.8	7.5	40.1	3.8	9.5	40.7	4.0	9.9	41.1	4.0	9.7	41.4	4.3	10.4
22		Jamnagar (SEZ)	47.8	3.7	7.8	48.9	3.6	7.4	52.1	4.6	8.9	45.1	4.4	9.8	50.5	5.0	9.8	51.6	5.3	10.2
23		Vadinar	21.0	1.2	5.7	19.2	1.1	6.0	21.1	1.2	5.7	17.5	1.0	6.0	20.5	1.1	5.5	19.1	1.1	5.8
		Total	271.0	21.3		279.6	21.6		283.5	23.5		252.3	22.8		276.1	24.4		291.0	26.0	

*Nayara Energy Limited (formerly Essar Oil Limited)

Source: Oil companies

(P) Provisional



Table 4.10: Specific energy consumption of PSU Refineries

						MBTU/Bbl/NRGF)
Company	Refinery	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
IOCL	Barauni	77.9	75.9	78.1	76.8	71.2
	Koyali	75.3	77.4	82.6	79.5	70.0
	Haldia	76.6	88.3	89.3	86.9	75.4
	Mathura	63.9	65.8	63.1	62.7	59.8
	Panipat	64.1	64.5	68.0	63.6	61.1
	Guwahati	112.3	121.2	123.7	121.4	104.2
	Digboi	101.8	101.7	98.1	88.4	96.0
	Bongaigaon	88.6	96.8	108.5	111.1	108.5
CPCL	Paradip	66.8	64.1	69.0	68.4	61.2
	Manali	83.0	81.5	86.7	82.8	74.2
HPCL	CBR	118.1	-	-	-	-
	Mumbai	82.8	84.8	98.2	105.8	76.0
BPCL	Visakhapatnam	77.3	84.4	81.2	85.3	79.1
	Mumbai	64.7	63.0	64.4	64.1	62.7
NRL	Kochi	71.6	68.2	71.7	67.1	63.9
	Bina	-	-	-	69.9	68.2
MRPL	Numaligarh	65.9	64.8	64.4	63.5	61.7
MRPL	Mangalore	74.2	75.3	81.4	73.5	71.2
PSU average		72.7	72.8	76.6	73.7	68.8

Source: CHT

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

(P) Provisional



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

Import / export	Crude oil & petroleum products	2018-19			2019-20			2020-21			2021-22 (P)			2022-23 (P)		
		Quantity	Value		Quantity	Value		Quantity	Value		Quantity	Value		Quantity	Value	
		Million tonne	US\$ (Billion)	Rs. (Crores)	Million tonne	US\$ (Billion)	Rs. (Crores)	Million tonne	US\$ (Billion)	Rs. (Crores)	Million tonne	US\$ (Billion)	Rs. (Crores)	Million tonne	US\$ (Billion)	Rs. (Crores)
I M P O R T	Crude oil	226.5	111.9	783183	227.0	101.4	717001	196.5	62.2	459779	212.4	120.7	901262	232.7	157.6	1260910
	of which, PSU/JVs	142.9	71.9	504524	141.4	64.7	458073	121.8	39.7	292718	134.7	77.3	577372	154.0	106.4	853130
	Private	83.6	40.0	278659	85.5	36.7	258928	74.7	22.6	167060	77.7	43.4	323890	78.7	51.2	407780
	Products															
	LPG	13.2	7.2	49939	14.8	7.1	50347	16.5	7.2	53752	17.0	12.2	91468	18.3	13.3	107155
	Petrol	0.7	0.4	3104	2.1	1.4	9610	1.4	0.7	4950	0.7	0.5	3895	1.1	1.0	8110
	Naphtha	2.1	1.4	9665	1.7	0.9	6678	1.2	0.5	3844	0.2	0.2	1499	0.9	0.6	4781
	Aviation Turbine Fuel	0.3	0.2	1392	0.1	0.04	309	0	0	0	0	0	0	0	0	0
	Kerosene	0	0	0	0	0	0	0.003	0.002	12	0	0	0	0	0	0
	Diesel	0.6	0.4	2486	2.8	1.6	11619	0.6	0.3	1960	0.04	0.03	253	0.3	0.5	3638
	Lubes/LOBS	2.5	1.9	13349	2.7	1.7	11869	2.7	1.6	12170	3.1	2.6	19704	2.2	2.3	18449
	Fuel Oil	1.4	0.7	4782	4.6	1.6	11791	6.5	1.9	14312	9.0	4.4	32815	8.6	4.2	33474
	Bitumen	0.9	0.3	2149	1.6	0.5	3634	2.1	0.6	4325	2.6	1.0	7678	2.8	1.2	9902
	Petcoke	7.9	1.5	10350	10.7	1.4	9713	8.3	0.9	6410	4.2	1.1	8203	8.7	2.3	18157
	Others**	3.9	2.4	16449	2.7	1.4	10172	4.1	1.0	7695	2.2	1.5	11319	1.8	1.4	11217
	Total product import	33.3	16.3	113665	43.8	17.7	125742	43.2	14.8	109430	39.0	23.7	176835	44.5	26.8	214883
	of which, PSU/JVs	14.6	8.1	56178	20.0	10.2	72699	18.7	8.3	61332	18.1	13.0	97082	19.8	14.9	119489
Private	18.8	8.3	57487	23.8	7.5	53042	24.6	6.5	48098	20.9	10.7	79753	24.7	11.9	95395	
"Total import (crude oil + product)"	259.8	128.3	896848	270.7	119.1	842743	239.7	77.0	569208	251.4	144.3	1078097	277.3	184.4	1475793	
E X P O R T	Products															
	LPG	0.4	0.3	1976	0.5	0.3	1970	0.5	0.2	1797	0.5	0.4	3214	0.5	0.5	3854
	Petrol	12.9	8.6	60419	12.7	7.7	54512	11.6	5.0	36530	13.5	10.9	81649	13.1	12.8	102489
	Naphtha	7.0	4.1	28893	8.9	4.4	31509	6.5	2.5	18643	6.9	5.0	37231	5.7	4.2	33357
	Aviation Turbine Fuel	7.4	4.9	34030	6.9	4.0	28458	3.5	1.3	9377	5.2	3.7	27112	7.3	7.3	58598
	Kerosene	0.02	0.01	98	0.2	0.1	560	0.02	0.01	48	0.01	0.01	77	0.01	0.01	100
	Diesel	27.8	17.6	123519	31.7	17.5	123919	30.6	11.1	81611	32.4	22.1	164741	28.5	28.9	231130
	LDO	0.1	0.05	364	0	0	0	0	0	0	0	0	0	0.001	0.002	13
	Lubes/LOBS	0.01	0.02	106	0.01	0.01	96	0.01	0.01	93	0.01	0.02	114	0.01	0.02	149
	Fuel Oil	2.2	0.9	6537	1.5	0.5	3811	1.2	0.3	2318	1.8	0.9	6633	1.8	1.0	7835
	Bitumen	0.02	0.01	72	0.03	0.01	89	0.01	0.003	23	0.01	0.004	28	0.01	0.01	42
	Petcoke / CBFS	1.1	0.5	3255	0.5	0.2	1096	0.6	0.04	292	0.2	0.1	553	0.3	0.1	648
	Others***	2.1	1.2	8429	2.9	1.1	7998	2.3	0.9	6436	2.3	1.4	10449	3.7	2.5	20472
	Total product export	61.1	38.2	267697	65.7	35.8	254018	56.8	21.4	157168	62.8	44.4	331801	61.0	57.3	458688
	of which, PSU/JVs	13.4	8.1	56415	14.2	7.5	53276	10.6	4.0	29708	14.2	10.3	76775	12.9	11.7	93335
	Private	47.7	30.2	211282	51.5	28.4	200742	46.1	17.4	127460	48.6	34.2	255026	48.1	45.6	365353
	Net import	198.8	90.0	629152	205.1	83.2	588725	182.9	55.6	412041	188.6	99.9	746296	216.2	127.1	1017105
Net product export	27.7	21.9	154031	21.9	18.2	128276	13.5	6.6	47738	23.7	20.8	154966	16.5	30.5	243804	

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

Note:

Figures are rounded off

*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 increased by 9.6% during FY 2022-23 as compared to FY 2021-22

Imports made due to deficit in production viz. LPG and Lubes/LOBS accounted for 45.9% share of total POL products import during FY 2022-23 as compared to 51.5% during FY 2021-22

Imports of naphtha and FO were done for commercial and technical considerations and accounted for 21.2% share of total POL products import during FY 2022-23 as compared to 23.6% during FY 2021-22.

Decrease of 2.7% was recorded in POL products export during FY 2022-23 as compared to during FY 2021-22 mainly due to decrease in exports of high speed diesel (HSD), motor spirit (MS) and naphtha.

Table 4.12 : Exchange rates of Indian rupee (₹)

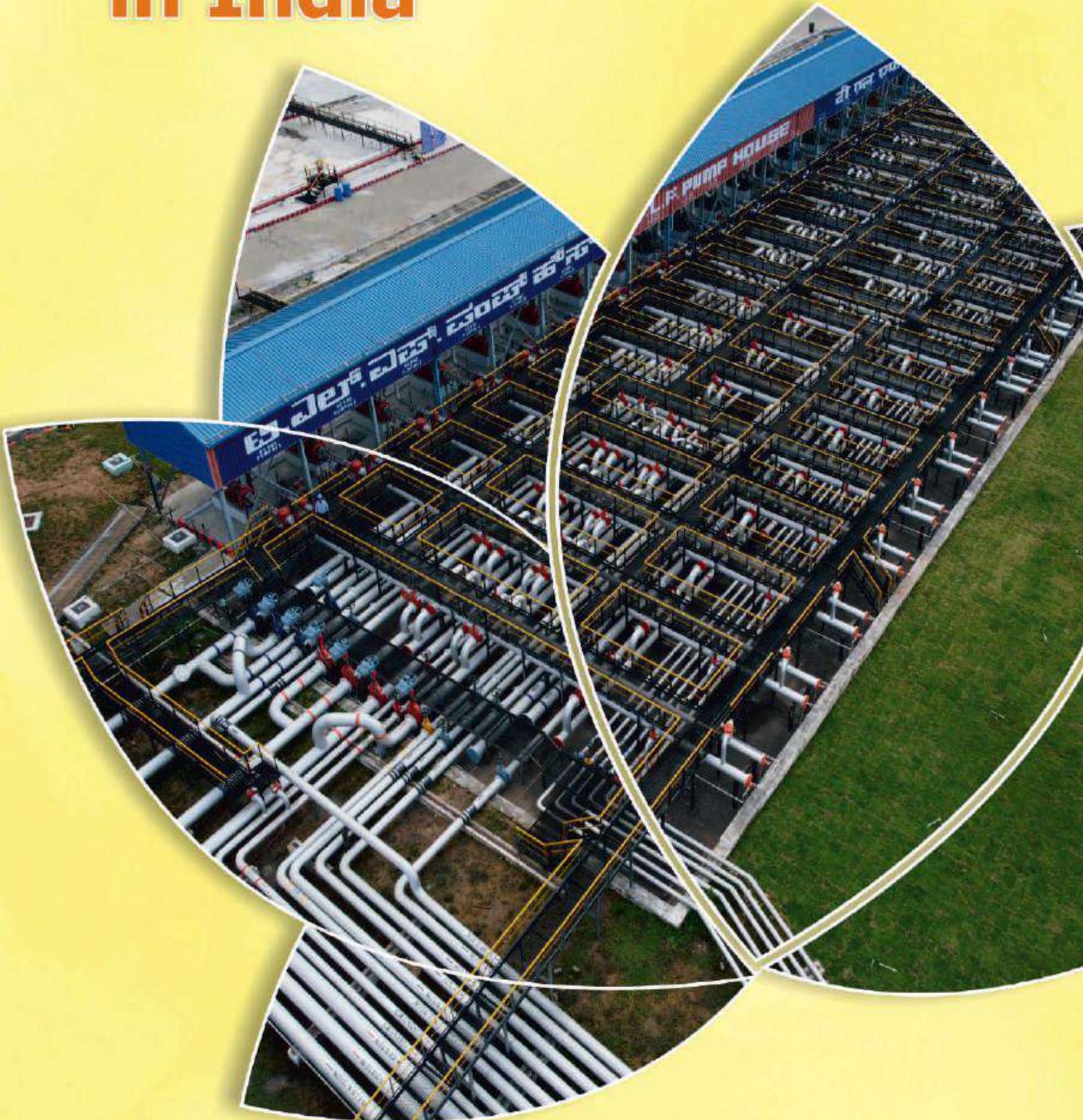
Year	US dollar (\$)	British pound (£)	Euro (€)	Japanese yen (¥)
Indian rupee (₹) / foreign currency				
2002-03	48.41	74.84	48.07	0.40
2003-04	45.92	77.74	54.01	0.41
2004-05	44.95	82.95	56.55	0.42
2005-06	44.28	79.02	53.88	0.39
2006-07	45.29	85.72	58.11	0.39
2007-08	40.24	80.80	56.99	0.35
2008-09	45.91	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	80.39	96.83	83.72	0.59
2023 : Month wise				
January	81.90	100.08	88.21	0.63
February	82.61	99.90	88.53	0.62
March	82.29	99.81	88.04	0.62
April	82.02	101.98	89.87	0.61
May	82.34	102.73	89.48	0.60
June	82.23	103.81	89.07	0.58

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

Note: The rates are average for the period.

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 01.04.2023, the total length of crude oil pipeline network across India is 10420 km with a capacity of 147.9 MMTPA. During FY 2022-23, the utilization of the crude oil pipelines was 72.7%. The utilization of Crude oil pipeline increased by 3.0 percentage points during FY 2022-23 as compared to the previous year. Product pipelines, including LPG, have a total network of 22488 km and 139.6 MMTPA capacity. During FY 2022-23, product pipeline utilization stands at 68.0% as compared to 69.9% in FY 2021-22. Installed capacity of the Product/LPG pipeline increased by 23.9 MMTPA during FY 2022-23.



Table 5.1: Natural Gas Pipelines in the Country (operational)- 01.04.2023

S. No.	Network/Region	Entity	Length (Kms)	Authroized capacity/ Declared capacity (MMSCMD)	Pipeline size	Pipeline Status	Average flow 2021-22 (mmscmd)	% Capacity utilisation 2021-22	Average flow Apr-Mar 2023 (P) (mmscmd)	% Capacity utilisation Apr-Mar 2023 (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%	1.50	61.6%
2	Cauvery Basin Network	GAIL	272	4.33	18"/ 12"/ 8"/ 6"/ 4"/3"/2"	Operational	2.01	46.4%	1.85	42.7%
3	Hazira-Vijaipur-Jagdishpur -GREP (Gas Rehabilitation and Expansion Project)- Dahej-Vijaipur HVJ/ VDPL	GAIL	6725	107	42"/36"/30"/18"/ 16"/14"/12"/10"/ 8"/6"/4"/2"	Operational	72.58	67.8%	72.54	67.8%
4	Dahej-Vijaipur (DVPL)- Vijaipur-Dadri (GREP) Upgradation DVPL 2 & VDPL	GAIL			48"/ 16"/12"	Operational				
5	Dahej-Uran-Panvel-Dhabhol	GAIL	943	19.90	30"/24"/18"/ 12"/6"/4"	Operational	16.84	84.6%	16.33	82.1%
6	KG Basin Network	GAIL	917	15.99	18"/16"/14"/12"/ 8"/6"/4"/2"	Operational	3.8	23.8%	3.83	24.0%
7	Gujarat Regional Network	GAIL	615	8.31	24"/18"/14"/12"/ 8"/6"/5"/2"/1"	Operational	3.14	37.8%	3.09	37.2%
8	Agartala Regional Network	GAIL	65	2.00	12"/10"/8"	Operational	1.09	54.5%	0.99	49.5%
9	Mumbai Regional Network	GAIL	125	7.04	26"/20"/18"/12"/4"	Operational	4.46	63.4%	4.40	62.5%
11	Chainsa-Jhajjar-Hissar	GAIL	442	35.00	36"/18"/16"/12"/ 10"/8"/4"	Operational	1.36	3.9%	1.74	5.0%
12	Dadri-Bawana-Nangal	GAIL	909	31.00	36"/30"/18"/10"/8"	Operational	6.95	22.4%	7.51	24.2%
13	Kochi-Kootanad-Bangalore-Mangalore #	GAIL	642	12.00	30"/ 24"/ 18" / 8"/ 4"	"Under Construction / Part Operational"	3.87	32.3%	3.29	27.4%
14	Dabhol-Bangalore	GAIL	1148	16.00	36"/30"/24"/18"/ 10"/8"	Operational	1.69	10.6%	1.86	11.6%
15	Jagdishpur-Haldia-Bokaro Dhamra-Paradip- Barauni-Guwahati #	GAIL	2383	7.44	36"/30"/24"/18" 12"/8"/6"/4"	"Under Construction / Part Operational"	1.605	21.6%	5.21	70.0%
16	Hazira-Ankleshwar (HAPI) 1	GGL	73.2	4.20	18"	Operational	0.98	23.3%	0.74	17.7%
17	Mehsana - Bhatinda^	GIGL	1673	45.94	36"/24"/18"/12"	Partially Commissioned**	3.40	7.4%	3.23	7.0%
18	Bhatinda - Gurdaspur\$	GIGL	261.42	33.93	24"/18"/16"/ 12"/8"/6"	Partially Commissioned\$	0.04	0.1%	0.04	0.1%
19	Mallavaram - Bhopal - Bhilwara - Vijaipur#	GITL	2042	78.25	42"/36"/30"/24"/18"/12"	Under Construction	1.60	2.0%	1.28	1.6%
20	High Pressure Gujarat Gas Grid	GSPL	2657.4	31	36"/30"/24"/20"/18"/ 12"/8"/6"/4"	Operational	25.35	59.0%	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 (141 Km)"	5.49	58.0%	4.37	46.0%
23	Ennore-Thiruvallur-Bengaluru-Puducherry-Nagapattinam-Madurai-Tuticorn	IOCL	1421	84.67 (installed capacity 34)	30"/24"/18"/16"/ 14"/12"/8"/6"	"Under Construction / Part Operational (under operation 285 Km)"	2.91	23.0%	3.24	13.17% *
24	Dahej-Koyali	IOCL	106	5.23	16"	Operational (106 Km)	0.03	0.6%	1.05	20.1%

Table 3.8 Continued

S. No.	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-Mar 2023 (P) (mmscmd)	% Capacity utilisation Apr-Mar 2023 (P)
25	Uran-Trombay	ONGC	24	6.00	20"	Operational	2.71	45.2%	2.81	46.8%
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%	23.68	27.9%
27	Shahdol-Phulpur	RGPL	304	3.50	16"	Operational	0.71	2027.1%	0.65	1846.4%

Source: Pipeline entities

Note:

1. GGL Pipeline - Pipeline capacity as determined by GGL

2. GSPL/GIGL/GITL pipelines

^aNatural Gas flowing through (i) Barmer - Pali - Palanpur Pipeline (ii) Pali - Ajmer - Jaipur - Sikar - Hanumangarh - Sirsa - Bhatinda Pipeline (iii) Hanumangarh - Sonipat - Panipat Pipeline

^{**}186 km of the pipeline commissioned, approx. 42 km of the pipeline is completed, approx. 5.52 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

3. Pipeline Infrastructure Limited Pipeline:

1) For the period April 2022 - March 2023 conversion factor of 37000 Btu/SCM is used for computing volumes in MMSCMD. While, For the period April 2021 - March 2022 conversion factor of 38263.11 Btu/SCM is used for computing volumes in MMSCMD.

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 re-assessed capacity determined by PIL and submitted to PNGRB is 74.83 MMSCMD.

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.

5. IOCL

*Capacity Utilisation based on pro-rata commissioning of new sections.

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

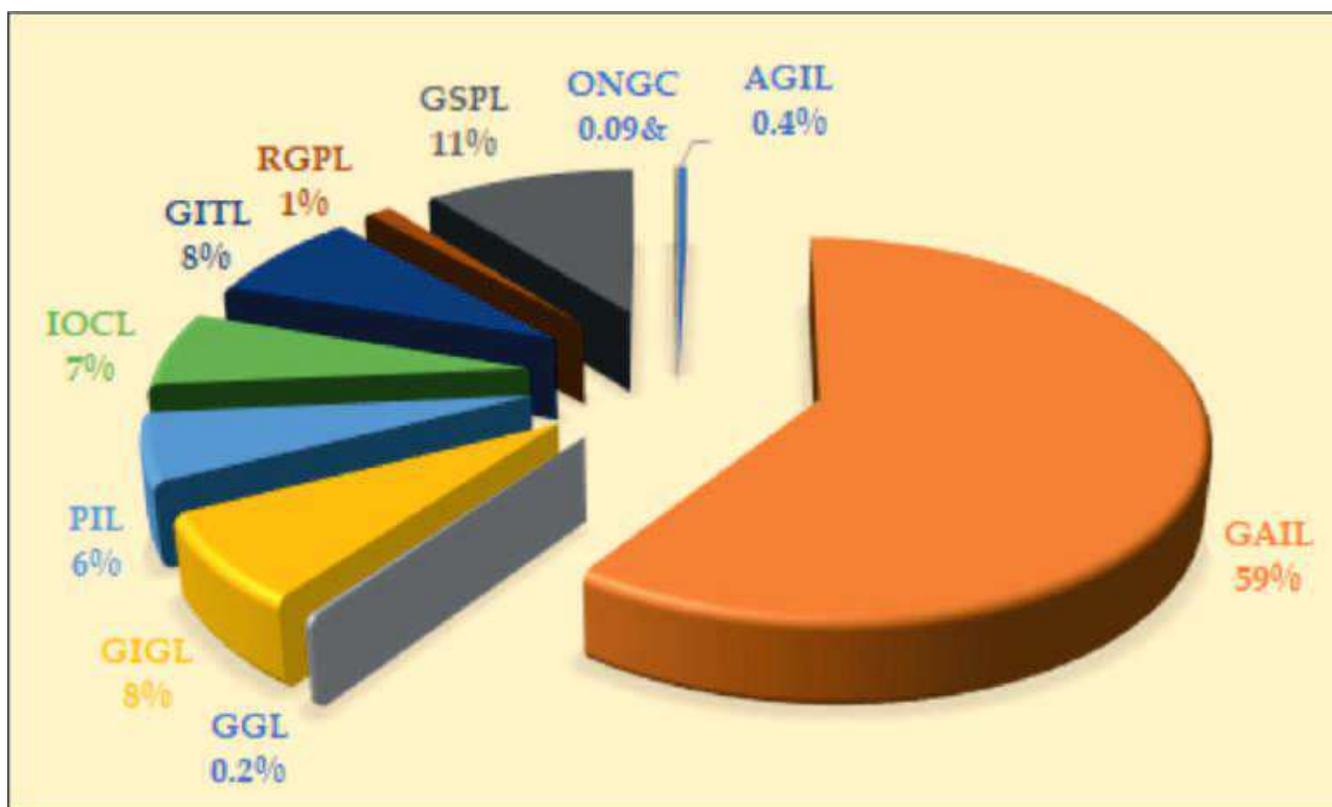


Table 5.2 : Existing major crude oil pipelines in India

Type of Pipeline -Onshore/Offshore	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during
			01.04.2023	01.04.2023	2022-23(P)	2022-23(P)
Onshore	CTF (Central Tank Farm) Kalol to CTF Nawagam - New	ONGC	63	3.1	1.0	33.2
Onshore	Nawagam-Koyali (18" line) (New)		80	5.4	3.7	68.9
Onshore	Nawagam-Koyali (14" line) (Old)		78	3.3	0.0	0.0
Onshore	Mehsana-Nawagam trunk line - New		77	2.3	2.1	93.4
Onshore	CTF, Ankleshwar to Koyali oil pipeline		95	2.2	0.5	24.2
Onshore	CTF, Ankleshwar to CPF (Central Processing Facility), Gandhar		44	0.4	0.0	0.0
Onshore	CPF, Gandhar to Saraswani 'T' point		57	1.8	0.4	23.4
Onshore	Akholjuni- Koyali oil pipe line. Akholjuni to Laxmipura T' point		66	0.5	0.4	82.5
Onshore	Lakwa-Moran oil line (New)		15	1.5	0.5	34.0
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	0.3	18.7
Onshore	Borholla- Jorhat oil line		43	0.6	0.0	0.0
Onshore	Borholla- Jorhat TPL (New)		43	0.6	0.2	34.8
Onshore	NRM (Narimanam) to CPCL		5	0.7	0.3	41.9
Onshore	KSP-WGGS to TPK Refinery		14	0.1	0.1	74.4
Onshore	GMAA EPT		4	0.1	0.0	36.2
Offshore	Mumbai High - Uran - Trunk (MUT) 30" pipeline		204	15.6	3.6	23.2
Offshore	Heera - Uran - Trunk (HUT) 24" pipeline		81	11.5	6.0	52.4
Offshore	Bombay-Uran Trunk (BUT) 30" pipeline		203	6.4	0.5	7.4
		Sub total ONGC	1284	60.6	19.8	32.6
Onshore	Salaya-Mathura pipeline (SMPL)	IOCL	2646	25.0	28.5	114.2
Onshore	Paradip-Haldia-Barauni pipeline (PHBPL)		1355	15.2	19.0	125.2
Onshore	Mundra-Panipat pipeline		1194	8.4	5.8	69.2
Offshore	Salaya Mathura Pipeline (Offshore segment)		14	-	0.0	-
Offshore	Paradip Haldia Barauni Pipeline (Offshore segment)		92	-	0.0	-
		Sub total IOCL	5301	48.6	53.4	109.8
Onshore	Duliajan-Digboi-Bongaigaon-Barauni pipeline	OIL	1193	9.0	6.8	75.5
Onshore	Mangla-Bhogat pipeline	CAIRN	660	8.7	5.1	58.4
Offshore	Bhogat Marine		28	2.0	2.1	102.5
		Sub total CAIRN	688	10.7	7.1	66.7
Onshore	Mundra- Bathinda pipeline	HMPL	1017	11.3	12.8	113.4
Onshore	Vadinar-Bina pipeline	BPCL	937	7.8	7.8	100.2
Total Crude pipelines			10420	147.9	107.6	72.7

Source : Oil companies (P): Provisional

Notes: Figures are rounded off

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

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
			01.04.2023	01.04.2023	2022-23(P)	2022-23(P)
Petroleum Products Pipelines						
Onshore	Barauni - Kanpur pipeline	IOCL	1227	3.5	3.6	104.1
Onshore	Guwahati -Siliguri pipeline		435	1.4	2.0	146.1
Onshore	Haldia-Barauni pipeline		526	1.3	1.6	125.8
Onshore	Haldia-Mourigram-Rajbandh pipeline		277	1.4	1.9	144.1
Onshore	Koyali-Ahmedabad pipeline		79	1.1	0.8	69.2
Onshore	Koyali-Jaipur-Panipat pipeline		1644	5.0	4.9	98.9
Onshore	Koyali-Ratlam pipeline		265	2.0	1.7	85.3
Onshore	Koyali-Dahej pipeline		197	2.6	0.9	33.7
Onshore	Mathura-Agra-Gawria pipeline (3)(8)		311	4.0	1.0	25.2
Onshore	Mathura-Bharatpur pipeline		21	1.2	0.2	14.1
Onshore	Mathura-Delhi pipeline		147	3.7	2.7	73.8
Onshore	Panipat-Amabala-Jalandhar (Including Kurukshetra-Roorkee-Najibabad branch line)		495	3.5	3.3	93.0
Onshore	Panipat-Delhi (Including Sonapat-Meerut branch line) pipeline		189	3.0	0.4	14.5
Onshore	Panipat Bijwasan ATF pipeline (4)		111	1.0	0.5	48.4
Onshore	Panipat-Bathinda pipeline		219	3.0	1.7	55.2
Onshore	Panipat-Rewari pipeline		155	2.1	1.4	67.9
Onshore	Chennai-Trichy-Madurai pipeline (10)		683	3.9	3.0	77.6
Onshore	Chennai - Meenambakkam ATF pipeline		95	0.2	0.2	133.3
Onshore	Chennai-Bengaluru pipeline		290	2.5	2.4	97.3
Onshore	Devangonhi - Devanhalli pipeline		36	0.7	0.5	82.7
Onshore	Paradip Raipur Ranchi pipeline(PRRPL)		1073	5.0	4.3	86.3
Onshore	Kolkata ATF Pipeline		27	0.2	0.2	81.5
Onshore	Lucknow ATF Pipeline (1)		6	0.2	0.1	35.0
Onshore	Paradip Hyderabad Pipeline (5)		958	4.5	0.2	4.5
Onshore	Paradip-Somnathpur-Haldia Pipeline (9)		165	4.6	0.02	0.5
Onshore	Koyali-Ahmednagar-Solapur Pipeline (11)		352	5.0	0.05	1.1
			Sub total IOCL	9983	66.4	39.7
Onshore	Mumbai-Manmad-Bijwasan pipeline (MMBPL)	BPCL	1389	6.0	7.8	129.3
Onshore	Bina-Kota pipeline (BKPL)		259	4.4	3.5	78.4
Onshore	Bina Panki Pipeline		355	3.5	1.6	46.5
Onshore	ATF P/L Mumbai Refinery (MR)-Santacruz		15	1.0	0.5	53.6
Onshore	ATF P/L Kochi Refinery (KR)-Kochi Airport		34	0.6	0.4	68.8
Onshore	Kota - Jobner branch pipeline(1)		211	1.7		
Onshore	Mumbai Refinery- Wadilube Pipeline		12	1.3	0.3	22.2
Onshore	Cochin-Coimbatore-Karur (CCK) pipeline (2)		293	3.3	4.3	130.1
		Sub total BPCL	2568	21.8	18.4	84.2
Onshore	Mumbai-Pune-Solapur pipeline	HPCL	508	4.3	3.7	86.4
Onshore	Vizag-Vijaywada-Secunderabad pipeline (6)		572	7.7	5.5	71.5
Onshore	Mundra-Delhi pipeline (1)		1054	6.9	3.5	51.3
Onshore	Ramanmandi-Bahadurgarh pipeline (2)		243	7.1	6.2	86.8
Onshore	Ramanmandi-Bathinda pipeline		30	2.1	1.3	62.5
Onshore	Awa-Salawas pipeline		93			
Onshore	Bahadurgarh-Tikrikalan pipeline		14			
Onshore	Rewari- Kanpur Pipeline		443			

Type of Pipeline	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during
			01.04.2023	01.04.2023	2022-23(P)	2022-23(P)
Onshore	ATF pipeline from Mumbai Refinery to Mumbai Airport		20	0.5	0.3	68.8
Onshore	Black Oil Pipeline (BOPL)		22	1.5	1.2	78.9
Onshore	Lube Oil Pipeline : Trombay to Wadibundar (3)		17	1.0	0.5	50.1
Onshore	Palanpur-Vadodara Pipeline		235			
Onshore	Vijaywada Dharmapuri (VDPL) Pipeline		697			
		Sub total HPCL	3947	31.1	22.3	71.6
Onshore	Mangalore-Hassan-Bengaluru (MHB) pipeline (1)	Petronet MHB	363	5.6	3.9	69.5
Onshore	Numaligarh-Siliguri pipeline	OIL	654	1.7	1.4	82.3
	Total Petroleum product pipelines (w/o LPG pipelines)		17515	126.6	85.6	67.6
LPG Pipelines						
Onshore	Panipat-Jalandhar pipeline	IOCL	280	0.7	0.6	84.7
Onshore	Paradip-Haldia-Barauni-Motihari pipeline (2)(6)(7)		1468	3.5	1.4	39.2
		Sub total IOCL	1748	4.2	2.0	46.8
Onshore/offshore	Mumbai-Uran pipeline	BPCL	28	0.8	0.7	83.1
Onshore	Jamnagar-Loni pipeline	GAIL	1414	2.5	3.0	121.5
Onshore	Vizag-Secunderabad pipeline		609	1.3	1.3	97.5
		Sub total GAIL	2023	3.8	4.3	113.2
Onshore	Mangalore-Hassan-Mysore-Bangalore LPG (5)	HPCL	356	3.1	1.3	42.7
Onshore	Uran-Chakan-Shikrapur LPG Pipeline (4)		169	1.0	1.0	99.2
Onshore	Hassan-Cherlapalli LPG Pipeline		649			
		Sub total HPCL	1174	4.1	2.3	56.5
	Total LPG pipelines		4973	12.9	9.3	71.8
	Total POL pipelines		22488	139.6	94.9	68.0

Source: Oil Companies (P): Provisional

Notes: Figures are rounded off

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

IOCL

- (1) Lucknow ATF Pipeline commissioned on 22nd June 2022.
- (2) Under PHBMPL 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.
- (5) Paradip-Vijaywada section of Paradip Hyderabad Pipeline (PHPL) commissioned on 18th November 2022.
- (6) Haldia-Durgapur 18" loopline of PHDPL commissioned on 30th November 2022. Capacity of PHDPL is 3.5 MMTPA.
- (7) Banka-Giddha (Patna) section of PHBMPL commissioned on 13th December 2022, having length 315.285 Km.
- (8) Independent pumping units at Mathura under MTPL augmentation project commissioned on 16th December 2022. Capacity of augmented MTPL is 4.0 MMTPA.
- (9) Paradip - Somnathpur (Balasore) section of PSHPL commissioned on 2nd March 2023, having length of 165 km and capacity 4.6 MMTPA.
- (10) Chengalpet pumping station commissioned on 10th March 2023 and augmented capacity of CTMPL is 3.90 MMTPA (earlier 2.30 MMTPA)
- (11) Dumad - Manmad section of KASPL commissioned on 22nd March 2023, having length of 352.14 km and capacity 5.0 MMTPA.

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

HPCL

- (1) Throughput of Mundra-Delhi Pipeline is including throughput of branchlines viz. Awa Salawas Pipeline, Rewari Kanpur pipeline & Palanpur Vadodara Pipeline
- (2) Throughput of Ramanandi Bahadurgarh Pipeline is including throughput 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) Throughput of UCSPL includes both HPCL & BPCL volumes.
- (5) Throughput of Mangalore Bangalore Pipeline includes throughput of branchline viz Hassan Cherlapally pipeline
- (6) Throughput of Vizag Vijaywada Secunderabad pipeline includes throughput of branchline viz Vijaywada Dharmapuri Pipeline

Petronet MHB

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

Chapter-6

Sales





CHAPTER - HIGHLIGHTS

Sales

- Overall consumption of POL for the FY2022-23 in the Country was recorded at 223 MMT, highest till date, with a growth of 11.6% over the previous financial year. Growth in the petroleum products is driven by growth in High Speed Diesel (HSD) at 12.1%, the largest contributor at 38.35% to POL consumption. Motor Spirit (MS), the 2nd largest contributor at 15.7% share in POL basket grew by 13.4% in FY2022-23 over the previous year.
- The sales of Aviation Turbine Fuel (ATF) in FY 2022-23 grew by huge 47.1%, however recovered to 88.8% of the pre pre-pandemic period of 2018-19.
- The country crossed Ethanol Blending in Petrol of 12% in March 2023, achieving 12.1% with cumulative of 11.6% during the current ESY of Nov 22 – Mar'23.
- The Retail network in the Country reached 84855 as on 01.04.2023, with 24550 of these set up in rural areas.
- More than 14% of total outlets have alternate fuels at 12212 Retail Outlets across the Country and of these 8361 outlets offer EV charging facilities to commuters
- 310 depots and terminals spread throughout the country ensure uninterrupted supply of fuels to consumers

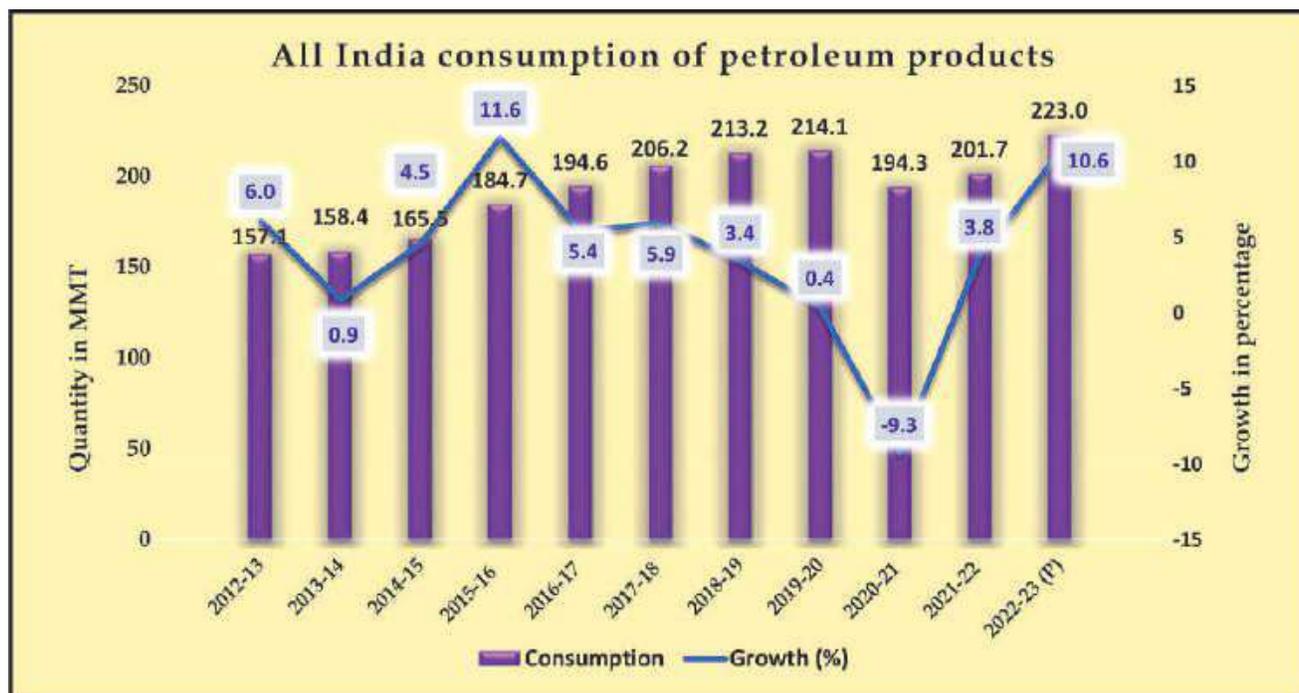
Table 6.1 : Consumption of petroleum products

(Million metric tonne)

Products	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (P)	2022-23 (P)
LPG	15.6	16.3	18.0	19.6	21.6	23.3	24.9	26.3	27.6	28.3	28.5
MS	15.7	17.1	19.1	21.8	23.8	26.2	28.3	30.0	28.0	30.8	35.0
Naphtha	12.3	11.3	11.1	13.3	13.2	12.9	14.1	14.3	14.1	13.2	12.2
ATF	5.3	5.5	5.7	6.3	7.0	7.6	8.3	8.0	3.7	5.0	7.4
SKO	7.5	7.2	7.1	6.8	5.4	3.8	3.5	2.4	1.8	1.5	0.5
HSD	69.1	68.4	69.4	74.6	76.0	81.1	83.5	82.6	72.7	76.7	85.9
LDO	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.9	1.0	0.7
Lubes	3.2	3.3	3.3	3.6	3.5	3.9	3.7	3.8	4.1	4.5	3.7
FO/LSHS	7.7	6.2	6.0	6.6	7.2	6.7	6.6	6.3	5.6	6.3	7.0
Bitumen	4.7	5.0	5.1	5.9	5.9	6.1	6.7	6.7	7.5	7.8	8.0
Petcoke	10.1	11.8	14.6	19.3	24.0	25.7	21.3	21.7	15.6	14.3	18.3
Others*	5.5	6.0	5.9	6.4	6.6	8.3	11.7	11.4	12.8	12.3	15.8
All India	157.1	158.4	165.5	184.7	194.6	206.2	213.2	214.1	194.3	201.7	223.0
Growth (%)	6.0	0.9	4.5	11.6	5.4	5.9	3.4	0.4	-9.3	3.8	10.6

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

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);



The consumption of petroleum products has gone up from 157.1 MMT in FY2012-13 to 223.0 MMT in FY2022-23. The compounded annual growth rate (CAGR) of total POL consumption in the last decade has been 3.6%. The consumption based CAGR was highest in 'Others category', marking 11.1% among POL products in the last decade followed by MS (8.3%), LPG (6.2%), LDO (6.2%), Petcoke (6.1%), Bitumen (5.6%), ATF (3.4%), HSD (2.2%) and Lubes (1.6%). Negative CAGR in the last decade was observed in the consumption of Naphtha (0.1%), FO/LSHS (1%) and SKO (23.9%) as compared to the same period in 2012-13.

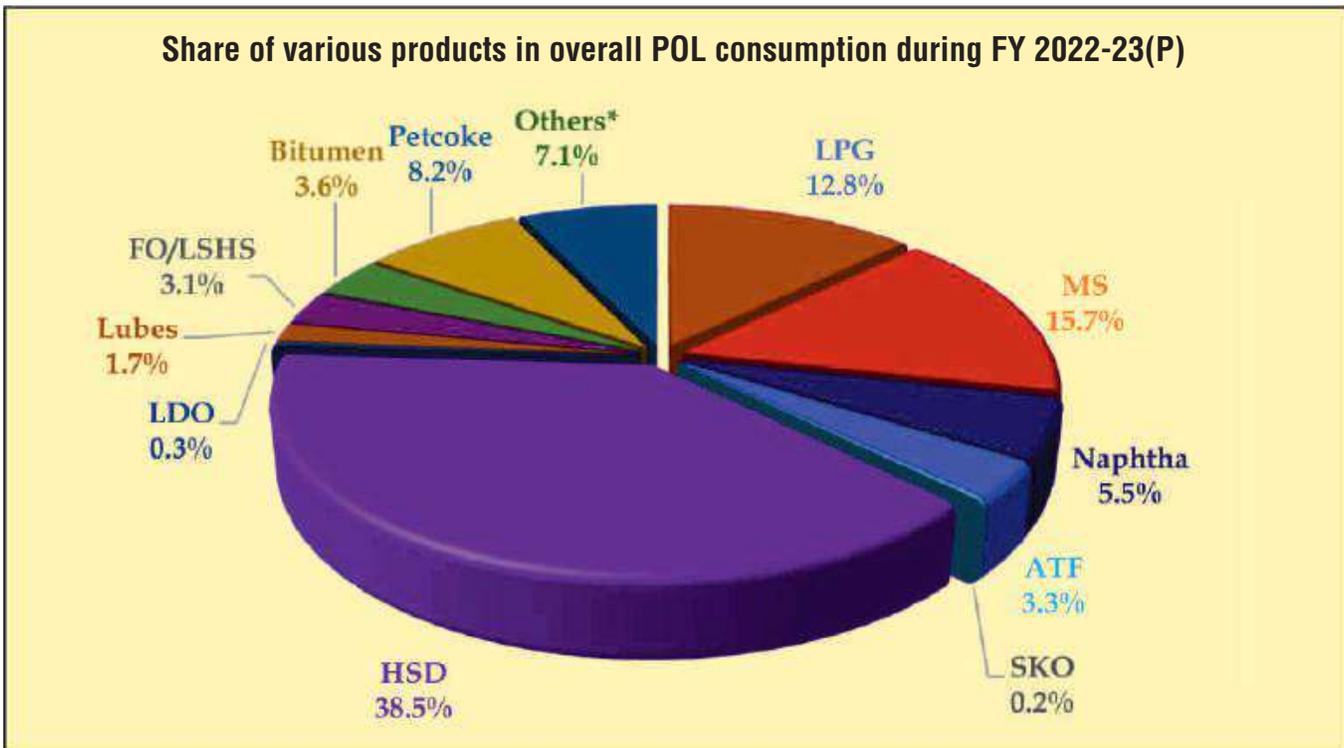
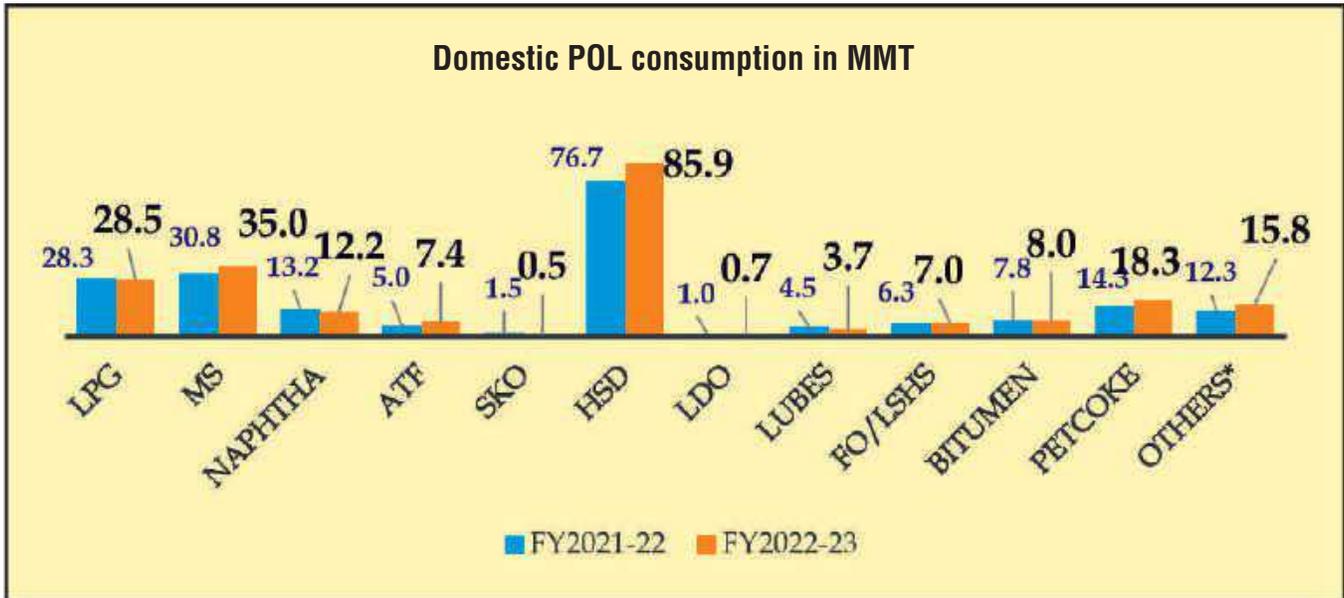
Table 6.2 : Consumption growth of petroleum products

(Growth in percentage)

Products	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22(P)	2022-23(P)	CAGR calculated FY12-13 vs 22-23
LPG	1.6	4.4	10.5	9.0	10.1	8.0	6.7	5.7	4.7	2.5	0.9	6.2
MS	5.0	8.8	11.4	14.5	8.8	10.1	8.1	6.0	-6.7	10.3	13.4	8.3
Naphtha	9.5	-8.0	-2.0	19.8	-0.2	-2.7	9.6	1.0	-1.2	-6.1	-8.2	-0.1
ATF	-4.8	4.4	4.0	9.4	11.7	9.1	8.7	-3.7	-53.8	35.4	47.1	3.4
SKO	-8.8	-4.5	-1.1	-3.7	-20.9	-28.8	-10.0	-30.7	-25.0	-16.9	-67.2	-23.9
HSD	6.7	-1.0	1.5	7.5	1.8	6.6	3.0	-1.1	-12.0	5.4	12.1	2.2
LDO	-3.9	-3.1	-5.4	11.5	10.3	16.7	14.2	5.0	36.2	19.0	-28.8	6.2
Lubes	21.4	3.4	0.1	7.9	-2.8	11.9	-5.6	4.5	6.9	10.8	-17.6	1.6
FO/LSHS	-17.7	-18.6	-4.4	11.3	7.8	-6.0	-2.3	-4.0	-11.3	12.1	11.1	-1.0
Bitumen	0.8	7.1	1.3	17.1	0.0	2.5	10.2	0.2	12.0	3.9	2.9	5.6
Petcoke	65.1	16.0	23.8	32.6	24.2	7.1	-16.8	1.7	-28.1	-8.6	28.7	6.1
Others	11.9	8.1	-1.4	8.2	3.8	26.5	40.6	-3.0	12.6	-3.9	28.6	11.1
All India	6.0	0.9	4.5	11.6	5.4	5.9	3.4	0.4	-9.3	3.8	10.6	3.6



Domestic Consumption of Petroleum Products (YoY)

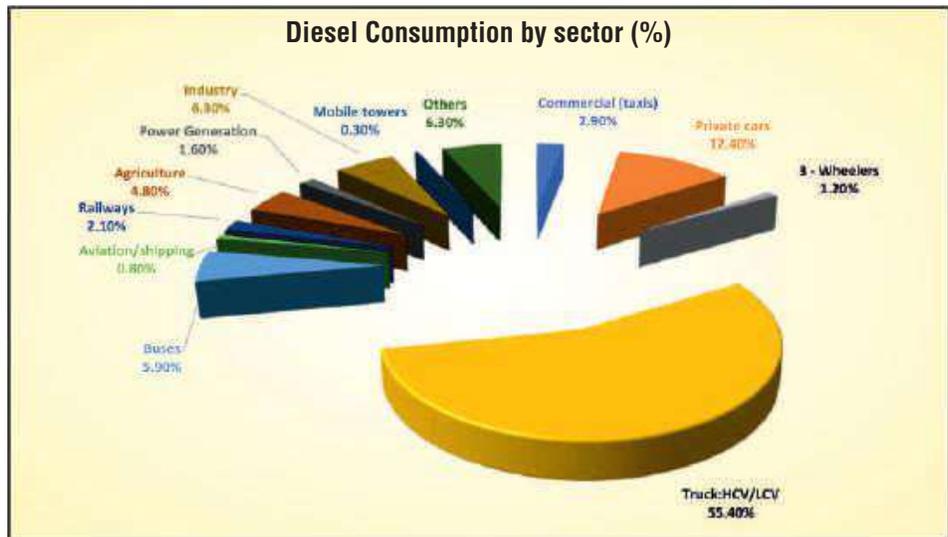


Note: *Others include sulphur, propylene, propane, reformat, butane, MTO (Mineral Turpentine oil) etc

End-use sectoral analysis of POL Domestic Consumption

End-use-analysis of HSD sales (Oct. 2020-Sep 2021) (PPAC survey based)

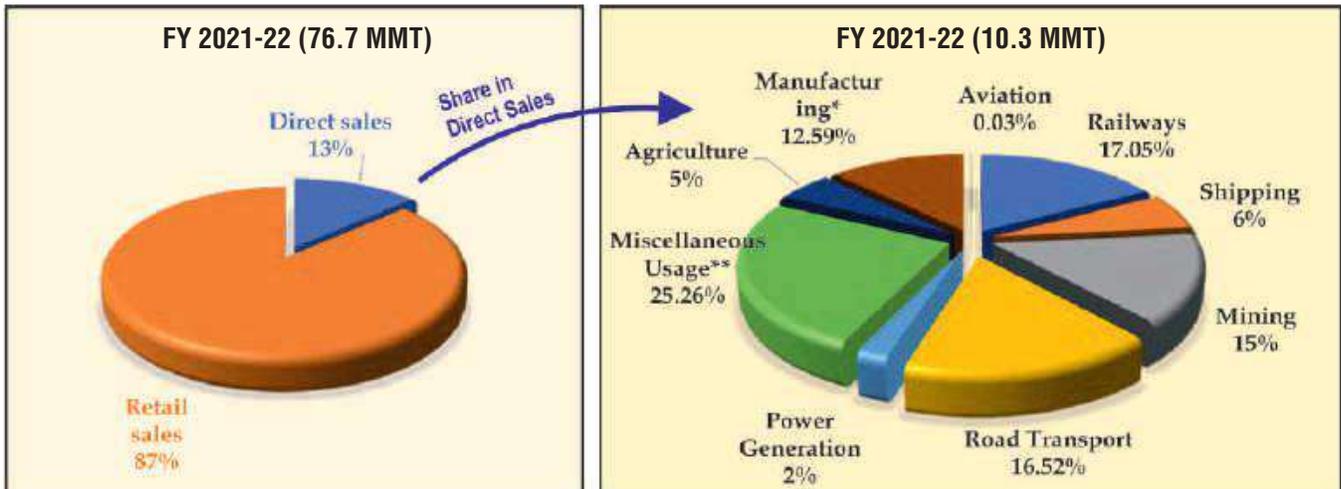
Sl. no.	End-use-Sectors	% of total sales*
(I)	(II)	(III)
1	Transport of which	
a	Commercial (taxis)	2.90
b	Private cars	12.40
c	3 - Wheelers	1.20
d	Truck:HCV/LCV	55.40
e	Buses	5.90
2	Aviation/shipping	0.80
3	Railways	2.10
4	Agriculture	4.80
5	Power Generation	1.60
6	Industry	6.30
7	Mobile towers	0.30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



*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



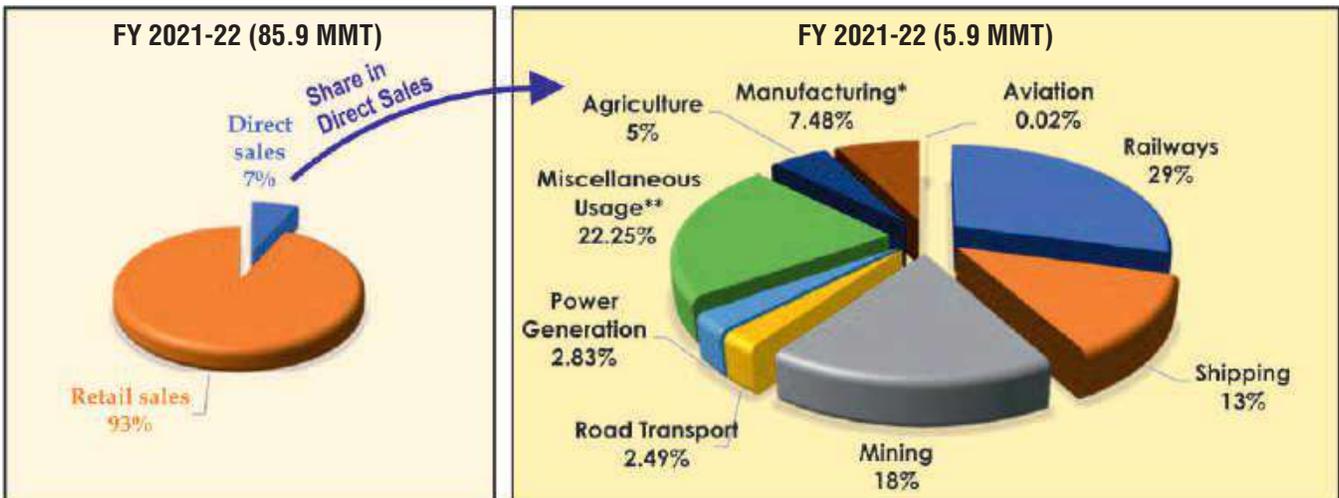
Sector-wise HSD consumption for FY-2021-22 (P)



*Manufacturing (12.59%) includes 'Iron / Steel & metallurgy' (2.65%), chemicals (1%), Civil engineering (8.2%), 'Electricals/electronics' (0.09%), 'Textiles' (0.15%) and 'Consumer industrial goods' (0.5%)

**Miscellaneous Usage (25.26%) includes 'Bulk applications' (24.5%), Universities (0.4%), Catering & hotels (0.07%), Posts & telegraphs (0.004%), State electricity boards (0.03%), and 'other domestic distributions' (0.62%)

Sector-wise HSD consumption for FY-2022-23 (P)

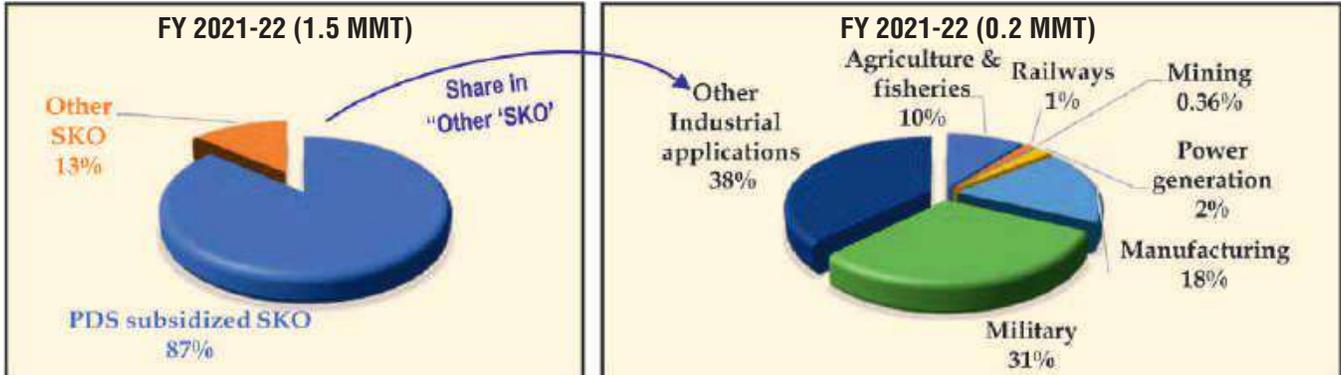


*Manufacturing (7.48%) includes 'Iron / Steel & metallurgy' (2.16%), chemicals (1%), Civil engineering (3.6%), 'Electricals/electronics' (0.13%), 'Textiles' (0.05%) and 'Consumer industrial goods' (0.5%)

**Miscellaneous Usage (22.25%) includes 'Other industrial applications' (20.9%), Universities (0.03%), Catering & hotels (0.05%), Posts & telegraphs (0.003%), State electricity boards (0.06%), and 'other domestic distributions' (1.2%)



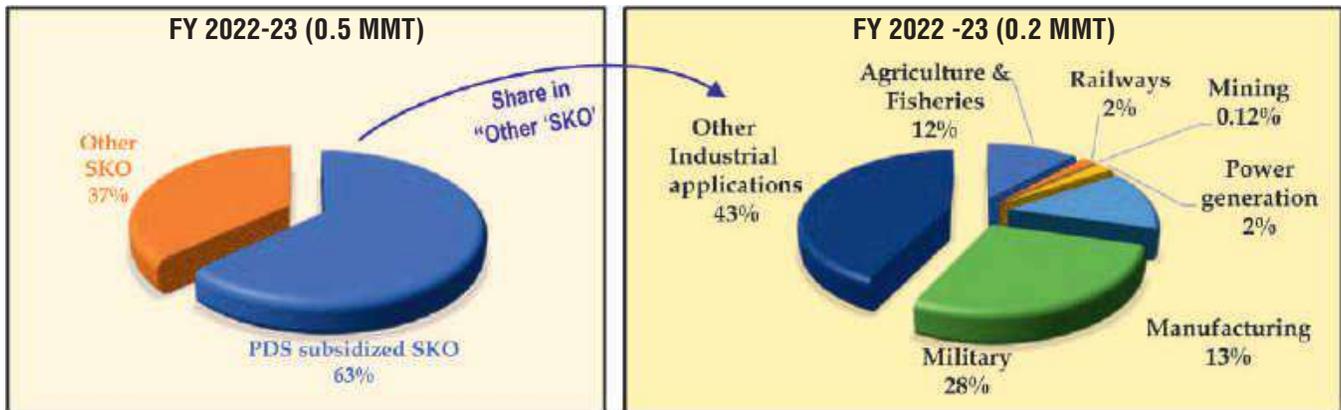
'PDS Subsidized SKO' & 'Other SKO' consumption for FY 2021-22(P)



Other SKO includes 'Nonsubsidized PDS SKO', 'non-PDS SKO' and 'Imported SKO'

**Manufacturing (18%) includes 'Chemicals' (2.9%), 'Civil engineering' (6.4%), 'Electrical/electronics' (1%), 'Iron, steel & metallurgy' (3.4%), 'Textiles' (0.1%) and 'Bulk applications' (4.2%)

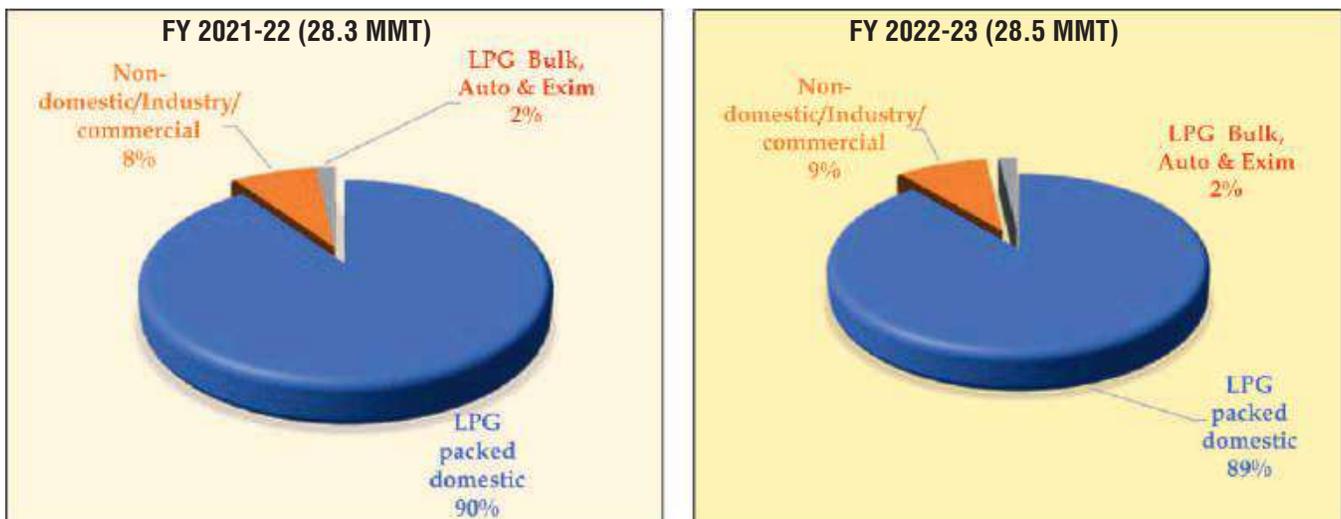
'PDS Subsidized SKO' & 'Other SKO' consumption for FY 2022-23(P)



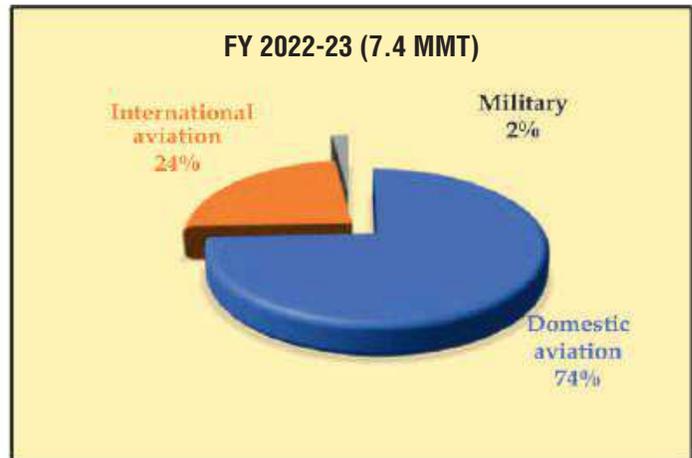
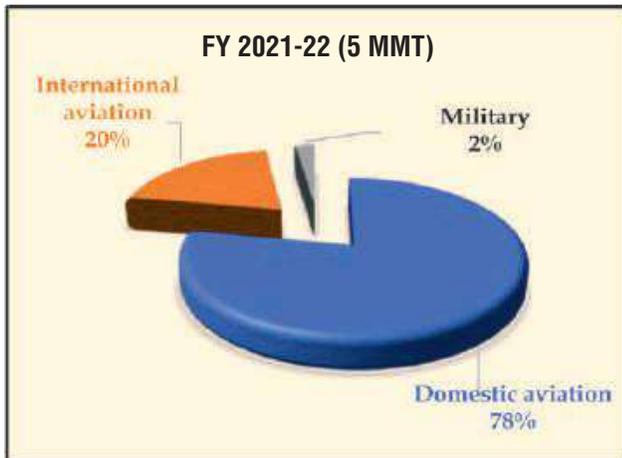
Other SKO includes 'Nonsubsidized PDS SKO', 'non-PDS SKO' and 'Imported SKO'

**Manufacturing (13%) includes 'Chemicals' (3.3%), 'Civil engineering' (5.1%), 'Electrical/electronics' (0.03%), 'Iron, steel & metallurgy' (2.4%), 'Textiles' (0.04%) and 'Bulk applications' (2.8%)

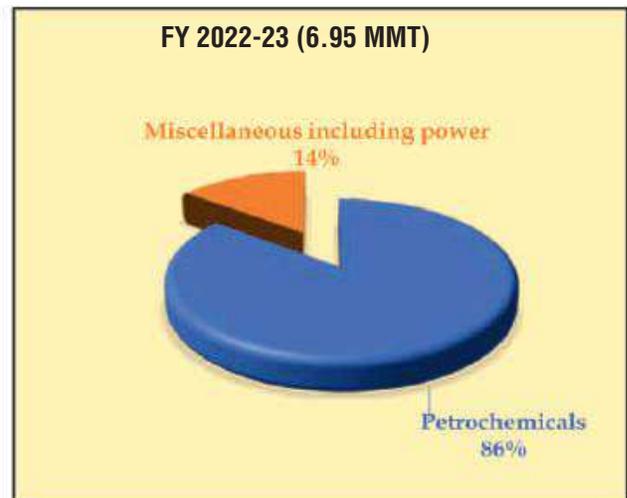
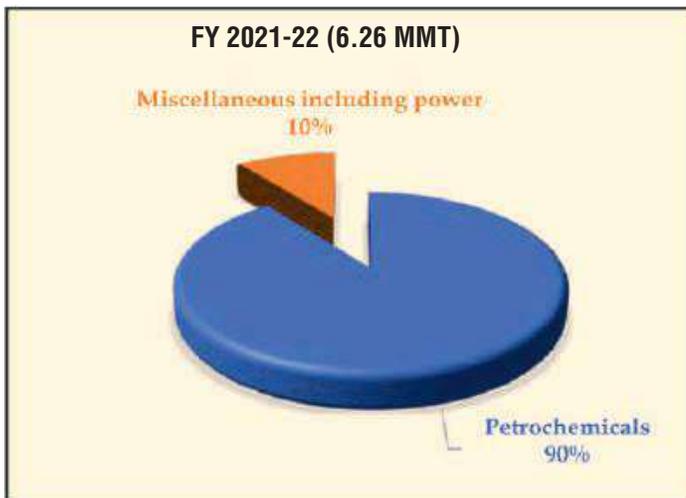
Sector wise LPG consumption for FY 2021-22(P) & 2022-23 (P)



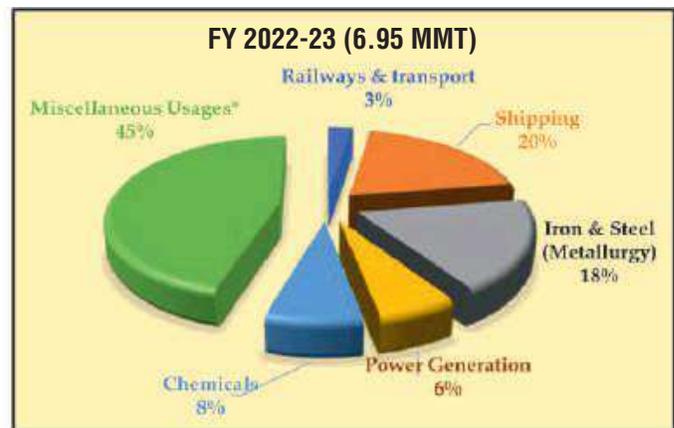
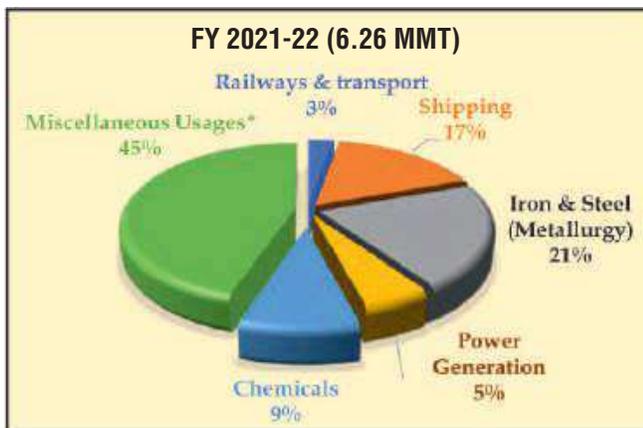
Sector wise ATF consumption for FY 2021-22(P) & 2022-23 (P)



Sector wise Naphtha consumption for FY 2021-22 (P) & 2022-23 (P)



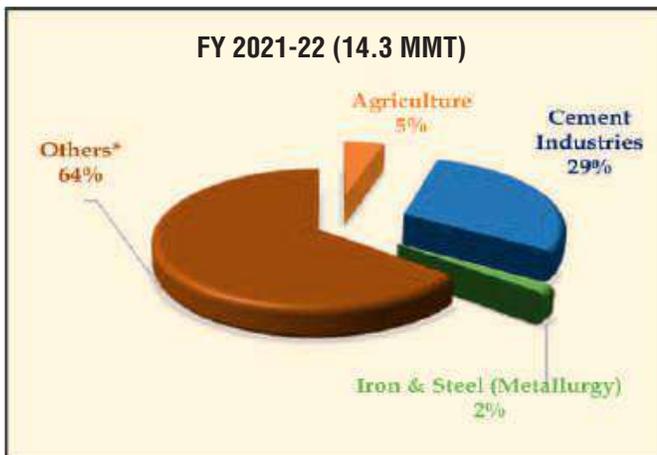
Sector wise FO&LSHS consumption for FY 2021-22 (P) & 2022-23 (P)



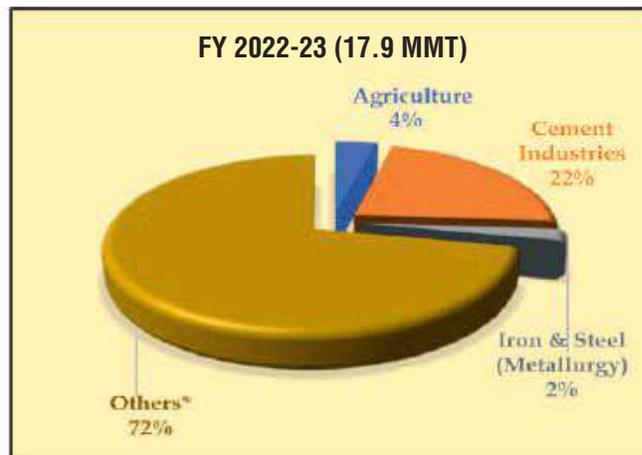
*Miscellaneous usage (45%) includes 'catering & hotels' (0.01%), Bulk Applications (30.48%), Military (0.3%), State Electricity Board (0.03%), Universities (0.003%) etc.

*Miscellaneous usage (45%) includes 'catering & hotels' (0.01%), Bulk Applications (32.65%), Military (0.03%), State Electricity Board (1.13%), Universities (0.006%) etc.

Sector wise Petcoke consumption for FY 2021-22(P) & 2022-23 (P)

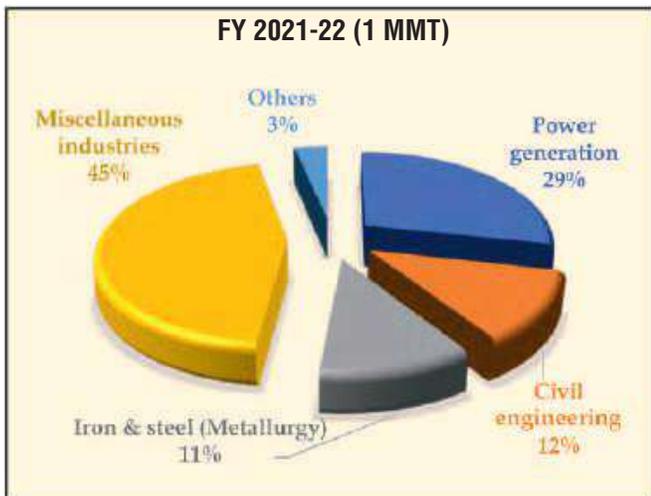


Others (64%) includes chemicals (5.2%), Textiles (0.5%), Mining (1.0%), Power Generation (0.2%) & Bulk applications (57.1%).

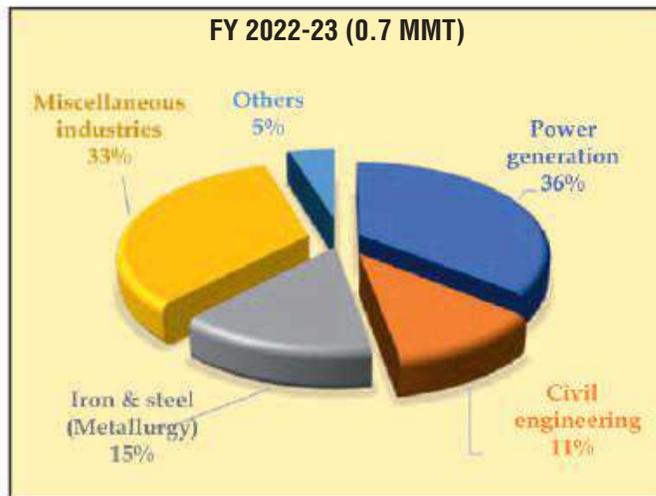


Others (72%) includes chemicals (4.4%), Textiles (0.4%), Mining (1.2%), Power Generation (0.1%) & Bulk applications (65.9%).

Sector wise LDO consumption for FY 2021-22(P) & 2022-23 (P)



*Miscellaneous (45%) industries include chemicals (3.3%), electrical & electronics (0.2%), Industrial goods (2%) and textiles (0.3%) 'bulk category' (39.1%)



*Miscellaneous (33%) industries include chemicals (3.3%), electrical & electronics (0.4%), Industrial goods (2.1%) and textiles (0.3%) & bulk category (27.3%)



Table 6.3A : State-wise sales of petroleum products : FY2022-23 (P)

(Sales figures in thousand metric tonnes until otherwise specified)

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)	"Total sales"	Per capita sales (Kg)
Chandigarh	55.1	44.7	0.00	0.00	114.4	92.6	0.07	0.060	210.6	170.5	26.9	21.8
Delhi	787.8	36.7	0.00	0.00	899.5	41.9	0.17	0.008	662.0	30.8	1948.4	90.7
Haryana	981.7	32.4	2540.55	83.8	1203.3	39.7	0.58	0.019	4205.9	138.7	26.4	0.9
Himachal Pradesh	196.0	26.2	0.00	0.00	306.4	41.0	3.72	0.497	1002.8	134.1	5.2	0.7
Jammu and Kashmir	217.5	15.9	0.00	0.00	354.7	26.0	44.85	3.289	821.7	60.3	93.7	6.9
Ladakh	8.9	29.5	0.00	0.00	20.3	67.6	44.66	148.357	80.3	266.6	7.1	23.5
Punjab	1004.1	32.6	7.06	0.23	1133.5	36.8	0.40	0.013	3264.8	106.0	172.6	5.6
Rajasthan	1534.8	18.9	5.00	0.06	1790.4	22.0	1.54	0.019	5073.8	62.4	157.2	1.9
Uttar Pradesh	3778.8	16.0	8.25	0.03	4103.4	17.4	1.69	0.007	9858.6	41.7	273.1	1.2
Uttarakhand	336.8	28.8	0.00	0.00	410.2	35.1	3.96	0.339	779.7	66.8	28.7	2.5
SUB TOTAL NORTH	8901.5	20.5	2560.85	5.89	10336.2	23.8	101.6	0.234	25960.0	59.7	2739.3	6.3
Andaman & Nicobar Islands	13.6	33.6	0.00	0.00	19.4	48.1	0.03	0.062	162.8	403.9	17.3	42.8
Bihar	1528.3	12.0	0.00	0.00	1034.3	8.1	37.74	0.296	2398.4	18.8	35.5	0.3
Jharkhand	393.1	9.9	0.00	0.00	660.3	16.7	14.81	0.374	1754.8	44.3	39.8	1.0
Odisha	627.2	13.5	0.13	0.003	992.5	21.4	22.36	0.482	2929.1	63.2	83.8	1.8
West Bengal	1924.7	19.4	534.77	5.39	1191.1	12.0	135.18	1.362	3496.9	35.2	358.1	3.6
SUB TOTAL EAST	4487.0	14.3	534.90	1.71	3897.6	12.5	210.1	0.671	10742.0	34.3	534.5	1.7
Arunachal Pradesh	26.9	17.2	0.00	0.00	66.7	42.6	8.12	5.191	227.0	145.1	2.0	1.3
Assam	509.4	14.2	217.48	6.07	611.2	17.1	10.67	0.298	1327.5	37.1	129.5	3.6
Manipur	55.6	17.2	0.00	0.00	88.4	27.4	2.18	0.675	149.5	46.3	10.7	3.3
Meghalaya	31.2	9.3	0.00	0.00	124.6	37.1	2.12	0.632	397.4	118.4	1.0	0.3
Mizoram	31.8	25.6	0.00	0.00	35.4	28.6	0.11	0.090	100.7	81.1	3.3	2.6
Nagaland	29.2	13.1	0.00	0.00	51.2	22.9	0.98	0.439	109.9	49.1	5.3	2.3
Sikkim	20.3	29.4	0.00	0.00	26.5	38.3	9.46	13.693	90.8	131.3	0.3	0.5
Tripura	57.5	13.8	0.00	0.00	64.3	15.5	6.52	1.568	101.3	24.4	13.0	3.1
SUB TOTAL NORTH EAST	761.9	14.6	217.48	4.16	1068.3	20.4	40.2	0.768	2504.0	47.9	165.0	3.2
Chhattisgarh	330.2	10.9	0.00	0.00	743.4	24.5	7.75	0.256	1930.3	63.7	32.4	1.1
Dadra & Nagar Haveli and Daman & Diu	33.2	25.6	0.00	0.00	44.2	34.2	0.00	0.0	212.7	164.5	1.2	0.9
Goa	74.7	47.4	0.00	0.00	204.7	129.8	0.00	0.000	294.0	186.4	132.6	84.1
Gujarat	1404.7	19.6	7496.36	104.41	2397.8	33.4	6.55	0.091	6927.3	96.5	293.7	4.1
Madhya Pradesh	1140.4	13.1	0.00	0.00	1705.3	19.6	2.82	0.032	3884.5	44.7	117.9	1.4
Maharashtra	3363.6	26.5	333.75	2.63	3815.2	30.1	5.79	0.046	9291.0	73.3	1116.9	8.8
SUB TOTAL WEST	6346.7	19.9	7830.11	24.58	8910.6	28.0	22.9	0.072	22539.9	70.7	1694.8	5.3
Andhra Pradesh	1335.4	25.1	23.6944	0.4452	1504.1	28.3	1.86	0.035	3460.4	65.0	78.8	1.5
Karnataka	1996.8	29.4	0	0	2648.1	39.0	14.72	0.217	8042.0	118.6	709.7	10.5
Kerala	1133.3	31.6	0	0	1747.6	48.8	24.06	0.672	2485.6	69.4	496.5	13.9
Lakshadweep	0.9	13.1	0	0	0.7	10.6	0.02	0.271	16.3	235.8	0.2	2.3
Puducherry	46.9	28.3	0	0	168.3	101.5	0.00	0.000	553.0	333.5	0.1	0.08
Tamil Nadu	2369.2	30.8	0	0	3152.9	41.0	73.79	0.959	5999.3	78.0	486.8	6.3
Telangana	1123.7	29.5	0	0	1541.4	40.4	0.31	0.008	3528.8	92.5	459.1	12.0
SUB TOTAL SOUTH	8006.3	29.3	23.69	0.09	10763.3	39.3	114.8	0.4	24085.4	88.0	2231.2	8.2
All India	28503.4	20.5	11167.04	8.02	34976.0	25.1	489.6	0.4	85831.2	61.6	7364.8	5.3

State wise highest/lowest per capita (only formajor products)

Highest Lowest **Source:** Oil companies; P-Provisional**Note:**

1-Per capita sales figures are based on provisional sales figures for the period April 2022 - March 2023

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 : FY 2022-23 (P)

(Sales figures in thousand metric tonnes until otherwise specified)

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	0.5	0.4	1.5	1.2	2.6	2.1	0.2	0.1	2.9	2.4	0.1	0.0	414.8	335.9
Delhi	0.0	0.0	0.0	0.0	13.1	0.6	2.7	0.1	0.0	0.0	8.4	0.4	4322.0	201.1
Haryana	21.1	0.7	82.3	2.7	65.8	2.2	187.7	6.2	0.0	0.0	138.3	4.6	9453.7	311.7
Himachal Pradesh	0.3	0.0	33.2	4.4	12.8	1.7	64.3	8.6	497.0	66.5	7.9	1.1	2129.7	284.7
Jammu and Kashmir	0.1	0.0	3.7	0.3	9.8	0.7	30.0	2.2	87.2	6.4	4.8	0.3	1667.9	122.3
Ladakh	0.0	0.0	0.0	0.0	0.3	0.9	14.3	47.4	0.0	0.0	0.0	0.0	175.7	583.8
Punjab	8.1	0.3	143.6	4.7	37.6	1.2	90.5	2.9	621.6	20.2	75.9	2.5	6559.8	213.0
Rajasthan	44.2	0.5	82.0	1.0	55.1	0.7	280.0	3.4	1670.2	20.5	75.9	0.9	10770.1	132.4
Uttar Pradesh	83.4	0.4	142.3	0.6	85.6	0.4	690.3	2.9	43.7	0.2	331.3	1.4	19400.5	82.0
Uttarakhand	0.8	0.1	115.6	9.9	15.1	1.3	31.0	2.7	27.8	2.4	11.6	1.0	1761.4	150.9
SUB TOTAL NORTH	158.6	0.4	604.2	1.4	297.8	0.7	1390.9	3.2	2950.5	6.8	654.1	1.5	56655.6	130.3
Andaman & Nicobar Islands	0.0	0.0	0.0	0.0	0.8	1.9	6.7	16.6	0.0	0.0	0.0	0.0	220.4	547.0
Bihar	28.3	0.2	25.9	0.2	13.6	0.1	276.8	2.2	185.2	1.5	7.7	0.1	5571.7	43.7
Jharkhand	62.6	1.6	136.4	3.4	33.4	0.8	217.3	5.5	3.5	0.1	64.6	1.6	3380.7	85.3
Odisha	56.7	1.2	1027.4	22.2	26.2	0.6	113.2	2.4	520.0	11.2	244.1	5.3	6642.7	143.2
West Bengal	50.1	0.5	348.1	3.5	77.9	0.8	210.6	2.1	230.8	2.3	338.2	3.4	8896.6	89.6
SUB TOTAL EAST	197.7	0.6	1537.9	4.9	151.8	0.5	824.6	2.6	939.5	3.0	654.6	2.1	24712.1	78.9
Arunachal Pradesh	0.0	0.0	0.0	0.0	0.7	0.4	14.5	9.3	0.0	0.0	0.0	0.0	345.9	221.0
Assam	3.3	0.1	5.6	0.2	39.2	1.1	19.9	0.6	184.0	5.1	44.7	1.2	3102.6	86.6
Manipur	0.1	0.0	0.4	0.1	0.5	0.1	6.5	2.0	0.0	0.0	0.0	0.0	313.9	97.1
Meghalaya	0.2	0.1	0.3	0.1	1.0	0.3	3.8	1.1	0.0	0.0	0.0	0.0	561.5	167.3
Mizoram	0.0	0.0	0.4	0.3	0.2	0.2	2.9	2.4	0.0	0.0	0.0	0.0	174.9	140.9
Nagaland	0.0	0.0	0.0	0.0	0.6	0.3	5.9	2.6	0.0	0.0	0.0	0.0	203.0	90.7
Sikkim	3.8	5.5	0.0	0.0	0.2	0.3	0.3	0.5	0.0	0.0	0.0	0.0	151.6	219.4
Tripura	0.0	0.0	0.0	0.0	0.9	0.2	5.5	1.3	0.0	0.0	0.1	0.0	249.3	60.0
SUB TOTAL NORTH EAST	7.4	0.1	6.7	0.1	43.4	0.8	59.4	1.1	184.0	3.5	44.9	0.9	5102.6	97.6
Chhattisgarh	49.0	1.6	173.2	5.7	25.8	0.9	236.4	7.8	595.1	19.6	32.7	1.1	4156.2	137.2
Dadra & Nagar Haveli and Daman & Diu	0.8	0.6	43.9	34.0	191.4	148.0	3.3	2.6	0.0	0.0	5.0	3.9	535.8	414.4
Goa	1.2	0.7	22.7	14.4	5.1	3.2	26.3	16.6	11.9	7.5	5.3	3.4	778.5	493.7
Gujarat	73.2	1.0	1277.4	17.8	125.2	1.7	741.3	10.3	1104.8	15.4	3856.8	53.7	25705.1	358.0
Madhya Pradesh	21.7	0.2	79.0	0.9	43.8	0.5	191.4	2.2	1022.5	11.8	136.8	1.6	8346.0	96.0
Maharashtra	106.6	0.8	821.4	6.5	451.9	3.6	585.8	4.6	124.1	1.0	934.6	7.4	20950.7	165.3
SUB TOTAL WEST	252.5	0.8	2417.6	7.6	843.2	2.6	1784.4	5.6	2858.3	9.0	4971.3	15.6	60472.3	189.8
Andhra Pradesh	22.1	0.4	432.6	8.1	39.1	0.7	184.2	3.5	776.7	14.6	177.9	3.3	8036.9	151.0
Karnataka	15.9	0.2	274.7	4.0	61.7	0.9	110.2	1.6	774.6	11.4	360.9	5.3	15009.4	221.3
Kerala	8.7	0.2	430.5	12.0	41.3	1.2	219.2	6.1	20.7	0.6	271.5	7.6	6879.1	192.0
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	18.1	262.2
Puducherry	0.5	0.3	37.7	22.7	2.9	1.8	0.6	0.4	0.4	0.2	9.7	5.8	820.2	494.7
Tamil Nadu	27.8	0.4	536.5	7.0	167.6	2.2	565.9	7.4	830.5	10.8	314.5	4.1	14524.9	188.8
Telangana	28.5	0.7	139.1	3.6	44.0	1.2	155.8	4.1	233.0	6.1	34.1	0.9	7287.8	191.1
SUB TOTAL SOUTH	103.6	0.4	1851.1	6.8	356.7	1.3	1235.9	4.5	2635.9	9.6	1168.7	4.3	52576.4	192.1
All India**	719.7	0.5	6417.5	4.6	1692.8	1.2	5295.2	3.8	9568.2	6.9	7493.5	5.4	223008.3	160.2

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

* Total (all product) sales includes all petroleum oil and lubricants **All India domestic sales figures are including private imports & SEZ data

Source: Oil companies; P-Provisional

Note:

1-Per capita sales figures are based on provisional sales figures for the period April 2022 - March 2023

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 6.4A : All products annual industry sales- region & state wise for last 5 years

(Figures in TMT)					
STATE/UT	2018-19	2019-20	2020-21	2021-22(P)	2022-23(P)
REGION - NORTH					
Chandigarh	435.2	435.9	312.0	369.5	414.8
Delhi	4890.5	4621.4	2911.3	3405.0	4322.0
Haryana	10522.7	10222.8	9853.0	10546.3	9453.7
Himachal Pradesh	1558.8	1693.5	1527.8	1924.1	2129.7
Jammu & Kashmir	1502.7	1371.7	1300.8	1500.0	1667.9
Ladakh		128.3	140.6	158.9	175.7
Punjab	7063.3	7113.9	5964.0	6578.6	6559.8
Rajasthan	11402.7	10920.6	9179.4	10242.3	10770.1
Uttar Pradesh	18180.4	18407.2	18090.2	18791.1	19400.5
Uttarakhand	1725.5	1655.7	1533.6	1619.1	1761.4
Region Total	57281.9	56571.0	50812.8	55134.8	56655.6
Region - North East					
Arunachal Pradesh	248.4	263.3	275.8	302.1	345.9
Assam	2744.0	2823.3	2710.0	2923.1	3102.6
Manipur	241.0	254.7	236.7	254.0	313.9
Meghalaya	491.9	550.3	409.3	472.6	561.5
Mizoram	138.8	140.9	130.4	146.0	174.9
Nagaland	154.4	171.6	162.5	190.8	203.0
Sikkim	125.9	130.1	108.1	129.7	151.6
Tripura	234.9	231.8	229.8	237.3	249.3
Region Total	4379.1	4566.0	4262.7	4655.6	5102.6
Region - East					
Andaman & Nicobar	212.0	217.1	171.5	189.8	220.4
Bihar	5242.3	5396.9	5518.3	5362.9	5571.7
Jharkhand	3409.1	3416.4	3139.3	3245.8	3380.7
Odisha	5929.7	6029.6	5926.7	6154.4	6642.7
West Bengal	8788.9	9308.5	8490.7	8681.0	8896.6
Region Total	23582.1	24368.5	23246.5	23633.9	24712.1
Region - West					
Chhattisgarh	4109.9	3667.0	3420.8	3598.2	4156.2
Dadra & Nagar Haveli And Daman & Diu	618.9	570.4	541.6	522.1	535.8
Goa	797.5	789.9	555.6	680.1	778.5
Gujarat	21216.4	22535.6	21940.1	24220.7	25705.1
Madhya Pradesh	8006.0	7860.0	7283.3	7533.9	8346.0
Maharashtra	21017.2	20796.8	17849.4	19050.5	20950.7
Region Total	55765.9	56219.7	51590.8	55605.6	60472.3
Region - South					
Andhra Pradesh	7819.8	7699.3	7266.3	7552.6	8036.9
Karnataka	13205.9	13067.4	11121.4	12479.3	15009.4
Kerala	6338.9	6533.5	5461.3	5901.7	6879.1
Lakshadweep	15.1	16.5	17.7	17.6	18.1
Puducherry	542.1	516.7	412.8	531.4	820.2
Tamil Nadu	14421.2	14115.6	12195.0	13067.7	14524.9
Telangana	6999.7	6952.5	6222.8	6859.3	7287.8
Region Total	49342.9	48901.4	42697.2	46409.5	52576.4
All India Total*	213216.3	214126.6	194295.3	201696.7	223008.3

Source : Oil Companies; P:-provisional

*Domestic sales figures are including private imports & SEZ sales data

6.4B: MS/Petrol annual industry sales- region & state wise for last 5 years

(Figures in TMT)

STATE/UT	2018-19	2019-20	2020-21	2021-22(P)	2022-23(P)
REGION - NORTH					
Chandigarh	122.6	126.8	91.4	110.0	114.4
Delhi	903.1	876.0	668.8	693.3	899.5
Haryana	978.5	1029.4	1011.6	1113.7	1203.3
Himachal Pradesh	224.6	238.0	233.1	272.3	306.4
Jammu & Kashmir	274.7	300.4	273.1	316.3	354.7
Ladakh		3.6	12.5	16.8	20.3
Punjab	879.2	960.2	888.4	1015.8	1133.5
Rajasthan	1550.7	1657.0	1549.4	1621.5	1790.4
Uttar Pradesh	3119.2	3319.9	3210.1	3696.1	4103.4
Uttarakhand	309.2	326.3	293.0	338.4	410.2
Region Total	8361.9	8837.6	8231.3	9194.3	10336.2
Region - North East					
Arunachal Pradesh	46.2	51.8	50.6	55.4	66.7
Assam	411.6	445.1	431.9	510.0	611.2
Manipur	61.2	68.2	62.1	67.5	88.4
Meghalaya	93.7	99.8	81.3	95.5	124.6
Mizoram	28.2	31.2	26.0	26.0	35.4
Nagaland	36.8	39.2	31.9	40.9	51.2
Sikkim	19.7	21.1	15.8	19.4	26.5
Tripura	54.1	57.7	53.7	57.5	64.3
Region Total	751.5	814.1	753.2	872.3	1068.3
Region - East					
Andaman & Nicobar	18.1	18.9	13.8	15.7	19.4
Bihar	793.0	852.1	848.9	926.7	1034.3
Jharkhand	487.0	526.5	512.5	574.1	660.3
Odisha	775.9	834.5	782.4	863.9	992.5
West Bengal	904.1	996.1	997.5	1076.9	1191.1
Region Total	2978.1	3227.9	3155.2	3457.3	3897.6
Region - West					
Chhattisgarh	559.6	613.1	604.3	660.9	743.4
Dadra & Nagar Haveli And Daman & Diu	42.8	38.9	30.0	38.6	44.2
Goa	183.6	186.1	145.1	167.0	204.7
Gujarat	1976.0	2066.8	1860.2	2134.0	2397.8
Madhya Pradesh	1372.1	1463.7	1461.1	1542.7	1705.3
Maharashtra	3358.1	3462.0	3014.4	3387.6	3815.2
Region Total	7492.1	7830.6	7115.1	7930.9	8910.6
Region - South					
Andhra Pradesh	1161.9	1278.4	1321.9	1419.4	1504.1
Karnataka	2142.7	2270.5	2123.9	2235.0	2648.1
Kerala	1462.6	1558.8	1371.1	1495.8	1747.6
Lakshadweep				0.0	0.7
Puducherry	132.9	133.8	108.4	128.5	168.3
Tamil Nadu	2602.0	2735.4	2580.6	2758.1	3152.9
Telangana	1198.8	1288.3	1199.5	1357.3	1541.4
Region Total	8700.8	9265.2	8705.4	9394.1	10763.3
All India Total	28284.4	29975.5	27960.3	30848.9	34976.0

Source : Oil Companies; P:-provisional

6.4C: HSD annual industry sales- region & state wise for last 5 years

(Figures in TMT)

STATE/UT	2018-19	2019-20	2020-21	2021-22(P)	2022-23(P)
REGION - NORTH					
Chandigarh	192.4	197.7	126.6	171.0	210.6
Delhi	1020.8	835.3	499.2	597.5	662.0
Haryana	4847.0	4716.8	4434.9	4450.1	4205.9
Himachal Pradesh	646.2	667.6	609.8	776.6	1002.8
Jammu & Kashmir	697.0	675.5	576.0	698.5	821.7
Ladakh		5.0	56.1	67.7	80.3
Punjab	3216.7	3213.7	2741.7	3113.0	3264.8
Rajasthan	5440.4	5271.9	4336.8	4452.4	5073.8
Uttar Pradesh	9453.4	9484.9	9384.8	9496.3	9858.6
Uttarakhand	762.2	744.0	657.2	699.7	779.7
Region Total	26276.3	25812.4	23423.0	24522.7	25960.0
Region - North East					
Arunachal Pradesh	150.1	161.5	174.9	192.5	227.0
Assam	984.6	1023.8	904.0	1123.0	1327.5
Manipur	115.8	118.4	109.0	119.4	149.5
Meghalaya	343.7	355.9	281.1	331.1	397.4
Mizoram	72.6	74.9	68.9	82.7	100.7
Nagaland	77.5	90.4	88.9	101.1	109.9
Sikkim	77.7	78.0	60.4	73.6	90.8
Tripura	93.6	86.8	88.7	94.7	101.3
Region Total	1915.5	1989.6	1775.7	2118.1	2504.0
Region - East					
Andaman & Nicobar	149.2	157.2	132.4	141.9	162.8
Bihar	2441.8	2366.7	2136.6	2055.1	2398.4
Jharkhand	1901.4	1968.4	1741.5	1660.6	1754.8
Odisha	2613.3	2661.7	2534.5	2593.6	2929.1
West Bengal	3448.7	3438.7	3007.9	2962.3	3496.9
Region Total	10554.4	10592.8	9553.0	9413.6	10742.0
Region - West					
Chhattisgarh	1698.8	1648.2	1607.7	1656.9	1930.3
Dadra & Nagar Haveli And Daman & Diu	291.4	234.0	161.7	175.3	212.7
Goa	315.5	305.5	233.4	276.4	294.0
Gujarat	5429.9	5607.6	5089.8	5780.1	6927.3
Madhya Pradesh	3797.5	3654.9	3368.9	3375.0	3884.5
Maharashtra	9291.8	9528.9	8031.2	8322.1	9291.0
Region Total	20824.9	20979.2	18492.8	19585.7	22539.9
Region - South					
Andhra Pradesh	3947.2	3833.6	3405.4	3432.2	3460.4
Karnataka	6904.6	6601.8	5574.5	6203.6	8042.0
Kerala	2576.0	2557.3	1922.7	2101.1	2485.6
Lakshadweep	14.0	15.3	16.0	16.1	16.3
Puducherry	314.2	290.3	210.9	300.2	553.0
Tamil Nadu	6354.3	6191.3	5006.9	5371.1	5999.3
Telangana	3753.4	3621.8	3253.3	3555.8	3528.8
Region Total	23863.5	23111.4	19389.7	20980.1	24085.4
All India Total	83434.7	82485.4	72634.2	76620.2	85831.2

Source : Oil Companies; P:-provisional

Table 6.5 : PDS SKO allocation and sales

(Figures in thousand kilo litres)

State/UT	2018-19		2019-20		2020-21		2021-22		2022-23 (P)	
	Allocn	Sales	Allocn	Sales	Allocn	Sales	Allocn	Sales	Allocn	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	4.0	0.1
Jammu & Kashmir	58.5	53.9	45.0	40.9	45.0	36.5	38.3	29.2	30.6	0.8
Ladakh			3.5	1.0	3.5	3.5	3.5	3.3	2.8	0.6
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
SUB TOTAL NORTH	1124.2	1021.0	625.8	518.8	256.4	74.6	49.3	34.9	37.6	1.5
Andaman & Nicobar Islands	4.1	3.8	1.9	1.5	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	127.6	48.4
Jharkhand	186.8	150.3	135.2	107.2	90.0	83.2	72.0	68.9	54.0	18.9
Odisha	248.4	247.7	210.6	208.3	194.3	190.3	155.4	150.3	116.5	28.7
West Bengal	704.0	699.3	704.0	692.7	704.0	696.5	704.0	689.7	462.7	171.5
SUB TOTAL EAST	1476.0	1430.7	1314.8	1253.5	1201.1	1182.4	1101.6	1078.6	760.9	267.5
Arunachal Pradesh	7.9	7.2	6.4	5.2	4.8	3.7	3.3	2.9	3.0	0.2
Assam	245.9	242.6	181.9	176.9	155.6	153.1	124.5	117.3	99.6	12.7
Manipur	17.9	17.7	13.3	12.7	11.1	11.3	10.0	10.0	9.0	2.6
Meghalaya	19.4	19.3	19.3	18.9	18.9	17.9	17.0	16.0	15.3	2.5
Mizoram	4.8	4.8	3.6	3.6	3.2	3.2	2.9	2.7	2.6	0.1
Nagaland	10.3	9.8	9.3	8.9	8.6	8.4	7.7	7.7	7.0	1.1
Sikkim	3.5	3.4	2.6	2.5	2.3	2.1	22.7	22.5	1.8	0.2
Tripura	29.4	29.3	26.4	26.2	25.2	25.1	2.0	2.0	20.4	8.4
SUB TOTAL NORTH EAST	339.0	334.0	262.7	254.9	229.5	224.8	190.0	181.0	158.6	27.9
Chhattisgarh	115.1	91.5	82.4	69.1	58.3	56.1	46.6	43.9	34.9	9.7
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	0.2	0.0
Gujarat\$	249.7	248.7	138.8	120.8	84.0	83.1	55.8	53.7	25.1	6.0
Madhya Pradesh	336.2	325.9	260.7	238.5	213.4	187.1	160.0	116.8	120.0	3.4
Maharashtra	286.7	241.9	106.5	52.9	46.5	21.6	27.9	15.6	16.8	3.9
SUB TOTAL WEST	989.8	909.5	589.3	482.1	402.6	348.2	290.7	230.2	197.0	23.0
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	17.9	6.3
Kerala	55.6	55.6	41.7	41.7	37.1	37.1	29.8	17.8	15.6	15.6
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	54.2	54.2
Telengana	97.9	94.3	56.6	29.8	16.0	2.9	90.4	90.4	1.5	0.0
SUB TOTAL SOUTH	504.1	456.9	328.7	283.8	225.5	208.8	151.7	135.1	89.6	76.1
All India	4433.0	4152.1	3121.3	2793.2	2315.0	2038.8	1783.3	1659.9	1243.6	396.1

Allocn= Allocation

States/UTs currently under nil PDS SKO quota

Source: MoP&NG and PPAC

* 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. \$: Allocation of PDS subsidized Kerosene for 4th quarter for the state of Gujrat has been reduced to zero according to MoPNG letter no. M-11021(16)/2022-Distribution-PNG dated 20th January,2023. #: Goa Government declared to be kerosene free effective from 31.03.2023

*On an all India basis, the drop in allocation in the last five years (till 2022-23) has been 72% 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 (96.7%) followed by Southern region (82.2%), Western region (80.1%), North Eastern region 53.2% & Eastern region (48.4%). Overall India based PDS SKO upliftment with respect to allocation during FY2022-23 was 31.9%. Highest upliftment was observed in South zone 85% followed by East zone 35.2%, North East zone 17.6%, West zone 11.7% and North zone 4%.

Overall lapse quota of PDS SKO on subsidized rate for the FY2022-23 was 68%.

Table 6.6 : 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	1.4.2021	1.4.2022	1.4.2023 (P)	1.4.2019	1.4.2020	1.4.2021	1.4.2022	1.4.2023 (P)
Chandigarh	42	42	47	47	48	12	12	12	12	11
Delhi	398	398	400	400	402	116	116	111	111	112
Haryana	2933	3060	3412	3660	3769	141	141	139	139	150
Himachal Pradesh	439	494	563	638	701	26	26	26	26	25
Jammu and Kashmir	504	530	552	581	643	45	45	45	45	50
Ladakh	3	3	12	27	32	2	2	2	2	2
Punjab	3453	3551	3772	3920	4000	237	237	237	237	232
Rajasthan	4661	4967	5615	6028	6348	250	250	248	248	285
Uttar Pradesh	7762	8210	9315	10162	10709	695	691	675	674	772
Uttarakhand	601	629	686	763	798	73	73	69	69	73
SUB TOTAL NORTH	20796	21884	24374	26226	27450	1597	1593	1564	1563	1712
Andaman & Nicobar Islands	14	16	16	19	19	2	2	2	2	2
Bihar	2860	2968	3158	3341	3523	371	371	362	362	349
Jharkhand	1216	1358	1535	1634	1681	87	87	87	87	110
Odisha	1704	1894	2070	2246	2340	177	177	176	176	172
West Bengal	2363	2523	2750	2894	3006	458	457	455	455	470
SUB TOTAL EAST	8157	8759	9529	10134	10569	1095	1094	1082	1082	1103
Arunachal Pradesh	94	116	152	178	195	33	33	33	33	30
Assam	897	979	1104	1312	1417	359	359	359	359	227
Manipur	104	136	160	178	195	36	36	36	36	40
Meghalaya	208	225	238	270	285	35	35	35	35	31
Mizoram	43	45	55	72	96	19	19	19	19	27
Nagaland	79	94	120	150	167	19	19	19	19	19
Sikkim	51	55	57	63	65	12	12	12	12	7
Tripura	72	79	94	108	114	40	40	40	40	48
SUB TOTAL NORTH EAST	1548	1729	1980	2331	2534	553	553	553	553	429
Chhattisgarh	1280	1462	1808	1969	2071	108	108	108	108	105
Dadra & Nagar Haveli and Daman & Diu	62	61	61	64	66	7	7	7	7	7
Goa	118	118	122	127	135	22	22	22	22	19
Gujarat	4159	4573	5149	5502	5661	473	473	470	470	466
Madhya Pradesh	3832	4230	4981	5566	5909	284	284	284	284	279
Maharashtra	6148	6457	7048	7667	8045	767	766	752	752	786
SUB TOTAL WEST	15599	16901	19169	20895	21887	1661	1660	1643	1643	1662
Andhra Pradesh	3430	3721	4047	4230	4345	394	394	384	384	328
Karnataka	4385	4811	5500	5929	6199	315	315	311	309	376
Kerala	2140	2238	2396	2559	2694	237	237	234	234	200
Lakshadweep	0	0	0	1	4	0	0	0	0	1
Puducherry	165	164	174	179	186	8	8	8	8	6
Tamil Nadu	5638	5804	6355	6745	7018	466	465	458	458	392
Telangana	2767	3078	3571	3798	3969	202	202	202	202	205
SUB TOTAL SOUTH	18525	19816	22043	23441	24415	1622	1621	1597	1595	1508
All India	64625	69089	77095	83027	86855	6528	6521	6439	6436	6414

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 01.04.2023 has been 34.4%. The region wise growth is highest for the North Eastern region (63.7%), followed by Western region (40.3%), Southern region (31.8%) and Northern region (32%) whereas Eastern region growth rate was 29.6%

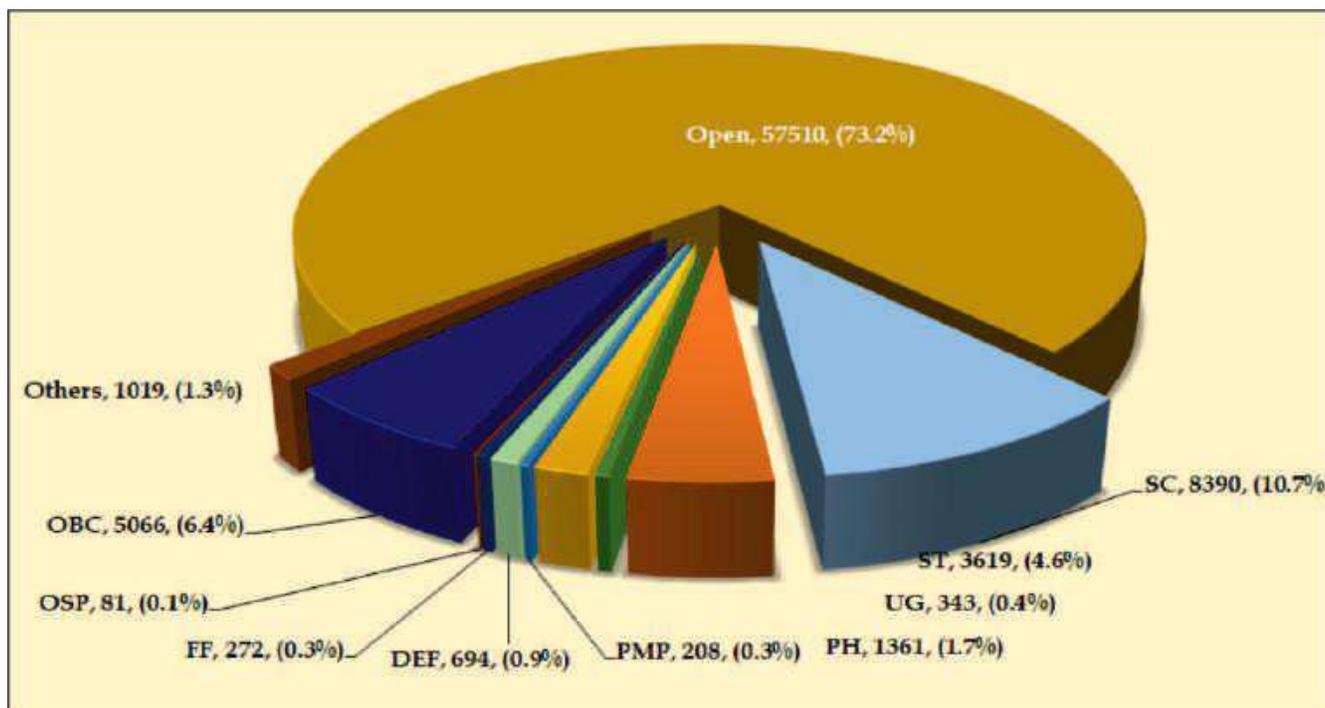
• As many states have become kerosene free in the last five years and due to voluntary surrender of PDS kerosene quota by some others there has been a decline in the number of kerosene dealers in the country.

All India number of retail outlets in PSU and private category



On 01.04.2023 the number of public sector oil company owned retail outlets was 78563 out of a total of 86855 outlets on all India basis, whereas the number of retail outlets owned by private oil companies was 8292. Participation by private sector in retail outlet business started in FY 2004 with 27 retail outlets. As on 01.04.2023 it accounted for 9.5% of the total market representation.

Category wise PSU Retail Outlets (Total 78563) as on 01.04.2023



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 : Industry marketing infrastructure as on 01.04.2023 (P)

Particulars	IOCL	BPCL	HPCL	RIL/RBML *	NEL##	Shell	Others	Total
POL terminal/depots (Nos.)\$	120	82	81	18	3		6	310
Aviation fuel stations (Nos.)@	132	65	54	30			2	283
Retail Outlets (total) (Nos.)^	36,285	21,029	21,186	1,555	6,386	351	63	86,855
Out of which, Rural ROs (Nos.)	11,732	5,253	5,237	130	2,092	85	21	24,550
SKO/LDO agencies (Nos.)	3,871	927	1,638					6,436
LPG distributors (total) (Nos.) (PSUs only)	12,859	6,244	6,283					25,386
LPG bottling plants (Nos.) (PSUs only)#	97	53	55				3	208
LPG bottling capacity (TMTPA) (PSUs only)&	10,722	4,890	6,410				203	22,225
LPG active domestic consumers (Nos. crore) (PSUs only)	14.7	8.1	8.6					31.4

\$(Others=4 MRPL & 2 NRL); @(Others=ShellMRPL); ^(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



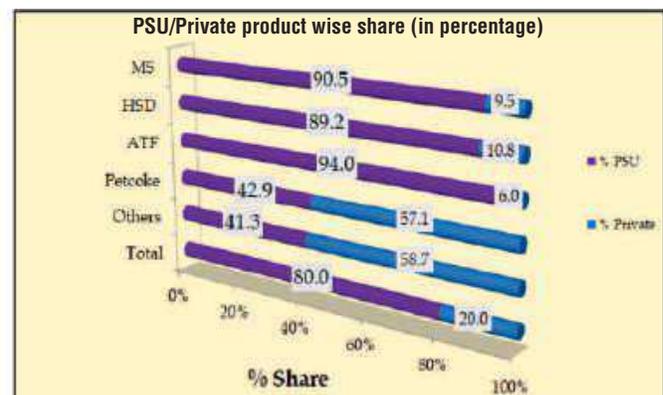
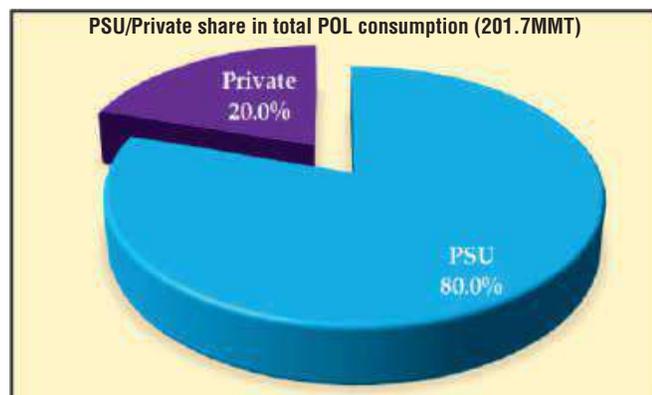
Table 6.8 : Break-up of consumption data (PSU/JV and Private)

Product	(Thousand metric tonne)											
	2019-20			2020-21			2021-22 (P)			2022-23 (P)		
	PSU/JV	Private	Total	PSU	Private	Total	PSU	Private	Total	PSU	Private	Total
LPG	26126	204	26330	27494	64	27558	28253	0	28253	28503	0	28504
MS	27179	2797	29975	25168	2801	27969	27905	2944	30849	32631	2345	34976
Naphtha	6479	7789	14268	6050	8051	14100	6426	6820	13246	5459	6699	12158
ATF	7598	400	7999	3525	172	3698	4707	301	5008	6948	418	7366
SKO	2397	0	2397	1795	3	1798	1493	0	1493	490	0	490
HSD	73825	8777	82602	64504	8208	72713	68411	8248	76659	81433	4465	85898
LDO	602	25	628	713	142	855	765	252	1017	625	100	725
Lubes	1317	2517	3833	1475	2622	4097	1563	2977	4540	1693	2047	3739
FO/LSHS	5172	1129	6302	4925	662	5586	5542	720	6262	6171	783	6954
Bitumen	4995	1725	6720	5356	2168	7524	5093	2723	7816	5211	2830	8041
PetCoke	6500	15208	21708	5034	10571	15605	6110	8145	14255	7207	11137	18345
Others	4626	6739	11365	4149	8643	12791	5073	7224	12297	5050	10763	15813
Total	166815	47312	214127	150189	44107	194295	161343	40354	201697	181421	41587	223008

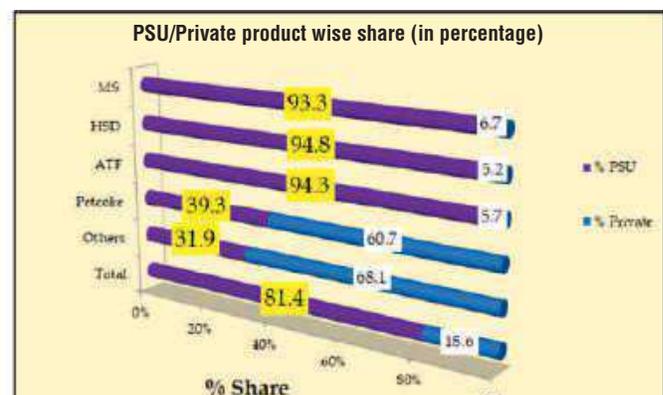
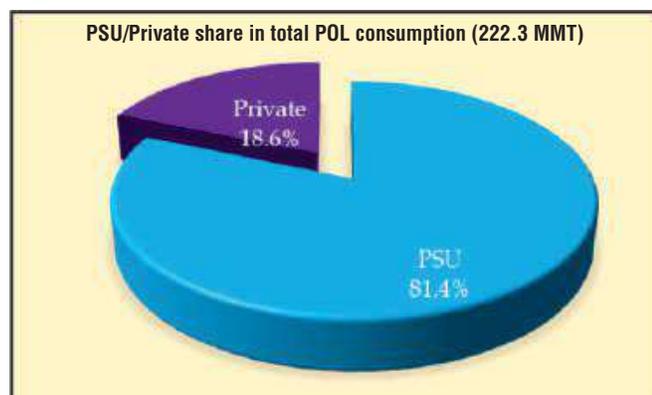
Source: Oil companies, Directorate General of Commercial Intelligence and Statistics (DGCIS) & SEZ data (included from FY 2017-18 onwards). (Oil company sales+Private imports+SEZ sales to DTA=Consumption)

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

FY 2021-22 (P)



FY 2022-23 (P)



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

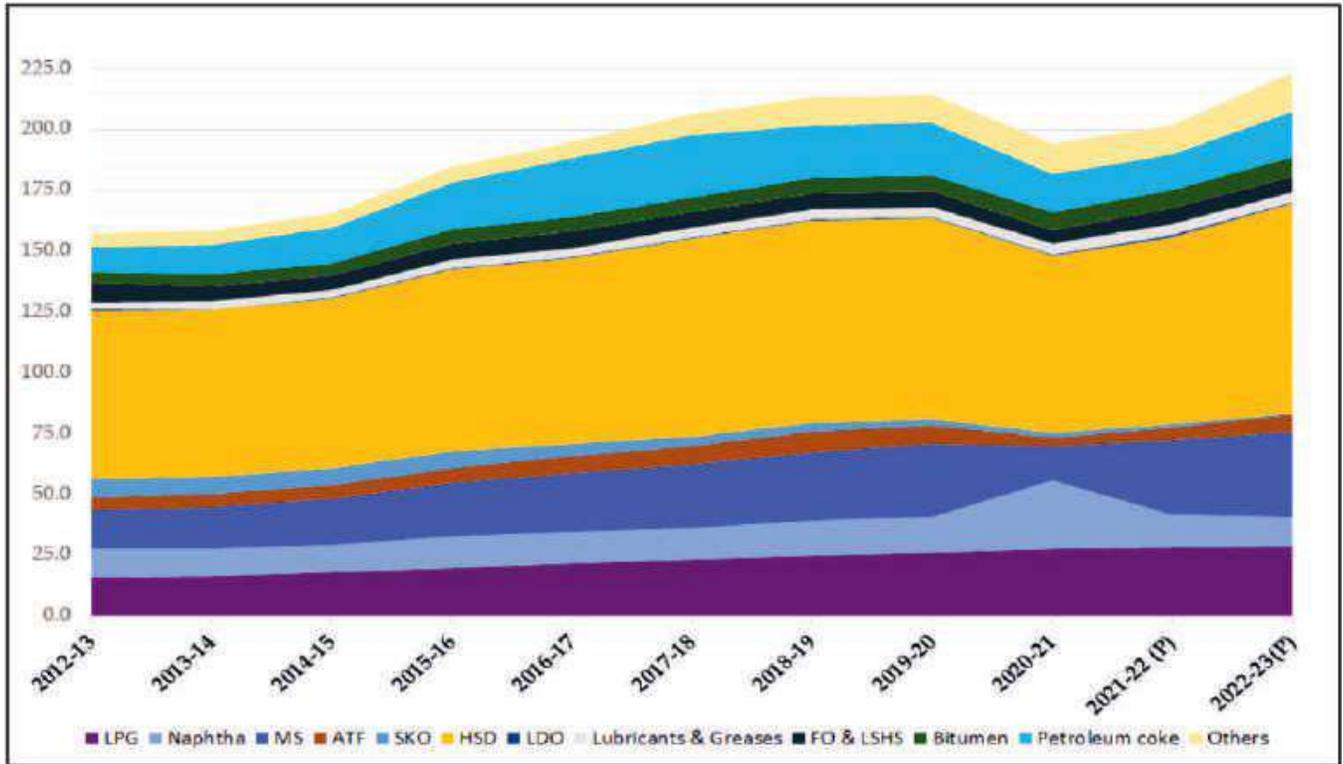
The share of the public sector in total consumption increased during FY2022-23 increased by 1.6% as compared to the same period last year.

• The share of the public sector during FY2022-23 increased in HSD (5.6%) MS (2.8%) & ATF (0.3%) as compared to FY 2020-21.

• In the private sector the growth has been observed for Petcoke (2.6%) and 'Others' category (9.2%).

POL consumption Trend product wise

Million metric tonnes



Distribution of total domestic POL sales in India

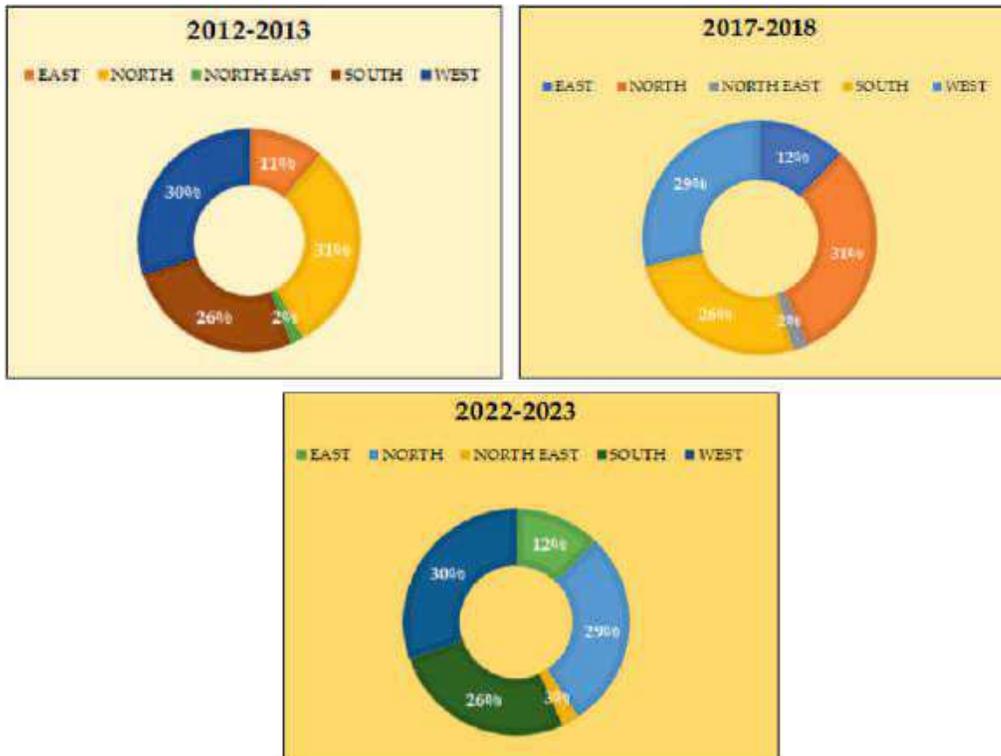


Table 6.9: Oil Industry Alternate Fuel Infrastructure at Retail Outlets as on 01.04.2023 (P)

State/UT	CNG_CBG_LNG	EV Charging	AutoLPG	Retail Outlets with at least one Alternate Fuel
Chandigarh	7	19	8	32
Delhi	262	101	3	290
Haryana	273	402	2	667
Himachal Pradesh	15	65	0	80
Jammu and Kashmir	0	85	3	85
Ladakh	0	0	0	0
Punjab	236	312	9	535
Rajasthan	265	631	24	853
Uttar Pradesh	790	960	38	1694
Uttarakhand	39	75	5	103
SUB TOTAL NORTH	1887	2650	92	4339
Andaman & Nicobar Islands	0	2	0	2
Bihar	121	219	1	335
Jharkhand	82	191	0	264
Odisha	97	278	4	368
West Bengal	71	404	37	481
SUB TOTAL EAST	371	1094	42	1450
Arunachal Pradesh	0	27	4	27
Assam	6	186	0	192
Manipur	0	33	0	33
Meghalaya	0	27	0	27
Mizoram	0	2	0	2
Nagaland	0	12	0	12
Sikkim	0	2	0	2
Tripura	20	31	0	44
SUB TOTAL NORTH EAST	26	320	4	339
Chhattisgarh	4	179	4	182
Dadra & Nagar Haveli and Daman & Diu	9	2	0	10
Goa	10	42	3	49
Gujarat	729	686	20	1365
Madhya Pradesh	254	439	25	678
Maharashtra	681	690	59	1310
SUB TOTAL WEST	1687	2038	111	3594
Andhra Pradesh	161	355	8	492
Karnataka	274	861	145	1165
Kerala	136	259	61	401
Lakshadweep	0	1	0	1
Puducherry	5	9	2	15
Tamil Nadu	214	563	113	810
Telangana	142	412	62	567
SUB TOTAL SOUTH	932	2460	391	3451
All India	4903	8562	640	13173

Source: Oil companies

Table 6.10 : Ethanol blending programme

Sl.no.	State	(1st December 2021 to 30th Nov 2022 (P))		(1st December 2022 to 31ST Mar 2023 (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	17.20	10.2%	8.35	11.8%
2	Andaman & Nicobar	0.00	0.0%	0.00	0.0%
3	Arunachal Pradesh	0.00	6.0%	0.00	10.6%
4	Assam	3.93	5.8%	2.63	11.6%
5	Bihar	13.88	10.6%	5.37	11.9%
6	Chandigarh	0.00	9.8%	0.00	10.5%
7	Chhattisgarh	7.69	9.3%	3.59	10.8%
8	Dadar & Nagar Haveli and Daman & Diu	0.00	10.0%	0.00	11.8%
9	Delhi	11.51	10.4%	4.49	11.2%
10	Goa	2.34	9.3%	0.91	11.3%
11	Gujarat	21.95	10.5%	10.51	11.7%
12	Haryana	21.56	10.5%	12.37	11.7%
13	Himachal Pradesh	2.72	9.2%	0.99	10.0%
14	Jammu & Kashmir	0.89	9.8%	0.33	11.3%
15	Jharkand	6.06	8.8%	2.89	11.8%
16	Karnataka	32.50	10.5%	13.37	11.7%
17	Lakshadweep	0.00	0.0%	0.00	0.0%
18	Kerala	19.04	9.7%	8.89	11.8%
19	Ladakh	0.00	0.0%	0.00	3.0%
20	Madhya Pradesh	17.02	10.3%	7.47	11.5%
21	Maharashtra	52.66	10.5%	22.33	11.9%
22	Manipur	0.00	5.3%	0.00	10.4%
23	Meghalaya	0.00	6.3%	0.00	10.8%
24	Mizoram	0.00	5.7%	0.00	10.5%
25	Nagaland	0.00	4.3%	0.00	10.4%
26	Odisha	9.76	9.0%	4.60	10.5%
27	Puducherry	0.00	8.8%	0.00	11.7%
28	Punjab	16.56	10.3%	6.70	11.4%
29	Rajasthan	19.91	10.0%	8.30	11.2%
30	Sikkim	0.00	4.0%	0.00	6.3%
31	Tamil Nadu	34.99	10.1%	18.93	11.7%
32	Telangana	17.92	10.2%	8.40	11.7%
33	Tripura	0.00	7.2%	0.00	10.9%
34	Uttar Pradesh	63.11	10.7%	27.66	11.9%
35	Uttrakhand	2.65	10.3%	1.19	11.9%
36	West Bengal	12.26	8.7%	5.19	11.1%
Grand Total		408.1	8.10%	185.5	11.58%

* 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.



XTRA TEJ
डोजिंग मशीन
XTRA TEJ
Dosing Machine

Indian Oil
XTRA TEJ DOSING MACHINE



XTRA TEJ
DOSING
MACHINE

XTRA TEJ
DOSING
MACHINE



INDIAN OIL
LPG BOTTLING PLANT
DOs and DON'Ts while using A

DOs

1. Make necessary arrangements to prevent water
2. Empty cylinders which have expired flame-out
3. used for refilling with should not be accepted
4. after use
5. Keep away from combustible materials, fire
6. safe storage
7. Store in a dry, cool and well-ventilated area
8. materials. Store in a regulated and approved
9. location. Store in a regulated and approved
10. location. Store in a regulated and approved
11. location. Store in a regulated and approved

DON'Ts

1. Do not wear rings, watches or other apparel
2. and close to skin reaction.
3. Do not place in unregulated containers.
4. Do not try to repair or fix it.
5. Do not try to repair or fix it.
6. Do not try to repair or fix it.
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Chapter-7

LPG





CHAPTER - HIGHLIGHTS

LPG

- The PMUY scheme has covered around 9.59 crore beneficiaries since its launch in May 2016. As on 1.4.2023, 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 (29.7%), Western region (21.4%), Southern region (9.9%) and North-east region (5.5%).
- Highest LPG consumption in Northern region (30%) followed by Southern (27%), Western (24%), Eastern (16%) and North-eastern region (3%) during FY 2022-23.
- PSU OMCs sold nearly 29.34 MMT of LPG during FY 2022-23 out of which about 86.5% was sold in the domestic sector.
- PSU OMCs have a total of 208 LPG bottling plants all over India with rated bottling capacity of around 22.23 million metric tonne per annum (MMTPA).
- 87.1 lakh new domestic customers were enrolled by PSU OMCs during FY 2022-23. During the same period, PSU OMCs have added 116 distributorships.
- The total LPG tankage on all-India basis is around 1178.1 TMT which is equivalent to about 15 days of consumption.
- PSU OMCs have a total of 526 (including 79 ALDS with nil sales) 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 106.7 TMT during FY 2022-23 out of which around 83.8% sales were in the Southern region.
- Packed domestic segment dominated LPG consumption on All India basis with a share of around 86.5% followed by Packed non-domestic segment (8.9%), Bulk sales (4.2%) and Auto LPG sales (0.4%) in FY 2022-23.
- As on 1.4.2023 PSU OMCs (IOCL, BPCL and HPCL) together have 31.40 crore active LPG customers in the domestic category who are being served by 25,385 LPG distributors.



Table 7.1 : LPG marketing at a glance

Particulars	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
	(Thousand metric tonne)						
LPG production	11253	12364	12786	12823	12072	12238	12831
LPG consumption	21608	23342	24907	26330	27540	28253	28503
PSU sales	21179	22977	24591	26126	27476	28253	28503
of which:							
Domestic	18871	20352	21728	23076	25117	25502	25382
Non-Domestic	1776	2086	2364	2614	1885	2239	2606
Bulk	364	355	318	263	355	391	409
Auto LPG	167	184	180	172	118	122	107
Imports	11097	11379	13235	14809	16476	17125	18309
of which:							
PSU imports	10668	11015	12919	14605	16412	17125	18309
Private imports	429	364	316	204	64	0.1	0.1
Import dependency percentage of LPG*	49%	47%	52%	55%	60%	60%	64%
	(Lakh)						
Enrolment (domestic)	331.7	284.7	455.1	161.1	85.8	158.4	101.2
As on	1.4.2017	1.4.2018	1.4.2019	1.4.2020	1.4.2021	1.4.2022	1.4.2023
LPG active domestic customers	1,988	2,243	2,654	2,787	2,895	3,053	3,140.3
PMUY beneficiaries	200	356	719	802	800	899	959
Non-domestic customers	25.3	27.9	30.2	32.4	33.9	35.2	35.9
	(Percent)						
LPG coverage (Estimated)	72.8	80.9	94.3	97.5	99.8	*	*
	(Nos.)						
LPG distributors	18786	20146	23737	24670	25083	25269	25385
of which:							
Shehri Vitrak	7677	7821	7908	7914	7899	7894	7925
Rurban Vitrak	3152	3463	3626	3671	3697	3720	3716
Gramin & Durgam Kshetriya Vitrak	7957	8862	12203	13085	13487	13655	13744
Auto LPG dispensing stations (ALDS)	675	672	661	657	651	601	525
	(Thousand metric tonne per annum)						
Bottling capacity (rated)	16264	17395	18338	20292	21249	21573	22225
	(Thousand metric tonne)						
Gross tankage	878	912	929	978	994	1088	1178

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

Note:

- Data in respect of enrolment, customers, distributors, ALDS and rated bottling capacity pertain to PSU OMCs only.
- Gross tankage includes LPG tankage at LPG bottling plants owned by PSU oil companies, all refineries, fractionators and LPG import terminals.
- 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 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: State-wise active domestic connections as on 01.04.2023(P)

State/UT	Number of Active domestic connections
(Number in lakhs)	
Chandigarh	2.88
Delhi	53.34
Haryana	76.12
Himachal Pradesh	21.47
Jammu & Kashmir	34.60
Ladakh	0.95
Punjab	93.40
Rajasthan	175.75
Uttar Pradesh	463.45
Uttarakhand	30.25
Sub Total North	952.20
Arunachal Pradesh	3.08
Assam	83.86
Manipur	6.57
Meghalaya	4.10
Mizoram	3.42
Nagaland	3.34
Sikkim	1.70
Tripura	7.89
Sub Total North-East	113.94
Andaman & Nicobar Islands	1.23
Bihar	215.17
Jharkhand	62.76
Odisha	96.96
West Bengal	267.80
Sub Total East	643.91
Chhattisgarh	59.01
Dadra & Nagar Haveli and Daman & Diu	1.67
Goa	5.48
Gujarat	120.57
Madhya Pradesh	166.60
Maharashtra	303.87
Sub Total West	657.20
Andhra Pradesh	149.21
Karnataka	178.56
Kerala	95.04
Lakshadweep	0.11
Puducherry	3.94
Tamil Nadu	226.08
Telangana	120.13
Sub Total South	773.07
All India	3140.33

Source: PSU OMCs (IOCL, BPCL and HPCL)

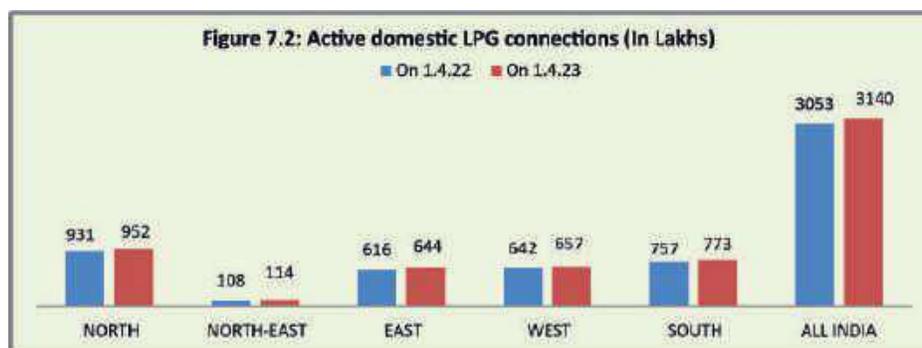


Table 7.3: State-wise PMUY connections as on 01.04.2023(P)

(Number in lakhs)

State/UT	Number of PMUY connections
Chandigarh	0.00659
Delhi	1.42
Haryana	7.67
Himachal Pradesh	1.41
Jammu & Kashmir	12.45
Ladakh	0.11
Punjab	12.84
Rajasthan	69.27
Uttar Pradesh	175.03
Uttarakhand	4.96
Sub Total North	285.18
Arunachal Pradesh	0.49
Assam	44.15
Manipur	2.02
Meghalaya	2.15
Mizoram	0.34
Nagaland	0.92
Sikkim	0.14
Tripura	2.84
Sub Total North East	53.04
Andaman & Nicobar Islands	0.13
Bihar	107.33
Jharkhand	36.46
Odisha	53.20
West Bengal	123.72
Sub Total East	320.85
Chhattisgarh	34.92
Dadra & Nagar Haveli and Daman & Diu	0.15
Goa	0.01
Gujarat	38.43
Madhya Pradesh	82.27
Maharashtra	48.90
Sub Total West	204.69
Andhra Pradesh	5.12
Karnataka	37.58
Kerala	3.41
Lakshadweep	0.00
Puducherry	0.15
Tamil Nadu	37.04
Telangana	11.53
Sub Total South	94.83
All India	958.59

Source: PSU OMCs (IOCL, BPCL and HPCL)

PMUY connections refer to those households where subscription vouchers have been issued

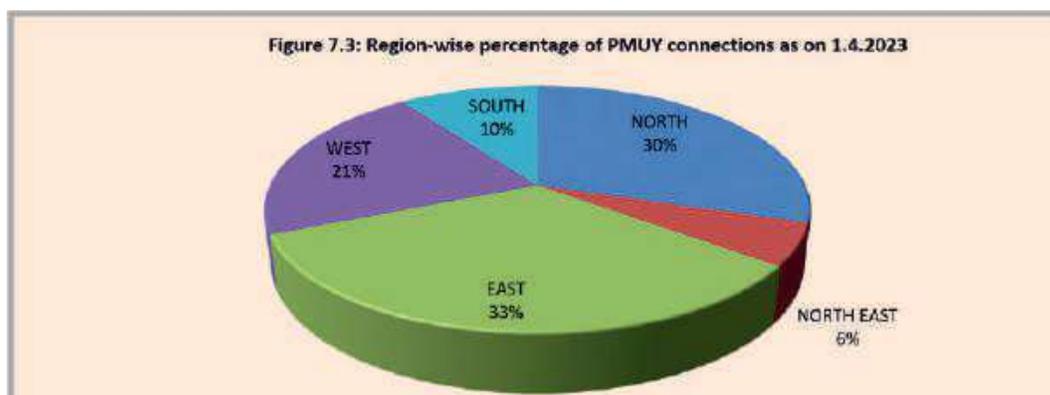


Table 7.4 : LPG domestic customers enrolment (14.2 kg/5 kg) by PSU OMCs

(Number in lakhs)

State/UT	FY2022-23 (P)		
	14.2 Kg	5 Kg	Total
Chandigarh	0.05	0.0006	0.05
Delhi	1.10	0.0327	1.13
Haryana	1.75	0.0085	1.75
Himachal Pradesh	0.44	0.0053	0.45
Jammu & Kashmir	0.33	0.0032	0.33
Ladakh	0.02	0.0001	0.02
Punjab	1.37	0.0996	1.47
Rajasthan	4.08	0.2376	4.32
Uttar Pradesh	12.37	0.0972	12.47
Uttarakhand	1.05	0.0353	1.08
Sub Total North	22.56	0.52	23.08
Arunachal Pradesh	0.11	0.0026	0.11
Assam	5.02	0.1736	5.19
Manipur	0.33	0.0007	0.33
Meghalaya	0.37	0.1356	0.51
Mizoram	0.10	0.0013	0.10
Nagaland	0.23	0.0006	0.23
Sikkim	0.06	0.0003	0.06
Tripura	0.24	0.0010	0.25
Sub Total North-East	6.48	0.316	6.79
Andaman & Nicobar Islands	0.04	0.0007	0.04
Bihar	8.79	0.1042	8.89
Jharkhand	2.33	0.0390	2.37
Odisha	2.46	0.0169	2.47
West Bengal	16.65	0.0596	16.71
Sub Total East	30.27	0.22	30.49
Chhattisgarh	1.83	0.0288	1.86
Dadra & Nagar Haveli and Daman & Diu	0.05	0.0001	0.05
Goa	0.14	0.0001	0.14
Gujarat	5.68	0.1272	5.81
Madhya Pradesh	3.96	0.1034	4.06
Maharashtra	8.30	0.0435	8.34
Sub Total West	19.95	0.30	20.25
Andhra Pradesh	2.68	0.0032	2.68
Karnataka	6.32	0.0863	6.41
Kerala	2.00	0.0141	2.01
Lakshadweep	0.00	0.0000	0.00
Puducherry	0.07	0.0010	0.07
Tamil Nadu	6.22	0.1378	6.36
Telangana	3.01	0.0052	3.02
Sub Total South	20.30	0.25	20.55
All India	99.56	1.61	101.16

Source: PSU OMCs (IOCL, BPCL and HPCL)

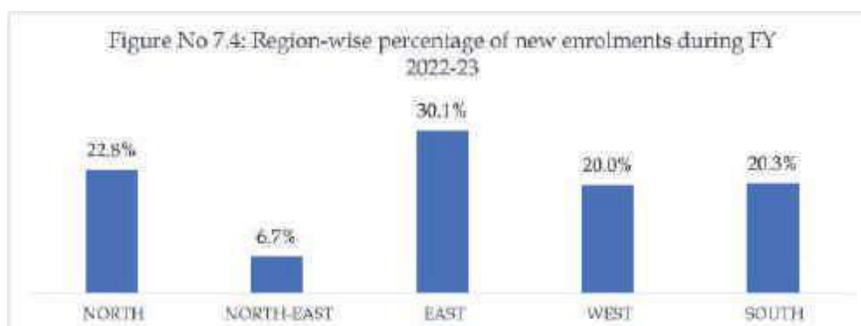
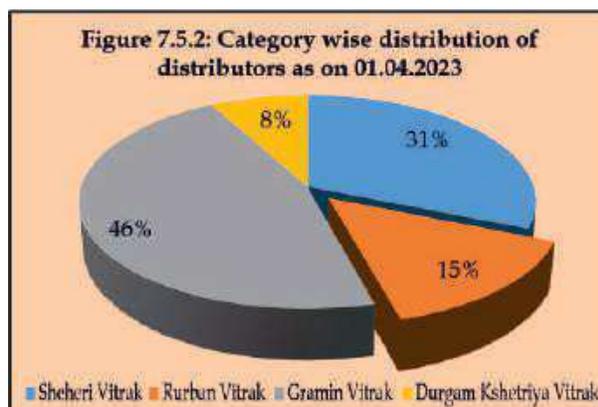
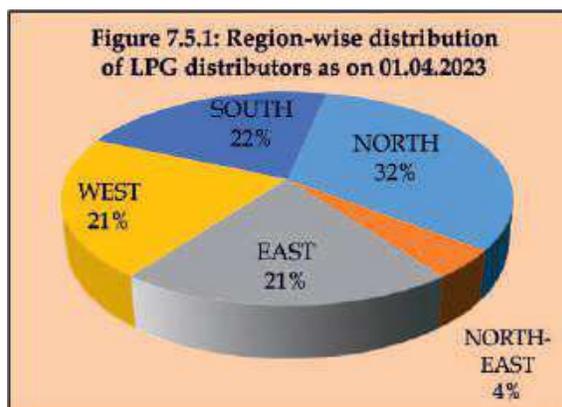


Table 7.5 : LPG distributors as on 01.04.2023 (P)

(Numbers)

State/UT	Sheheri Vitrak	Rurban Vitrak	Gramin Vitrak	Durgam Kshetriya Vitrak	Total
Chandigarh	26	0	0	0	26
Delhi	317	0	0	0	317
Haryana	281	102	232	9	624
Himachal Pradesh	69	13	92	33	207
Jammu & Kashmir	125	34	74	37	270
Ladakh	0	13	2	9	24
Punjab	334	255	248	21	858
Rajasthan	436	164	654	133	1387
Uttar Pradesh	1008	706	2306	122	4142
Uttarakhand	114	105	57	40	316
Sub Total North	2710	1392	3665	404	8171
Arunachal Pradesh	6	6	33	40	85
Assam	128	102	305	61	596
Manipur	15	13	36	38	102
Meghalaya	21	9	18	15	63
Mizoram	11	6	26	16	59
Nagaland	15	11	17	40	83
Sikkim	9	1	9	9	28
Tripura	18	8	46	8	80
Sub Total North-East	223	156	490	227	1096
Andaman & Nicobar Islands	0	4	4	1	9
Bihar	240	252	1493	39	2024
Jharkhand	162	51	352	20	585
Odisha	173	99	578	113	963
West Bengal	408	164	939	75	1586
Sub Total East	983	570	3366	248	5167
Chhattisgarh	105	75	173	181	534
Dadra & Nagar Haveli and Daman & Diu	5	1	0	0	6
Goa	45	4	5	2	56
Gujarat	425	120	480	13	1038
Madhya Pradesh	473	210	483	385	1551
Maharashtra	1008	193	844	186	2231
Sub Total West	2061	603	1985	767	5416
Andhra Pradesh	316	250	421	106	1093
Karnataka	536	139	545	51	1271
Kerala	225	130	317	24	696
Lakshadweep	1	0	0	0	1
Puducherry	15	11	3	0	29
Tamil Nadu	567	364	609	105	1645
Telangana	288	101	333	78	800
Sub Total South	1948	995	2228	364	5535
All India	7925	3716	11734	2010	25385

Source: PSU OMCs (IOCL, BPCL and HPCL)





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Chapter-8

Prices and Taxes





CHAPTER - HIGHLIGHTS

Price and Taxes

- The Year 2022 had 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. Further, OPEC+ announced voluntary cuts in April-23 to the extent of 1.16 million bpd besides Russia's cuts of 0.5 million bpd, which brings the total volume cuts by OPEC+ to 3.66 million bpd.
- 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. However, the prices softened to some extent in the later half of the year on account of various factors like reduced demand due to recessionary conditions, rising interest rates, Russian oil still available in the world market etc.
- The monthly average prices of Indian basket of crude oil fell to \$78.54/bbl at the end of the financial year 2022-23 in March 2023 from \$102.97/bbl at the beginning in April 2022.
- The Indian basket of crude oil has averaged \$93.15/bbl during 2022-23 an increase of 17.64% 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 FY2022-23, Petroleum sector contributed Rs. 428067 crores (Rs. 492303 crores for FY 2021-22) 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 2022-23 is Rs. 320651 crores (Rs. 282122 crores for FY 2021-22) by way of VAT and other taxes, royalty, etc.
- The subsidy burden on petroleum products were Rs. 30,396 crores during 22-23 (Rs. 2237 crore during 21-22) including one time grant of Rs. 22,000 crores on account of under recovery on domestic LPG to OMCs.

Table 8.1 : Indian Basket Crude Oil Price

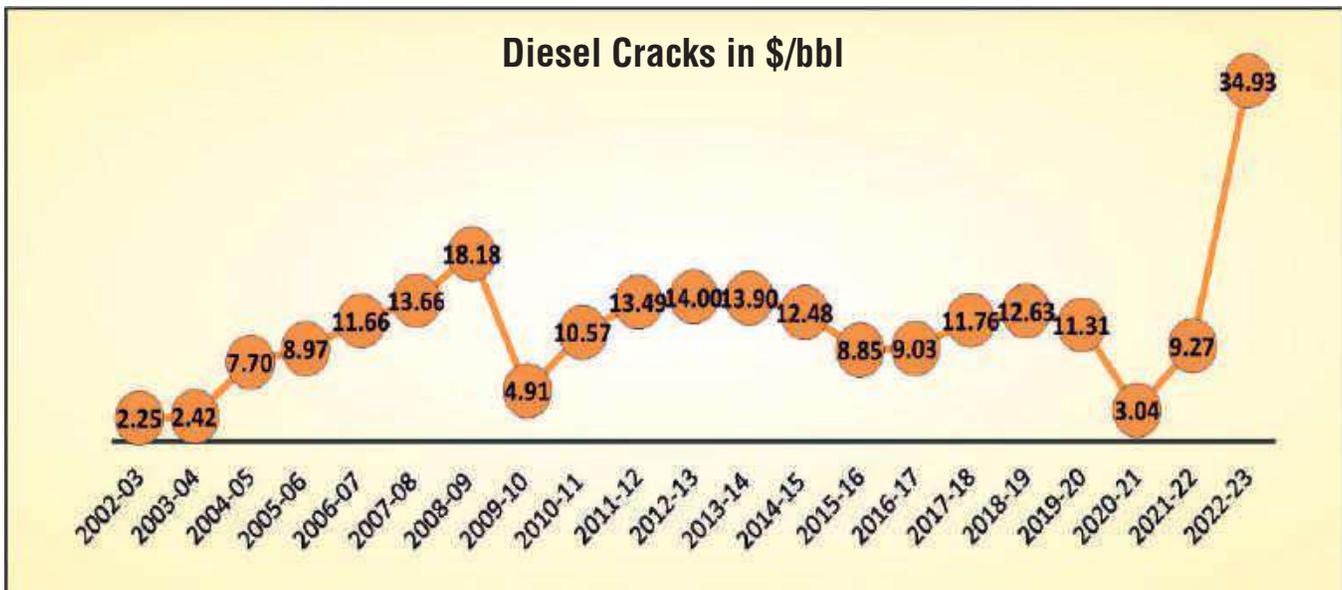
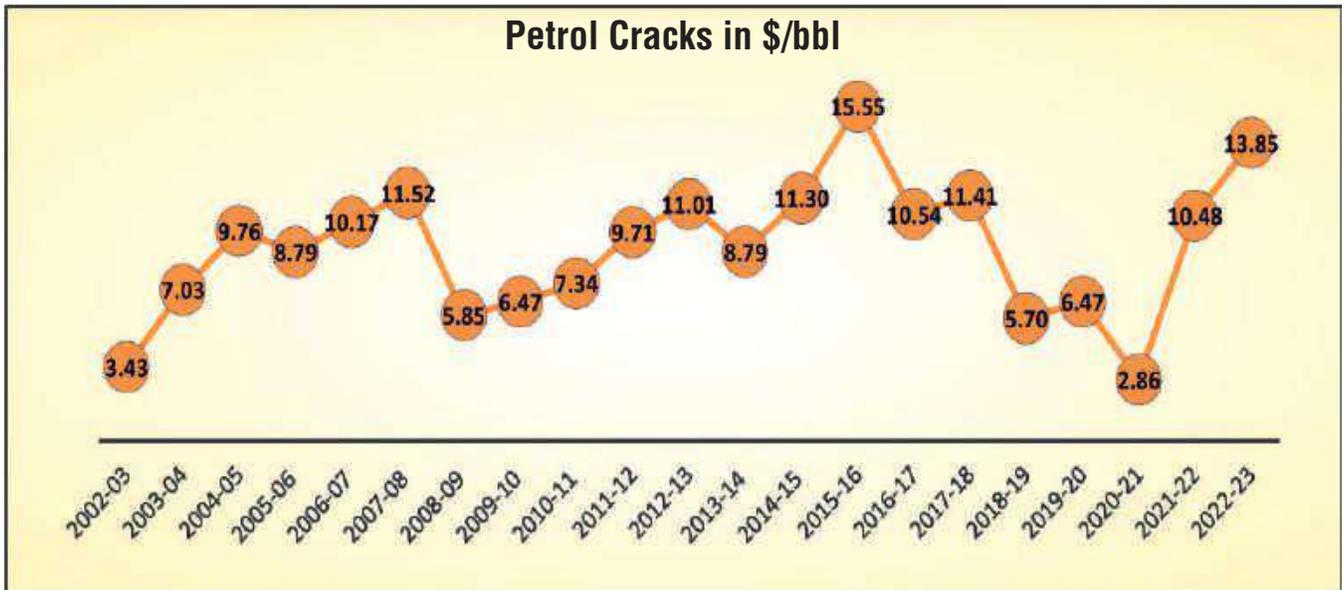
Year	Indian basket
	(\$/bbl)
2002-03	26.60
2003-04	27.98
2004-05	39.21
2005-06	55.72
2006-07	62.46
2007-08	79.25
2008-09	83.57
2009-10	69.76
2010-11	85.09
2011-12	111.89
2012-13	107.97
2013-14	105.52
2014-15	84.16
2015-16	46.17
2016-17	47.56
2017-18	56.43
2018-19	69.88
2019-20	60.47
2020-21	44.82
2021-22	79.18
2022-23	93.15
2023 : Month wise	
January	80.92
February	82.28
March	78.54
April	83.76
May	74.98
June	74.93

Notes:

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 spread of petroleum products vs Indian basket of crude oil



Trend in spread of international benchmark crude oils

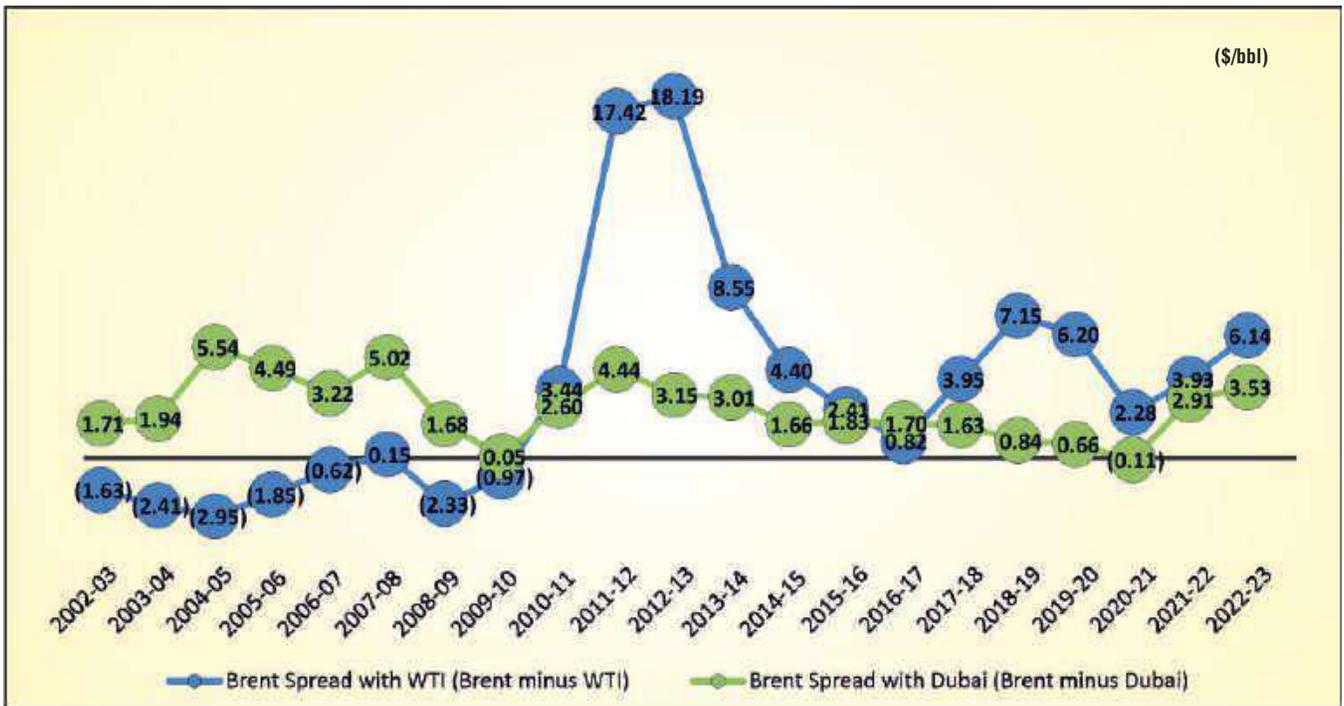


Table 8.2 : Price built-up of PDS Kerosene at Mumbai

Elements	Unit	As on 01.06.2023
Price before taxes and dealers' commission	₹ / litre	51.81
Add : Dealers' commission	₹ / litre	2.65
Add : GST (incl GST on dealers' commission)	₹ / litre	2.72
Retail selling price	₹ / litre	57.18

Source : As per IOCL.

Table 8.3 : Price built-up of Domestic LPG at Delhi

Elements	Unit	As on 01.06.2023
Price before taxes and distributors' commission	₹ / 14.2 kg cylinder	985.63
Add : Distributors' commission	₹ / 14.2 kg cylinder	64.84
Add : GST (including GST on distributors' commission)	₹ / 14.2 kg cylinder	52.53
Retail selling price	₹ / 14.2 kg cylinder	1103.00

Source : As per IOCL.

Table 8.4 : Price built-up of Petrol at Delhi

Elements	Unit	As on 01.06.2023
Price charged to dealers (excluding excise duty and VAT)	₹ / litre	57.35
Add : Excise duty	₹ / litre	19.90
Add : Dealers' commission (average)	₹ / litre	3.76
Add : VAT (including VAT on dealers' commission)	₹ / litre	15.71
Retail selling price	₹ / litre	96.72

Source : As per IOCL.

Table 8.5 : Price built-up of Diesel at Delhi

Elements	Unit	As on 01.06.2023
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
Retail selling price	₹ / litre	89.62

Source : As per IOCL.

Table 8.6 : Break up of Central excise duty on Petrol & Diesel (As on 01.06.2023)

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
Total excise duty	19.90	15.80

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

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	₹ /MT
	₹ /Ltr	₹ /Ltr	₹ /Ltr	
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
03-Jan-23	-	6.50	4.50	2,100.00
17-Jan-23	-	5.00	3.50	1,900.00
04-Feb-23	-	7.50	6.00	5,050.00
16-Feb-23	-	2.50	1.50	4,350.00
04-Mar-23	-	0.50	-	4,400.00
21-Mar-23	-	1.00	-	3,500.00
04-Apr-23	-	0.50	-	-
19-Apr-23	-	-	-	6,400.00
02-May-23	-	-	-	4,100.00
16-May-23	-	-	-	-

Source: www.cbic.gov.in



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 01.06.2023 at Mumbai

Particulars	₹/litre	Share in RSP (%)
Price before taxes and dealers' commission	51.81	90.6%
Customs duty	-	
GST (Including GST on dealers' commission)	2.72	
Total taxes	2.72	4.8%
Dealers' commission	2.65	4.6%
Retail selling price	57.18	100.0%

Table 8.8 : Share of taxes in retail selling price of Domestic LPG as on 01.06.2023 at Delhi

Particulars	₹/14.2 kg cylinder	Share in RSP (%)
Price before taxes and distributors' commission	985.63	89.4%
Customs duty	-	
GST (including GST on distributors' commission)	52.53	
Total taxes	52.53	4.8%
Distributors' commission	64.84	5.9%
Retail selling price	1103.00	100.0%

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
Total	10.37

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)

Effective date	Petrol	Diesel
As on 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
As on 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

(₹/cylinder)			
Effective date	14.2 KG cyl.	Additional commission for sale at market determined price (₹/14.2 KG cyl.)	5 KG cyl.
As on 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
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

Table 8.12 : Continued

(₹/cylinder)

Effective date	14.2 KG cyl.	Additional commission for sale at market determined price (₹/14.2 KG cyl.)	5 KG cyl.
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

Country	Petrol (₹/ltr)	Diesel (₹/ltr)	Kerosene (₹/ltr)	Domestic LPG (₹/14.2 kg cyl.)
India	96.72 [^]	89.62 [^]	57.18 [#]	1103.00 ^{**}
Pakistan	75.59	73.69	47.79	958.95
Bangladesh	97.50	85.02	85.02	523.66
Sri Lanka	90.90	88.62	70.04	1181.39
Nepal (Kathmandu)	110.73	98.08	98.08	1138.97

[^] Petrol and Diesel at Delhi as on 01.06.2023 as per IOCL

[#] at Mumbai as on 01.06.2023 for PDS Kerosene

^{**} Non subsidised Domestic LPG at Delhi as on 01.06.2023

Note - Prices for neighboring countries as available on their respective website as on 01.06.2023.

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



Table 8.14 : Retail Selling Price of petroleum products at State capitals / UTs as on 01.06.2023

State/Union Territory	City	Petrol	Diesel	Domestic LPG Non subsidized
		(₹/litre)		(₹/14.2 KG Cylinder)
Andaman & Nicobar Islands	Port Blair	84.10	79.74	1179.00
Andhra Pradesh	Amaravathi	111.87	99.61	1135.50
Arunachal Pradesh	Itanagar	92.76	82.18	1168.50
Assam	Guwahati	97.02	89.07	1152.00
Bihar	Patna	107.24	94.04	1201.00
Chandigarh	Chandigarh	96.20	84.26	1112.50
Chhattisgarh	Raipur	102.45	95.44	1174.00
Dadra and Nagar Haveli and Daman & Diu	Daman	94.31	89.86	1112.50
Delhi	New Delhi	96.72	89.62	1103.00
Goa	Panjim	97.68	90.23	1117.00
Gujarat	Gandhinagar	96.63	92.38	1128.50
Haryana	Ambala	97.48	90.31	1120.50
Himachal Pradesh	Shimla	97.25	86.13	1147.50
Jammu & Kashmir	Srinagar	101.98	86.97	1219.00
Jharkhand	Ranchi	99.84	94.65	1160.50
Karnataka	Bengaluru	101.94	87.89	1105.50
Kerala	Thiruvananthapuram	109.73	98.53	1112.00
Ladakh	Leh	104.20	89.21	1340.00
Madhya Pradesh	Bhopal	108.65	93.90	1108.50
Maharashtra	Mumbai	106.31	94.27	1102.50
Manipur	Imphal	101.19	87.13	1254.50
Meghalaya	Shillong	96.97	85.21	1170.00
Mizoram	Aizwal	95.73	82.18	1255.00
Nagaland	Kohima	99.45	87.56	1122.00
Odisha	Bhubaneswar	103.19	94.76	1129.00
Puducherry	Puducherry	96.16	86.33	1115.00
Punjab	Jullunder	97.09	87.46	1132.50
Rajasthan	Jaipur	108.48	93.72	1106.50
Sikkim	Gangtok	102.85	89.90	1255.50
Tamil Nadu	Chennai	102.63	94.24	1118.50
Telangana	Hyderabad	109.66	97.82	1155.00
Tripura	Agartala	99.49	88.44	1263.50
Uttar Pradesh	Lucknow	96.57	89.76	1140.50
Uttarakhand	Dehradun	95.28	90.30	1122.00
West Bengal	Kolkata	106.03	92.76	1129.00

Source: IOCL

Highest

Lowest

Table 8.15 : Retail selling price of PDS kerosene at major Metro cities as on 01.06.2023

State	Metro City	(₹/litre)
Maharashtra	Mumbai	57.18
Tamil Nadu	Chennai	15.00
West Bengal	Kolkata	60.19

Source: IOCL

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 01.06.2023

8.16A-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 excise duty	Special additional excise duty	Additional excise duty (Road and Infrastructure Cess)	Additional excise duty (Agriculture Infrastructure & Development Cess)
Crude oil	Rs 1/MT + Rs. 50/MT as NCCD	Rs.1/MT	-	Rs. 1/MT+ Cess @ 20% +Rs.50/ MT as NCCD	-	-	-
Petrol	2.50%	Rs.1.40/ltr. + Rs.11.00/ ltr SAD+ Rs.2.50/ ltr AIDC	Rs.5.00/ltr.	Rs.1.40/ltr	Rs.11.00/ltr	Rs.5.00/ltr.	Rs.2.50/ltr
Petrol (branded)	2.50%	Rs.2.60/ltr. + Rs.11.00/ ltr SAD+ Rs.2.50/ ltr AIDC	Rs.5.00/ltr.	Rs.2.60/ltr	Rs.11.00/ltr	Rs.5.00/ltr.	Rs.2.50/ltr
High speed diesel	2.50%	Rs.1.80/ltr. + Rs.8.00/ ltr SAD+ Rs.4.00/ ltr AIDC	Rs.2.00/ltr.	Rs.1.80/ltr	Rs.8.00/ltr	Rs.2.00/ltr.	Rs.4.00/ltr
High speed diesel (branded)	2.50%	Rs.4.20/ltr. + Rs.8.00/ ltr SAD+ Rs.4.00/ ltr AIDC	Rs.2.00/ltr.	Rs.4.20/Ltr	Rs.8.00/ltr	Rs.2.00/ltr.	Rs.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%	-	-	-

8.16B-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%	5.00%
	Non - Domestic	5.00%	18.00%	18.00%
Kerosene	PDS	5.00%	5.00%	5.00%
	Non PDS	5.00%	18.00%	18.00%
Naphtha	Fertilizer	Nil	18.00%	18.00%
	Non- Fertilizer	2.50%	18.00%	18.00%
Butane / Propane	Domestic	Nil	5.00%	5.00%
	Non - Domestic	2.50%	18.00%	18.00%
Bitumen & Asphalt		5.00%	18.00%	18.00%
Furnace Oil	Fertilizer	Nil	18.00%	18.00%
	Non- Fertilizer	2.50%	18.00%	18.00%
Light Diesel Oil		5.00%	18.00%	18.00%
Low Sulphur Heavy Stock/ HPS & other Residue	Fertilizer	Nil	18.00%	18.00%
	Non- Fertilizer	5.00%	18.00%	18.00%
Lube oil/greases		5.00%	18.00%	18.00%
Petroleum Coke		10.00%	18.00%	18.00%
Petroleum Jelly		5.00%	18.00%	18.00%
Transformer Oil		5.00%	18.00%	18.00%
Waxes all types		5.00%	18.00%	18.00%

Source: www.cbic.gov.in

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

Table 8.17 : Actual rate of sales tax/ VAT/GST and other taxes levied by State/UT Governments on major petroleum products as on 01.06.2023

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	*19.28% OR Rs. 12.50 per litre whichever is higher Rebate of Rs. 1.73 per litre subject to minimum tax of Rs. 12.50 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 per liter which ever is higher	Rs.10/KL cess + 6.66% or Rs5.07 per liter which ever 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% VAT or Rs.11.86/litre whichever is higher as VAT+5% additional tax on VAT		
13	Himachal Pradesh	17.50% or Rs 13.50/Litre- whichever is higher	9.96% or Rs 7.40/Litre- whichever is higher		
14	Jammu & Kashmir	24% MST+ Rs.2/Litre employment cess, Reduction of Rs.4.50/Litre	16% MST+ Rs.1.00/Litre employment cess, Reduction 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 , Social security cess Rs.2 per litre	22.76% sales tax+ Rs.1/litre additional sales tax + 1% cess , Social security cess Rs.2 per litre		
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	10% VAT	10% VAT	5%	5%
20	Madhya Pradesh	29 % VAT + Rs.2.5/litre VAT+1%Cess	19% VAT+ Rs.1.50/litre VAT+1% Cess		
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	13.50% VAT		
24	Meghalaya	13.50% or Rs12.50/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 minus rebate of Rs.5.50/Litre	16.50% VAT or Rs. 10.51/litre whichever is higher +5% surcharge + Rs.2.00/Litre as road maintenance cess minus rebate of Rs.5.10/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)+14.75% VAT plus 10% additional tax or Rs.13.40/Litre whichever is higher	Rs.1050/KL (cess) + Rs.0.10 per Litre (Urban Transport Fund) +0.25 per Litre (Special Infrastructure Development Fee) + 10.97% VAT plus 10% additional tax and or Rs.9.14/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)		

Source: IOCL

Note:

For Petrol & Diesel, VAT/Sales Tax at applicable rates is also levied on Dealer's commission in Delhi, Gujarat, Dadra & Nagar Haveli and Daman & Diu, Haryana, Madhya Pradesh, Rajasthan. Chandigarh, Puducherry, Andaman & Nikobar, Meghalaya & Lakshadweep

Table 8.18 : Contribution of petroleum sector to exchequer

(₹ Crore)

	Particulars	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
1. Contribution to Central exchequer						
A.	Tax/ duties on crude oil & petroleum products					
	Cess on crude oil	17741	14789	10676	19214	21445
	Royalty on crude oil / natural gas	6062	5602	3590	5639	9822
	Customs duty	16035	22927	13514	11423	14985
	NCCD on Crude Oil	1180	1130	1016	1121	1192
	Excise duty	214369	223057	372970	363305	287575
	Service tax	340	17	0	0	0
	IGST	16479	13099	11594	19726	22236
	CGST	7437	6831	6158	10843	13012
	Others	204	88	365	338	59
	Sub total (A)	279847	287540	419884	431609	370326
B.	Dividend to Government/ income tax etc.					
	Corporate/ income tax	38561	23134	21909	29219	33292
	Dividend income to Central Government	15525	12270	10393	22612	15673
	Dividend distribution tax	6415	5462	0	0	0
	Profit petroleum on exploration of oil/ gas*	7694	5909	2883	8862	8776
	Sub total (B)	68194	46775	35185	60694	57741
	Total contribution to Central exchequer (A+B)	348041	334315	455069	492303	428067
2. Contribution to State exchequer						
C.	Tax/ duties on crude oil & petroleum products					
	Royalty on crude oil / natural gas	13371	11882	7179	13526	17914
	Sales tax/ VAT	201265	200493	202937	256248	288086
	SGST/UTGST	7961	7345	6121	11017	13188
	Octroi/ duties (incl. electricity duty)	685	716	706	827	830
	Entry tax / others	4114	405	329	354	293
	Sub total (C)	227396	220841	217271	281972	320311
D.	Dividend to Government/ direct tax etc.					
	Dividend income to State Government	195	215	379	151	340
	Sub total (D)	195	215	379	151	340
	Total contribution to State exchequer (C+D)	227591	221056	217650	282122	320651
	Total contribution of petroleum sector to exchequer (1+2)	575632	555370	672719	774425	748718

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

* as provided by MOP&NG.

(P)- Provisional

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	2022-23 (P)
1	Andaman & Nicobar Islands	92	94	74	80	63
2	Andhra Pradesh	10784	10168	11014	14724	16429
3	Arunachal Pradesh	49	26	104	136	158
4	Assam	3879	3641	3747	3901	5073
5	Bihar	6584	6238	5854	6867	9848
6	Chandigarh	62	60	60	87	99
7	Chhattisgarh	3986	3877	4107	5178	6164
8	Dadra and Nagar Haveli and Daman & Diu	2	2	1	2	1
9	Delhi	4379	3833	2653	3659	4398
10	Goa	694	754	682	994	1278
11	Gujarat	16229	15337	15141	20697	24631
12	Haryana	8286	7648	7923	10067	10030
13	Himachal Pradesh	364	440	882	1313	1222
14	Jammu & Kashmir	1449	1459	1444	1859	1543
15	Jharkhand	2796	3296	3619	4392	5533
16	Karnataka	14417	15381	15476	18310	18459
17	Kerala	7995	8074	6924	9265	11827
18	Ladakh		14	49	81	68
19	Lakshadweep	0	0	0	0	3
20	Madhya Pradesh	9485	10720	11908	14157	15573
21	Maharashtra	27191	26791	25430	34002	37619
22	Manipur	181	192	265	319	331
23	Meghalaya	0	0	0	0	0
24	Mizoram	88	91	84	120	87
25	Nagaland	97	116	148	180	168
26	Odisha	5660	5495	6224	7656	9328
27	Puducherry	8	5	10	11	9
28	Punjab	6576	5548	6291	7890	6900
29	Rajasthan	12714	13319	15119	17401	18574
30	Sikkim	134	129	111	155	179
31	Tamil Nadu	18143	18175	17063	20586	24309
32	Telangana	10037	10045	8691	13171	14929
33	Tripura	277	384	445	474	624
34	Uttar Pradesh	19168	20112	21956	26333	28170
35	Uttarakhand	1595	1495	1524	1847	2073
36	West Bengal	7866	7534	7916	10335	12386
	TOTAL	201265	200493	202937	256248	288086

(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	2022-23 (P)
1	Andaman & Nicobar Islands	0	0	0	1	1
2	Andhra Pradesh	257	156	112	204	290
3	Arunachal Pradesh	6	0	0	0	1
4	Assam	559	475	332	414	445
5	Bihar	159	145	122	147	210
6	Chandigarh	1	1	1	1	2
7	Chhattisgarh	18	9	14	26	30
8	Dadra and Nagar Haveli and Daman & Diu	12	20	20	15	41
9	Delhi	52	51	37	54	56
10	Goa	3	9	11	15	10
11	Gujarat	2060	1801	1566	3180	3922
12	Haryana	659	685	529	1064	1119
13	Himachal Pradesh	3	4	6	8	18
14	Jammu & Kashmir	20	17	40	35	24
15	Jharkhand	13	16	12	10	29
16	Karnataka	356	269	260	461	577
17	Kerala	146	171	136	255	333
18	Ladakh		1	1	1	6
19	Lakshadweep	0	0	0	1	0
20	Madhya Pradesh	87	98	68	117	174
21	Maharashtra	1272	1126	932	1822	2102
22	Manipur	1	1	2	2	2
23	Meghalaya	1	0	0	0	0
24	Mizoram	1	1	0	0	1
25	Nagaland	1	1	0	1	1
26	Odisha	93	192	195	421	579
27	Puducherry	1	1	1	1	4
28	Punjab	116	128	43	346	258
29	Rajasthan	205	176	145	196	260
30	Sikkim	2	0	0	0	0
31	Tamil Nadu	642	562	439	640	861
32	Telangana	19	21	22	45	33
33	Tripura	20	17	38	17	23
34	Uttar Pradesh	616	619	603	827	859
35	Uttarakhand	6	7	8	7	8
36	West Bengal	545	553	418	674	897
Others						
1	Other territory (Offshore areas of India beyond 12 Nautical Miles)	11	11	7	9	15
TOTAL		7961	7345	6121	11017	13188

(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)

Companies	2018-19	2019-20	2020-21	2021-22	2022-23
PSU upstream/midstream companies					
ONGC	26765	13464	11246	40306	38829
OIL	2590	2584	1742	3887	6810
GAIL	6026	6621	4890	10364	5302
Total	35380	22668	17878	54557	50941
PSU downstream Oil Marketing Companies (OMCs)					
IOCL	16894	1313	21836	24184	8242
BPCL *	7132	2683	19042	11363	1870
HPCL	6029	2637	10664	6383	-8974
Total	30055	6634	51542	41930	1138
PSU stand alone refineries					
MRPL	332	-2740	-240	2955	2638
CPCL	-213	-2078	238	1342	3534
NRL	1968	1381	3036	3562	3703
Total	2087	-3437	3033	7859	9875
PSU consultancy company					
EIL	370	430	260	344	342
Total	370	430	260	344	342
Private sector companies					
RIL	35163	30903	31944	39084	44205
NEL	344	2518	467	1030	**
Total	35507	33421	32411	40114	44205

Source: Published results/ information provided by oil companies.

Note: Financials are on standalone basis

* BPCL figures for 2022-23 includes BORL & BGRL also after its merger with BPCL. BPCL Figures for 2021-22 have been reinstated here after merger.

** Not available.



Table 8.22 : Financial details of major oil companies

2021-22										
Particulars	IOCL	BPCL	HPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL	RIL
(₹ Crore)										
Sales turnover	724602	432422	372642	109962	14237	91426	86036	60402	23546	466425
Profit Before Interest and Tax (PBIT)	36562	17881	9176	43400	5770	13765	3916	2244	4852	55909
Interest	4829	2209	973	2360	783	174	1207	412	4	9123
Tax	7549	4308	1821	734	1099	3226	(247)	489	1286	7702
Profit After Tax (PAT)	24184	11363	6383	40306	3887	10364	2955	1342	3562	39084
Net worth	131286	51645	38677	237148	26979	55587	7196	2790	736	471527
Borrowings (loan fund)	110799	33615	43193	6397	11636	6353	21085	9223	1000	194563
Ratios										
PAT as % of turnover (net sales)	3.34%	2.63%	1.71%	36.65%	27.30%	11.34%	3.43%	2.22%	15.13%	8.38%
Debt (loan fund) to equity ratio	0.84	0.65	1.12	0.03	0.43	0.11	2.93	3.31	1.36	0.41
Earnings Per Share (EPS)	26.34	53.41	44.94	32.04	35.85	23.34	16.86	90.15	48.42	59.24

* BPCL Figures for 2021-22 has been reinstated after merger of BORL & BGRL with BPCL

2022-23										
Particulars	IOCL	BPCL	HPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL	RIL
(₹ Crore)										
Sales turnover	919649	532105	464684	154754	22369	143976	124686	90801	29785	566805
Profit Before Interest and Tax (PBIT)	16628	5433	(9783)	53095	9581	6896	5524	5139	4966	68198
Interest	6930	3216	2132	2700	724	312	1285	330	12	12626
Tax	1456	347	(2941)	11566	2047	1282	1600	1275	1250	11367
Profit After Tax (PAT)	8242	1870	(8974)	38829	6810	5302	2638	3534	3703	44205
Net worth	134758	51996	27713	257846	34365	55654	9835	6281	11427	502596
Borrowings (loan fund)	132495	35855	64517	7219	11161	14309	16707	4235	3262	216566
Ratios										
PAT as % of turnover (net sales)	0.90%	0.35%	-1.93%	25.09%	30.45%	3.68%	2.12%	3.89%	12.43%	7.80%
Debt (loan fund) to equity ratio	0.98	0.69	2.33	0.03	0.32	0.26	1.70	0.67	0.29	0.43
Earnings Per Share (EPS)	5.98	8.78	(63.26)	30.86	62.80	8.04	15.05	237.31	25.17	65.34

* BPCL figures 2022-23 includes BORL & BGRL also after its merger with BPCL

Source: Published results/ information provided by oil companies.

Table 8.23 : Total subsidy on Petroleum Products & Natural Gas

(₹ Crore)

Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23 (P)
PDS kerosene	4672	5950	1833	0	0	0
Domestic LPG	0	0	0	0	0	22000
Total under-recoveries (A)	4672	5950	1833	0	0	22000
Direct Benefit Transfer for LPG (DBTL) subsidy	20880	31447	22635	3559	0	823
Project Management Expenditure (PME)*	25	92	91	99	242	32
Total DBTL related subsidies (B)	20905	31539	22726	3658	242	855
Pradhan Mantri Ujjwala Yojana (PMUY) claims	2496	5636	1403	(34)	1569	6110
Project Management Expenditure (PME) & Information Education and Communication (IEC) expenditure under PMUY*	63	34	43	110	0	0
Total PMUY related subsidy (C)	2559	5670	1446	76	1569	6110
Direct Benefit Transfer of Kerosene (DBTK) subsidy (D)	113	98	42	0	0	0
PMGKY (E)	0	0	0	8162	0	0
Natural gas subsidy for North East	435	557	574	336	405	1354
Scheme for Promotion of Flagging of Merchant Ships in India	0	0	0	0	22	76
Other subsidies (F)	435	557	574	336	427	1431
Total subsidy/ under-recovery on petroleum products & natural gas (A+B+C+D+E+F)	28684	43814	26621	12231	2237	30396

(P)- Provisional
*on payment basis.

Note: 1. DBTK subsidy for 2019-20 is till Oct'19. The subsidy excludes cash incentive/assistance for establishment of institutional mechanism for direct transfer of subsidy paid to States/UTs.
2. 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	₹ Crore	\$/bbl (approx)
2018-19	226.5	1660.2	1,11,915	7,83,183	67.4
2019-20	227.0	1663.9	1,01,376	7,17,001	60.9
2020-21	196.5	1440.3	62,248	4,59,779	43.2
2021-22	212.4	1556.9	1,20,675	9,01,262	77.5
2022-23 (P)	232.7	1705.9	1,57,597	12,60,910	92.4

(P) Provisional
Conversion factor taken 1 MT = 7.33 bbl



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.	Natural gas production (average) - India	8000-9480 K cal/SCM
C.	India	M Cals/tonne or K Cal/Kg
	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

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

Coverage time instant of all data 'as on 01.04.2023' : till 24:00 hr of 31.03.2023





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