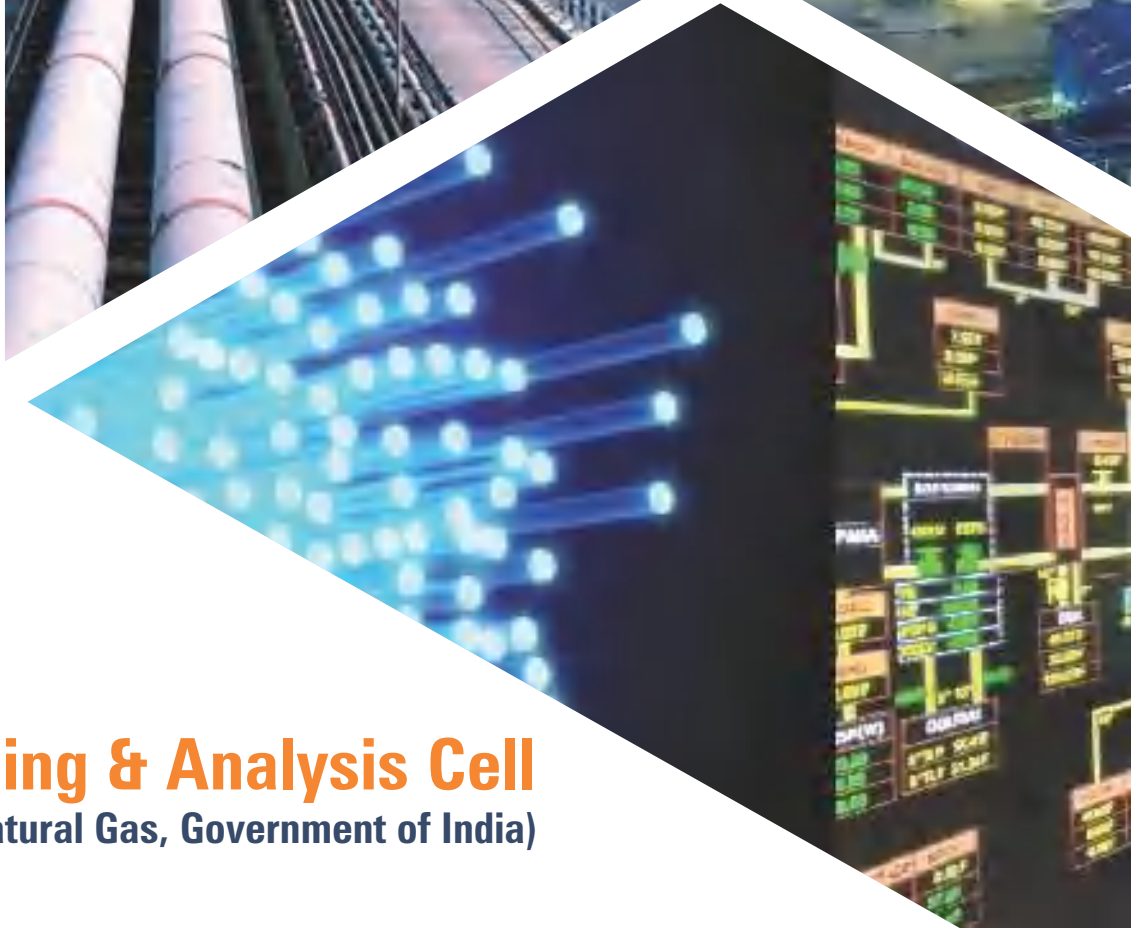




India's Oil & Gas READY RECKONER

Oil Industry Information
at a Glance



December
2021

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:

Dr. Pankaj Sharma, Additional Director (D&ES)

Petroleum Planning & Analysis Cell (PPAC)

(Ministry of Petroleum & Natural Gas, Govt. of India)

SCOPE Complex, 2nd Floor, Core 8,

Lodhi Road, New Delhi-110003

Email: epankaj.sharma@ppac.gov.in

Acknowledgments

The cooperation of the following persons from PPAC is acknowledged in preparation of the Reckoner:

Sh. Ganesh Nadar (D&ES Division), Sh. Lokesh Mehta (Gas Division), Ms. Saraswati Joshi (Finance Division), Sh. Tarakeswar Das & Sh. Vivek pant (Supply Division), Ms. Poonam Mittal (Marketing Division).

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

Energy moves the World. The Vedas describe energy by the name of -Agni, our Vedic God. As per Aiteraya Brahmana all material bodies in universe originated from Agni (energy). Primary Energy comes from various sources i.e. Coal, Oil, Gas, Sun (Solar), Wind, Nuclear, Hydropower etc and then converted into Electricity (Power), Transportation Fuels (Petrol, Diesel, ATF), Industrial Fuels etc which are used for various purposes. The relative share of the sources of energy constitutes the primary energy mix.

India is the third largest energy consumer in the world and its energy demand is poised to grow at an average rate of 2.2% till 2050 as compared to 0.8% growth rate for the world's primary energy demand growth during the same period. Government of India has introduced several reforms to meet national energy needs based on the Energy Vision as laid out by Hon'ble Prime Minister of India, covering energy access, energy efficiency, energy sustainability, energy security and energy justice. In the COP26 summit in Glasgow, the Hon'ble Prime Minister presented the following five nectar elements Panchamrit, to deal with the challenge of global warming:

- India to reach its non-fossil energy capacity to 500 GW by 2030.
- India to meet 50 percent of its energy requirements from renewable energy by 2030.
- India to reduce total projected carbon emissions by one billion tonnes from now onwards till 2030.
- By 2030, India will reduce the carbon intensity of its economy by less than 45 percent.
- By the year 2070, India will achieve the target of Net Zero.

India is moving towards a new primary energy mix with the above Panamrit playing the central role in the transition. In the new energy mix, the Oil & Gas would continue playing an important part in the coming three decades in our Country. All the stakeholders in the Energy Sector including the PPAC are taking appropriate steps for attaining the new energy order.


Petroleum Planning and Analysis Cell (PPAC) is an attached office of the Ministry of Petroleum and Natural Gas (MoP&NG), Government of India and undertakes analysis of trends of consumption, pricing, subsidy and new developments in domestic Oil and Gas energy sector.

During the current year 2021-22, PPAC has also been involved in various studies/activities, important ones being (a) All India study on sectoral demand of petrol & diesel, (b) Energy Demand Projection Model (EDPM) for assessing consumption of all POL products during 2020-2045, (c) review on definition of remote retail outlets, (d) re-assessment of strategies for import reduction in the Oil & Gas sector, (e) Data Governance Quality Index for transparency assessment of schemes under MoP&NG and (f) strategies to increase the share of Gas consumption in the primary energy mix.

PPAC is also the nodal hub for data in the Oil & Gas sector and publishes the aggregated data on an industry basis on its website www.ppac.gov.in. The data is obtained from the Public Sector companies, Government agencies as well as the Private companies. Oil & Gas statistics is a crucial input for many stakeholders that include the Government, academia, industry and research agencies. Consistent and accurate data enable both decision-making and policymaking.

Publication entitled 'Ready Reckoner' is brought out twice a year and our endeavour is to deliver accurate and timely information to all stakeholders. This December 2021 edition of PPAC's biannual Ready Reckoner contains the latest data/information for the first half of the financial year 2021-22 and historical time series for stakeholders to access the same on a single platform. The Ready Reckoner is also published on PPAC's website (<https://www.ppac.gov.in>) and on our mobile app - PPACE which is available on both Google Play Store and Apple Store. 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 who have contributed to bring out the current edition. Cooperation of the oil and gas industry and various organizations is sincerely acknowledged 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 kindly be sent to epankaj.sharma@ppac.gov.in and dirgen@ppac.gov.in.



Praveen M. Khanooja
Director General
Petroleum Planning & Analysis Cell (PPAC)
(Ministry of Petroleum & Natural Gas)



Vision & Mission

Vision

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

Mission

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

Objectives

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

CONTENTS

CHAPTER NO.	TITLE	RR Book PAGE NO.
1	GENERAL	
1-1	Selected indicators of the Indian economy	2
1-2	Global energy consumption	3
2	EXPLORATION & CRUDE OIL PRODUCTION	
2-1	World top 30 crude oil proved reserves countries	6
2-2	World top 30 crude oil producing countries	7
2-3	World top 30 crude oil consuming countries	8
2-4	World top 30 crude oil refining capacity countries	9
2-5	Indigenous crude oil and condensate production	10
2-6	Self sufficiency in petroleum products	10
2-7 (A)	Status of blocks under NELP	11
2-7 (B)	Status of blocks under OALP round of HELP and DSF Rounds	11
2-8	Domestic oil & gas production vis a vis overseas production	12
2-9	Coal Bed Methane (CBM) Gas development in India	12
2-10	Status of shale gas and oil development in India	12
3	NATURAL GAS	
3-1	World top 30 natural gas reserve countries	14
3-2	World top 30 natural gas producing countries	15
3-3	World top 30 natural gas consuming countries	16
3-4	Natural gas at a glance	17
3-5	Natural gas production	17
3-6	PNG data	18
3-7	CNG sales in India	23
3-8	CNG stations and vehicles	25
3-9	LNG terminals (Operational)	31
3-10	Country wise import of Liquefied Natural Gas (LNG)	31
3-11	Domestic natural gas price and gas price ceiling	31
3-12	Statewise CGD Sale Profile	32
4	REFINING & PRODUCTION	
Map	Map of refineries in India	34
Flow dia.	Simplified block flow diagram of a typical refinery	35
4-1	Refineries: Installed capacity and crude oil processing	36
4-2	High Sulphur (HS) & Low Sulphur (LS) crude oil processing	36
4-3	Imported crude & indigenous crude oil processing	37
4-4	Production of petroleum products	37
4-5	Production of petroleum products: All sources	38
4-6	Production vis a vis consumption of petroleum products	38

CHAPTER NO.	TITLE	RR Book PAGE NO.
4-7	Gross Refining Margins (GRM) of refineries	39
4-8	Distillate yield of PSU refineries	40
4-9	Fuel and Loss	41
4-10	Specific energy consumption (MBN number) of PSU refineries	41
4-11	Import / export of crude oil and petroleum products	42
4-12	Exchange rates of Indian rupee (₹)	43
5	MAJOR PIPELINES IN INDIA	
Map	Map of pipeline network in India	46
5-1	Gas pipeline network	47
5-2	Existing major crude oil pipelines in India	48
5-3	Existing major petroleum product pipelines in India	49
6	SALES	
6-1	Consumption of petroleum products	52
6-2	Consumption growth of petroleum products	53
6-3	State-wise sales of selected petroleum products	54
6-4	PDS SKO allocation	55
6-5	Oil industry Retail Outlets & SKO/LDO agencies	56
Chart	Chart: Category wise retail outlets and SKO/LDO agencies	57
6-6	Industry marketing infrastructure	57
Chart	Chart: All India number of retail outlets in PSU & private category	58
Chart	Chart: Category wise retail outlets	58
6-7	Break-up of POL consumption data (PSU and Pvt.)	59
6-8	Ethanol Blending Programme	60
Chart	Chart: POL consumption by Product	61
Chart	Chart: Distribution of total POL domestic sales in India	61
7	LPG	
7-1	LPG marketing at a glance	64
7-2	LPG coverage (estimated)	65
7-3	BPL households covered under PMUY scheme	66
7-4	LPG domestic customers (14.2 kg/5 kg) enrolment by PSU OMCs	67
7-5	Number of LPG distributors (New scheme)	68
8	PRICES AND TAXES	
8-1	Price of crude oil & petroleum products in the international market	70
Chart	Chart: Trend in spreads of petroleum products vs Indian basket of crude oil	71
Chart	Chart: Trend in spreads of international benchmark crude oils	71
8-2	Price build-up of PDS kerosene at Mumbai	72
8-3	Price build-up of domestic LPG at Delhi	72
8-4	Price build-up of petrol at Delhi	72

CHAPTER NO.	TITLE	RR Book PAGE NO.
8-5	Price build-up of diesel at Delhi	72
8-6	Break up of current excise duty on petrol & diesel	72
8-7	Share of taxes in Retail Selling Price (RSP) of PDS kerosene at Mumbai	73
8-8	Share of taxes in Retail Selling Price (RSP) of domestic LPG at Delhi	73
8-9	Weightage of crude oil, natural gas and petroleum products in Wholesale Price Index (WPI)	73
8-10	Dealer's commission on petrol & diesel	74
8-11	Wholesale dealer's commission on PDS kerosene	74
8-12	Distributor's commission on domestic LPG	75
8-13	Retail Selling Price (RSP) of major products in India & neighbouring countries	76
8-14	Retail Selling Price (RSP) of petroleum products at state capitals/UT capitals	77
8-15	Retail Selling Price (RSP) of PDS kerosene at major cities	77
8-16	Customs, excise duty and GST rates on petroleum products	78
8-17	Actual Rate of Sales Tax/VAT/GST and other taxes levied by State/UT Governments on major petroleum products	79
8-18	Contribution of petroleum sector to exchequer	80
8-19	State/UT wise collection of sales tax/VAT by petroleum sector	81
8-20	State/UT wise collection of SGST/UTGST by petroleum sector	82
8-21	Profit After Tax (PAT) of oil companies	83
8-22	Financial details of oil companies	84
8-23	Total subsidy on petroleum products & natural gas	85
8-24	Quantity and value of Indian crude oil imports	85
9	MISCELLANEOUS	
9-1	Average international calorific values of different fuels	88
9-2	Weight to volume conversion	88
9-3	Volume conversion	88
9-4	Contents of LPG & Natural Gas	88
9-5	Natural Gas conversions	89
9-6	Major end use of petroleum products	89
	List of Abbreviations	90



Chapter-1 General



Table 1.1 : Selected indicators of the Indian economy

General									
Sl. no.	Particular	Source	Unit/ Base	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
1	Population-(World Bank database)@	Census of India	Billion	1.34	1.35	1.37	1.38		
2	GDP At constant (2011-12 Prices)	MoC&I	Growth %	6.8 3rd RE	6.5 2nd RE	4.0 1st RE	-7.3 PE	-15.9 H1 (PE)	20.1 E (Q1, 2021-22)
3	Agricultural production (Foodgrains)	MoA	Million tonne	285.0	285.2	297.5	308.7 4th AE	144.5 1st AE (Kharif)	150.5 1st AE (Kharif)
			Growth %	3.6	0.1	4.3	3.7	2.8	4.2
4	Index of Industrial Production (Base: 2011-12)	MoSPI	Growth %	4.4	3.8	-0.8	-8.4	-20.8	23.4
5	Imports	MoC&I	\$ Billion	465.6	514.1	474.7	394.4	151.9	273.9
6	Exports	MoC&I	\$ Billion	303.5	330.1	313.4	291.8	125.6	198.3
7	Trade balance	MoC&I	\$ Billion	-162.1	-184.0	-161.3	-102.6	-26.3	-75.6
8	Wholesale Price Index (all commodities) (average)	MoC&I	2011-12 = 100	114.9	119.8	121.8	123.4	120.3	134.3
9	All India Consumer Price Index (average):								
	i) Industrial workers	Labour Bureau, Govt. of India	*2001=100 #2016=100	284.4*	299.9*	322.5*	119.0#	118.1^	121.9
	ii) Agricultural labourers		1986-87=100	888.9	907.3	979.6	1033.7	1022.5	1056.8
	iii) Rural labourers		1986-87=100	895.1	915.1	986.0	1039.9	1028.7	1065.2
10	Foreign exchange reserves- Total\$	RBI	\$ Billion	424.4	411.9	475.6	582.3	545.0	638.6
11	Outstanding external liabilities (as of end of financial year)	MoF	₹ Crore	2,50,090	2,69,961	2,99,250	3,82,829 (RE)	-	4,27,925 2021-22 (BE)
12	Outstanding internal debt (as of end of financial year)	MoF	₹ Crore	79,84,787	88,13,254	99,47,402	1,17,39,130 (RE)	-	1,31,59,050 2021-22 (BE)
13	Centrally Sponsored Schemes & other transfers	MoF	₹ Crore	4,58,259	4,77,967	6,31,969	7,61,408 (RE)	-	8,10,632 2021-22 (BE)
14	Gross fiscal deficit	MoF	%	3.5	3.4	4.6	9.5 (RE)	-	6.8 2021-22 (BE)

Note : @Population figures have been taken from World Bank International Data Base for 2020; #Avg. of September 2020-Mar 21 and ^ for September 2020 as base year changed to 2016 from 2001 wef Sep 2020; \$2016-17-as on March 31, 2017; 2017-18-as on March 30, 2018; 2018-19-as on March 29, 2019; 2019-20-as on March 27, 2019; 2020-21-as on March 19, 2021; Apr-Sep 2020 - as on September 18, 2020; Apr-Sep 2021 - as on September 24, 2021;(P): Provisional; MoA: Ministry of Agriculture; MoF: Ministry of Finance; MoC&I: Ministry of Commerce & Industry; MoSPI: Ministry of Statistics and Programme Implementation; RBI: Reserve Bank of India; E: Estimates; PE: Provisional Estimates; QE: Quick Estimates; AE: Advance Estimates; RE: Revised Estimates; FE: Final Estimates

Petroleum									
Sl. no.	Particular	Source	Unit/ Base	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
1	Crude oil production in India	ONGC/OIL/DGH	MMT	35.7	34.2	32.2	30.5	15.4	14.9
2	Consumption of petroleum products in India	OMCs/PPAC	MMT	206.2	213.2	214.1	194.3	85.9	95.6
3	Petroleum products production in India	Oil Cos	MMT	254.3	262.4	262.9	233.5	107.3	119.3
4	Imports & exports								
	Crude oil imports	Oil Cos	\$ Billion	87.8	111.9	101.4	62.2	22.4	51.2
	Petroleum products imports	Oil Cos & DGCIS	\$ Billion	13.6	16.3	17.7	14.8	5.7	10.1
	Total petroleum imports (crude oil + petroleum products)	Oil Cos & DGCIS	\$ Billion	101.4	128.3	119.1	77.0	28.2	61.3
	Petroleum products exports	Oil Cos	\$ Billion	34.9	38.2	35.8	21.4	8.9	17.9
5	Gross petroleum imports as % of India's gross imports in value terms	MOC&I/PPAC	%	21.8	24.9	25.1	19.5	18.5	22.4
6	Gross petroleum exports as % of India's gross exports in value terms	MOC&I/PPAC	%	11.5	11.6	11.4	7.3	7.1	9.0
7	Import dependency (based on consumption)	PPAC	%	82.9	83.8	85.0	84.4	82.4	84.8

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

Natural gas									
Sl. no.	Particular	Source	Unit/ Base	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
1	Gross Production	ONGC/OIL/DGH	MMSCM	32,649	32,875	31,184	28,672	13,954	16,891
2	Net Production (net of flare and loss)	ONGC/OIL/DGH	MMSCM	31,731	32,058	30,257	27,784	13,492	16,469
3	LNG Import	LNG importing Cos, DGCIS	MMSCM	27,439	28,740	33,887	33,031	15,981	16,210
4	Total Consumption including internal use (Net Production+ LNG import)		MMSCM	59,170	60,798	64,144	60,815	29,473	32,679
5	Import dependency (based on consumption)	PPAC	%	46.4	47.3	52.8	54.3	54.2	49.6

Note : MMSCM : Million Standard Cubic Meter

Table 1.2 : Global primary energy consumption, 2020

Sl. no.	Country	Unit	Oil	Natural Gas	Coal	Nuclear Energy	Hydro Electricity	Renewables	Total Energy
1	China	Mtoe	661.60	284.25	1965.00	77.68	280.44	186.09	3455.07
	Percentage share	%	19.15	8.23	56.87	2.25	8.12	5.39	100%
	Per capita consumption	Toe	0.47	0.20	1.40	0.06	0.20	0.13	2.46
2	USA	Mtoe	755.42	715.41	219.80	176.39	61.24	146.89	2075.14
	Percentage share	%	36.40	34.48	10.59	8.50	2.95	7.08	100%
	Per capita consumption	Toe	2.29	2.17	0.67	0.54	0.19	0.45	6.30
3	India	Mtoe	209.43	51.25	418.86	9.46	34.71	34.17	757.88
	Percentage share	%	27.63	6.76	55.27	1.25	4.58	4.51	100%
	Per capita consumption	Toe	0.15	0.04	0.30	0.01	0.03	0.02	0.55
4	Russian Federation	Mtoe	148.31	353.73	78.20	45.80	45.07	0.90	672.00
	Percentage share	%	22.07	52.64	11.64	6.82	6.71	0.13	100%
	Per capita consumption	Toe	1.03	2.45	0.54	0.32	0.31	0.01	4.66
5	Japan	Mtoe	150.76	89.78	109.26	9.12	16.45	27.04	402.41
	Percentage share	%	37.46	22.31	27.15	2.27	4.09	6.72	100%
	Per capita consumption	Toe	1.20	0.71	0.87	0.07	0.13	0.21	3.20
6	Canada	Mtoe	98.91	96.85	11.83	20.69	81.60	12.80	322.67
	Percentage share	%	30.65	30.01	3.67	6.41	25.29	3.97	100%
	Per capita consumption	Toe	2.60	2.55	0.31	0.54	2.15	0.34	8.49
7	Germany	Mtoe	97.71	74.42	44.04	13.66	3.95	52.67	286.45
	Percentage share	%	34.11	25.98	15.38	4.77	1.38	18.39	100%
	Per capita consumption	Toe	1.17	0.89	0.53	0.16	0.05	0.63	3.44
8	Iran	Mtoe	76.87	200.43	1.78	1.34	4.49	0.21	285.12
	Percentage share	%	26.96	70.30	0.62	0.47	1.58	0.07	100%
	Per capita consumption	Toe	0.92	2.39	0.02	0.02	0.05	0.00	3.39
9	Brazil	Mtoe	106.95	27.62	13.83	3.24	84.17	47.91	283.72
	Percentage share	%	37.69	9.73	4.87	1.14	29.67	16.89	100%
	Per capita consumption	Toe	0.50	0.13	0.07	0.02	0.40	0.23	1.33
10	South Korea	Mtoe	113.84	48.71	72.35	33.98	0.82	8.55	278.26
	Percentage share	%	40.91	17.50	26.00	12.21	0.30	3.07	100%
	Per capita consumption	Toe	2.20	0.94	1.40	0.66	0.02	0.17	5.37
11	Saudi Arabia	Mtoe	151.16	96.39	0.11	0.00	0.00	0.22	247.87
	Percentage share	%	60.98	38.89	0.04	-	-	0.09	100%
	Per capita consumption	Toe	4.34	2.77	0.00	-	-	0.01	7.12
12	France	Mtoe	62.17	34.96	4.62	75.06	13.00	16.28	206.10
	Percentage share	%	30.16	16.96	2.24	36.42	6.31	7.90	100%
	Per capita consumption	Toe	0.92	0.52	0.07	1.11	0.19	0.24	3.06
13	Indonesia	Mtoe	54.35	35.71	77.76	0.00	4.13	8.81	180.76
	Percentage share	%	30.07	19.75	43.02	-	2.28	4.87	100%
	Per capita consumption	Toe	0.20	0.13	0.28	-	0.02	0.03	0.66
14	United Kingdom	Mtoe	55.39	62.33	4.62	10.67	1.37	28.69	163.07
	Percentage share	%	33.97	38.22	2.84	6.54	0.84	17.59	100%
	Per capita consumption	Toe	0.82	0.93	0.07	0.16	0.02	0.43	2.43
15	Mexico	Mtoe	57.22	74.20	4.99	2.42	5.69	8.50	153.02
	Percentage share	%	37.39	48.49	3.26	1.58	3.72	5.55	100%
	Per capita consumption	Toe	0.44	0.58	0.04	0.02	0.04	0.07	1.19
	Sub total	Mtoe	2800.07	2246.03	3027.04	479.52	637.15	579.72	9769.54
	Others	Mtoe	1233.11	1040.96	589.67	93.26	274.35	177.69	3409.05
	Total World	Mtoe	4033.18	3287.00	3616.72	572.78	911.50	757.42	13178.60
	Percentage share	%	30.60	24.94	27.44	4.35	6.92	5.75	100%
	Per capita consumption	Toe	0.52	0.42	0.47	0.07	0.12	0.10	1.70

Source: BP Statistical Review of World Energy, 2021.

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

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

Mtoe: Million tonnes of oil equivalent, **Toe:** Tonnes of oil equivalent
 Figures are for Calendar year



Chapter-2

Exploration & Crude Oil Production



Table 2.1: World top 30 crude oil proved reserves countries

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

Source: BP Statistical Review of World Energy, July 2021 ; * More than 500 years.

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

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

Figures are for Calendar year

Table 2.2: World top 30 crude oil producing countries, 2020

S. no.	Country	Production*	
		Million tonnes	Million barrels daily
1	US	713	16.5
2	Russian Federation	524	10.7
3	Saudi Arabia	520	11.0
4	Canada	252	5.1
5	Iraq	202	4.1
6	China	195	3.9
7	United Arab Emirates	166	3.7
8	Brazil	159	3.0
9	Iran	143	3.1
10	Kuwait	130	2.7
11	Mexico	95	1.9
12	Norway	92	2.0
13	Nigeria	87	1.8
14	Kazakhstan	86	1.8
15	Qatar	76	1.8
16	Angola	65	1.3
17	Algeria	58	1.3
18	United Kingdom	48	1.0
19	Oman	46	1.0
20	Colombia	41	0.8
21	Indonesia	36	0.7
22	India	35	0.8
23	Azerbaijan	35	0.7
24	Egypt	30	0.6
25	Argentina	28	0.6
26	Venezuela	27	0.5
27	Malaysia	27	0.6
28	Ecuador	26	0.5
29	Australia	20	0.5
30	Libya	18	0.4
	Sub total	3980	84.4
	Others	186	3.9
	Total World	4165	88.4
	of which: OECD	1281	28.2
	Non-OECD	2884	60.2
	OPEC	1474	31.1
	Non-OPEC	2691	57.3
	European Union #	19	0.4

Source: BP Statistical Review of World Energy, July 2021

* 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, 2020

S. no.	Million tonnes	Consumption*	
		Million tonnes	Million barrels daily
1	US	739.7	17.2
2	China	669.2	14.2
3	India	213.1	4.7
4	Saudi Arabia	150.0	3.5
5	Japan	149.0	3.3
6	Russian Federation	146.3	3.2
7	South Korea	110.6	2.6
8	Brazil	106.8	2.3
9	Canada	98.1	2.3
10	Germany	96.2	2.0
11	Iran	75.3	1.7
12	Singapore	69.5	1.3
13	France	61.4	1.3
14	Mexico	56.1	1.3
15	United Kingdom	54.7	1.2
16	Thailand	54.0	1.3
17	Indonesia	53.2	1.2
18	Spain	51.7	1.1
19	Italy	49.3	1.1
20	Turkey	43.4	0.9
21	Taiwan	43.1	1.0
22	Australia	41.9	0.9
23	Netherlands	35.2	0.7
24	United Arab Emirates	34.7	0.8
25	Malaysia	31.1	0.7
26	Egypt	30.7	0.7
27	Iraq	30.2	0.6
28	Poland	29.4	0.6
29	Argentina	24.3	0.5
30	South Africa	23.3	0.5
	sub total	3371.8	74.7
	Others	635.0	13.7
	Total World	4006.7	88.5
	of which: OECD	1796.8	40.3
	Non-OECD	2209.9	48.2
	European Union #	462.5	9.8

Source: BP Statistical Review of World Energy, July 2021

* 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	2010	2020	ADDITION	% CHANGE
1	US	17736	18143	407	2.3
2	China	12323	16691	4369	35.5
3	Russian Federation	5527	6736	1209	21.9
4	India	3703	5018	1314	35.5
5	South Korea	2774	3572	798	28.8
6	Japan	4291	3285	(1006)	-23.4
7	Saudi Arabia	2109	2905	796	37.7
8	Iran	1950	2475	525	26.9
9	Brazil	1992	2290	298	15.0
10	Germany	2091	2085	(7)	-0.3
11	Canada	1913	2065	152	7.9
12	Italy	2396	1900	(496)	-20.7
13	Spain	1421	1586	165	11.6
14	Mexico	1463	1558	95	6.5
15	Singapore	1427	1514	87	6.1
16	United Arab Emirates	702	1331	629	89.6
17	Venezuela	1303	1303	-	0.0
18	United Kingdom	1757	1251	(506)	-28.8
19	France	1702	1245	(457)	-26.9
20	Thailand	1230	1245	15	1.2
21	Netherlands	1274	1229	(45)	-3.6
22	Taiwan	1197	1131	(67)	-5.6
23	Indonesia	1099	1127	27	2.5
24	Malaysia	582	955	373	64.1
25	Iraq	914	919	5	0.5
26	Turkey	613	822	209	34.1
27	Kuwait	936	800	(136)	-14.5
28	Egypt	810	795	(15)	-1.9
29	Belgium	787	776	(11)	-1.4
30	Algeria	554	657	103	18.5
	Sub total	78576	87408	8831	11.2
	Others	15295	14539	142	0.9
	Total World	93871	101947	8973	9.7
	of which: OECD	45680	44804	(876)	-1.9
	Non-OECD	48191	57143	8952	18.6
	European Union #	13544	12663	(881)	-6.5

Source: BP Statistical Review of World Energy, July 2021

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

Figures are for Calendar year

Table 2.5 : Indigenous crude oil and condensate production

(Million metric tonne)						
Particulars	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
PSU companies						
ONGC	20.8	19.6	19.2	19.1	9.6	9.2
OIL	3.4	3.3	3.1	2.9	1.5	1.5
PSU total	24.2	22.9	22.4	22.0	11.1	10.7
PSC total	9.9	9.6	8.2	7.1	3.6	3.6
Total crude oil	34.0	32.5	30.5	29.1	14.7	14.3
Condensate	1.6	1.7	1.6	1.4	0.7	0.6
Total (crude oil + condensate)	35.7	34.2	32.2	30.5	15.4	14.9
Total (crude oil + condensate) (crore barrels)	26.2	25.1	23.6	22.4	11.3	10.9

Source: Oil companies and DGH(P): Provisional

Table 2.6 : Self sufficiency in petroleum products

(Million metric tonne)						
Particulars	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
i) Indigenous crude oil processing	32.8	31.7	29.3	28.0	13.9	13.3
a) Products from indigeneous crude	30.6	29.6	27.3	26.1	13.0	12.4
b) Products from fractionators	4.6	4.9	4.8	4.2	2.1	2.1
ii) Total production from indigenous crude and condensate (a+b)	35.2	34.5	32.1	30.3	15.1	14.5
iii) Total domestic consumption	206.2	213.2	214.1	194.3	85.9	95.6
Percentage of self sufficiency (ii/iii)	17.1%	16.2%	15.0%	15.6%	17.6%	15.2%

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 New Exploration Licensing Policy (NELP) (As on 01.10.2021)

Round	Launch Year	Offered	Awarded				Relinquished/ Proposed For Relinquishment				Operational			
			Deep/ Ultra	Shallow Water	Onland	Total	Deep/ Ultra	Shallow Water	Onland	Total	Deep/ Ultra	Shallow Water	Onland	Total
NELP-I	1999	48	7	16	1	24	5	15	1	21	2	1		3
NELP-II	2000	25	8	8	7	23	8	8	6	22	0		1	1
NELP-III	2002	27	9	6	8	23	9	5	5	19	0	1	3	4
NELP-IV	2003	24	10		10	20	10		7	17	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	4	19	44	0	2	6	8
NELP-VII	2007	57	11	7	23	41	11	4	18	33	0	3	5	8
NELP-VIII	2009	70	8	11	13	32	8	9	12	29	0	2	1	3
NELP-IX	2010	34	1	3	15	19	1	2	7	10	0	1	8	9
TOTAL		360	81	59	114	254	79	48	84	211	2	11	30	43

Source: DGH

Table 2.7(B): Status of blocks under Open Acreage Licensing Policy (OALP) round of Hydrocarbon Exploration Licensing Policy (HELP) and Discovered Small and Marginal Fields (DSF) Rounds (As on 01.10.2021)

Round	Launch Year	Offered	Awarded				Relinquished/ Proposed For Relinquishment				Operational			
			Deep/ Ultra Deep Water	Shallow Water	Onland	Total	Deep/ Ultra Deep Water	Shallow Water	Onland	Total	Deep/ Ultra Deep Water	Shallow Water	Onland	Total
OALP Round-I	2018	55	1	8	46	55	0	0	0	0	1	8	46	55
OALP Round-II	2019	14	1	5	8	14	0	0	0	0	1	5	8	14
OALP Round-III	2019	23	1	3	14	18	0	0	0	0	1	3	14	18
OALP Round-IV	2019	7	0	0	7	7	0	0	0	0	0	0	7	7
OALP Round-V	2020	11	1	2	8	11	0	0	0	0	1	2	8	11
DSF Round-I	2016	46	0	7	23	30	0	4	7	11	0	3	16	19
DSF Round-II	2018	25	0	9	15	24	0	1	4	5	0	8	11	19
TOTAL		181	4	34	121	159	0	5	11	16	4	29	110	143

Source: DGH

Note : NELP New Exploration Licensing Policy
 HELP Hydrocarbon Exploration Licensing Policy
 OALP Open Acreage Licensing Policy Round
 DSF Discovered Small and Marginal Fields Round

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

Year	2017-18	2018-19	2019-20	2020-21 (P)	Apr-Sep 2020	Apr-Sep 2021 (P)
Total domestic production (MMTOE)	68.3	67.1	63.4	59.2	29.3	31.8
Overseas production (MMTOE)	22.7	24.7	24.5	21.9	11.0	11.0
Overseas production as percentage of domestic production	33.2	36.8	38.7	37.0	37.5	34.6

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

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

Prognosticated CBM resources	91.8	TCF
Established CBM resources	10.4	TCF
CBM Resources (33 Blocks)	62.8	TCF
Total available coal bearing areas (India)	32760	Sq. KM
Total available coal bearing areas with MoPNG/DGH	21659	Sq. KM
Area awarded	16613	Sq. KM
Blocks awarded	32	Nos.
Exploration initiated*	10669.6	Sq. KM
Production of CBM gas April-September 2021(P)	344.6	MMSCM

*Area considered if any boreholes were drilled in the awarded block.

Source: DGH

Table 2.10: Status of Shale Gas and Oil development in India (As on 01.10.2021)

Policy Guidelines for Exploration & exploitation of Shale gas and oil	<p>Shale gas and oil exploration policy was announced in October, 2013. ONGC and OIL India Ltd have been allotted 50 and 6 blocks respectively for assessment under Phase-I. ONGC identified 50 blocks in 4 basins and OIL identified 6 blocks in 2 basins in Phase-I.</p> <p>Under Hydrocarbon Exploration and Licensing Policy (HELP), 2016 the single licence will enable the contractor to explore conventional as well as unconventional oil and gas resources including CBM, shale gas/oil, tight gas and gas hydrates under a single license.</p> <p>In August 2018, the Government of India notified a Policy framework for Exploration and exploitation of Unconventional hydrocarbons in existing acreages under existing Production Sharing Contracts (PSC), Coal Bed Methane (CBM) Contracts and Nomination fields.</p>				
Oil and Natural Gas Corporation Limited (ONGC): Activities up to 2020-21	Basin	Phase-I Blocks	MWP* Wells	Blocks Taken up for Drilling	Actual Wells Drilled
	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 2020-21	Basin	Phase-I Blocks	MWP Wells	Blocks Taken up for Drilling	Actual Wells Drilled
	Jaisalmer	1	2	1	1
	Assam	5	6	0	3
	Total	6	8	1	4

*MWP : Minimum Work Programme



Analysis • Knowledge • Information

Chapter-3 Natural Gas



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: BP Statistical Review of World Energy, July 2021

Figures are for Calendar year

Table 3.2 : World top 30 natural gas producing countries

(Billion cubic metres)		
Sl. no.	Country	2020
1	US	915
2	Russian Federation	638
3	Iran	251
4	China	194
5	Qatar	171
6	Canada	165
7	Australia	143
8	Saudi Arabia	112
9	Norway	111
10	Algeria	81
11	Malaysia	73
12	Indonesia	63
13	Turkmenistan	59
14	Egypt	58
15	United Arab Emirates	55
16	Nigeria	49
17	Uzbekistan	47
18	United Kingdom	39
19	Argentina	38
20	Oman	37
21	Thailand	33
22	Kazakhstan	32
23	Pakistan	31
24	Mexico	30
25	Trinidad & Tobago	29
26	Other Africa	29
27	Other Asia Pacific	28
28	Azerbaijan	26
29	Bangladesh	25
30	Brazil	24
	Sub total	3588
	Others	265
	Total World	3854
	of which: OECD	1478
	Non-OECD	2375
	European Union	48

Source: BP Statistical Review of World Energy, July 2021

Note: As per BP Statics India is at 31st position with Natural Gas Production at 23.8 BCM in calendar year 2020 while as per MoPNG/PPAC Net Natural Gas Production of India (after excluding flare & loss and internal consumption) during 2020 has been 27.6 BCM

Figures are for Calendar year

Table 3.3 : World top 30 natural gas consuming countries

(Billion cubic metres)		
Sl. no.	Country	2020
1	US	832
2	Russian Federation	411
3	China	331
4	Iran	233
5	Canada	113
6	Saudi Arabia	112
7	Japan	104
8	Germany	87
9	Mexico	86
10	United Kingdom	72
11	United Arab Emirates	70
12	Italy	68
13	India	60
14	Egypt	58
15	South Korea	57
16	Thailand	47
17	Turkey	46
18	Argentina	44
19	Algeria	43
20	Uzbekistan	43
21	Indonesia	42
22	Pakistan	41
23	Australia	41
24	France	41
25	Malaysia	38
26	Netherlands	37
27	Qatar	35
28	Spain	32
29	Brazil	32
30	Turkmenistan	31
	Sub total	3286
	Others	537
	Total World	3823
	of which: OECD	1758
	Non-OECD	2065
	European Union	380

Source: BP Statistical Review of World Energy, July 2021

Figures are for Calendar year

Table 3.4 : Natural gas at a glance

	(MMSCM)					
	2017-18	2018-19	2019-20	2020-21 (P)	Apr-Sep 2020	Apr-Sep 2021 (P)
Gross production	32649	32875	31184	28672	13954	16891
Net Production (net of flare and loss)	31731	32058	30257	27784	13492	16469
LNG import	27439	28740	33887	33031	15981	16210
Total Consumption including internal use (Net Production+ LNG import)	59170	60798	64144	60815	29473	32679
Total consumption (in BCM)	59.2	60.8	64.1	60.8	29.5	32.7

Table 3.5 : Natural gas production

	(MMSCM)					
	2017-18	2018-19	2019-20	2020-21 (P)	Apr-Sep 2020	Apr-Sep 2021 (P)
ONGC						
A) Gross Production	23429	24677	23746	21872	10979	10256
B) Flared	450	449	520	458	240	230
C) Internal Use	4427	4629	4697	4432	2265	2106
D) Loss	0	0	0	0	0	0
D) =A-B-C Net Production for Sale	18553	19599	18529	16982	8474	7920
Oil India Limited						
A) Gross Production	2881	2722	2668	2480	1242	1434
B) Flared	114	122	155	164	82	88
C) Internal Use	398	382	377	371	186	220
D) Loss	5	12	13	14	7	14
D) =A-B-C Net Production for Sale	2365	2207	2123	1930	966	1113
PSC/JVs fields						
A) Gross Production	6338	5477	4770	4321	1733	5200
B) Flared	261	153	185	199	104	66
C) Internal Use	981	1007	978	925	446	549
D) Loss	89	81	54	53	28	24
E) =A-B-C-D Net Production for Sale	5007	4235	3552	3143	1154	4562
Grand Total						
A) Gross Production	32649	32875	31184	28672	13954	16891
B) Flared	824	724	860	822	427	384
C) Internal Use	5806	6017	6052	5729	2898	2875
D) Loss	94	93	67	67	35	37
E) =A-B-C-D Net Production for Sale	25925	26041	24205	22055	10594	13595

Source: Domestic Gas Producers / DGH / LNG Importing companies/DGCIS

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

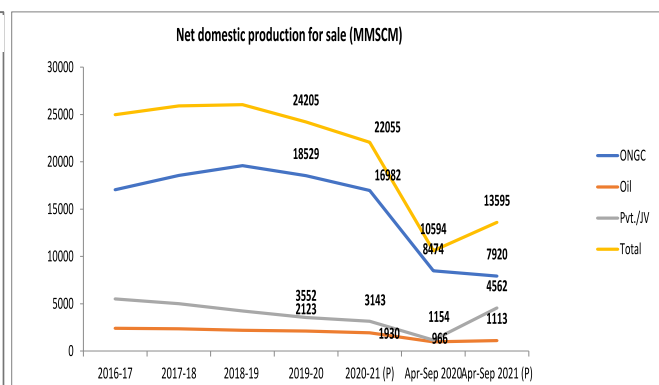
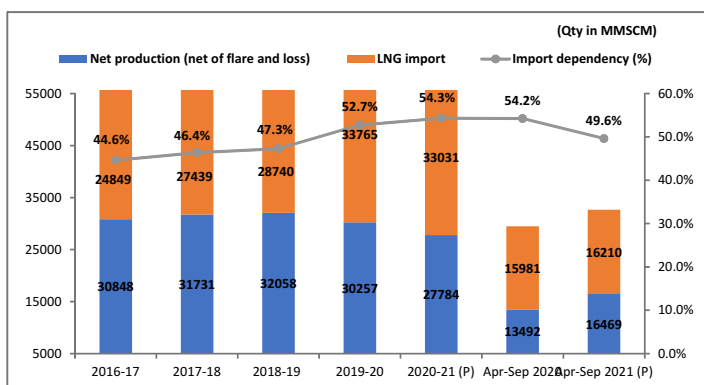


Table No. 3.6 : PNG Data as on 30.09.2021

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
Andhra Pradesh	Kakinada	Bhagyanagar Gas Limited	59,863	135	2
	Vijaywada	Bhagyanagar Gas Limited	45,411	64	0
	East Godavari District (EAAA)	Godavari Gas Private Limited	49,800	5	0
	West Godavari District	Godavari Gas Private Limited	51,064	12	1
	Krishna District (EAAA)	Megha Engineering & Infrastructure Limited	13,672	100	18
Andhra Pradesh Total			219,810	316	21
Andhra Pradesh, Karnataka & Tamil Nadu	Chittoor, Kolar and Vellore Districts	AGP City Gas Private Limited	0	0	1
Andhra Pradesh, Karnataka & Tamil Nadu Total			0	0	1
Assam	Upper Assam	Assam Gas Company Limited	38,059	1,221	413
	Cachar, Hailakandi & Karimganj Districts	Purba Bharati Gas Private Limited	285	0	0
Assam Total			38,344	1,221	413
Bihar	Patna District	GAIL (India) Limited	37,311	13	1
	Aurangabad, Kaimur & Rohtas Districts	Indian Oil Corporation Limited	1,450	0	0
Bihar Total			38,761	13	1
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	Chandigarh	Indian-Oil Adani Gas Private Limited	21,423	55	13
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh Total			21,423	55	13
Dadra & Nagar Haveli (UT)	UT of Dadra & Nagar Haveli	Gujarat Gas Limited	7,008	46	45
Dadra & Nagar Haveli (UT) Total			7,008	46	45
Daman & Diu (UT)	UT of Daman	Indian-Oil Adani Gas Private Limited	4,884	32	31
Daman & Diu (UT) Total			4,884	32	31
Daman and Diu & Gujarat	Diu & Gir Somnath Districts	IRM Energy Private Limited	190	1	0
Daman and Diu & Gujarat Total			190	1	0
Goa	North Goa District	Goa Natural Gas Private Limited	7,093	7	14
	South Goa District	Indian-Oil Adani Gas Private Limited	0	0	4
Goa Total			7,093	7	18
Gujarat	Vadodara	Adani Gas Limited	616	1	88
	Ahmedabad City and Daskroi Area	Adani Gas Limited	443,262	2,953	859
	Anand area including Kanjari & Vadtal Villages (in Kheda District)	Charotar Gas Sahakari Mandali Limited	38,001	688	150
	Gandhinagar	Gujarat Gas Limited	130,079	548	27
	Bhavnagar	Gujarat Gas Limited	43,142	340	75
	Jamnagar	Gujarat Gas Limited	26,719	178	116
	Kutch (West)	Gujarat Gas Limited	2,309	31	2
	Amreli District	Gujarat Gas Limited	6,345	34	2
	Dahej Vagra Taluka	Gujarat Gas Limited	1,155	15	37
	Dahod District	Gujarat Gas Limited	3,312	10	23
	Anand District (EAAA)	Gujarat Gas Limited	38,484	246	18
	Panchmahal District	Gujarat Gas Limited	17,856	100	84
	Narmada (Rajpipla) District	Gujarat Gas Limited	492	0	0

Table 3.6 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
	Surat, Bharuch, Ankleshwar	Gujarat Gas Limited	705,584	9,224	1,037
	Nadiad	Gujarat Gas Limited	66,417	402	22
	Navsari	Gujarat Gas Limited	107,249	263	53
	Rajkot	Gujarat Gas Limited	271,057	1,063	1,496
	Surendranagar	Gujarat Gas Limited	25,873	250	363
	Hazira	Gujarat Gas Limited	36,919	129	16
	Valsad	Gujarat Gas Limited	113,845	373	706
	Banaskantha District	IRM Energy Private Limited	28,700	123	12
	Patan District	Sabarmati Gas Limited	14,594	41	6
	Gandhinagar Mehsana Sabarkantha	Sabarmati Gas Limited	216,213	971	376
	Vadodara	Vadodara Gas Limited	185,625	2,662	10
Gujarat Total			2,523,848	20,645	5,578
Haryana	Faridabad	Adani Gas Limited	66006	231	415
	Nuh and Palwal Distircts	Adani Gas Limited	1,917	4	38
	Yamunanagar District	Bharat Petroleum Corporation Limited	6,222	0	0
	Rohtak District	Bharat Petroleum Corporation Limited	1,746	0	0
	Sonipat	GAIL Gas Limited	26,906	43	188
	Jhajjar District	Haryana City Gas (KCE) Private Limited	24	0	0
	Sonipat District (EAAA) & Jind District	Hindustan Petroleum Corporation Limited	5,293	0	0
	Ambala & Kurukshetra Districts	HPOIL Gas Private Limited	7,774	0	0
	Panipat District	Indian-Oil Adani Gas Private Limited	17,102	12	35
	Gurugram	Indraprastha Gas Limited	16,525	93	27
	Rewari District	Indraprastha Gas Limited	11,396	61	154
	Karnal District	Indraprastha Gas Limited	10,291	7	23
	Kaithal District	Indraprastha Gas Limited	12,351	0	0
	Gurugram	Haryana City Gas Distribution Limited	23349	146	208
Haryana Total			206,902	597	1,088
Himachal Pradesh	Bilaspur, Hamirpur & Una Districts	Bharat Gas Resources Limited	1,209	0	0
Himachal Pradesh Total			1,209	0	0
Jharkhand	East Singhbhum District	GAIL (India) Limited	17,402	0	0
	Ranchi District	GAIL (India) Limited	24,150	0	0
	Giridih & Dhanbad Districts	GAIL Gas Limited	7,438	0	0
	Seraikela-Kharsawan District	GAIL Gas Limited	5,690	0	0
	Bokaro, Hazaribagh & Ramgarh Districts	Indian Oil Corporation Limited	343	0	0
Jharkhand Total			55,023	0	0
	Bidar District	Bharat Gas Resources Limited	37	0	0
	Bengaluru Rural and Urban Districts	GAIL Gas Limited	224,002	253	148
	Dakshina Kannada District*	GAIL Gas Limited	12,726	1	3
	Dharwad District	Indian-Oil Adani Gas Private Limited	14,762	5	2
	Ramanagara District	Maharashtra Natural Gas Limited	7,839	0	7
	Tumkur District	Megha Engineering & Infrastructure Limited	19,517	113	40

Table 3.6 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
	Belgaum District	Megha Engineering & Infrastructure Limited	16,231	80	27
	Chitradurga & Davanagere Districts	Unison Enviro Private Limited	87	0	0
Karnataka Total			295,201	452	227
Kerala	Alapuzha, Kollam and Thiruvananthapuram Districts	AGP City Gas Private Limited	0	0	3
	Ernakulam District	Indian-Oil Adani Gas Private Limited	16,803	15	9
Kerala Total			16,803	15	12
Madhya Pradesh	Indore (including Ujjain City)	Aavantika Gas Limited	65,766	102	249
	Gwalior	Aavantika Gas Limited	25,641	44	8
	Satna & Shandol Districts	Bharat Gas Resources Limited	1,580	0	0
	Dewas	GAIL Gas Limited	14445	31	43
	Raisen, Shajapur and Sehore Districts	GAIL Gas Limited	651	0	0
	Guna District	Indian Oil Corporation Limited	506	0	0
	Rewa District	Indian Oil Corporation Limited	810	0	0
	Ashoknagar District	Indian Oil Corporation Limited	390	0	0
	Morena District	Indian Oil Corporation Limited	851	0	0
	Dhar District	Naveriya Gas Private Limited	820	17	0
	Gwalior (EAAA) District and Sheopur District	Rajasthan State Gas Limited	0	0	0
	Bhopal & Rajgarh Districts	Think Gas Bhopal Private Limited	135	2	1
Madhya Pradesh Total			111,595	196	301
Maharashtra	Ahmednagar & Aurangabad Districts	Bharat Gas Resources Limited	902	4	1
	Sangli & Satara Districts	Bharat Gas Resources Limited	6,424	0	0
	Palghar District & Thane Rural	Gujarat Gas Limited	492	14	74
	Kolhapur District	HPOIL Gas Private Limited	5,605	0	0
	Raigarh District (EAAA)	Mahanagar Gas Limited	45,617	0	1
	Mumbai & Greater Mumbai	Mahanagar Gas Limited	979,192	3161	15
	Thane urban and adjoining Municipalities	Mahanagar Gas Limited	685,406	967	73
	Sindhudurg District	Maharashtra Natural Gas Limited	2,720	0	0
	Pune City including Pimpri - Chichwad & adjoining contiguous areas Hinjewadi, Chakan, Talegaon	Maharashtra Natural Gas Limited	371,725	397	243
	Pune District (EAAA)	Torrent Gas Pune Limited	6,538	1	16
	Ratnagiri District	Unison Enviro Private Limited	2,359	2	29
	Latur & Osmanabad Districts	Unison Enviro Private Limited	0	0	0
	Maharashtra Total			2,106,980	4,546
Maharashtra & Gujarat	Valsad (EAAA), Dhule & Nashik Districts	Maharashtra Natural Gas Limited	57,121	0	0
Maharashtra & Gujarat Total			57,121	0	0
National Capital Territory of Delhi (UT)	National Capital Territory of Delhi	Indraprastha Gas Limited	1102731	2822	1644
National Capital Territory of Delhi (UT) Total			1,102,731	2,822	1,644
	Jajpur & Kendujhar Districts	Bharat Gas Resources Limited	1,120	0	0
	Khordha District	GAIL (India) Limited	19,229	0	0
	Cuttack District	GAIL (India) Limited	10,093	0	0
	Sundargarh & Jharsuguda Districts	GAIL Gas Limited	4,402	0	0

Table 3.6 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
	Ganjam, Nayagarh & Puri Districts	GAIL Gas Limited	3,110	0	0
Odisha Total			37,954	0	0
Punjab	Rupnagar District	Bharat Petroleum Corporation Limited	4,950	1	0
	Amritsar District	Gujarat Gas Limited (EARLY)	6,098	63	7
	Bhatinda District	Gujarat Gas Limited (EARLY)	2,197	2	0
	Fatehgarh Sahib District	IRM Energy Private Limited	1,590	21	76
	Ludhiana District (EAAA), Barnala & Moga Districts	Think Gas Ludhiana Private Limited	424	1	1
	SAS Nagar District (EAAA), Patiala & Sangrur Districts	Torrent Gas Private Limited	186	5	0
Punjab Total			15,445	93	84
Rajasthan	Bhilwara & Bundi Districts	Adani Gas Limited	0	0	1
	Barmer, Jaisalmer & Jodhpur Districts	AGP CGD India Private Limited	337	1	4
	Bhiwadi (in Alwar District)	Haryana City Gas Distribution (Bhiwadi) Limited	2,688	1	84
	Ajmer, Pali and Rajsamand Districts	Indraprastha Gas Limited	54,488	0	0
	Kota	Rajasthan State Gas Limited	18,044	17	15
	Alwar (Other than Bhiwadi) & Jaipur Districts	Torrent Gas Jaipur Private Limited	0	0	1
	Kota District (EAAA), Baran & Chittorgarh (Only Rawatbhata Taluka) Districts	Torrent Gas Private Limited	15	0	0
Rajasthan Total			75,572	19	105
Telangana	Hyderabad	Bhagyanagar Gas Limited	153,135	40	51
	Nalgonda Suryapet & Yadadri Bhuvanagiri Districts	Megha Engineering & Infrastructure Limited	756	0	2
	Medak, Siddipet & Sangareddy Districts	Torrent Gas Private Limited	10	0	5
Telangana Total			153,901	40	58
	West Tripura (EAAA) District	Tripura Natural Gas Company Limited	7,924	0	0
	Agartala	Tripura Natural Gas Company Limited	43,118	497	62
Tripura Total			51,042	497	62
Uttar Pradesh	Meerut District (EAAA), Muzaffarnagar & Shamli Districts	Indraprastha Gas Limited	17,284	8	0
	Khurja	Adani Gas Limited	8,605	8	241
	Bagpat District	Bagpat Green Energy Private Limited	56	0	0
	Amethi, Pratapgarh & Raebareilly Districts	Bharat Gas Resources Limited	1,824	0	0
	Saharanpur District	Bharat Petroleum Corporation Limited	9,445	0	0
	Jhansi	Central UP Gas Limited	3,637	0	0
	Bareilly	Central UP Gas Limited	40,342	130	23
	Kanpur	Central UP Gas Limited	96,958	252	87
	Varanasi District	GAIL (India) Limited	39,432	32	3
	Meerut	GAIL Gas Limited	51,216	44	63
	Mirzapur, Chandauli and Sonbhadra Districts	GAIL Gas Limited	3,223	0	0
	Faizabad & Sultanpur Districts	Green Gas Limited	841	0	0
	Unnao (EAAA) District	Green Gas Limited	0	0	0
	Agra	Green Gas Limited	84,268	61	17
	Lucknow	Green Gas Limited	75,239	57	11

Table 3.6 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
	Allahabad	Indian-Oil Adani Gas Private Limited	11,842	34	7
	Allahabad District (EAAA), Bhadohi & Kaushambi Districts	Indian-Oil Adani Gas Private Limited	421	3	0
	Gautam Budh Nagar District	Indraprastha Gas Limited	269,220	638	952
	Kanpur (EAAA) District, Fatehpur and Hamirpur Districts	Indraprastha Gas Limited	14,798	0	0
	Ghaziabad & Hapur Districts	Indraprastha Gas Limited	253773	322	393
	Mathura	Sanwariya Gas Limited	4,605	39	78
	Moradabad	Torrent Gas Moradabad Limited	9,901	16	99
	Auraiya, Kanpur Dehat & Etawah Districts	Torrent Gas Private Limited	1,011	0	1
	Moradabad (EAAA) District	Torrent Gas Private Limited	1,170	0	3
	Gorakhpur, Sant Kabir Nagar & Kushinagar Districts	Torrent Gas Private Limited	118	0	0
Uttar Pradesh Total			999,229	1,644	1,978
Uttar Pradesh & Rajasthan	Firozabad (Taj Trapezium Zone)	GAIL Gas Limited	18,588	2	341
Uttar Pradesh & Rajasthan Total			18,588	2	341
Uttarakhand	Dehradun District	GAIL Gas Limited	16,685	0	0
	Haridwar District	Haridwar Natrural Gas Private Limited	23,850	0	0
	Udham Singh Nagar District	Indian-Oil Adani Gas Private Limited	10,721	35	54
Uttarakhand Total			51,256	35	54
Grand Total			8,217,913	33,294	12,527

Note/Remarks:-

1. All the GAs where PNG connections have been established are considered as Operational.
2. Under normal conditions. Operation of any particular GA commences within around one year of authorization.
3. EAAA stands for Excluding/Except Area Already Authorized | * stands for Sub-Judice | # stands for authorization of GA cancelled | ## stands for the data which is not provided by the CGD Entity

Table 3.7: CNG Sales in India

(Sales in TMT) #								
State (s) / Union Territory	Company name	No. of companies (as on 01.10.2021)	2017-18	2018-19	2019-20	2020-21 (P)	Apr-Sep 2020	Apr-Sep 2021 (P)
Andhra Pradesh*	AGP City Gas Private Limited, Bhagyanagar Gas Limited, Godavari Gas Private Limited, Indian Oil Corporation Limited, Megha Engineering & Infrastructure Limited	5	32	31	21	13	4	14
Andhra Pradesh, Karnataka and Tamil Nadu	AGP City Gas Private Limited	1	0	0	0	0	0	0.0002
Assam	Assam Gas Company Limited	1	0	0	0.02	0.05	0.02	0.02
Bihar	GAIL (India) Limited, Indian Oil-Adani Gas Private Limited, Think Gas Begusarai Pvt Limited	3	0	0	2	5	1	5
Chandigarh, Haryana, Punjab & Himachal Pradesh	Indian Oil-Adani Gas Private Limited	1	5	15	21	14	4	11
Dadra & Nagar Haveli**	Gujarat Gas Limited	1	0	0	3	2	1	1
Daman and Diu	Indian Oil-Adani Gas Private Limited	1	1	2	2	1.37	0	1.05
Delhi NCT***	Indraprastha Gas Limited	1	1016	1144	1033	785	301	456
Goa	Goa Natural Gas Private Limited, Indian Oil-Adani Gas Private Limited	2	0	0	0.03	0.15	0.01	0.21
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	612	662	745	649	252	426
Gujarat & UT of Daman and Diu	IRM Energy Private Limited	1	0	0	0.07	1.36	0.36	1.48
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	144	179	197	173	62	127
Haryana & Himachal Pradesh	Indian Oil-Adani Gas Private Limited	1	0	0	0	0.08	0	0.26
Haryana & Punjab	Gujarat Gas Limited	1	0	0	0	1.4	0.17	2.3
Himachal Pradesh	Bharat Gas Resources Limited	1	0	0	0	0	0	0.025
Jharkhand	GAIL (India) Limited, GAIL Gas Limited, Indian Oil Corporation Limited	3	0	0	0.34	1.2	0.29	1.3
Karnataka	Adani Total Gas Limited, AGP City Gas Private Limited, GAIL Gas Limited, Indian Oil-Adani Gas Private Limited, Maharashtra Natural Gas Limited, Megha Engineering & Infrastructure Limited, Unison Enviro Private Limited	7	0	0.3	1	3	1	3
Kerala	AGP City Gas Private Limited, Indian Oil-Adani Gas Private Limited	2	0	1	6	4	1	3
Kerala & Puducherry	Indian Oil-Adani Gas Private Limited	1	0	0	0	0	0	0.016
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	7	25	31	34	24	7	17
Madhya Pradesh & Rajasthan	Gujarat Gas Limited	1	0	0	0	0.26	0.04	0.75
Maharashtra	Bharat Gas resources Limited, 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	8	630	702	738	504	154	348
Maharashtra & Gujarat	Maharashtra Natural Gas Limited	1	0	0	0	1.4	0.2	1.8
Odisha	Adani Total Gas Limited, GAIL (India) Limited, GAIL Gas Limited	3	0	1	3	2	1	1
Puducherry (UT) & Tamil Nadu	Torrent Gas Private Limited	1	0	0	0	0.001		0.007
Punjab	Bharat Petroleum Corporation Limited, Gujarat Gas Limited, Gujarat State Petronet Limited, IRM Energy Private Limited, Think Gas Ludhiana Private Limited, Torrent Gas Private Limited	6	0	1	7	14	4	16
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	8	5	7	9	15	5	14



State (s) / Union Territory	Company name	No. of companies (as on 01.10.2021)	2017-18	2018-19	2019-20	2020-21 (P)	Apr-Sep 2020	Apr-Sep 2021 (P)
Tamil Nadu	Adani Total Gas Limited, AGP CGD India Pvt Ltd, Indian Oil Corporation Limited, Torrent Gas Chennai Private Limited	4	0	0	0	0.004	0	0.092
Telangana*	Bhagyanagar Gas Limited, Megha Engineering & Infrastructure Limited, Torrent Gas Private Limited	3	0	0	13	9	3	13
Tripura	Tripura Natural Gas Company Limited	1	13	15	16	18	8	9
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	153	282	392	339	118	238
Uttar Pradesh & Uttarakhand	Hindustan Petroleum Corporation Limited	1	0	0	0	0.359	0.071	0.738
Uttar Pradesh & Madhya Pradesh	Adani Total Gas Limited	1	0	0	0.001	0.402	0.090	6.274
Uttarakhand	GAIL Gas Limited, Haridwar Natural Gas Private Limited, Indian Oil-Adani Gas Private Limited	3	0	0.1	1	5	1	5
West Bengal	Bengal Gas Company Limited, Great Eastern Energy Corporation Ltd. , IndianOil-Adani Gas Private Limited, Hindustan Petroleum Corporation Limited	4	2	3	2	2	1	1
Total			2638	3076	3247	2589	929	1725

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 data as on 30.09.2021

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
Andhra Pradesh	Anantapur and YSR (Kadapa) Districts	AGP City Gas Private Limited	1
	Kakinada	Bhagyanagar Gas Limited	13
	Vijaywada	Bhagyanagar Gas Limited	31
	East Godavari District (EAAA)	Godavari Gas Private Limited	15
	West Godavari District	Godavari Gas Private Limited	13
	Srikakulam, Visakhapatnam & Vizianagaram Districts	Indian Oil Corporation Limited	1
	Krishna District (EAAA)	Megha Engineering & Infrastructure Limited	17
Andhra Pradesh Total			91
Andhra Pradesh, Karnataka & Tamil Nadu	Chittoor, Kolar and Vellore Districts	AGP City Gas Private Limited	1
Andhra Pradesh, Karnataka & Tamil Nadu Total			1
Assam	Upper Assam	Assam Gas Company Limited	1
	Cachar, Hailakandi & Karimganj Districts	Purba Bharati Gas Private Limited	0
Assam Total			1
Bihar	Patna District	GAIL (India) Limited	10
	Aurangabad, Kaimur & Rohtas Districts	Indian Oil Corporation Limited	2
	Gaya & Nalanda Districts	Indian-Oil Adani Gas Private Limited	3
	Begusarai District	Think Gas Begusarai Private Limited	4
Bihar Total			19
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	Chandigarh	Indian-Oil Adani Gas Private Limited	21
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh Total			21
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	11
Daman and Diu & Gujarat Total			11
Goa	North Goa District	Goa Natural Gas Private Limited	5
	South Goa District	Indian-Oil Adani Gas Private Limited	3
Goa Total			8
Gujarat	Vadodara	Adani Gas Limited	6
	Surendranagar District (EAAA) & Morbi District (EAAA)	Adani Gas Limited	8
	Barwala & Ranpur Talukas	Adani Gas Limited	4
	Navsari District (EAAA), Surat District (EAAA), Tapi District (EAAA) & the Dangs District	Adani Gas Limited	8
	Kheda District (EAAA) & Mahisagar District	Adani Gas Limited	14
	Porbandar District	Adani Gas Limited	6
	Ahmedabad City and Daskroi Area	Adani Gas Limited	73
	Anand area including Kanjari & Vadtal Villages (in Kheda District)	Charotar Gas Sahakari Mandali Limited	10
	Gandhinagar	Gujarat Gas Limited	16
	Bhavnagar	Gujarat Gas Limited	31
	Jamnagar	Gujarat Gas Limited	22
	Kutch (West)	Gujarat Gas Limited	12
	Amreli District	Gujarat Gas Limited	13

Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
	Dahej Vagra Taluka	Gujarat Gas Limited	4
	Dahod District	Gujarat Gas Limited	14
	Anand District (EAAA)	Gujarat Gas Limited	31
	Panchmahal District	Gujarat Gas Limited	29
	Ahmedabad District (EAAA)	Gujarat Gas Limited	8
	Narmada (Rajpipla) District	Gujarat Gas Limited	5
	Surat, Bharuch, Ankleshwar	Gujarat Gas Limited	111
	Nadiad	Gujarat Gas Limited	33
	Navsari	Gujarat Gas Limited	24
	Rajkot	Gujarat Gas Limited	77
	Surendranagar	Gujarat Gas Limited	20
	Hazira	Gujarat Gas Limited	1
	Valsad	Gujarat Gas Limited	25
	Ahmedabad City (Only for CNG)	Hindustan Petroleum Corporation Limited	22
	Banaskantha District	IRM Energy Private Limited	32
	Patan District	Sabarmati Gas Limited	23
	Gandhinagar Mehsana Sabarkantha	Sabarmati Gas Limited	117
	Junagadh District	Torrent Gas Private Limited	12
	Vadodara	Vadodara Gas Limited	25
	Gujarat Total		836
Haryana	Faridabad	Adani Gas Limited	22
	Bhiwani, Charkhi Dadri & Mahendragarh Districts	Adani Gas Limited	15
	Nuh and Palwal Districts	Adani Gas Limited	15
	Yamunanagar District	Bharat Petroleum Corporation Limited	4
	Rohtak District	Bharat Petroleum Corporation Limited	4
	Sonipat	GAIL Gas Limited	18
	Jhajjar District	Haryana City Gas (KCE) Private Limited	4
	Hisar District	HCG (KCE) Private Limited	2
	Sonipat District (EAAA) & Jind District	Hindustan Petroleum Corporation Limited	11
	Ambala & Kurukshetra Districts	HPOIL Gas Private Limited	9
	Panipat District	Indian-Oil Adani Gas Private Limited	11
	Gurugram	Indraprastha Gas Limited	14
	Rewari District	Indraprastha Gas Limited	15
	Karnal District	Indraprastha Gas Limited	10
	Kaithal District	Indraprastha Gas Limited	5
	Gurugram	Haryana City Gas Distribution Limited	30
	Haryana Total		189
Haryana & Himachal Pradesh	Panchkula District (EAAA), Sirmaur, Shimla & Solan (EAAA) Districts	Indian-Oil Adani Gas Private Limited	6
	Haryana & Himachal Pradesh Total		6
Haryana & Punjab	Sirsa, Fatehabad and Mansa (Punjab) Districts	Gujarat Gas Limited	9
	Haryana & Punjab Total		9
Himachal Pradesh	Bilaspur, Hamirpur & Una Districts	Bharat Gas Resources Limited	1
	Himachal Pradesh Total		1

Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
Jharkhand	East Singhbhum District	GAIL (India) Limited	4
	Ranchi District	GAIL (India) Limited	6
	Giridih & Dhanbad Districts	GAIL Gas Limited	7
	Seraikela-Kharsawan District	GAIL Gas Limited	6
	Bokaro, Hazaribagh & Ramgarh Districts	Indian Oil Corporation Limited	12
Jharkhand Total			35
Karnataka	Udupi District	Adani Gas Limited	4
	Mysuru, Mandya and Chamarajanagar Districts	AGP City Gas Private Limited	3
	Uttara Kannada, Haveri and Shivamogga Districts	AGP City Gas Private Limited	1
	Ballari & Gadag Districts	Bharat Gas Resources Limited	4
	Bidar District	Bharat Gas Resources Limited	1
	Bengaluru Rural and Urban Districts	GAIL Gas Limited	41
	Dakshina Kannada District*	GAIL Gas Limited	15
	Dharwad District	Indian-Oil Adani Gas Private Limited	6
	Ramanagara District	Maharashtra Natural Gas Limited	8
	Tumkur District	Megha Engineering & Infrastructure Limited	1
	Belgaum District	Megha Engineering & Infrastructure Limited	2
	Chitradurga & Davanagere Districts	Unison Enviro Private Limited	7
Karnataka Total			93
Kerala	Alapuzha, Kollam and Thiruvananthapuram Districts	AGP City Gas Private Limited	2
	Ernakulam District	Indian-Oil Adani Gas Private Limited	10
	Kozhikode & Wayanad Districts	Indian-Oil Adani Gas Private Limited	7
	Malappuram District	Indian-Oil Adani Gas Private Limited	6
	Palakkad & Thrissur Districts	Indian-Oil Adani Gas Private Limited	13
Kerala Total			38
Kerala & Puducherry	Kannur, Kasaragod & Mahe Districts	Indian-Oil Adani Gas Private Limited	2
Kerala & Puducherry Total			2
Madhya Pradesh	Indore (including Ujjain City)	Aavantika Gas Limited	47
	Gwalior	Aavantika Gas Limited	21
	Satna & Shandol Districts	Bharat Gas Resources Limited	4
	Dewas	GAIL Gas Limited	3
	Raisen, Shajapur and Sehore Districts	GAIL Gas Limited	7
	Ujjain (EAAA) District, Dewas (EAAA) District and Indore (EAAA) District	Gujarat Gas Limited	6
	Guna District	Indian Oil Corporation Limited	1
	Rewa District	Indian Oil Corporation Limited	3
	Ashoknagar District	Indian Oil Corporation Limited	1
	Morena District	Indian Oil Corporation Limited	2
	Dhar District	Naveriya Gas Private Limited	3
	Gwalior (EAAA) District and Sheopur District	Rajasthan State Gas Limited	2
	Bhopal & Rajgarh Districts	Think Gas Bhopal Private Limited	17
	Shivpuri District	Think Gas Bhopal Private Limited	2
Madhya Pradesh Total			119

Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
Madhya Pradesh and Rajasthan	Jhabua, Banswara, Ratlam and Dungarpur Districts	Gujarat Gas Limited	13
Madhya Pradesh and Rajasthan Total			13
Madhya Pradesh and Uttar Pradesh	Jhansi (EAAA) District, Bhind, Jalaun, Lalitpur and Datia Districts	Adani Gas Limited	7
Madhya Pradesh and Uttar Pradesh Total			7
Maharashtra	Ahmednagar & Aurangabad Districts	Bharat Gas Resources Limited	15
	Sangli & Satara Districts	Bharat Gas Resources Limited	10
	Palghar District & Thane Rural	Gujarat Gas Limited	17
	Kolhapur District	HPOIL Gas Private Limited	9
	Raigarh District (EAAA)	Mahanagar Gas Limited	21
	Mumbai & Greater Mumbai	Mahanagar Gas Limited	143
	Thane urban and adjoining Municipalities	Mahanagar Gas Limited	115
	Sindhudurg District	Maharashtra Natural Gas Limited	7
	Pune City including Pimpri - Chichwad & adjoining Hinjewadi, Chakan, Talegaon	Maharashtra Natural Gas Limited	91
	Solapur District	Sholagasco Private Limited	1
	Pune District (EAAA)	Torrent Gas Pune Limited	33
	Ratnagiri District	Unison Enviro Private Limited	15
	Latur & Osmanabad Districts	Unison Enviro Private Limited	5
Maharashtra Total			482
Maharashtra & Gujarat	Valsad (EAAA), Dhule & Nashik Districts	Maharashtra Natural Gas Limited	40
Maharashtra & Gujarat Total			40
National Capital Territory of Delhi (UT)	National Capital Territory of Delhi	Indraprastha Gas Limited	435
National Capital Territory of Delhi (UT) Total			435
Odisha	Balasore, Bhadrak & Mayurbhanj Districts	Adani Gas Limited	4
	Jajpur & Kendujhar Districts	Bharat Gas Resources Limited	0
	Khordha District	GAIL (India) Limited	11
	Cuttack District	GAIL (India) Limited	6
	Sundargarh & Jharsuguda Districts	GAIL Gas Limited	2
	Ganjam, Nayagarh & Puri Districts	GAIL Gas Limited	2
Odisha Total			25
Puducherry & Tamil Nadu	Karaikal & Nagapattinam Districts	Torrent Gas Private Limited	3
Puducherry & Tamil Nadu Total			3
Punjab	Rupnagar District	Bharat Petroleum Corporation Limited	6
	Ferozepur, Faridkot and Sri Muksar Sahib Districts	Gujarat Gas Limited	5
	Hoshiarpur and Gurdaspur Districts	Gujarat Gas Limited	17
	Amritsar District	Gujarat Gas Limited (EARLY)	16
	Bhatinda District	Gujarat Gas Limited (EARLY)	6
	Fatehgarh Sahib District	IRM Energy Private Limited	7
	Ludhiana	Jay Madhok Energy Private Limited led Consortium	3
	Jalandhar	Jay Madhok Energy Private Limited led Consortium	3
	Ludhiana District (EAAA), Barnala & Moga Districts	Think Gas Ludhiana Private Limited	14
	Jalandhar District (EAAA), Kapurthala & SBS Nagar Districts	Think Gas Ludhiana Private Limited	10

Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
	SAS Nagar District (EAAA), Patiala & Sangrur Districts	Torrent Gas Private Limited	18
Punjab Total			105
Rajasthan	Bhilwara & Bundi Districts	Adani Gas Limited	7
	Chittorgarh (Other than Rawatbhata Taluka) & Udaipur Districts	Adani Gas Limited	17
	Barmer, Jaisalmer & Jodhpur Districts	AGP CGD India Private Limited	9
	Dholpur District	Dholpur CGD Private Limited	5
	Jalore and Sirohi Districts	Gujarat Gas Limited	12
	Bhiwadi (in Alwar District)	Haryana City Gas Distribution (Bhiwadi) Limited	1
	Ajmer, Pali and Rajsamand Districts	Indraprastha Gas Limited	17
	Kota	Rajasthan State Gas Limited	7
	Alwar (Other than Bhiwadi) & Jaipur Districts	Torrent Gas Jaipur Private Limited	11
	Kota District (EAAA), Baran & Chittorgarh (Only Rawatbhata Taluka) Districts	Torrent Gas Private Limited	12
Rajasthan Total			98
Tamil Nadu	Cuddalore, Nagapattinam & Tiruvarur Districts	Adani Gas Limited	12
	Tiruppur District	Adani Gas Limited	15
	Kanchipuram District	AGP CGD India Private Limited	1
	Ramanathapuram District	AGP CGD India Private Limited	2
	Coimbatore District	Indian Oil Corporation Limited	5
	Salem District	Indian Oil Corporation Limited	2
	Chennai & Tiruvallur Districts	Torrent Gas Chennai Private Limited	25
Tamil Nadu Total			62
Telangana	Hyderabad	Bhagyanagar Gas Limited	87
	Jangaon, Jayashankar Bhupalpally, Mahabubabad, Warangal Urban & Warangal Rural Districts	Megha Engineering & Infrastructure Limited	2
	Medchal-Malkajgiri, Ranga Reddy & Vikarabad Districts	Megha Engineering & Infrastructure Limited	2
	Nalgonda Suryapet & Yadadri Bhuvanagiri Districts	Megha Engineering & Infrastructure Limited	1
	Medak, Siddipet & Sangareddy Districts	Torrent Gas Private Limited	14
Telangana Total			106
Tripura	Gomati District	Tripura Natural Gas Company Limited	6
	West Tripura (EAAA) District	Tripura Natural Gas Company Limited	6
	Agartala	Tripura Natural Gas Company Limited	6
Tripura Total			18
Uttar Pradesh	Meerut District (EAAA), Muzaffarnagar & Shamli Districts	Indraprastha Gas Limited	11
	Khurja	Adani Gas Limited	7
	Bagpat District	Bagpat Green Energy Private Limited	5
	Amethi, Pratapgarh & Raebareli Districts	Bharat Gas Resources Limited	6
	Saharanpur District	Bharat Petroleum Corporation Limited	7
	Jhansi	Central UP Gas Limited	5
	Bareilly	Central UP Gas Limited	18
	Kanpur	Central UP Gas Limited	34
	Varanasi District	GAIL (India) Limited	13
	Meerut	GAIL Gas Limited	16
	Mirzapur, Chandauli and Sonbhadra Districts	GAIL Gas Limited	7
	Faizabad & Sultanpur Districts	Green Gas Limited	5

Table 3.8 : Continued

State/Union Territory	Geographical Area/CGD Networks	Authorized CGD Entity	CNG Stations
	Unnao (EAAA) District	Green Gas Limited	1
	Agra	Green Gas Limited	26
	Lucknow	Green Gas Limited	37
	Bareilly (EAAA) District, Pilibhit and Rampur Districts	Hindustan Petroleum Corporation Limited	21
	Farrukhabad, Etah and Hardoi Districts	Hindustan Petroleum Corporation Limited	11
	Mainpuri and Kannauj Districts	Hindustan Petroleum Corporation Limited	7
	Shahjahanpur and Budaun Districts	Hindustan Petroleum Corporation Limited	11
	Allahabad	Indian-Oil Adani Gas Private Limited	7
	Bulandshahr (part) District	Indian-Oil Adani Gas Private Limited	5
	Bulandshahr District (EAAA), Aligarh & Hathras Districts	Indian-Oil Adani Gas Private Limited	10
	Allahabad District (EAAA), Bhadohi & Kaushambi Districts	Indian-Oil Adani Gas Private Limited	9
	Jaunpur and Ghazipur Districts	Indian-Oil Adani Gas Private Limited	4
	Gautam Budh Nagar District	Indraprastha Gas Limited	52
	Kanpur (EAAA) District, Fatehpur and Hamirpur Districts	Indraprastha Gas Limited	8
	Ghaziabad & Hapur Districts	Indraprastha Gas Limited	55
	Mathura	Sanwariya Gas Limited	8
	Moradabad	Torrent Gas Moradabad Limited	6
	Auraiya, Kanpur Dehat & Etawah Districts	Torrent Gas Private Limited	21
	Moradabad (EAAA) District	Torrent Gas Private Limited	15
	Azamgarh, Mau and Ballia Districts	Torrent Gas Private Limited	9
	Basti and Ambedkarnagar Districts	Torrent Gas Private Limited	12
	Gonda and Barabanki Districts	Torrent Gas Private Limited	12
	Gorakhpur, Sant Kabir Nagar & Kushinagar Districts	Torrent Gas Private Limited	18
	Uttar Pradesh Total		499
Uttar Pradesh & Rajasthan	Firozabad (Taj Trapezium Zone)	GAIL Gas Limited	31
	Uttar Pradesh & Rajasthan Total		31
Uttar Pradesh and Uttrakhand	Bijnor and Nainital Districts	Hindustan Petroleum Corporation Limited	10
	Uttar Pradesh and Uttrakhand Total		10
Uttrakhand	Dehradun District	GAIL Gas Limited	6
	Haridwar District	Haridwar Natrural Gas Private Limited	4
	Udham Singh Nagar District	Indian-Oil Adani Gas Private Limited	7
	Uttrakhand Total		17
West Bengal	Kolkata Muncipal Corporation and Parts of Adjoining Districts	Bengal Gas Company Limited	3
	Howrah (EAAA) District and Hoogly (EAAA) District	Hindustan Petroleum Corporation Limited	2
	Nadia (EAAA) District and North 24 Parganas (EAAA) District	Hindustan Petroleum Corporation Limited	2
	Burdwan District	Indian-Oil Adani Gas Private Limited	14
	CNG Stations	Great Eastern Energy Corporation Limited	1
	West Bengal Total		22
	Grand Total		3,464

Source: PNGRB and GEECL

Table 3.9 : LNG terminals (Operational)

Location	Promoters	Capacity as on 01.10.2021	% Capacity utilisation (Apr-Sep 2021) (P)
Dahej	Petronet LNG Ltd (PLL)	17.5 MMTPA	92.2
Hazira	"Shell Energy India Pvt. Ltd.	5.2 MMTPA	73.8
Dabhol	Konkan LNG Limited	*5 MMTPA	40.2
Kochi	Petronet LNG Ltd (PLL)	5 MMTPA	22.6
Ennore	Indian Oil LNG Pvt Ltd	5 MMTPA	14.0
Mundra	GSPC LNG Limited	5 MMTPA	20.7
Total Capacity		42.7 MMTPA	

* To increase to 5 MMTPA with breakwater only HP stream of capacity of 2.9 MMTPA is commissioned #

Table 3.10 : Import of Liquefied Natural Gas (LNG)

Financial Year	LNG import quantity/value				
	MMT	MMSCM	Million Btu	Value (Mn. USD)	USD /MMBtu
2017-18	20.7	27,439	1,089	8,051	7.4
2018-19	21.7	28,740	1,140	10,253	9.0
2019-20	25.6	33,886	1,345	9,489	7.1
2020-21 (P)	24.9	33,031	1,311	7,864	6.0
Apr-Sep 2020	12.1	15,981	634	3,313	5.2
Apr-Sep 2021 (P)	12.2	16,210	643	4,956	7.7

Source: LNG importing companies & DGCIS

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

Table 3.11 : Domestic natural gas price and gas price ceiling

Period	Domestic natural gas price in US\$/MMBTU (GCV basis)*	Gas price ceiling 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	2.50	5.30
April 2017 - September 2017	2.48	5.56
October 2017 - March 2018	2.89	6.30
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	2.90	6.13

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

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

Table 3.12: Statewise CGD Sale Profile* (in SCMD)

State (s) / Union Territory	CNG	Domestic	Commercial	Industrial	Total
Andhra Pradesh	63458	24660	2077	36145	126340
Andhra Pradesh, Karnataka and Tamil Nadu	2	0	0	0	2
Assam	158	34494	17389	569855	621897
Bihar	38087	1389	88	141	39704
Chandigarh, Haryana, Punjab & Himachal Pradesh	87648	8913	2122	6668	105352
Dadra & Nagar Haveli	11339	2046	529	73819	87732
Daman and Diu	8973	839	684	9659	20156
Delhi	3523143	299209	84973	144175	4051500
Goa	1633	267	106	19634	21639
Gujarat	3282514	1067626	152204	9277896	13780240
Gujarat & UT of Daman and Diu	11538	20	7	0	11565
Haryana	1006660	51729	17582	633243	1709214
Haryana & Himachal Pradesh	2266	0	0	0	2266
Haryana & Punjab	17497	0	0	0	17497
Himachal Pradesh	189	0	0	0	189
Jharkhand	10571	731	0	0	11303
Karnataka	26130	27567	9423	278761	341880
Kerala	28390	1977	898	13723	44988
Kerala & Puducherry	130	0	0	0	130
Madhya Pradesh	128759	38970	3167	95841	266738
Madhya Pradesh & Rajasthan	5743	0	0	0	5743
Maharashtra	2659421	559758	148689	642393	4010262
Maharashtra & Gujarat	13481	0	0	0	13481
Odisha	10488	776	0	0	11264
Puducherry (UT) & Tamil Nadu	51	0	0	0	51
Punjab	121888	6052	2524	137263	267727
Rajasthan	104268	1838	823	8545	115474
Tamil Nadu	692	0	0	0	692
Telangana	51701	36584	498	70947	159729
Tripura	68069	38828	6436	19230	132563
Uttar Pradesh	1849141	240504	38088	2105380	4233113
Uttar Pradesh & Uttarakhand	5633	0	0	0	5633
Uttar Pradesh & Madhya Pradesh	48760	0	0	0	48760
Uttarakhand	38784	11363	761	63360	114268
West Bengal	10866	0	0	0	10866
Grand Total	13238071	2456140	489067	14206677	30389956

** Inputs based on the information submitted by CGD entities - subject to revisions, if any.

Categorizations of data under Commercial and Industrial sectors- as per the respective policies of individual CGD entities "

Sales of SCMD (SCM per day) calculated based on sale for period April 2021 to September 2021



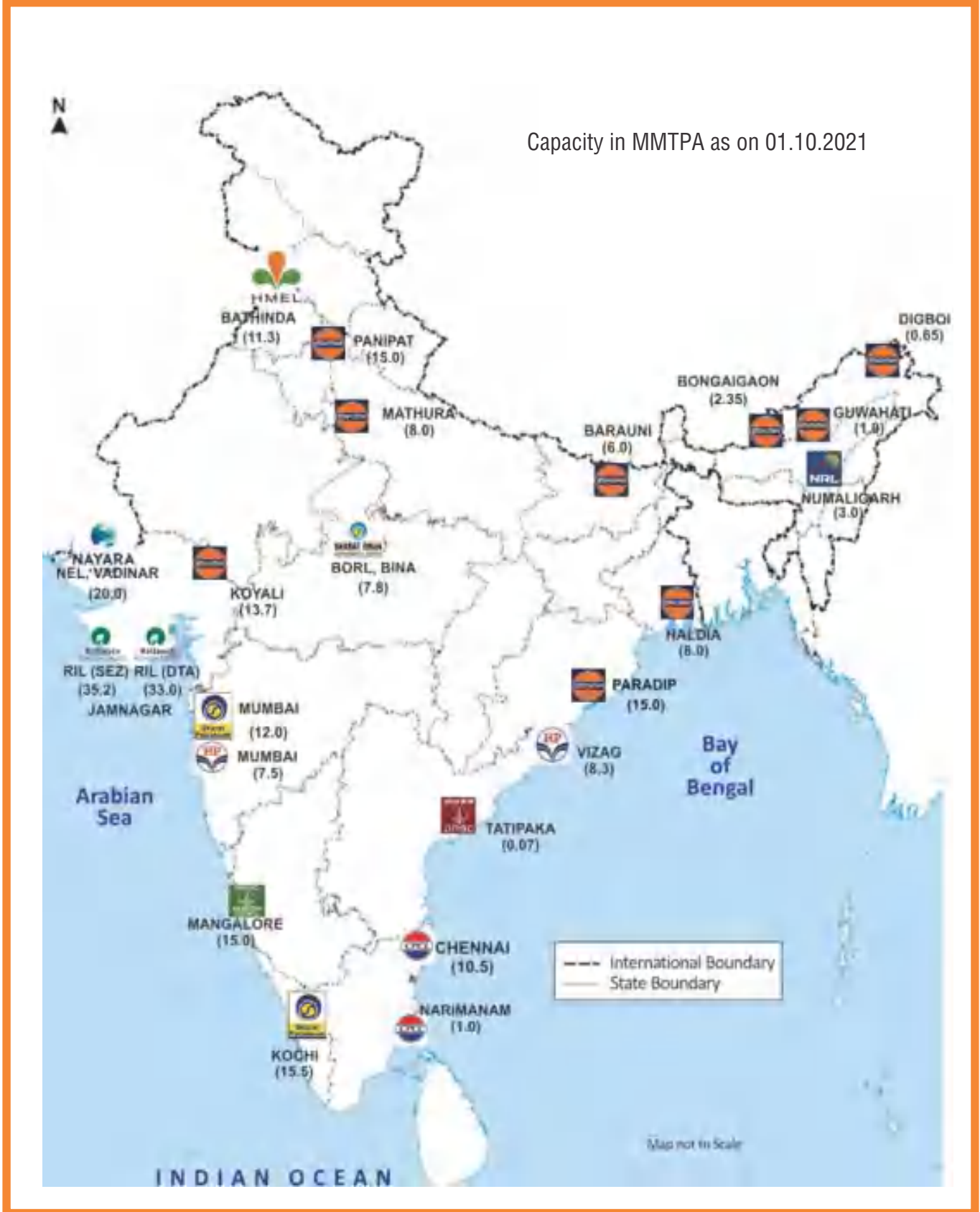
Analysis • Knowledge • Information

Chapter-4

Refining & Production



Map of refineries in India



Simplified block flow diagram of a typical refinery

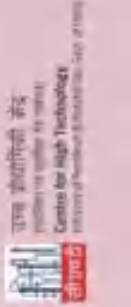
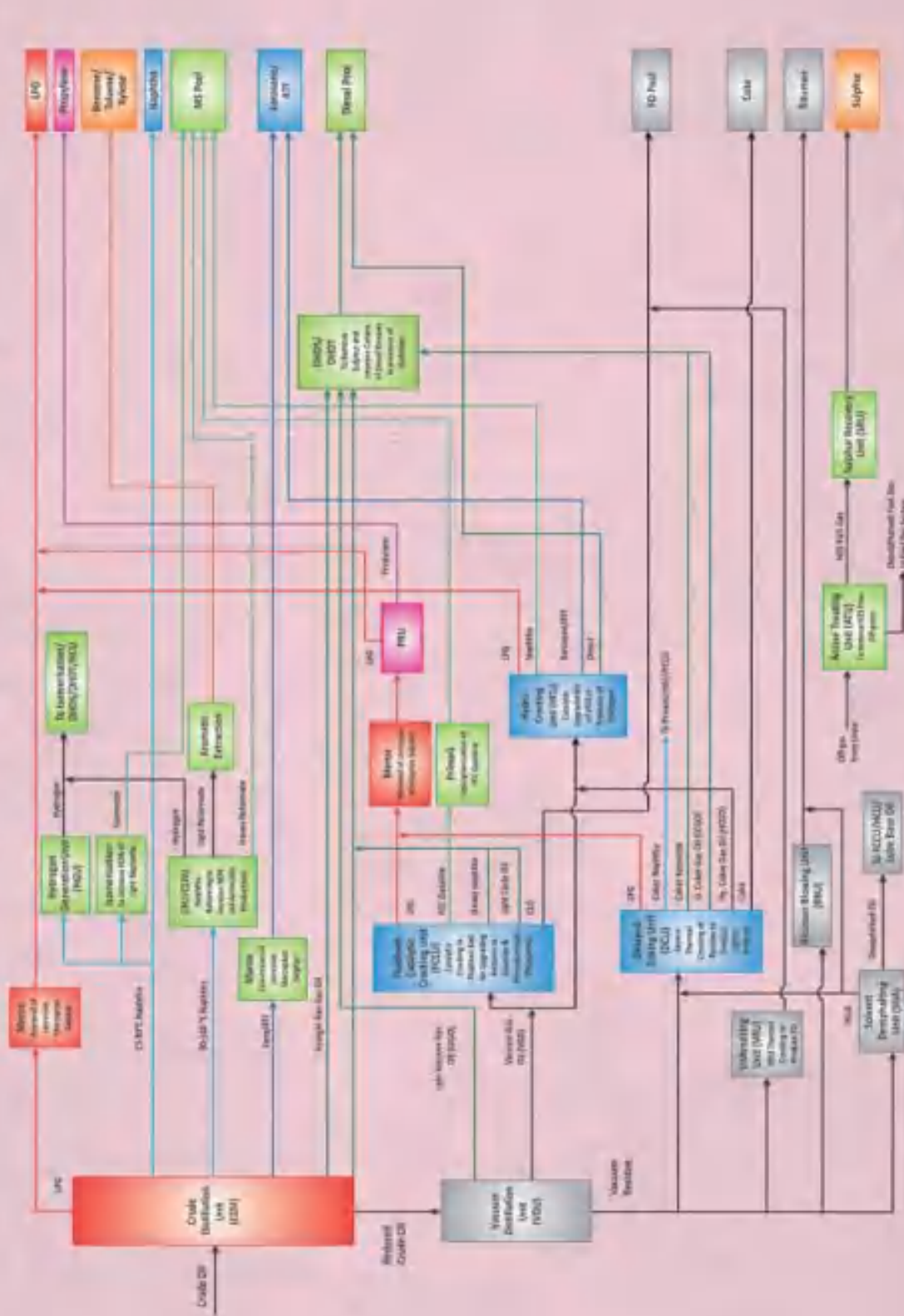


Table 4.1 : Refineries: Installed capacity and crude oil processing

Sl. no.	Refinery	Installed capacity (MMTPA)					Crude oil processing (MMT)				
		01.04.2018	01.04.2019	01.04.2020	01.04.2021	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
1	Barauni	6.0	6.0	6.0	6.0	5.8	6.7	6.5	5.5	2.2	2.4
2	Koyali	13.7	13.7	13.7	13.7	13.8	13.5	13.1	11.6	5.2	6.3
3	Haldia	7.5	7.5	8.0	8.0	7.7	8.0	6.5	6.8	2.7	3.9
4	Mathura	8.0	8.0	8.0	8.0	9.2	9.7	8.9	8.9	4.0	4.2
5	Panipat	15.0	15.0	15.0	15.0	15.7	15.3	15.0	13.2	5.7	7.3
6	Guwahati	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.3	0.2
7	Digboi	0.65	0.65	0.65	0.65	0.7	0.7	0.7	0.6	0.3	0.4
8	Bongaigaon	2.35	2.35	2.35	2.35	2.4	2.5	2.0	2.5	1.2	1.4
9	Paradip	15.0	15.0	15.0	15.0	12.7	14.6	15.8	12.5	5.2	6.0
	IOCL total	69.2	69.2	69.7	69.7	69.0	71.8	69.4	62.4	26.9	32.0
10	Mumbai	7.5	7.5	7.5	7.5	8.6	8.7	8.1	7.4	3.7	1.5
11	Visakh	8.3	8.3	8.3	8.3	9.6	9.8	9.1	9.1	4.3	3.5
12	HMEL-Bathinda	11.3	11.3	11.3	11.3	8.8	12.5	12.2	10.1	5.1	6.5
	HPCL total	27.1	27.1	27.1	27.1	27.1	30.9	29.4	26.5	13.2	11.6
13	Mumbai	12.0	12.0	12.0	12.0	14.1	14.8	15.0	12.9	5.5	6.9
14	Kochi	15.5	15.5	15.5	15.5	14.1	16.1	16.5	13.3	5.2	6.8
15	BORL-Bina	6.0	7.8	7.8	7.8	6.7	5.7	7.9	6.2	2.5	3.4
	BPCL total	33.5	35.3	35.3	35.3	34.9	36.5	39.4	32.4	13.2	17.1
16	Manali	10.5	10.5	10.5	10.5	10.3	10.3	10.2	8.2	3.4	4.0
17	CBR	1.0	1.0	1.0	1.0	0.5	0.4	0.0	0.0	0.0	0.0
	CPCL total	11.5	11.5	11.5	11.5	10.8	10.7	10.2	8.2	3.4	4.0
18	Numaligarh	3.0	3.0	3.0	3.0	2.8	2.9	2.4	2.7	1.3	1.3
19	Tatipaka	0.07	0.07	0.07	0.07	0.08	0.07	0.09	0.08	0.04	0.04
20	MRPL-Mangalore	15.0	15.0	15.0	15.0	16.1	16.2	14.0	11.5	4.3	6.2
	ONGC total	15.1	15.1	15.1	15.1	16.2	16.3	14.0	11.6	4.4	6.2
21	RIL-Jamnagar (DTA)	33.0	33.0	33.0	33.0	33.2	31.8	33.0	34.1	16.8	16.8
22	RIL-Jamnagar (SEZ)	35.2	35.2	35.2	35.2	37.3	37.4	35.9	26.8	12.2	14.3
23	NEL*-Vadinar	20.0	20.0	20.0	20.0	20.7	18.9	20.6	17.1	8.9	10.0
	All India	247.6	249.4	249.9	249.9	251.9	257.2	254.4	221.8	100.2	113.3

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

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

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

(Million metric tonne)							
Sl. no.	Type of crude	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
1	HS crude	188.4	194.2	192.4	161.4	73.1	85.2
2	LS crude	63.6	63.0	62.0	60.3	27.1	28.1
	Total crude	251.9	257.2	254.4	221.8	100.2	113.3
	Share of HS crude in total crude processing	74.8%	75.5%	75.6%	72.8%	73.0%	75.2%

Source: Oil companies

Table 4.3 : Imported crude & indigenous crude oil processing

(Million metric tonne)

Sl. no.	Indigenous/ Imported crude	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
1	Imported crude	219.1	225.5	225.1	193.8	86.2	100.0
2	Indigenous crude	32.8	31.7	29.3	28.0	13.9	13.3
	Total crude	251.9	257.2	254.4	221.8	100.2	113.3
	Share of imported crude in total crude processing	87.0%	87.7%	88.5%	87.4%	86.1%	88.3%

Source: Oil companies

Table 4.4 : Production of petroleum products

(Million metric tonne)

Products	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
A) From crude oil/refineries						
Light ends	83.7	85.1	87.4	83.0	38.5	42.2
of which: LPG	10.2	10.7	10.9	10.2	4.7	4.9
MS	37.8	38.0	38.6	35.8	15.9	18.5
Naphtha	18.8	18.4	19.4	18.4	8.5	9.3
Others	17.0	18.0	18.5	18.6	9.4	9.5
Middle distillates	131.2	136.3	135.5	115.4	52.4	58.6
of which: SKO	4.2	4.0	3.2	2.4	1.3	0.9
ATF	14.6	15.5	15.2	7.1	2.7	4.2
HSD	108.0	110.5	111.1	100.4	45.7	50.4
LDO	0.6	0.7	0.6	0.7	0.3	0.4
Others	3.7	5.7	5.5	4.8	2.5	2.6
Heavy ends	34.8	36.0	35.3	30.9	14.3	16.5
of which: Furnace Oil	9.8	9.5	8.9	7.1	3.5	3.7
LSHS	0.5	0.4	0.4	0.4	0.2	0.2
Lube Oil	1.0	0.9	0.9	1.1	0.4	0.5
Bitumen	5.3	5.6	4.9	4.9	1.6	1.9
RPC/Petcoke	13.9	13.7	14.6	12.0	5.8	6.7
Others	4.3	5.9	5.5	5.5	2.7	3.5
Sub total (A)	249.7	257.4	258.2	229.3	105.2	117.3
B) From natural gas/fractionators						
Sub total (B)	4.6	4.9	4.8	4.2	2.1	2.1
of which: LPG	2.2	2.1	2.0	1.9	1.0	0.8
Naphtha	1.2	1.2	1.2	1.0	0.5	0.5
SKO	0.05	0.07	0.05	0.03	0.02	0.01
ATF	0.01	0.02	0.03	0.02	0.00	0.01
HSD	0.01	0.04	0.06	0.06	0.03	0.03
Others	1.1	1.5	1.5	1.3	0.6	0.7
Total production (A +B)	254.3	262.4	262.9	233.5	107.3	119.3

Source: Oil companies

Table 4.5 : Production of petroleum products : All sources

(Million metric tonne)

Major products	2017-18		2018-19		2019-20		2020-21		Apr-Sep 2020		Apr-Sep 2021 (P)	
	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage
HSD	108.1	42.5	110.6	42.1	111.2	42.3	100.4	43.0	45.7	42.6	50.5	42.3
MS	37.8	14.9	38.0	14.5	38.6	14.7	35.8	15.3	15.9	14.9	18.5	15.5
Naphtha	20.0	7.9	19.6	7.5	20.6	7.8	19.4	8.3	9.0	8.4	9.8	8.2
FO	9.8	3.8	9.5	3.6	8.9	3.4	7.1	3.0	3.5	3.3	3.7	3.1
ATF	14.7	5.8	15.5	5.9	15.2	5.8	7.1	3.0	2.7	2.5	4.2	3.6
LPG	12.4	4.9	12.8	4.9	12.8	4.9	12.1	5.2	5.7	5.3	5.7	4.8
SKO	4.3	1.7	4.1	1.5	3.2	1.2	2.4	1.0	1.3	1.2	0.9	0.8
Bitumen	5.3	2.1	5.6	2.1	4.9	1.9	4.9	2.1	1.6	1.5	1.9	1.6
LSHS	0.5	0.2	0.4	0.2	0.4	0.2	0.4	0.2	0.2	0.1	0.2	0.2
Lubes	1.0	0.4	0.9	0.4	0.9	0.4	1.1	0.5	0.4	0.4	0.5	0.4
LDO	0.6	0.2	0.7	0.3	0.6	0.2	0.7	0.3	0.3	0.3	0.4	0.3
RPC/Petcoke	13.9	5.5	13.7	5.2	14.6	5.6	12.0	5.2	5.8	5.4	6.7	5.6
Others#	26.2	10.3	31.0	11.8	31.0	11.8	30.2	12.9	15.1	14.1	16.3	13.6
Total	254.3	100.0	262.4	100.0	262.9	100.0	233.5	100.0	107.3	100.0	119.3	100.0

Source: Oil companies

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

Table 4.6 : Production vis a vis consumption of petroleum products

(Million metric tonne)

Year	Consumption \$	Production from refineries & other sources*	Surplus (+) / Deficit (-)
	(A)	(B)	(B)-(A)
1997-98	84.3	64.7	-19.6
1998-99	90.6	68.4	-22.2
1999-00	97.1	82.9	-14.2
2000-01	100.1	99.6	-0.5
2001-02	100.4	104.3	3.9
2002-03	104.1	108.7	4.5
2003-04	107.8	117.6	9.9
2004-05	111.6	123.3	11.6
2005-06	113.2	124.6	11.4
2006-07	120.7	140.6	19.9
2007-08	128.9	150.4	21.5
2008-09	133.6	157.9	24.3
2009-10	137.8	185.5	47.7
2010-11	141.0	196.2	55.2
2011-12	148.1	204.5	56.3
2012-13	157.1	218.2	61.2
2013-14	158.4	220.7	62.3
2014-15	165.5	221.1	55.6
2015-16	184.7	231.9	47.2
2016-17	194.6	243.5	48.9
2017-18	206.2	254.3	48.1
2018-19	213.2	262.4	49.1
2019-20	214.1	262.9	48.8
2020-21	194.3	233.5	39.2
Apr-Sep 2020	85.9	107.3	21.4
Apr-Sep 2021 (P)	95.6	119.3	23.7

Note: \$ includes direct imports by private parties*

*Fractionators and gas processing plants

Table 4.7 : Gross Refining Margins (GRM) of Refineries

\$/bbl

Company	2016-17	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
PSU refineries							
IOCL	7.77	8.49	5.41	0.08	5.64	3.46	6.57
BPCL	5.26	6.85	4.58	2.50	4.06	3.19	5.11
HPCL	6.20	7.40	5.01	1.02	3.86	2.58	2.87
CPCL	6.05	6.42	3.70	(1.18)	7.14	9.70	5.75
MRPL	7.75	7.54	4.06	(0.23)	3.71	1.55	3.33
NRL	28.56	31.92	28.11	24.55	37.23	32.67	45.31
BORL	11.80	11.70	9.80	5.60	6.20	7.50	5.70
RIL	11.00	11.60	9.20	8.90	*	6.10	*
NEL	9.14	8.95	6.97	5.88	*	*	*
Singapore	5.83	7.23	4.88	3.25	0.53	(0.44)	2.92

(P) - Provisional

* Not available

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

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

Table 4.8 : Distillate yield of PSU refineries
(Distillate %)

Company	Refinery	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
IOCL	Barauni	89.0	87.9	86.9	87.1	87.2	83.8
	Koyali	82.5	81.0	79.5	72.1	72.0	73.1
	Haldia	66.9	69.9	69.0	72.2	73.9	74.4
	Mathura	75.4	76.1	75.6	72.3	71.2	72.9
	Panipat	84.9	82.8	84.8	80.2	78.6	80.2
	Guwahati	82.7	81	83.5	82.1	75.5	68.5
	Digboi	77.9	75.8	72.5	67.9	67.9	71.9
	Bongaigaon	84.3	84.8	80.8	84.8	85.2	81.9
	Paradip	79.4	80.8	80.7	79.2	78.4	78.6
CPCL	Manali	72.3	75.3	77.6	78.4	77.2	77.3
	CBR	79.1	77.3	-	-	-	-
HPCL	Mumbai	77.4	77.6	77.0	76.2	77.6	61.6
	Visakh	74.5	74.5	72.1	74.4	75.4	68.0
BPCL	Mumbai	84.3	82.2	84.9	83.7	84.1	83.1
	Kochi	83.9	82.5	84.2	83.8	83.4	84.7
NRL	Numaligarh	86.7	87.1	83.0	86.4	85.2	89.3
MRPL	Mangalore	76.5	76.8	76.7	78.1	78.8	78.4
PSU oil cos. average		79.7	79.6	80.0	78.6	78.3	78.1

Source : CHT

P: Provisional

For FY 2020-21, Distillate reported is CHT distillate

Table 4.9 : Fuel & Loss

(Million metric tonne)

Company	Refinery	2017-18			2018-19			2019-20			2020-21			Apr-Sep 2020			Apr-Sep 2021 (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		Crude T'put + other inputs	Fuel & Loss	
			Qty	%		Qty	%		Qty	%		Qty	%		Qty	%		Qty	%
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	2.4	0.3	11.0	2.4	0.2	10.2
	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	5.6	0.6	10.7	6.7	0.7	10.1
	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	2.8	0.3	12.1	4.0	0.4	10.7
	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	4.2	0.3	7.2	4.5	0.3	7.1
	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	6.4	0.7	10.4	8.2	0.7	8.3
	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	0.4	0.1	11.9	0.3	0.0	10.1
	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	0.4	0.04	11.3	0.4	0.04	10.6
	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	1.2	0.1	9.5	1.5	0.2	11.7
	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	5.2	0.6	12.2	6.1	0.7	11.4
	IOCL Total	72.6	6.4		75.7	6.4		73.4	6.4		66.1	6.4		28.6	3.0		34.1	3.3	
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	3.8	0.3	8.0	1.6	0.1	8.3
	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	4.3	0.3	8.0	3.5	0.3	8.7
	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	5.2	0.3	6.2	6.5	0.4	6.3
		HPCL Total	27.2	1.9		31.2	2.1		29.5	1.8		26.7	1.9		13.3	1.0		11.7	0.9
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	5.5	0.2	4.4	7.0	0.3	4.0
	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	5.5	0.5	9.0	7.1	0.6	8.9
	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	2.5	0.3	13.3	3.4	0.4	11.2
	BPCL Total	35.5	2.4		37.0	2.4		40.2	2.8		33.1	2.4		13.5	1.1		17.5	1.3	
	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	1.4	0.1	10.3	1.4	0.1	9.8
CPCL	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	3.5	0.4	11.9	4.2	0.4	10.1
	CBR	0.5	0.0	5.0	0.4	0.02	5.1	0.0	0.0	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		3.5	0.4		4.2	0.4
ONGC	Tatipaka	0.1	0.004	5.3	11.2	1.1	9.9	0.1	0.007	7.8	0.1	0.0	5.1	0.04	0.0	4.2	0.036	0.002	4.2
	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	4.4	0.6	13.1	6.2	0.7	12.0
		ONGC Total	16.4	1.7		27.7	2.8		14.2	1.5		11.6	1.4		4.4	0.6		6.3	0.7
RIL	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	20.2	2.0	9.8	19.9	1.9	9.7
	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	22.2	2.2	10.0	24.9	2.6	10.3
NEL*	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	9.1	0.5	5.9	10.2	0.5	5.3
	Total	271.0	21.3		290.8	22.7		283.5	23.5		252.3	22.8		116.2	10.9		130.1	11.8	

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

Table 4.10: Specific energy consumption of PSU Refineries

(MBTU/Bbl/NRGF)

Company	Refinery	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
IOCL	Barauni	77.7	77.9	75.9	78.1	82.4	82.7
	Koyali	72.4	75.3	77.4	82.6	85.0	85.7
	Haldia	80.8	76.6	88.3	89.3	98.7	89.8
	Mathura	68.3	63.9	65.8	63.1	64.1	63.8
	Panipat	63.2	64.1	64.5	68.0	74.3	65.0
	Guwahati	108.0	112.3	121.2	123.7	138.8	167.1
	Digboi	105.5	101.8	101.7	98.1	113.0	99.1
	Bongaigaon	91.7	88.6	96.8	108.5	100.4	112.7
	Paradip	72.8	66.8	64.1	69.0	78.5	69.1
CPCL	Manali	88.6	83.0	81.5	86.7	92.4	87.6
	CBR	123.7	118.1	-	-	-	-
HPCL	Mumbai	84.4	82.8	84.8	98.2	94.7	132.2
	Visakhapatnam	77.3	77.3	84.4	81.2	81.0	90.3
BPCL	Mumbai	66.7	64.7	63.0	64.4	68.0	65.2
	Kochi	79.2	71.6	68.2	71.7	79.6	68.9
NRL	Numaligarh	64.7	65.9	64.8	64.4	66.7	64.1
MRPL	Mangalore	76.7	74.2	75.3	81.4	89.0	80.0
	PSU average	75.1	72.7	72.8	76.6	81.6	76.9

(P): Provisional

MBN values are as per New MBN methodology with normalisation for grid power import and BS-IV/VI production from 2015-16 onwards

Specific Energy Consumption written as SEC or MBN; MBN= MBTU/Bbl/NRGF (As mentioned in the excel sheet); MBTU : Net energy & loss in Refinery (Thousand British Thermal Unit)

Bbls: Barrels of crude processed; NRGF: Composite energy factor for the Refinery

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

Import / export	Crude oil & petroleum products	2017-18			2018-19			2019-20			2020-21			Apr-Sep 2020			Apr-Sep 2021 (P)		
		Quantity		Value	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)	Million tonne	US\$ (Billion)	Rs. (Crores)
I M P O R T	Crude oil	220.4	87.8	566450	226.5	111.9	783183	227.0	101.4	717001	196.5	62.2	459779	89.2	22.4	168068	100.9	51.2	378428
	of which, PSU/JVs	133.0	54.3	350612	142.9	71.9	504524	141.4	64.7	458073	121.8	39.7	292718	53.5	13.8	103003	63.2	32.2	238417
	Private	87.4	33.5	215839	83.6	40.0	278659	85.5	36.7	258928	74.7	22.6	167060	35.7	8.7	65065	37.8	18.9	140011
	Products																		
	LPG	11.4	5.8	37875	13.2	7.2	49939	14.8	7.1	50347	16.5	7.2	53752	7.9	2.8	20902	8.2	4.9	36458
	Petrol	0.2	0.1	581	0.7	0.4	3104	2.1	1.4	9610	1.4	0.7	4950	0.2	0.1	558	0.2	0.1	915
	Naphtha	2.2	1.3	8161	2.1	1.4	9665	1.7	0.9	6678	1.2	0.5	3844	0.6	0.2	1813	0.7	0.4	3110
	Aviation Turbine Fuel	0.3	0.2	1159	0.3	0.2	1392	0.1	0.04	309	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Kerosene	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.003	0.002	12	0.002	0.001	10	0.0001	0.0001	1
	Diesel	1.4	0.7	4269	0.6	0.4	2486	2.8	1.6	11619	0.6	0.3	1960	0.3	0.1	772	0.03	0.01	107
	Lubes/LOBS	2.5	1.9	12075	2.5	1.9	13349	2.7	1.7	11869	2.7	1.6	12170	1.0	0.6	4143	1.5	1.2	9182
	Fuel Oil	1.2	0.5	3231	1.4	0.7	4782	4.6	1.6	11791	6.5	1.9	14312	3.3	0.8	6119	4.0	1.7	12727
	Bitumen	1.0	0.3	1902	0.9	0.3	2149	1.6	0.5	3634	2.1	0.6	4325	0.7	0.2	1289	1.3	0.5	3505
	Petcoke	12.8	1.7	11100	7.9	1.5	10350	10.7	1.4	9713	8.3	0.9	6410	5.5	0.5	3732	2.2	0.5	3459
	Others**	2.6	1.2	8020	3.9	2.4	16449	2.7	1.4	10172	4.1	1.0	7695	1.3	0.5	3588	1.4	0.7	5445
	Total product import	35.5	13.6	88374	33.3	16.3	113665	43.8	17.7	125742	43.2	14.8	109430	20.9	5.7	42926	19.6	10.1	74908
	of which, PSU/JVs	12.8	6.5	42305	14.6	8.1	56178	20.0	10.2	72699	18.7	8.3	61332	8.4	3.0	22417	8.5	5.1	37741
Private	22.7	7.1	46069	18.8	8.3	57487	23.8	7.5	53042	24.6	6.5	48098	12.4	2.7	20508	11.1	5.0	37167	
Total import (crude oil+product)	255.9	101.4	654824	259.8	128.3	896848	270.7	119.1	842743	239.7	77.0	569208	110.1	28.2	210994	120.5	61.3	453336	
E X P O R T	Products																		
	LPG	0.4	0.2	1501	0.4	0.3	1976	0.5	0.3	1970	0.5	0.2	1797	0.2	0.1	700	0.2	0.2	1325
	Petrol	14.0	8.5	54580	12.9	8.6	60419	12.7	7.7	54512	11.6	5.0	36530	5.9	2.0	15073	6.2	4.3	31663
	Naphtha	9.0	4.5	29075	7.0	4.1	28893	8.9	4.4	31509	6.5	2.5	18643	3.2	0.9	6837	3.3	2.1	15729
	Aviation Turbine Fuel	7.2	3.9	25348	7.4	4.9	34030	6.9	4.0	28458	3.5	1.3	9377	1.6	0.4	3226	2.1	1.2	9033
	Kerosene	0.02	0.01	68	0.02	0.01	98	0.2	0.1	560	0.02	0.01	48	0.004	0.001	10	0.01	0.005	35
	Diesel	29.7	15.4	99454	27.8	17.6	123519	31.7	17.5	123919	30.6	11.1	81611	15.8	4.8	35821	15.3	8.8	64860
	LDO	0.02	0.01	37	0.1	0.05	364	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Lubes/LOBS	0.01	0.02	118	0.01	0.02	106	0.01	0.01	96	0.01	0.01	93	0.01	0.01	52	0.002	0.004	27
	Fuel Oil	2.5	0.8	5291	2.2	0.9	6537	1.5	0.5	3811	1.2	0.3	2318	0.6	0.1	829	1.1	0.5	3857
	Bitumen	0.1	0.02	119	0.02	0.01	72	0.03	0.01	89	0.01	0.003	23	0.002	0.001	7	0.002	0.001	9
	Petcoke / CBFS	0.6	0.1	687	1.1	0.5	3255	0.5	0.2	1096	0.6	0.04	292	0.6	0.04	285	0.1	0.04	311
	Others***	3.4	1.4	9110	2.1	1.2	8429	2.9	1.1	7998	2.3	0.9	6436	1.5	0.5	3578	1.2	0.7	5152
Total product export	66.8	34.9	225388	61.1	38.2	267697	65.7	35.8	254018	56.8	21.4	157168	29.5	8.9	66418	29.6	17.9	132001	
of which, PSU/JVs	15.0	7.4	48100	13.4	8.1	56415	14.2	7.5	53276	10.6	4.0	29708	5.3	1.5	11186	5.8	3.5	26159	
Private	51.8	27.5	177288	47.7	30.2	211282	51.5	28.4	200742	46.1	17.4	127460	24.3	7.4	55231	23.8	14.3	105842	
Net import	189.1	66.5	429436	198.8	90.0	629152	205.1	83.2	588725	182.9	55.6	412041	80.6	19.2	144576	90.9	43.4	321335	
Net product export	31.4	21.3	137014	27.7	21.9	154031	21.9	18.2	128276	13.5	6.6	47738	8.6	3.2	23492	10.0	7.8	57093	

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

Note:

* Import does not include LNG imports

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

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

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

Crude oil imports increased by 13.1% during April-September 2021 as compared to April-September 2020

Imports made due to deficit in production viz. LPG and Lubes/LOBS accounted for 49.4% share of total POL products import during April-September 2021 as compared to 42.9% during April-September 2020.

Imports of naphtha and FO were done for commercial and technical considerations and accounted for 23.9% share of total POL products import during April-September 2021 as compared to 18.8% during April-September 2020.

Decrease of 0.3% was recorded in POL products export during April-September 2021 as compared to during April-September 2020 mainly due to decrease in exports of High Speed Diesel(HSD), petcoke/CBFS and LOBS/Lube oil.

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 (upto 30.10.2021)	74.05	102.61	87.94	0.67
2021 : Month wise				
January	73.11	99.73	89.05	0.71
February	72.76	100.81	88.03	0.69
March	72.79	100.88	86.72	0.67
April	74.47	103.13	89.20	0.68
May	73.27	103.09	88.92	0.67
June	73.56	103.21	88.66	0.67
July	74.53	102.97	88.13	0.68
August	74.18	102.40	87.35	0.68
September	73.56	101.05	86.60	0.67
October	74.92	102.48	86.90	0.66

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

Note: The rates are average for the period.



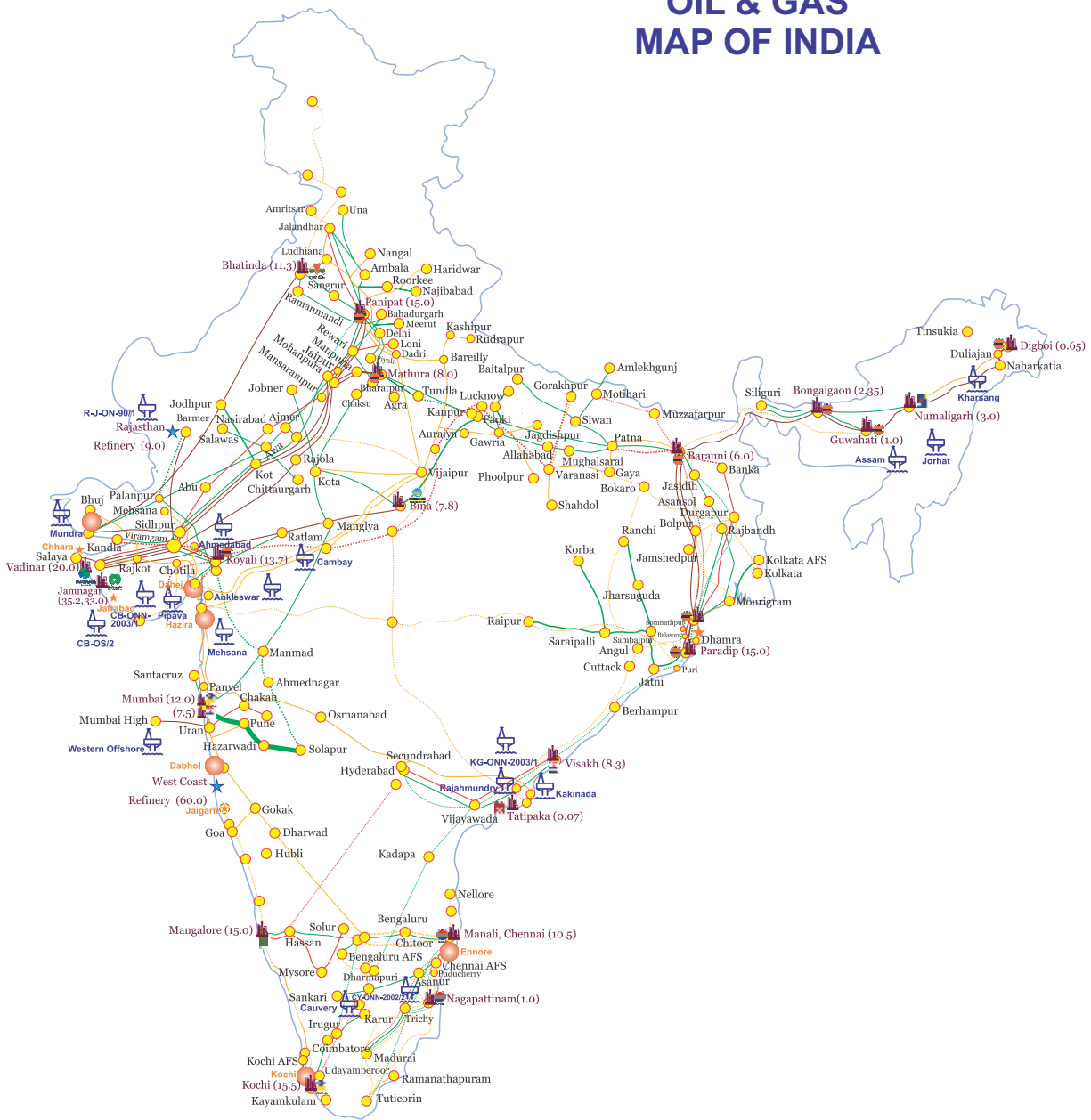
Chapter-5

Major Pipelines in India



Map of Pipeline Network in India

OIL & GAS MAP OF INDIA



LEGENDS

Refineries



Refineries (Capacity in MMTPA)

Producing Fields



LNG Terminals

- Dabhol, Dahej, Hazira, Kochi, Mundra, Ennore
- (Upcoming Terminals) Dhamra, Jafrabad, Jaigarh, Chhara

LEGENDS

Pipelines Network

- Crude Oil Pipeline
- Ongoing Crude Oil Pipeline
- Product Pipeline
- Ongoing Product Pipeline
- LPG Pipeline
- Ongoing LPG Pipeline
- Gas Pipeline
- Ongoing Gas Pipeline

Table 5.1 : Natural Gas Pipelines in the Country - 01.10.2021

S. N.	Network/Region	Entity	Length (Kms)	Authroized capacity/ Declared capacity (mmscmd)	Pipeline size	Pipeline Status	Average flow 2020-21 (mmscmd)	% Capacity utilisation 2020-21	Average flow Apr 2021-Sep 2021 (P) (mmscmd)	% Capacity utilisation Apr 2021-Sep 2021 (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	0.95	39.27%	1.31	53.95%
2	Cauvery Basin Network	GAIL	240.3	4.330	18"/ 12"/8"/6"/4"/3"/2"	Operational	1.8	42%	1.89	44%
3	Hazira-Vijaipur-Jagdishpur -GREP (Gas Rehabilitation and Expansion Project)-Dahej-Vijaipur HVJ/VDPL	GAIL	4222	57.300	42"/36"/30"/18"/16"/ 14"/12"/10"/8"/6"/4"/2"	Operational	68.68	62%	71.26	64%
4	Dahej-Vijaipur (DVPL)-Vijaipur-Dadri (GREP) Upgradation DVPL 2 & VDPL	GAIL	1280	54.000	48"/ 16"/12"	Operational				
5	Dahej-Uran-Panvel-Dhabhol	GAIL	815	19.900	30"/24"/18"/12"/6"/4"	Operational	15.41	77%	17.6	88%
6	KG Basin Network	GAIL	877.9	16.000	18"/16"/14"/12"/ 8"/6"/4"/2"	Operational	4.13	26%	4.57	29%
7	Gujarat Regional Network	GAIL	608.8	8.310	24"/18"/14"/12"/8"/ 6"/5"/2"/1"	Operational	3.36	40%	2.05	25%
8	Agartala Regional Network	GAIL	55.4	2.000	12"/10"/8"	Operational	0.97	49%	1.1	55%
9	Mumbai Regional Network	GAIL	128.7	7.034	26"/20"/18"/12"/4"	Operational	4.84	69%	4.34	62%
10	Dukli - Maharajganj	GAIL	5.2	0.260	4"	Operational	0.05	19%	0.05	19%
11	Chainsa-Jhajjar-Hissar	GAIL	455	35.000	36"/18"/16"/12"/ 10"/8"-4"	Under Construction	0.94	3%	1.17	3%
12	Dadri-Bawana-Nangal	GAIL	921	31.000	36"/30"/18"/10"/8"	Under Construction	6.07	20%	6.67	22%
13	Kochi-Koottanad-Bangalore-Mangalore	GAIL	1104	16.000	30"/ 24"/ 18" / 8"/ 4"	Operational	3.28	21%	4.27	27%
14	Dabhol-Bangalore	GAIL	1414	16.000	36"/30"/24"/18"/10"/8"	Under Construction	1.6	10%	1.56	10%
15	Jagdishpur-Haldia-Bokaro Dhamra-Paradip- Barauni-Guwahati	GAIL	3546	23.000	36"/30"/24"/18"/12"/ 8"/6"/4"	Under Construction	0.09	0%	0.456	2%
16	Hazira-Ankleshwar (HAPI)	GGL	73.2	4.200	18"	Operational	0.95	22.5%	1.00	23.7%
17	Mehsana - Bhatinda [^]	GIGL	1579	45.940	36"/24"/18"/12"	Under Construction	2.72	5.9%	3.93	8.6%
18	Bhatinda - Gurdaspur [^]	GIGL	346	33.930	24"/18"/16"/12"/8"/6"	Under Construction	0.01	0.03%	0.02	0.1%
19	Mallavaram - Bhopal - Bhilwara - Vijaipur [§]	GITL	2042	78.250	42"/36"/30"/24"/18"/12"	Under Construction	0.24	0.31%	0.99	1.3%
20	High Pressure Gujarat Gas Grid	GSPL	2207	31.000	36"/30"/24"/20"/18"/ 12"/8"/6"/4"	Operational	36.55	85%	36.79**	85.6%
21	Low Pressure Gujarat Gas Grid	GSPL	57.6	12.000	36"/30"/24"/12"	Operational				
22	Dadri-Panipat	IOCL	132	20.000	30"	Operational	5.47	58%	5.89	62%
23	Ennore-Tuticorin	IOCL	1421	84.700	28"/24"/16"/12"/10"	Under Construction	2.11	17%	2.93	24%
24	Uran-Trombay	ONGC	24	6.000	20"	Operational	2.86	48%	2.69	45%
25	Kakinada-Hyderabad-Uran-Ahmedabad (East West Pipeline)	PIL	1480	85.000	48"/30"/28"/24"/16"	Operational	11.99	14.11%	21.77	25.61%
26	Shahdol-Phulpur	RGPL	304	3.500	16"	Operational	0.818	23.38	0.732	20.93
	TOTAL		25446							

Note: * Information Not Available Source: Pipeline entities

[^] Please note that gas is flowing through (i) Palanpur-Pali-Barmer pipeline section (341kms) and (ii) Jalandhar- Amritsar pipeline section (101kms) commissioned in Nov' 2018

[§] Please note that the gas is flowing through 365 km x 18" pipeline Kunchanapally in Andhra Pradesh to RFCL, Ramagundam in Telanagana State which was commissioned on 14.10.2019

** Information for the period April -June 2021, Data for the period July-Sep 2021 shall be provided after publishing GSPL's financial results for Q2 2021-22

Table 5.2 : Existing major crude oil pipelines in India

Type of Pipeline -Onshore/ Ofshore	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during
			01.10.2021	01.10.2021	Apr-Sep 2021 (P)	Apr-Sep 2021 (P)
Onshore	CTF (Central Tank Farm) Kalol to CTF Nawagam - New (New line commissioned in Aug'2010)	ONGC	63	3.1	0.6	35.2
Onshore	Nawagam-Koyali (18" line) New		80	5.4	1.8	67.6
Onshore	Nawagam-Koyali (14" line) (Old)		78	3.3	0.0	0.0
Onshore	MHN-NGM (Mehsana-Nawagam) trunk line - New (New crude oil trunk line commissioned. Under operation since Dec'2010)		77	2.3	1.0	91.5
Onshore	CTF (Central Tank Farm), Ankleshwar to Koyali oil pipeline (AKCL- Ankleshwar Koyali Crude Line)		95	2.2	0.3	30.9
Onshore	CTF (Central Tank Farm), Ankleshwar to CPF (Central Processing Facility), Gandhar		44	0.4	0.0	0.0
Onshore	CPF (Central Processing Facility), Gandhar to Saraswani 'T' point		57	1.8	0.3	30.9
Onshore	Akholjuni- Koyali oil pipe line (Commissioned in July 2010). Akholjuni to Laxmipura T' point		66	0.5	0.2	73.6
Onshore	Lakwa-Moran oil line (New)		15	1.5	0.3	33.4
Onshore	Lakwa-Moran oil line (Old)		18	1.5	0.0	0.0
Onshore	Geleki-Jorhat oil line		49	1.5	0.0	0.0
Onshore	Geleki-Jorhat oil line (New)		48	1.5	0.1	18.0
Onshore	Borholla- Jorhat oil line		43	0.6	0.0	0.0
Onshore	Borholla- Jorhat new TPL (New)		43	0.6	0.1	37.1
Onshore	NRM (Narimanam) to CPCL (Chennai Petroleum Corporation Limited)		5	0.7	0.2	48.4
Onshore	KSP-WGGS to TPK Refinery (Kesnapalli-West-Group Gathering Station to Tatipaka)		14	0.1	0.0	71.0
Onshore	GMAA EPT (Gopavaram Early Production Terminal) to S. Yanam Unloading Terminal (3.5 Km long and 4"). New line commissioned on 28.07.10		4	0.1	0.02	35.9
Offshore	Mumbai High - Uran - Trunk (MUT) 30" pipeline		204	15.6	3.7	46.8
Offshore	Heera - Uran - Trunk (HUT) 24" pipeline		81	11.5	1.8	31.5
Offshore	Bombay-Uran Trunk (BUT) 30" pipeline		203	6.4	0.0	0.0
		Sub total ONGC	1283	60.6	10.4	34.3
Onshore	Salaya-Mathura pipeline (SMPL)	IOCL	2646	25.0	12.1	96.40
Onshore	Paradip-Haldia-Barauni pipeline (PHBPL)		1355	15.2	7.6	100.18
Onshore	Mundra-Panipat pipeline		1194	8.4	3.5	83.64
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	23.2	95.4
Onshore	Duliajan-Digboi-Bongaigaon-Barauni pipeline	OIL	1193	9.0	3.1	68.47
Onshore	Mangla-Bhogat pipeline	CAIRN	660	8.7	3.0	69.60
Offshore	Bhogat Marine	CAIRN	28	2.0	0.3	29.10
		Sub total CAIRN	688	10.7	3.3	62.0
Onshore	Mundra- Bathinda pipeline	HMPL	1017	11.3	6.5	116.14
Onshore	Vadinar-Bina pipeline	BORL	937	7.8	3.4	86.56
	Total Crude pipelines		10419	147.9	49.9	67.4

Source : Oil companies (P): Provisional

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

5.3 Existing major POL pipelines in India

Type of Pipeline	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during
			01.10.2021	01.10.2021	Apr-Sep 2021 (P)	Apr-Sep 2021 (P)
Petroleum Products Pipelines						
Onshore	Barauni - Kanpur pipeline	IOCL	1227	3.5	1.4	81.9
Onshore	Guwahati -Siliguri pipeline		435	1.4	0.8	120.6
Onshore	Haldia-Barauni pipeline		526	1.3	0.7	105.8
Onshore	Haldia-Mourigram-Rajbandh pipeline		277	1.4	0.9	136.0
Onshore	Koyali-Ahmedabad pipeline		79	1.1	0.3	58.5
Onshore	Koyali-Sanganer pipeline (Incl. JPNPL)		1644	5.0	2.2	89.9
Onshore	Koyali-Ratlam pipeline		265	2.0	0.2	19.6
Onshore	Koyali-Dahej pipeline		197	2.6	0.4	32.7
Onshore	Mathura-Tundla pipeline		56	1.2	0.3	42.3
Onshore	Mathura-Bharatpur pipeline		21		0.1	
Onshore	Mathura-Delhi pipeline		147	3.7	0.9	47.9
Onshore	Panipat-Amabala-Jalandhar (Including Kurukshetra-Roorkee-Najibabad branch line)		495	3.5	1.4	77.6
Onshore	Panipat-Delhi (Including Sonapat-Meerut branch line) pipeline		189	3.0	0.5	30.2
Onshore	Panipat Bijwasan ATF pipeline		111			
Onshore	Panipat-Bathinda pipeline (1)		219	3.0	0.7	44.3
Onshore	Panipat-Rewari pipeline		155	2.1	0.7	67.9
Onshore	Chennai-Trichy-Madurai pipeline		683	2.3	1.2	103.9
Onshore	Chennai - Meenambakkam ATF pipeline		95	0.2	0.1	73.3
Onshore	Chennai-Bengaluru pipeline		290	2.5	0.9	71.9
Onshore	Devangonthi - Devanhalli pipeline		36	0.7	0.1	43.9
Onshore	Paradip Raipur Ranchi pipeline(PRRPL)	1073	5.0	1.7	69.6	
Onshore	Kolkata ATF pipeline	27	0.2	0.0	35.0	
		Sub total IOCL	8247	45.5	15.5	68.2
Onshore	Mumbai-Manmad-Bijwasan pipeline (MMBPL)	BPCL	1389	6.0	3.5	115.2
Onshore	Bina-Kota pipeline (BKPL)		259	4.4	1.9	87.7
Onshore	ATF P/L Mumbai Refinery (MR)-Santacruz		15	1.4	0.1	20.7
Onshore	ATF P/L Kochi Refinery (KR)-Kochi Airport		34	0.6	0.1	31.7
Onshore	Kota - Jobner branch pipeline(1)		211	1.7		
Onshore	Mumbai Refinery- Wadilube Pipeline		12	1.3	0.1	21.7
Onshore	Cochin-Coimbatore-Karur (CCK) pipeline (2)		293	3.3	1.7	104.6
		Sub total BPCL	2213	18.7	7.5	80.2
Onshore	Mumbai-Pune-Solapur pipeline	HPCL	508	4.3	1.3	59.0
Onshore	Vizag-Vijaywada-Secunderabad pipeline		572	7.7	2.1	53.3

5.3 Existing major POL pipelines in India

Type of Pipeline	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during
			01.10.2021	01.10.2021	Apr-Sep 2021 (P)	Apr-Sep 2021 (P)
Onshore	Mundra-Delhi pipeline (1)		1054	6.9	1.1	31.6
Onshore	Ramanmandi-Bahadurgarh pipeline (2)		243	7.1	3.3	93.4
Onshore	Ramanmandi-Bathinda pipeline		30	2.1	0.5	49.7
Onshore	Awa-Salawas pipeline		93			
Onshore	Bahadurgarh-Tikrikalan pipeline		14			
Onshore	Rewari- Kanpur Pipeline		443			
Onshore	ATF pipeline from Mumbai Refinery to Mumbai Airport		20	0.5	0.1	35.0
Onshore	Black Oil Pipeline (BOPL)		22	1.5	0.2	21.1
Onshore	Lube Oil Pipeline : Trombay to Wadibundar (3)		17	1.0	0.1	30.0
Onshore	Palanpur-Vadodara Pipeline		235			
		Sub total HPCL	3250	31.1	8.6	55.6
Onshore	Mangalore-Hassan-Bengaluru (MHB) pipeline (1)	Petronet MHB	363	5.6	1.2	42.9
Onshore	Numaligarh-Siliguri pipeline	OIL	654	1.7	0.8	94.8
	Total Petroleum product pipelines (w/o LPG pipelines)		14727	102.6	33.7	65.6
LPG Pipelines						
Onshore	Panipat-Jalandhar pipeline	IOCL	280	0.7	0.3	90.6
Onshore	Paradip Haldia Durgapur pipeline (1)		873	1.3	0.6	99.5
		Sub total IOCL	1153	2.0	0.9	96.3
Onshore/ offshore	Mumbai-Uran pipeline	BPCL	28	0.8	0.2	60.2
Onshore	Jamnagar-Loni pipeline	GAIL	1414	2.5	1.4	114.3
Onshore	Vizag-Secunderabad pipeline		618	1.3	0.6	97.4
		Sub total GAIL	2032	3.8	2.1	108.5
Onshore	Mangalore-Hassan-Mysore-Bangalore LPG	HPCL	356	1.9	0.6	57.2
Onshore	Uran-Chakan-Shikrapur LPG Pipeline (4)		169	1.0	0.4	74.5
		Sub total HPCL	525	2.9	0.9	63.1
	Total LPG pipelines		3738	9.5	4.2	87.9
	Total POL pipelines		18465	112.2	37.9	67.5

Source: Oil Companies (P): Provisional

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

IOCL

(1) PBPL - Installed capacity augmented from 1.5 MMTPA to 3.0 MMTPA in April 2021

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) Thruput of Mundra-Delhi pipeline includes thruputs of branchlines viz. Awa Salawas Pipeline, Rewari Kanpur pipeline, Palanpur-Vadodara Pipeline and reverse pumping (1.66 MMT) from Bahadurgarh to Rewari.

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

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

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

Petronet MHB

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



Analysis • Knowledge • Information

Chapter-6 Sales



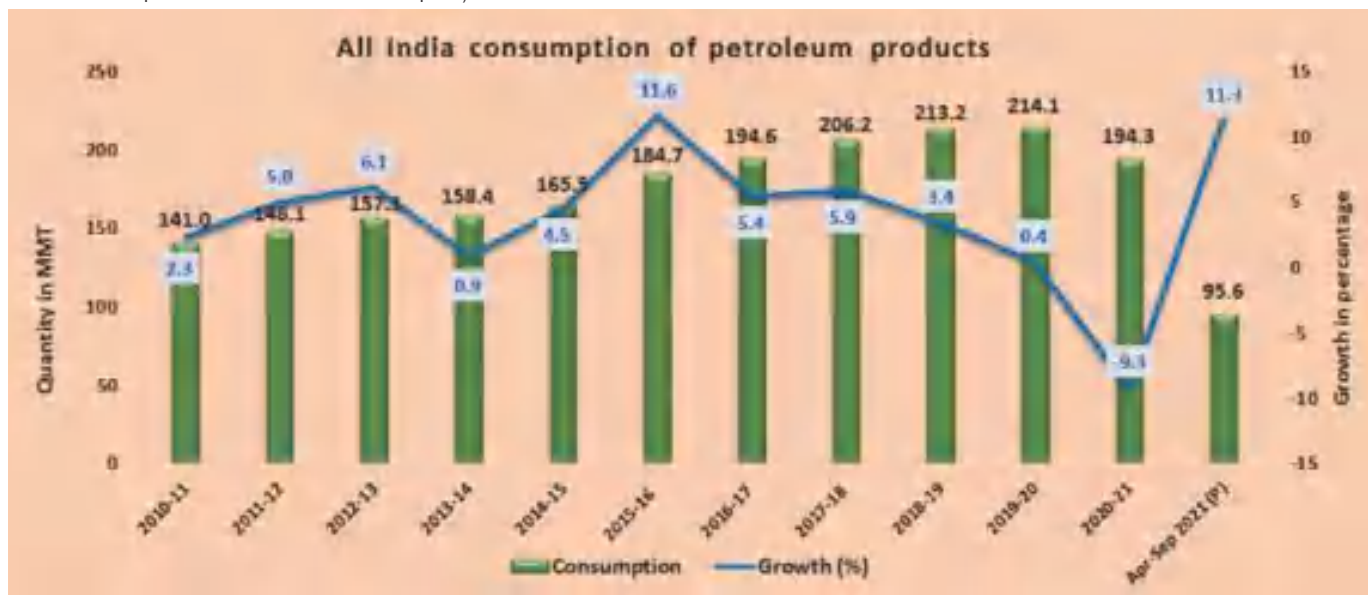
Table 6.1 : Consumption of petroleum products

(Million metric tonne)

Products	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
LPG	14.3	15.3	15.6	16.3	18.0	19.6	21.6	23.3	24.9	26.3	27.6	13.3	13.6
MS	14.2	15.0	15.7	17.1	19.1	21.8	23.8	26.2	28.3	30.0	28.0	12.1	14.7
Naphtha	10.7	11.2	12.3	11.3	11.1	13.3	13.2	12.9	14.1	14.3	14.1	6.4	7.0
ATF	5.1	5.5	5.3	5.5	5.7	6.3	7.0	7.6	8.3	8.0	3.7	1.2	2.0
SKO	8.9	8.2	7.5	7.2	7.1	6.8	5.4	3.8	3.5	2.4	1.8	0.9	0.8
HSD	60.1	64.8	69.1	68.4	69.4	74.6	76.0	81.1	83.5	82.6	72.7	30.9	35.7
LDO	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.9	0.4	0.5
Lubes	2.4	2.6	3.2	3.3	3.3	3.6	3.5	3.9	3.7	3.8	4.1	1.7	2.1
FO/LSHS	10.8	9.3	7.7	6.2	6.0	6.6	7.2	6.7	6.6	6.3	5.6	2.6	3.0
Bitumen	4.5	4.6	4.7	5.0	5.1	5.9	5.9	6.1	6.7	6.7	7.5	2.6	3.3
Petcoke	5.0	6.1	10.1	11.8	14.6	19.3	24.0	25.7	21.3	21.7	15.6	8.8	6.9
Others*	4.6	4.9	5.5	6.0	5.9	6.4	6.6	8.3	11.7	11.4	12.8	5.0	6.0
All India	141.0	148.1	157.1	158.4	165.5	184.7	194.6	206.2	213.2	214.1	194.3	85.9	95.6
Growth (%)	2.3	5.0	6.1	0.9	4.5	11.6	5.4	5.9	3.4	0.4	-9.3	-19.3	11.3

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 141.0 MMT in 2010-11 to 194.3 MMT in 2020-21. The compounded annual growth rate (CAGR) of total POL consumption in the last decade has been 3.3%. The CAGR of petcoke (12.1%) consumption has been highest among POL products in the last decade followed by MS (7.0%), LPG (6.8%), LDO (6.5%), lubes (5.4%), bitumen (5.2%), naphtha (2.8%) and HSD (1.9%). CAGR of products grouped under "others" category has been 10.8%. Negative CAGR in the last decade was observed in the consumption of ATF (-3.1%), FO/LSHS (-6.4%) and SKO (-14.8%). Half yearly consumption recorded a growth of 11.3% with a volume of 95.6 MMT in 2021-22 as compared to 85.9 MMT during the same period in 2020-21.

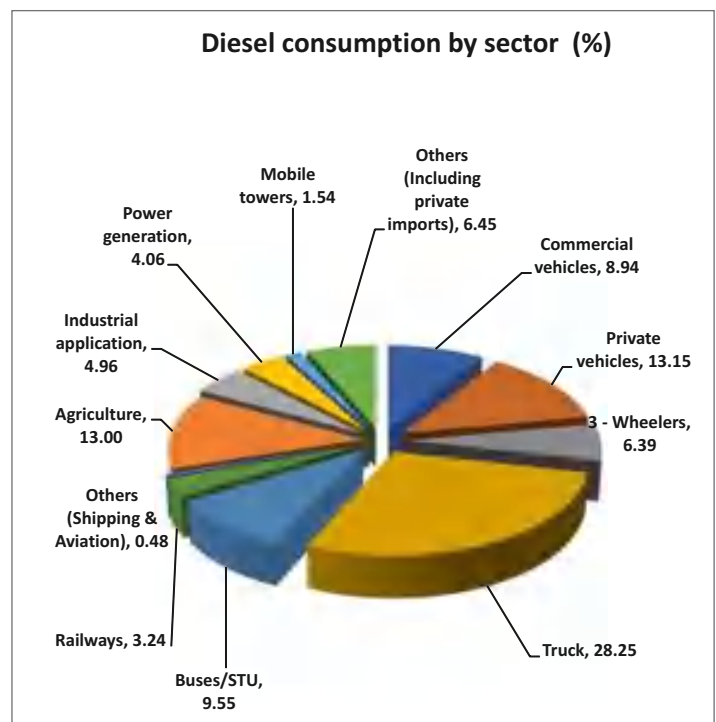
Table 6.2 : Consumption growth of petroleum products

(Growth in percentage)

Products	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
LPG	6.8	2.0	4.4	10.5	9.0	10.1	8.0	6.7	5.7	4.7	5.8	2.5
MS	5.6	5.0	8.8	11.4	14.5	8.8	10.1	8.1	6.0	-6.7	-20.8	21.4
Naphtha	5.1	9.5	-8.0	-2.0	19.8	-0.2	-2.7	9.6	1.0	-1.2	-3.5	9.4
ATF	9.0	-4.8	4.4	4.0	9.4	11.8	9.1	8.7	-3.6	-53.8	-69.9	71.5
SKO	-7.8	-8.8	-4.5	-1.1	-3.7	-20.9	-28.8	-10.0	-30.7	-25.0	-32.8	-17.4
HSD	7.8	6.7	-1.0	1.5	7.5	1.8	6.6	3.0	-1.1	-12.0	-25.3	15.5
LDO	-8.9	-4.0	-3.1	-5.4	11.5	10.3	16.7	14.2	5.0	36.2	8.7	46.3
Lubes	8.4	21.4	3.4	0.1	7.9	-2.8	11.9	-5.6	4.5	6.9	-11.9	25.4
FO/LSHS	-13.7	-17.7	-18.6	-4.4	11.3	7.8	-6.0	-2.3	-4.0	-11.3	-15.6	14.0
Bitumen	2.2	0.8	7.1	1.3	17.1	0.0	2.5	10.2	0.2	12.0	-10.2	27.3
Petcoke	23.2	65.1	16.0	23.8	32.6	24.2	7.1	-16.8	1.7	-28.1	-21.8	-22.2
Others	7.8	11.9	8.1	-1.4	8.2	3.8	26.5	40.6	-3.1	12.6	-13.3	20.2
All India	5.0	6.1	0.9	4.5	11.6	5.4	5.9	3.4	0.4	-9.3	-19.3	11.3

End-use analysis of HSD sales (as of 2012-13)

Sl. no.	End-use Sectors	% of total sales *
(I)	(II)	(III)
1	Transport, of which	70.00
a	Commercial vehicles	8.94
b	Private vehicles	13.15
c	3 - Wheelers	6.39
d	Truck	28.25
e	Buses/STU	9.55
f	Railways	3.24
g	Others (Shipping & Aviation)	0.48
2	Agriculture	13.00
3	Industrial application	4.96
4	Power generation	4.06
5	Mobile towers	1.54
6	Others (Including private imports)	6.45
	Total	100.0



* Figures include consumption through retail & direct imports. End use sector wise break up as per PPAC survey and direct sales as reported by oil companies for the year 2012-13.

Table 6.3 : State-wise sales of selected petroleum products : April - September 2021 (P)

(Figures in thousand metric tonnes)

State/UT	LPG		MS		SKO		HSD		Total (All products)*	
	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	23.6	38.1	53.9	87.0	0.01	0.02	74.5	120.3	168.4	271.9
Delhi	342.1	33.6	330.4	32.4	0.1	0.006	287.0	28.2	1511.2	148.3
Haryana	412.2	27.1	556.0	36.5	0.5	0.03	2244.6	147.5	5221.1	343.1
Himachal Pradesh	92.8	23.9	130.1	33.5	2.7	0.7	363.6	93.7	955.4	246.3
Jammu and Kashmir	97.2	12.8	158.4	20.9	23.4	3.1	335.7	44.3	714.3	94.2
Ladakh	4.7	26.2	10.3	57.2	39.5	219.8	52.3	291.2	120.6	670.9
Punjab	463.4	29.3	496.1	31.4	0.3	0.02	1437.8	90.9	3091.6	195.5
Rajasthan	686.2	16.5	793.9	19.1	0.8	0.02	2046.4	49.2	4722.1	113.4
Uttar Pradesh	1883.0	15.7	1845.3	15.3	1.5	0.01	4450.7	37.0	8919.2	74.2
Uttarakhand	151.4	25.2	159.2	26.5	1.1	0.2	321.3	53.6	743.1	123.9
SUB TOTAL NORTH	4156.5	18.8	4533.4	20.5	69.9	0.3	11614.0	52.5	26166.8	118.2
Andaman & Nicobar Islands	6.3	31.1	6.7	33.2	0.0	0.1	63.9	314.7	82.7	407.0
Bihar	828.0	12.7	463.8	7.1	66.1	1.0	966.9	14.8	2626.6	40.2
Jharkhand	199.3	9.9	279.0	13.8	26.9	1.3	805.7	39.8	1481.5	73.3
Odisha	317.2	13.2	403.9	16.9	66.5	2.8	1258.1	52.5	2936.9	122.6
West Bengal	943.6	18.2	522.7	10.1	267.6	5.1	1353.1	26.0	4068.5	78.3
SUB TOTAL EAST	2294.5	14.2	1676.1	10.4	427.2	2.6	4447.7	27.5	11196.1	69.2
Arunachal Pradesh	12.2	13.9	24.8	28.4	4.2	4.8	82.8	94.9	131.4	150.5
Assam	236.2	12.9	227.5	12.4	48.2	2.6	476.5	26.0	1302.7	71.2
Manipur	26.0	15.3	27.4	16.1	3.9	2.3	47.5	28.0	107.0	63.1
Meghalaya	13.3	7.0	39.3	20.7	6.6	3.5	136.6	71.9	197.2	103.7
Mizoram	14.6	21.5	10.4	15.4	1.1	1.7	32.1	47.3	59.9	88.2
Nagaland	13.1	13.3	17.6	17.9	3.0	3.1	45.0	45.7	85.6	87.0
Sikkim	8.5	24.8	7.4	21.5	4.8	14.0	30.6	88.7	55.2	160.0
Tripura	28.5	13.5	26.3	12.5	8.8	4.2	40.8	19.3	106.5	50.5
SUB TOTAL NORTH EAST	352.4	13.1	380.7	14.2	80.6	3.0	891.9	33.2	2045.4	76.1
Chhattisgarh	161.5	10.3	310.0	19.8	17.7	1.1	763.3	48.7	1693.6	108.0
Dadra & Nagar Haveli and Daman & Diu	13.5	29.5	17.8	39.1	0.0	0.0	74.7	163.7	249.7	547.2
Goa	33.4	42.2	70.4	89.2	0.1	0.1	115.0	145.7	285.6	361.8
Gujarat	591.8	16.4	1027.7	28.5	23.8	0.7	2544.6	70.5	11128.3	308.3
Madhya Pradesh	549.1	12.6	742.5	17.0	49.7	1.1	1495.3	34.2	3433.6	78.5
Maharashtra	1580.1	24.2	1558.9	23.9	7.9	0.1	3942.0	60.4	8819.3	135.2
SUB TOTAL WEST	2929.3	18.1	3727.3	23.0	99.2	0.6	8935.0	55.1	25610.2	158.1
Andhra Pradesh	639.9	23.4	691.6	25.2	0.3	0.01	1726.9	63.0	3677.4	134.2
Karnataka	922.0	26.1	1023.7	29.0	14.3	0.4	2667.7	75.5	5418.3	153.3
Kerala	548.7	31.3	663.6	37.9	23.5	1.3	913.8	52.1	2593.1	147.9
Lakshadweep	0.3	10.0	0.0	0.0	0.2	6.3	8.1	235.1	8.7	253.9
Puducherry	23.2	29.0	56.4	70.4	0.0	0.0	114.3	142.8	219.4	273.9
Tamil Nadu	1145.4	27.4	1311.0	31.4	53.0	1.3	2574.0	61.7	6174.2	147.9
Telangana	524.4	26.8	641.5	32.8	0.4	0.02	1740.7	88.9	3248.7	165.9
SUB TOTAL SOUTH	3803.9	26.7	4387.8	30.8	91.7	0.6	9745.4	68.4	21339.8	149.8
All India	13536.6	18.9	14705.4	20.6	768.6	1.1	35634.1	49.9	86358.4	120.9

* Total (all product) sales includes other petroleum products such as naphtha, FO, ATF, lubricants, bitumen, etc.

 State wise highest/lowest per capita **Highest** **Lowest**

Source: Oil companies

Note:

1-Per capita sales figures are based on provisional sales figures for the period April 2021 - September 2021

2-Population figures have been taken from Census of India, 2011 and then extrapolated for 01.04.2021 based on past decadal growth.

3- SKO includes both PDS & non PDS sales

Table 6.4 : PDS SKO allocation

(Figures in thousand kilo litres)

State/UT	2017-18		2018-19		2019-20		2020-21		Apr-Sep 2021 (P)	
	Alloc ⁿ	Sales	Alloc ⁿ	Sales	Alloc ⁿ	Sales	Alloc ⁿ	Sales	Alloc ⁿ	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	14.4	14.5	14.3	11.4	10.8	9.8	6.8	3.4	2.2
Jammu & Kashmir	58.5	57.6	58.5	53.9	45.0	40.9	45.0	36.5	15.3	14.4
Ladakh					3.5	1.0	3.5	3.5	3.5	1.9
Punjab	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rajasthan	260.0	110.5	138.0	69.3	40.0	16.2	14.2	0.9	0.0	0.0
Uttar Pradesh	911.2	901.3	887.9	873.5	517.9	449.5	181.7	26.5	0.0	0.0
Uttarakhand	25.3	13.3	25.3	10.0	8.0	0.5	2.2	0.4	0.3	0.0
SUB TOTAL NORTH	1269.5	1097.0	1124.2	1021.0	625.8	518.8	256.4	74.6	22.6	18.6
Andaman & Nicobar Islands	4.1	4.0	4.1	3.8	1.9	1.5	0.0	0.0	0.0	0.0
Bihar	495.4	490.3	332.6	329.6	263.0	243.9	212.7	212.4	85.1	84.9
Jharkhand	186.8	176.3	186.8	150.3	135.2	107.2	90.0	83.2	36.0	34.5
Odisha	248.4	244.3	248.4	247.7	210.6	208.3	194.3	190.3	77.7	85.5
West Bengal	704.0	653.6	704.0	699.3	704.0	692.7	704.0	696.5	352.0	342.6
SUB TOTAL EAST	1638.8	1568.5	1476.0	1430.7	1314.8	1253.5	1201.1	1182.4	550.8	547.5
Arunachal Pradesh	7.9	7.7	7.9	7.2	6.4	5.2	4.8	3.7	1.7	1.5
Assam	245.9	245.0	245.9	242.6	181.9	176.9	155.6	153.1	62.2	61.3
Manipur	17.9	18.2	17.9	17.7	13.3	12.7	11.1	11.3	5.0	5.0
Meghalaya	19.4	19.4	19.4	19.3	19.3	18.9	18.9	17.9	8.5	8.4
Mizoram	4.8	4.8	4.8	4.8	3.6	3.6	3.2	3.2	1.4	1.4
Nagaland	12.2	9.5	10.3	9.8	9.3	8.9	8.6	8.4	3.9	3.9
Sikkim	3.5	3.4	3.5	3.4	2.6	2.5	2.3	2.1	1.0	0.9
Tripura	29.4	29.4	29.4	29.3	26.4	26.2	25.2	25.1	11.3	11.3
SUB TOTAL NORTH EAST	340.9	337.4	339.0	334.0	262.7	254.9	229.5	224.8	95.0	93.9
Chhattisgarh	115.1	92.7	115.1	91.5	82.4	69.1	58.3	56.1	23.3	22.6
Dadra & Nagar Haveli and Daman & Diu	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goa	2.3	1.4	2.1	1.4	0.8	0.6	0.4	0.4	0.1	0.1
Gujarat	344.5	338.2	249.7	248.7	138.8	120.8	84.0	83.1	29.4	29.0
Madhya Pradesh	345.0	336.9	336.2	325.9	260.7	238.5	213.4	187.1	80.0	63.7
Maharashtra	384.7	377.8	286.7	241.9	106.5	52.9	46.5	21.6	14.0	8.3
SUB TOTAL WEST	1192.0	1147.2	989.8	909.5	589.3	482.1	402.6	348.2	146.8	123.8
Andhra Pradesh	56.4	26.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Karnataka	156.0	126.5	156.0	112.5	84.3	66.4	42.5	38.7	14.9	12.8
Kerala	58.7	58.7	55.6	55.6	41.7	41.7	37.1	37.1	13.0	13.0
Lakshadweep	0.8	0.8	0.8	0.8	0.8	0.6	0.8	0.9	0.6	0.3
Puducherry	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tamil Nadu	204.5	204.9	193.8	193.8	145.3	145.3	129.2	129.2	45.2	45.2
Telangana	103.4	100.8	97.9	94.3	56.6	29.8	16.0	2.9	2.5	0.3
SUB TOTAL SOUTH	580.6	519.0	504.1	456.9	328.7	283.8	225.5	208.8	76.1	71.6
All India	5021.8	4669.2	4433.0	4152.1	3121.3	2793.2	2315.0	2038.8	891.4	855.4

Allocⁿ= Allocation

Source: MoP&NG

· Delhi and Chandigarh have been declared kerosene-free from Q3, 2013-14 and Q1, 2016-17 respectively. Punjab and Haryana have been declared kerosene-free from Q1, 2017-18. PDS SKO allocation for Dadra & Nagar Haveli and Daman & Diu PDS SKO allocation has been reduced to "Zero" from Q2, 2017-18. PDS SKO allocation of Puducherry and Andhra Pradesh has been reduced to "Zero" wef 01.09.2017 and 01.10.2017 respectively. PDS SKO allocation for Andaman & Nicobar islands has been reduced to "Zero" effective from 01.09.2019. PDS SKO allocation for the state of Uttar Pradesh and Rajasthan has been reduced to "ZERO" from Q4 of 20-21.

· On an all India basis, the drop in allocation in the last five years (till 2020-21) has been (66.6%) 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 (85.8%) followed by Southern region (78.9%), Western region (75.5%), North Eastern region (43.0%) and North Eastern region (40.4%). Half yearly allocation in year 2020-21 also decreased by (27.2%) as compared to the same period in the year 2020-21.

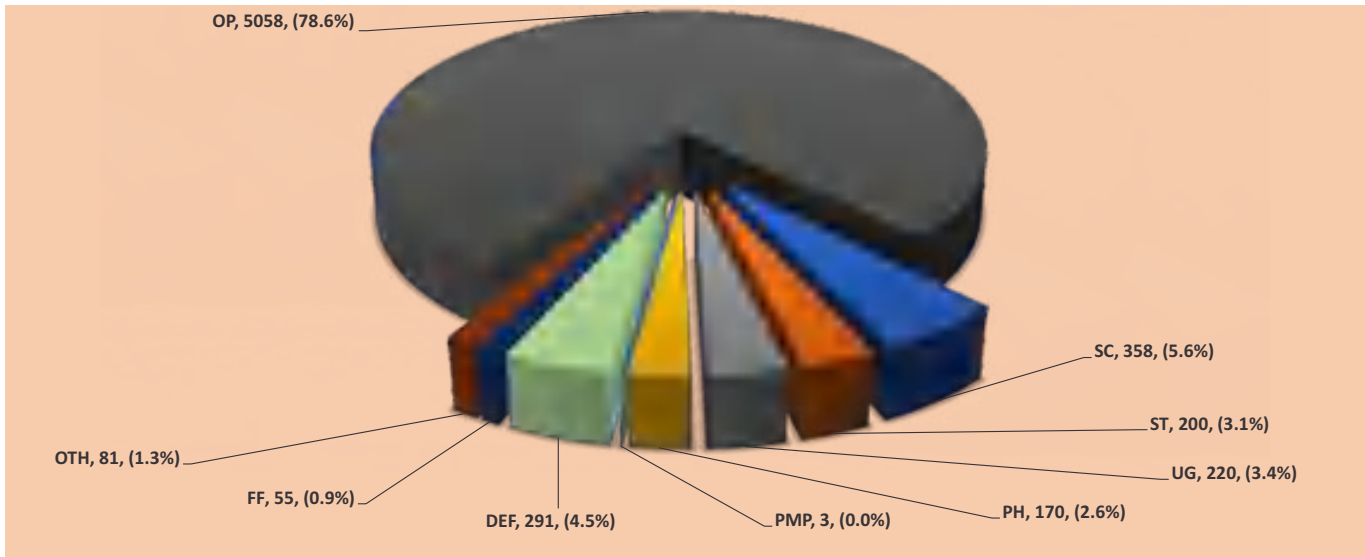
Table 6.5 : Oil industry retail outlets & SKO / LDO agencies

State/UT	Number of Retail Outlets (as on)					No of SKO /LDO agencies (as on)				
	1.04.2018	1.4.2019	1.4.2020	1.04.2021	1.10.2021 (P)	1.4.2018	1.4.2019	1.4.2020	1.04.2021	1.10.2021 (P)
Chandigarh	41	42	42	47	47	12	12	12	12	12
Delhi	397	398	398	400	400	116	116	116	111	111
Haryana	2862	2933	3060	3412	3509	141	141	141	139	139
Himachal Pradesh	432	439	494	563	591	26	26	26	26	26
Jammu and Kashmir	500	504	530	552	562	45	45	45	45	45
Ladakh	3	3	3	12	12	2	2	2	2	2
Punjab	3427	3453	3551	3772	3833	237	237	237	237	237
Rajasthan	4476	4661	4967	5615	5780	250	250	250	248	248
Uttar Pradesh	7473	7762	8210	9315	9713	696	695	691	675	674
Uttarakhand	590	601	629	686	721	73	73	73	69	69
SUB TOTAL NORTH	20201	20796	21884	24374	25168	1598	1597	1593	1564	1563
Andaman & Nicobar Islands	14	14	16	16	17	2	2	2	2	2
Bihar	2695	2860	2968	3158	3225	372	371	371	362	362
Jharkhand	1207	1216	1358	1535	1571	87	87	87	87	87
Odisha	1681	1704	1894	2070	2159	177	177	177	176	176
West Bengal	2333	2363	2523	2750	2793	458	458	457	455	455
SUB TOTAL EAST	7930	8157	8759	9529	9765	1096	1095	1094	1082	1082
Arunachal Pradesh	85	94	116	152	153	33	33	33	33	33
Assam	871	897	979	1103	1180	359	359	359	359	359
Manipur	97	104	136	160	165	36	36	36	36	36
Meghalaya	203	208	225	239	245	35	35	35	35	35
Mizoram	41	43	45	55	56	19	19	19	19	19
Nagaland	73	79	94	120	122	19	19	19	19	19
Sikkim	51	51	55	57	60	12	12	12	12	12
Tripura	71	72	79	94	99	40	40	40	40	40
SUB TOTAL NORTH EAST	1492	1548	1729	1980	2080	553	553	553	553	553
Chhattisgarh	1249	1280	1462	1808	1856	108	108	108	108	108
Dadra & Nagar Haveli and Daman & Diu	63	62	61	61	63	7	7	7	7	7
Goa	116	118	118	122	122	22	22	22	22	22
Gujarat	4025	4159	4573	5149	5282	476	473	473	470	470
Madhya Pradesh	3711	3832	4230	4981	5205	284	284	284	284	284
Maharashtra	5970	6148	6457	7048	7256	767	767	766	752	752
SUB TOTAL WEST	15134	15599	16901	19169	19784	1664	1661	1660	1643	1643
Andhra Pradesh	3336	3430	3722	4047	4114	413	394	394	384	384
Karnataka	4215	4385	4813	5500	5679	318	315	315	311	309
Kerala	2100	2140	2238	2396	2443	237	237	237	234	234
Lakshadweep	0	0	0	0	0	0	0	0	0	0
Puducherry	165	165	164	174	174	8	8	8	8	8
Tamil Nadu	5387	5638	5802	6355	6559	466	466	465	458	458
Telangana	2625	2767	3077	3571	3651	183	202	202	202	202
SUB TOTAL SOUTH	17828	18525	19816	22043	22620	1625	1622	1621	1597	1595
All India	62585	64625	69089	77095	79417	6536	6528	6521	6439	6436

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

· On an all India basis the percentage growth in the number of retail outlets from 01.04.2018 to 01.10.2021 has been 26.9%. The region wise growth is highest for the North Eastern region (39.4%), followed by Western region (30.7%), Southern region (26.9%), Northern region (24.6%) and Eastern region (23.1%).

· 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.

Category wise SKO/LDO dealers (Total 6436) on 01.10.2021 (P)

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) SKO/LDO dealers are only PSU OMC dealers.

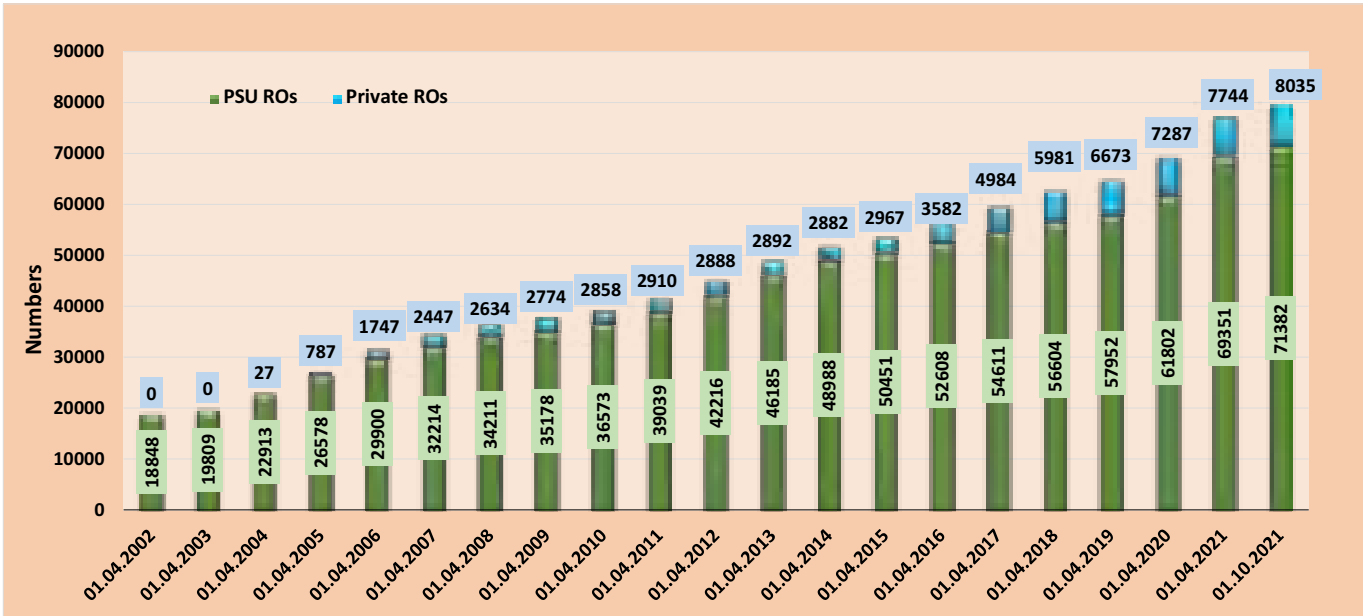
Table 6.6 : Industry marketing infrastructure as on 01.10.2021 (P)

Particulars	IOCL	BPCL	HPCL	RBML/ RSIL	NEL	SHELL	Others	Total
POL terminal/depots (Nos.)\$	117	80	80	18	3		6	304
Aviation fuel stations (Nos.)@	122	61	47	31			1	262
Retail Outlets (total) (Nos.)^	32,888	19,251	19,216	1,431	6,313	291	27	79,417
Out of which, Rural ROs (Nos.)	10,312	4,510	4,716	130	2,020	68	3	21,759
SKO/LDO agencies (Nos.)	3,871	927	1,638					6,436
LPG distributors (total) (Nos.) (PSUs only)	12,766	6,182	6,208					25,156
LPG bottling plants (Nos.) (PSUs only)#	92	53	51				3	199
LPG bottling capacity (TMTPA) (PSUs only)&	10,304	4,890	5,912				203	21,309
LPG active domestic consumers (Nos. crore) (PSUs only)	13.8	7.6	8.1					29.6

\$(Others=4 MRPL & 2 NRL); @(Others=ShellMRPL); ^ (Others=27 MRPL); # (Others=NRL-1, OIL-1, CPCL-1); & (Others=NRL-60, OIL-23, CPCL-120); RBML- Reliance BP Mobility Limited; RSIL-RBML Solutions India Ltd.

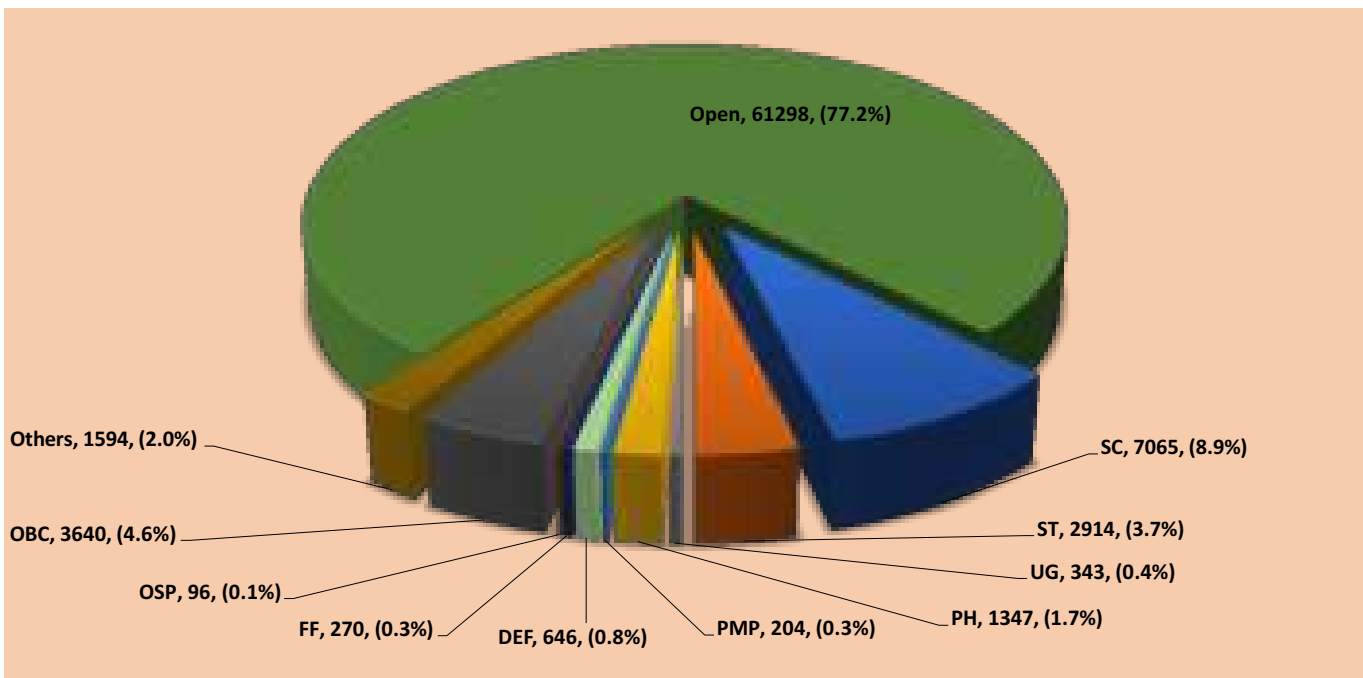
Source: Oil companies

All India number of retail outlets in PSU and private category



On 1.10.2021 the number of public sector oil company owned retail outlets was 71382 out of a total of 79417 outlets on all India basis, whereas the number of retail outlets owned by private oil companies was 8035. Participation by private sector in retail outlet business started in FY 2004 with 27 retail outlets. As on 01.10.2021 private sector accounted for 10.1% of the total market representation.

Category wise retail outlets (Total 79417) as on 01.10.2021



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.

Table 6.7 : Break-up of consumption data (PSU and Private)

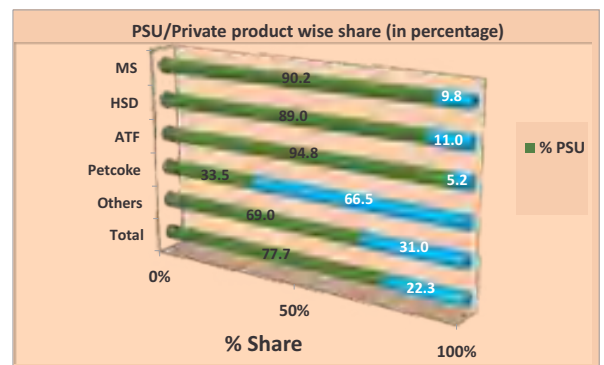
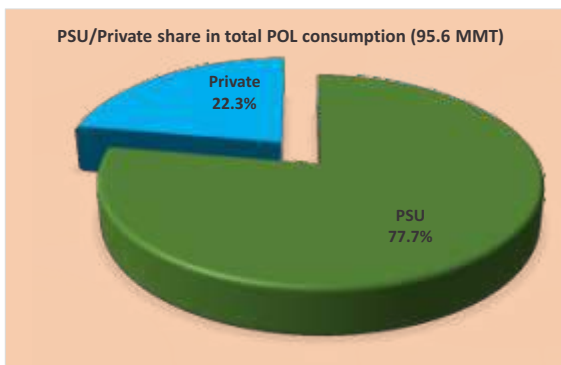
(Thousand metric tonne)

Product	2018-19			2019-20			2020-21			Apr-Sep 2020			Apr-Sep 2021 (P)		
	PSU	Private	Total	PSU	Private	Total	PSU	Private	Total	PSU	Private	Total	PSU	Private	Total
LPG	24591	316	24907	26126	204	26330	27494	64	27558	13235	19	13254	13537	44	13580
MS	25959	2326	28284	27179	2797	29975	25168	2801	27969	10880	1239	12119	13266	1441	14707
Naphtha	5583	8548	14131	6479	7789	14268	6050	8051	14100	2645	3789	6434	3156	3880	7036
ATF	7683	617	8300	7598	400	7999	3525	172	3698	1152	38	1189	1933	107	2040
SKO	3459	0	3459	2397	0	2397	1795	3	1798	929	2	931	769	0	769
HSD	75775	7753	83528	73825	8777	82602	64504	8208	72713	27308	3572	30881	31722	3933	35655
LDO	577	21	598	602	25	628	713	142	855	304	47	351	378	135	513
Lubes	1313	2355	3668	1317	2517	3833	1475	2622	4097	633	1035	1668	628	1463	2091
FO/LSHS	5596	968	6564	5172	1129	6302	4925	662	5586	2321	275	2596	2616	343	2959
Bitumen	5683	1024	6708	4995	1725	6720	5356	2168	7524	1853	773	2626	1964	1380	3344
PetCoke	5770	15576	21346	5634	16074	21708	4415	11190	15605	1905	6943	8848	2304	4577	6881
Others	4189	7534	11723	4381	6984	11365	3957	8834	12791	1756	3275	5031	2041	4004	6045
Total	166178	47038	213216	165704	48422	214127	149378	44918	194295	64921	21009	85929	74314	21307	95621

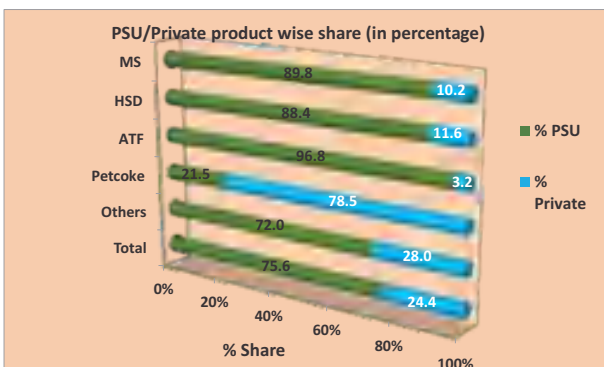
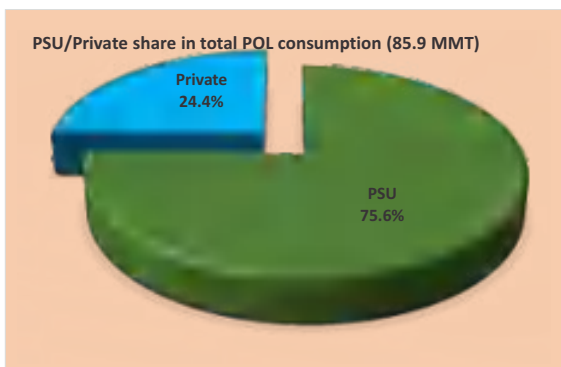
Source: Oil companies, Directorate General of Commercial Intelligence and Statistics (DGCIS) & SEZ data (included from FY 2017-18 onwards).
(Oil company sales+Private imports+SEZ sales to DTA=Consumption)

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

April - September 2021 (P)



April - September 2020



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

- The share of the private sector in total consumption decreased during April - September 2021 (P) by (2.2%) as compared to the same period last year.
- The share of the private sector during April - September 2021 (P) decreased in Petcoke (12.0%), MS (0.4%) and HSD (0.5%) as compared to the same period last year. This was mainly because of high growth of PSU sector due to low base of last year.
- In the private sector de-growth has been observed for petcoke (34.1%) during April - September 2021 (P) as compared to the same period last year.
- In respect of all other products (except MS, HSD, ATF & petcoke) including lubes, bitumen, LDO and naphtha, the private sector share has increased by 2.9% during April - September 2021 (P) as compared to the same period last year.

Table 6.8 : Ethanol blending programme

Si.no.	State	(1st December 2019 to 30th November 2020) Ethanol Supply Year*		(1st December 2020 to 30th November 2021 (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	5.3	3.4%	13.6	8.5%
2	Andaman & Nicobar	0.0	0.0%	0.0	0.0%
3	Arunachal Pradesh	0.0	0.0%	0.0	0.0%
4	Assam	0.0	0.0%	0.0	0.0%
5	Bihar	8.4	8.2%	9.9	8.0%
6	Chandigarh	0.0	8.9%	0.0	8.9%
7	Chhattisgarh	4.7	6.2%	7.6	8.4%
8	Dadar & Nagar Haveli and Daman & Diu	0.0	4.1%	0.0	8.9%
9	Delhi	6.7	7.3%	7.0	9.4%
10	Goa	0.8	4.8%	2.1	9.0%
11	Gujarat	12.4	6.3%	18.4	9.5%
12	Haryana	13.1	9.5%	14.5	9.7%
13	Himachal Pradesh	1.6	7.9%	2.7	9.4%
14	Jammu & Kashmir	0.0	0.0%	0.5	7.0%
15	Jharkand	2.4	3.8%	4.2	6.1%
16	Karnataka	18.8	7.3%	24.8	9.0%
17	Lakshadweep	0.0	0.0%	0.0	0.0%
18	Kerala	0.0	0.1%	9.0	4.4%
19	Ladakh	0.0	0.0%	0.0	0.0%
20	Madhya Pradesh	10.2	6.3%	13.8	8.6%
21	Maharashtra	21.9	5.7%	39.5	9.0%
22	Manipur	0.0	0.0%	0.0	0.0%
23	Meghalaya	0.0	0.0%	0.0	0.0%
24	Mizoram	0.0	0.0%	0.0	0.0%
25	Nagaland	0.0	0.0%	0.0	0.0%
26	Odisha	0.4	0.4%	4.4	4.0%
27	Pondicherry	0.0	0.4%	0.0	4.3%
28	Punjab	11.5	9.1%	14.3	9.9%
29	Rajasthan	2.7	1.4%	12.9	6.7%
30	Sikkim	0.0	0.0%	0.0	0.0%
31	Tamil Nadu	3.5	1.1%	23.4	7.7%
32	Telangana	4.7	3.1%	14.2	8.2%
33	Tripura	0.0	0.0%	0.0	0.0%
34	Uttar Pradesh	40.1	9.5%	53.2	9.8%
35	Uttarakhand	2.4	9.7%	2.8	9.3%
36	West Bengal	1.4	1.1%	3.1	2.4%
	Grand Total	173.0	5.0%	296.1	8.1%

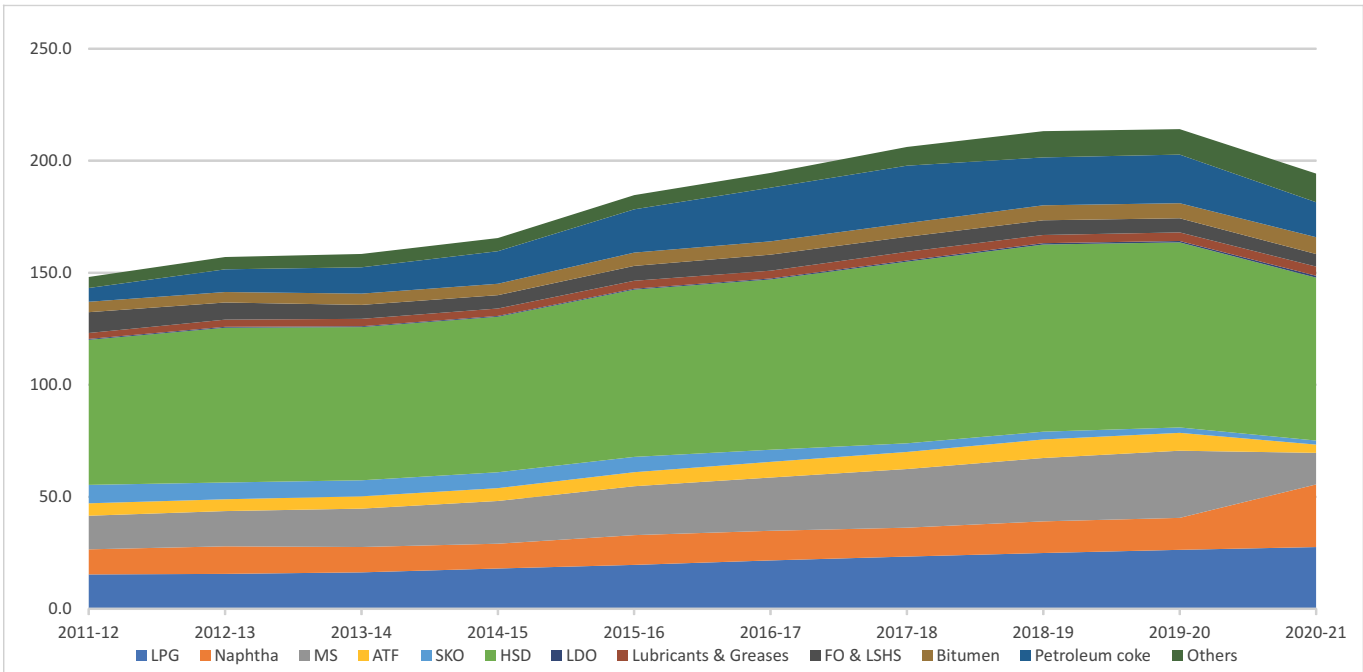
* Ethanol Supply Year : Ethanol supplies take place between 1st December of the present year to 30th November of the following year.

**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.

POL consumption by product

Million metric tonnes



Distribution of total domestic POL sales in India





Analysis • Knowledge • Information

Chapter-7 LPG



Table 7.1 : LPG marketing at a glance

Particulars	2016-17	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)
(Thousand metric tonne)							
LPG production	11253	12364	12786	12823	12072	5655	5746
LPG consumption	21608	23342	24907	26330	27591	13354	13646
PSU sales	21179	22977	24591	26126	27476	13335	13602
of which:							
Domestic	18871	20352	21728	23076	25117	12414	12308
Non-Domestic	1776	2086	2364	2614	1885	637	995
Bulk	364	355	318	263	355	241	242
Auto LPG	167	184	180	172	118	43	57
Imports	11097	11379	13235	14809	16527	7915	8183
of which:							
PSU imports	10668	11015	12919	14605	16412	7896	8139
Private imports	429	364	316	204	115	19	44
(Lakh)							
Enrolment (domestic)	331.7	284.7	455.1	161.1	85.8	45.6	62.4
As on	1.4.2017	1.4.2018	1.4.2019	1.4.2020	1.4.2021	1.10.2020	01.10.2021
LPG active domestic customers	1,988	2,243	2,654	2,787	2,895	2,845	2,957
PMUY beneficiaries	200	356	719	802	800	802	833
Non-domestic customers	25.3	27.9	30.2	32.4	33.9	32.9	34.5
(Percent)							
LPG coverage (Estimated)	72.8	80.9	94.3	97.5	99.8	98.8	-
(Nos.)							
LPG distributors	18786	20146	23737	24670	25083	24836	25156
of which:							
Shehri Vitrak	7677	7821	7908	7914	7899	7914	7902
Rurban Vitrak	3152	3463	3626	3671	3697	3687	3705
Gramin & Durgam Kshetriya Vitrak	7957	8862	12203	13085	13487	13235	13549
Auto LPG dispensing stations (ALDS)	675	672	661	657	651	657	634
(Thousand metric tonne per annum)							
Bottling capacity (rated)	16264	17395	18338	20292	21249	20611	21309
(Thousand metric tonne)							
Gross tankage	878	912	929	978	994	988	1008

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

Note:

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

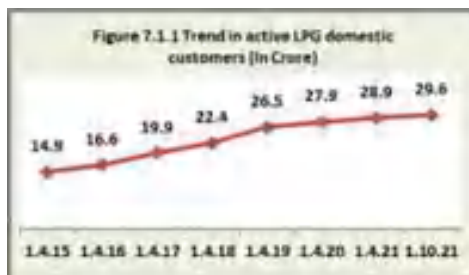


Table 7.2: LPG coverage (estimated) as on 1.4.2021 (P)

(Number in lakhs)				
State/UT	No. of households Census 2011	Estimated households as on 1.4.2021	Active connections as on 1.4.2021	LPG coverage (%)
Chandigarh	2.35	2.76	2.82	102.1%
Delhi	33.41	40.55	50.53	124.6%
Haryana	47.18	56.65	72.11	127.3%
Himachal Pradesh	14.77	16.69	20.53	123.0%
Jammu & Kashmir	20.15	24.95	33.27	133.4%
Punjab	54.10	61.68	88.51	143.5%
Rajasthan	125.81	152.83	167.03	109.3%
Uttar Pradesh	329.24	396.30	423.19	106.8%
Uttarakhand	19.97	23.76	27.87	117.3%
Sub Total North	646.98	776.16	885.85	114.1%
Arunachal Pradesh	2.62	3.30	2.84	86.1%
Assam	63.67	74.65	73.69	98.7%
Manipur	5.07	6.02	5.93	98.5%
Meghalaya	5.38	6.90	3.32	48.2%
Mizoram	2.21	2.73	3.21	117.4%
Nagaland	4.00	3.98	2.81	70.6%
Sikkim	1.28	1.45	1.60	110.3%
Tripura	8.43	9.69	7.59	78.4%
Sub Total North East	92.66	108.72	100.99	92.9%
Andaman & Nicobar Islands	0.93	1.00	1.17	116.9%
Bihar	189.41	237.92	186.49	78.4%
Jharkhand	61.82	75.78	57.67	76.1%
Odisha	96.61	110.25	88.87	80.6%
West Bengal	200.67	228.60	228.19	99.8%
Sub Total East	549.44	653.54	562.38	86.1%
Chhattisgarh	56.23	69.04	53.21	77.1%
Dadra & Nagar Haveli	0.73	1.14	0.94	82.6%
Daman & Diu	0.60	0.93	0.68	73.3%
Goa	3.23	3.49	5.19	148.5%
Gujarat	121.82	145.52	108.95	74.9%
Madhya Pradesh	149.68	180.31	153.73	85.3%
Maharashtra	238.31	276.75	287.57	103.9%
Sub Total West	570.59	677.20	610.27	90.1%
Andhra Pradesh	126.04	140.02	142.89	102.0%
Karnataka	131.80	152.53	167.03	109.5%
Kerala	77.16	80.98	91.00	112.4%
Lakshadweep	0.11	0.11	0.10	88.5%
Puducherry	3.01	3.87	3.81	98.4%
Tamil Nadu	184.93	214.02	216.87	101.3%
Telangana	84.21	93.55	113.64	121.5%
Sub Total South	607.26	685.07	735.34	107.3%
All India	2466.93	2900.68	2894.83	99.8%

Source: PSU OMCs (IOCL, BPCL and HPCL)

Note: 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 7.3: BPL households covered under PMUY Scheme as on 1.10.2021 (P)

(Number in lakhs)	
State/UT	Number of BPL Households
Chandigarh	0.00
Delhi	0.76
Haryana	7.26
Himachal Pradesh	1.37
J & K + LADAKH	12.42
Punjab	12.20
Rajasthan	63.98
Uttar Pradesh	150.85
Uttarakhand	4.13
Sub Total North	252.96
Arunachal Pradesh	0.45
Assam	36.66
Manipur	1.59
Meghalaya	1.57
Mizoram	0.28
Nagaland	0.58
Sikkim	0.10
Tripura	2.73
Sub Total North East	43.96
Andaman & Nicobar Islands	0.13
Bihar	92.86
Jharkhand	33.47
Odisha	49.36
West Bengal	93.79
Sub Total East	269.61
Chhattisgarh	31.43
Dadra & Nagar Haveli	0.15
Daman & Diu	0.00
Goa	0.01
Gujarat	32.08
Madhya Pradesh	75.20
Maharashtra	45.10
Sub Total West	183.97
Andhra Pradesh	3.92
Karnataka	32.04
Kerala	2.56
Lakshadweep	0.00
Puducherry	0.14
Tamil Nadu	33.01
Telangana	10.74
Sub Total South	82.41
All India	832.92

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

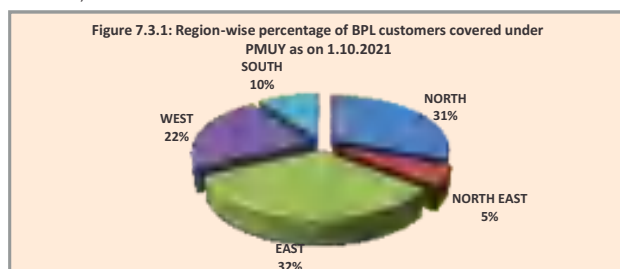


Table 7.4 : LPG domestic customers enrolment (14.2 kg/5 kg) by PSU OMCs

State/UT	April - September 2021 (P)		
	14.2 Kg	5 Kg	Total
Chandigarh	0.03	0.0001	0.03
Delhi	0.34	0.0007	0.34
Haryana	0.92	0.0012	0.92
Himachal Pradesh	0.34	0.0009	0.34
J & K + LADAKH	0.20	0.0029	0.20
Punjab	0.81	0.0024	0.81
Rajasthan	1.20	0.0050	1.21
Uttar Pradesh	7.98	0.0192	8.00
Uttarakhand	0.52	0.0013	0.52
Sub Total North	12.33	0.03	12.36
Arunachal Pradesh	0.08	0.0002	0.08
Assam	2.52	0.0012	2.52
Manipur	0.12	0.0001	0.12
Meghalaya	0.11	0.0004	0.12
Mizoram	0.05	0.0001	0.05
Nagaland	0.09	0.0001	0.09
Sikkim	0.05	0.0001	0.05
Tripura	0.09	0.0003	0.09
Sub Total North East	3.11	0.00	3.12
Andaman & Nicobar Islands	0.03	0.0000	0.03
Bihar	9.35	0.0111	9.36
Jharkhand	1.41	0.0008	1.41
Odisha	2.65	0.0037	2.66
West Bengal	6.91	0.0112	6.92
Sub Total East	20.35	0.03	20.38
Chhattisgarh	1.75	0.0028	1.75
Dadra & Nagar Haveli	0.03	0.0000	0.03
Daman & Diu	0.00	0.0000	0.00
Goa	0.08	0.0000	0.08
Gujarat	4.42	0.0035	4.42
Madhya Pradesh	5.41	0.0079	5.42
Maharashtra	4.98	0.0079	4.99
Sub Total West	16.67	0.02	16.70
Andhra Pradesh	1.55	0.0014	1.55
Karnataka	2.58	0.0118	2.60
Kerala	1.04	0.0011	1.05
Lakshadweep	0.00	0.0000	0.00
Puducherry	0.04	0.0001	0.04
Tamil Nadu	3.08	0.0453	3.13
Telangana	1.52	0.0015	1.53
Sub Total South	9.83	0.06	9.89
All India	62.30	0.15	62.44

Source: PSU OMCs (IOCL, BPCL and HPCL)

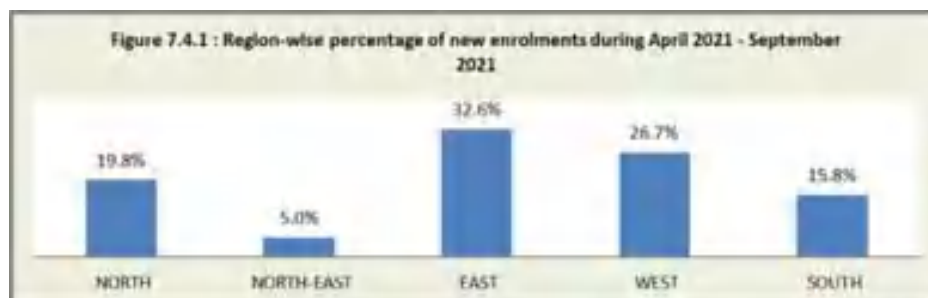
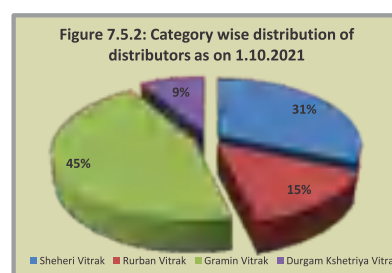
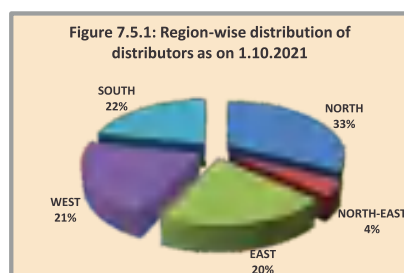


Table 7.5 : Number of LPG distributors as on 1.10.2021 (P) (New Scheme)

(Nos.)					
State/UT	Sheheri Vitrak	Rurban Vitrak	Gramin Vitrak	Durgam Kshetriya Vitrak	Total
Chandigarh	26	0	0	0	26
Delhi	321	0	0	0	321
Haryana	282	101	233	9	625
Himachal Pradesh	69	13	93	31	206
J & K + Ladakh	130	44	75	41	290
Punjab	334	254	245	26	859
Rajasthan	438	163	656	129	1386
Uttar Pradesh	1005	705	2234	187	4131
Uttarakhand	114	106	60	36	316
Sub Total North	2719	1386	3596	459	8160
Arunachal Pradesh	6	6	30	43	85
Assam	128	104	307	53	592
Manipur	15	13	35	38	101
Meghalaya	22	9	19	14	64
Mizoram	11	6	26	16	59
Nagaland	15	11	17	40	83
Sikkim	9	1	11	5	26
Tripura	18	9	38	13	78
Sub Total North-East	224	159	483	222	1088
Andaman & Nicobar Islands	0	4	4	1	9
Bihar	239	252	1460	49	2000
Jharkhand	163	50	326	35	574
Odisha	173	100	550	134	957
West Bengal	399	164	919	58	1540
Sub Total East	974	570	3259	277	5080
Chhattisgarh	105	76	164	190	535
Dadra & Nagar Haveli	2	1	0	0	3
Daman & Diu	3	0	0	0	3
Goa	44	4	6	1	55
Gujarat	418	118	452	23	1011
Madhya Pradesh	470	212	417	437	1536
Maharashtra	1003	189	827	190	2209
Sub Total West	2045	600	1866	841	5352
Andhra Pradesh	317	241	399	112	1069
Karnataka	534	142	514	74	1264
Kerala	226	132	310	25	693
Lakshadweep	1	0	0	0	1
Puducherry	15	10	3	0	28
Tamil Nadu	568	362	603	102	1635
Telangana	279	103	336	68	786
Sub Total South	1940	990	2165	381	5476
All India	7902	3705	11369	2180	25156

Source: PSU OMCs (IOCL, BPCL and HPCL)

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





Analysis • Knowledge • Information

Chapter-8

Prices and Taxes



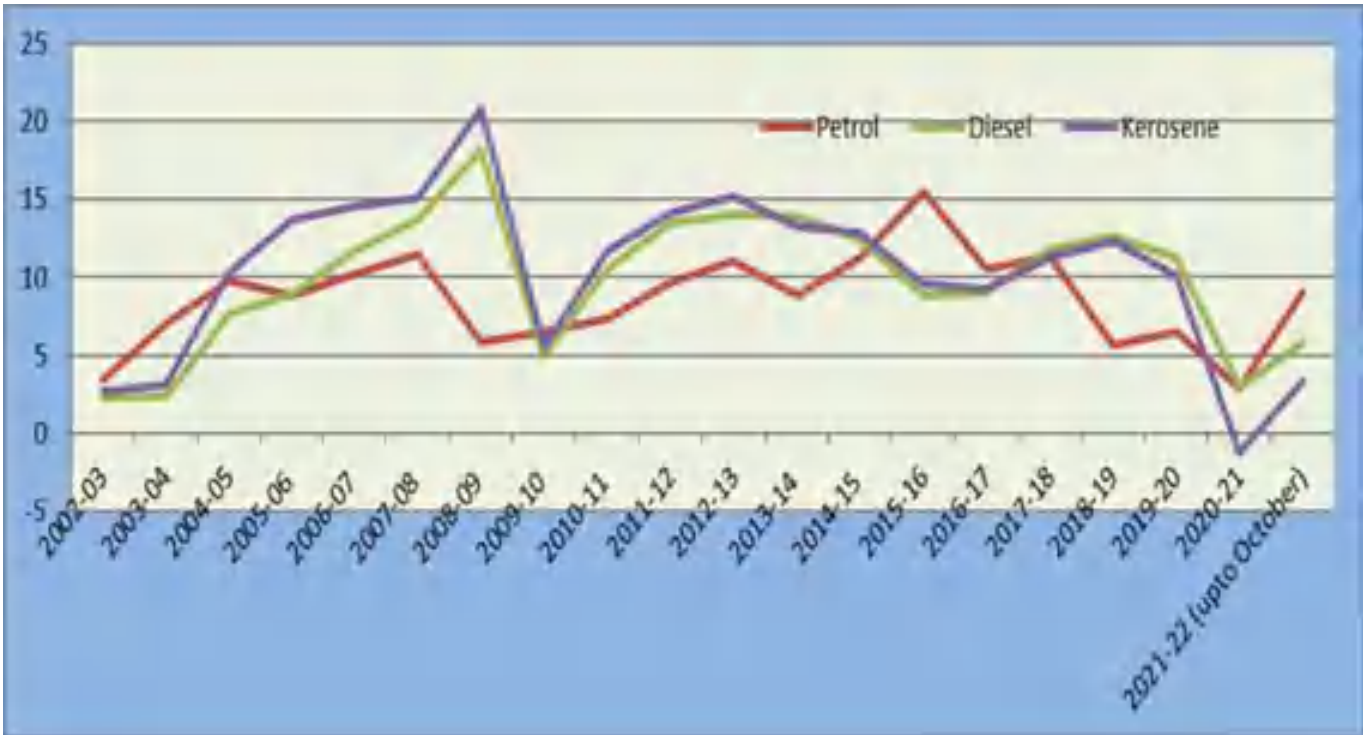
Table 8.1 : Price of crude oil & petroleum products in the international market

Year	Indian basket (\$/bbl)
2002-03	26.60
2003-04	27.98
2004-05	39.21
2005-06	55.72
2006-07	62.46
2007-08	79.25
2008-09	83.57
2009-10	69.76
2010-11	85.09
2011-12	111.89
2012-13	107.97
2013-14	105.52
2014-15	84.16
2015-16	46.17
2016-17	47.56
2017-18	56.43
2018-19	69.88
2019-20	60.47
2020-21	44.82
2021-22 (upto 31.10.2021)	71.77
2021 : Month wise	
January	54.79
February	61.22
March	64.73
April	63.40
May	66.95
June	71.98
July	73.54
August	69.80
September	73.13
October	82.11

Notes:

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

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



Trend in spreads of international benchmark crude oils

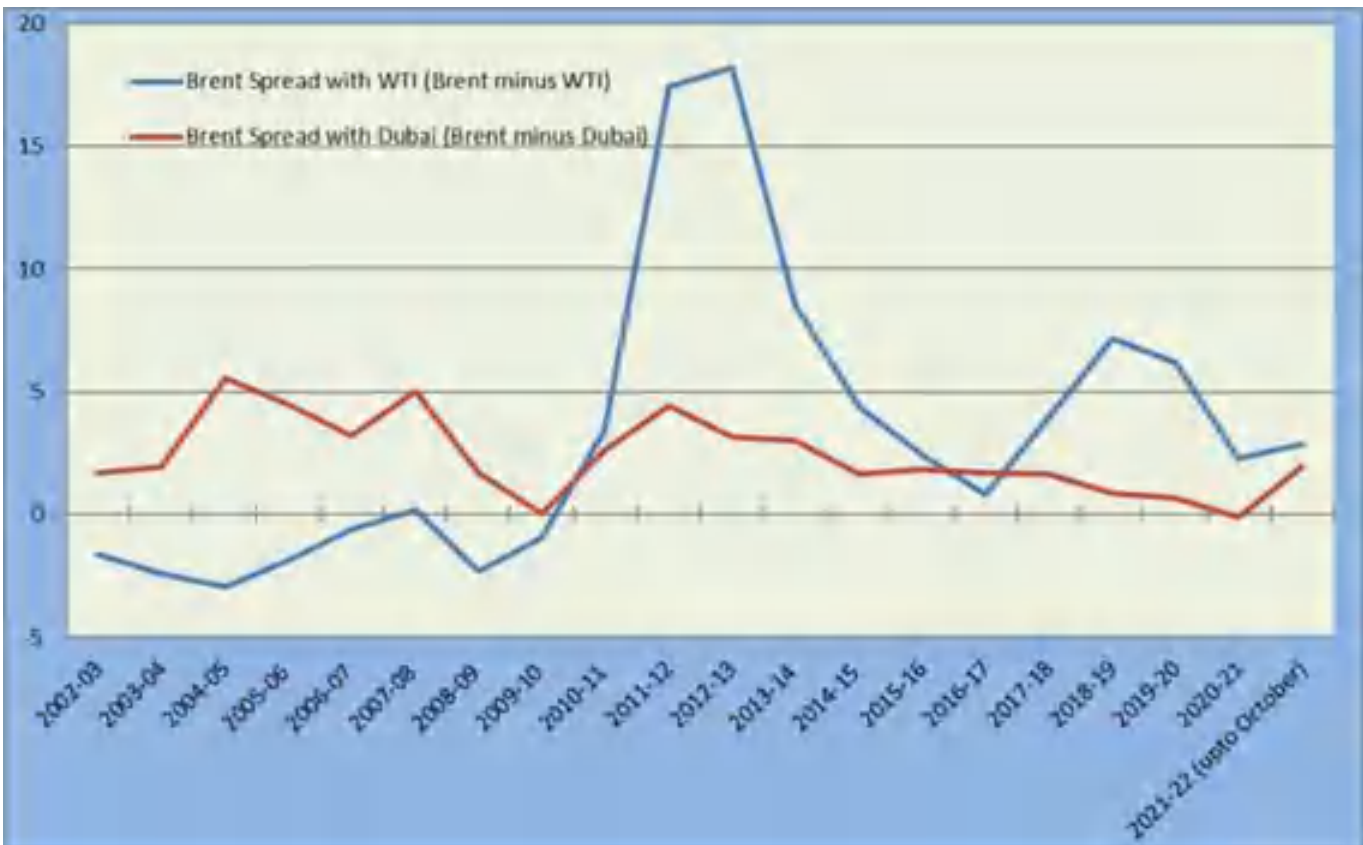


Table 8.2 : Price build-up of PDS kerosene at Mumbai

Elements	Unit	As on 1.11.2021
Price before taxes and dealers' commission	₹ / litre	45.44
Add : Dealers' commission	₹ / litre	2.64
Add : GST (incl GST on dealers' commission)	₹ / litre	2.40
Retail selling price	₹ / litre	50.48

Table 8.3 : Price build-up of domestic LPG at Delhi

Elements	Unit	As on 1.11.2021
Price before taxes and distributors' commission	₹ / 14.2 kg cylinder	794.82
Add : Distributors' commission	₹ / 14.2 kg cylinder	61.84
Add : GST (including GST on distributors' commission)	₹ / 14.2 kg cylinder	42.84
Retail selling price	₹ / 14.2 kg cylinder	899.50

Table 8.4 : Price build-up of petrol at Delhi

Elements	Unit	As on 16.11.2021
Price charged to dealers (excluding excise duty and VAT)	₹ / litre	48.23
Add : Excise duty	₹ / litre	27.90
Add : Dealers' commission (average)	₹ / litre	3.85
Add : VAT (including VAT on dealers' commission)	₹ / litre	23.99
Retail selling price	₹ / litre	103.97

-As per IOCL.

Table 8.5 : Price build-up of diesel at Delhi

Elements	Unit	As on 16.11.2021
Price charged to dealers (excluding excise duty and VAT)	₹ / litre	49.61
Add : Excise duty	₹ / litre	21.80
Add : Dealers' commission (average)	₹ / litre	2.58
Add : VAT (including VAT on dealer's commission)	₹ / litre	12.68
Retail selling price	₹ / litre	86.67

-As per IOCL.

Table 8.6 : Break up of Central excise duty on petrol & diesel (As on 16.11.2021)

Particulars	₹/litre	
	Petrol	Diesel
Basic duty	1.40	1.80
Additional excise duty (Road & Infrastructure Cess)	13.00	8.00
Special additional excise duty	11.00	8.00
Agriculture Infrastructure and Development Cess	2.50	4.00
Total excise duty	27.90	21.80

Share of taxes in retail selling price of petroleum products
Table 8.7 : Share of taxes in retail selling price of PDS kerosene as on 1.11.2021 at Mumbai

Particulars	₹/litre	Share in RSP (%)
Price before taxes and dealers' commission	45.44	90.0%
Customs duty	-	
GST (Including GST on dealers' commission)	2.40	
Total taxes	2.40	4.8%
Dealers' commission	2.64	5.2%
Retail selling price	50.48	100%

Table 8.8 : Share of taxes in retail selling price of domestic LPG as on 1.11.2021 at Delhi

Particulars	₹/14.2 kg cylinder	Share in RSP (%)
Price before taxes and distributors' commission	794.82	88.3%
Customs duty	-	
GST (including GST on distributors' commission)	42.84	
Total taxes	42.84	4.8%
Distributors' commission	61.84	6.9%
Retail selling price	899.50	100%

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, Ministry of Commerce & Industry

Dealers' / Distributors' commission on petroleum products
Table 8.10 : Dealers' commission on petrol & diesel

(₹/KL)		
Particulars	Petrol	Diesel
As on 1-Apr-04	707.00	425.00
21-Jun-05	778.00	467.00
1-Aug-05	848.00	509.00
1-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
7-Sep-10	1218.00	757.00
1-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
1-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
1-Jun-16	₹ 1750.29/KL + 0.883% of product billable price	₹ 1302.06/KL + 0.286% of product billable price
5-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
1-Apr-17	₹ 2020.38/KL + 0.859% of product billable price	₹ 1502.13/KL + 0.267% of product billable price
1-Jul-17	₹ 2025.97/KL + 0.859% of product billable price	₹ 1506.81/KL + 0.267% of product billable price
1-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
1-Mar-07	243.00	200.00
24-May-08	255.00	212.00
7-Jul-09	263.00	220.00
7-Sep-10	275.00	232.00
28-Dec-12	438.24	377.73
21-Oct-14	536.09	475.58
5-Feb-16	714.18	649.16
28-Oct-16	787.82	723.87
5-Sep-17	1008.83	928.10
4-Oct-18	1016.37	1005.95
22-Feb-19	1341.88	1230.98

Table 8.12: Distributors' commission on domestic LPG

Effective date	14.2 KG cyl.	(₹/ cylinder)	
		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
1-Mar-07	19.05	NA	9.81
4-Jun-08	20.54	NA	10.58
30-Jun-09	21.94	NA	11.30
1-Jul-11	25.83	NA	13.30
7-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
9-Dec-15	45.83	0.26	22.67
1-Jan-16	45.83	0.33	22.67
1-Feb-16	45.83	0.22	22.67
1-Mar-16	45.83	0.13	22.67
1-May-16	45.83	0.15	22.67
1-Jun-16	45.83	0.18	22.67
1-Jul-16	45.83	0.16	22.67
1-Aug-16	45.83	0.09	22.67
1-Sep-16	45.83	0.06	22.67
1-Oct-16	45.83	0.09	22.67
28-Oct-16	47.48	0.09	23.74
1-Nov-16	47.48	0.14	23.74
1-Dec-16	47.48	0.21	23.74
1-Feb-17	47.48	0.30	23.74
1-Mar-17	47.48	0.43	23.74
1-Apr-17	47.48	0.40	23.74
1-May-17	47.48	0.27	23.74
1-Jun-17	47.48	0.15	23.74
1-Jul-17	47.48	0.13	23.74
1-Aug-17	47.48	0.06	23.74
1-Sep-17	47.48	0.16	23.74
30-Sep-17	48.89	0.16	24.20
1-Oct-17	48.89	0.23	24.20
1-Nov-17	48.89	0.36	24.20
1-Jan-18	48.89	0.35	24.20
1-Feb-18	48.89	0.34	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.
1-Mar-18	48.89	0.28	24.20
1-Apr-18	48.89	0.23	24.20
1-Jun-18	48.89	0.29	24.20
1-Jul-18	48.89	0.36	24.20
1-Aug-18	48.89	0.42	24.20
1-Sep-18	48.89	0.46	24.20
1-Oct-18	48.89	0.54	24.20
1-Nov-18	48.89	0.63	24.20
7-Nov-18	50.58	0.63	25.29
1-Dec-18	50.58	0.45	25.29
1-Jan-19	50.58	0.28	25.29
1-Feb-19	50.58	0.24	25.29
1-Mar-19	50.58	0.30	25.29
1-Apr-19	50.58	0.31	25.29
1-Jun-19	50.58	0.35	25.29
1-Jul-19	50.58	0.21	25.29
1-Aug-19	56.20	-	28.10
1-Sep-19	59.02	-	29.51
1-Oct-19	61.84	-	30.92

Source: MoP&NG circulars & OMCs

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

Indian rupees (₹)/ litre/ 14.2 kg cyl.		
Country	Kerosene	Domestic LPG
India (Delhi)	50.48#	899.50**
Pakistan	49.64	1312.07
Bangladesh	70.69	602.26
Sri Lanka	28.59	1128.24
Nepal (Kathmandu)	75.26	996.04

at Mumbai as on 16.11.2021 for PDS Kerosene , **Non subsidised Domestic LPG as on 16.11.2021

Note - Prices for neighboring countries as available on their respective website as on 16.11.2021.

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.in); 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 16.11.2021

State/Union Territory	City	Petrol	Diesel	Domestic LPG (₹/14.2 KG Cylinder)
		(₹/litre)		Non subsidized
Andaman & Nicobar Islands	Port Blair	82.96	77.13	975.50
Andhra Pradesh	Amaravathi	110.47	96.55	932.50
Arunachal Pradesh	Itanagar	92.02	79.63	965.50
Assam	Guwahati	94.58	81.29	948.50
Bihar	Patna	105.90	91.09	998.00
Chandigarh	Chandigarh	94.23	80.90	909.00
Chhattisgarh	Raipur	101.88	93.78	971.00
Dadra & Nagar Haveli	Silvasa	93.21	87.09	914.50
Daman & Diu	Daman	93.10	86.97	909.50
Delhi	New Delhi	103.97	86.67	899.50
Goa	Panjim	96.38	87.27	913.50
Gujarat	Gandhinagar	95.35	89.33	925.50
Haryana	Ambala	95.30	86.53	917.50
Himachal Pradesh	Shimla	95.78	80.35	944.00
Jammu & Kashmir	Srinagar	100.36	83.91	1015.50
Jharkhand	Ranchi	98.52	91.56	957.00
Karnataka	Bengaluru	100.58	85.01	902.50
Kerala	Thiruvananthapuram	106.36	93.47	909.00
Ladakh	Leh	102.99	86.67	1137.00
Madhya Pradesh	Bhopal	107.23	90.87	905.50
Maharashtra	Mumbai	109.98	94.14	899.50
Manipur	Imphal	99.82	84.26	1051.50
Meghalaya	Shillong	93.91	80.58	967.00
Mizoram	Aizwal	94.50	79.55	1051.50
Nagaland	Kohima	98.05	84.59	919.00
Odisha	Bhubaneswar	101.81	91.62	926.00
Puducherry	Puducherry	94.94	83.58	912.00
Punjab	Jullunder	94.94	83.75	929.50
Rajasthan	Jaipur	111.10	95.71	903.50
Sikkim	Gangtok	98.50	83.55	1052.50
Tamil Nadu	Chennai	101.40	91.43	915.50
Telangana	Hyderabad	108.20	94.62	952.00
Tripura	Agartala	98.23	85.61	1060.50
Uttar Pradesh	Lucknow	95.28	86.80	937.50
Uttarakhand	Dehradun	94.00	87.32	919.00
West Bengal	Kolkata	104.67	89.79	926.00

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

Table 8.15 : Retail selling price of PDS kerosene at major cities as on 16.11.2021

State	City	(₹/litre)
Maharashtra	Mumbai	50.48
Tamil Nadu	Chennai	15.00
West Bengal	Kolkata	53.04

Source: OMCs

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

Table 8.16 : Customs ,excise duty and GST rates on petroleum products as on 01.01.2022

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

Particulars	Customs duty			Central excise duty			
	Basic customs duty	Additional customs duty (CVD)	Additional customs duty	Basic cenvat 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.13.00/ltr.	Rs.1.40/ltr	Rs.11.00/ltr	Rs.13.00/ltr.	Rs.2.50/ltr.
Petrol (branded)	2.50%	Rs.2.60/ltr. + Rs.11.00/ ltr SAD + Rs.2.50/ ltr AIDC	Rs.13.00/ltr.	Rs.2.60/ltr	Rs.11.00/ltr	Rs.13.00/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.8.00/ltr.	Rs.1.80/ltr	Rs.8.00/ltr	Rs.8.00/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.8.00/ltr.	Rs.4.20/ltr	Rs.8.00/ltr	Rs.8.00/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%	-	-	-

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

Particulars	Customs		GST
	Basic Customs Duty	CVD (in lieu of IGST)	
LPG	Domestic (Note-3)	Nil	5.00%
	Non - Domestic	5.00%	18.00%
Kerosene	PDS	Nil	5.00%
	Non PDS	5.00%	18.00%
Naphtha	Fertilizer	Nil	18.00%
	Non- Fertilizer	2.50%	18.00%
Butane / Propane	Domestic	Nil	5.00%
	Non - Domestic	2.50%	18.00%
Bitumen & Asphalt		5.00%	18.00%
Furnace Oil	Fertilizer	Nil	18.00%
	Non- Fertilizer	5.00%	18.00%
Light Diesel Oil		5.00%	18.00%
Low Sulphur Heavy Stock/ HPS & other Residue	Fertilizer	Nil	18.00%
	Non- Fertilizer	5.00%	18.00%
Lube oil/greases		5.00%	18.00%
Petroleum Coke		10.00%	18.00%
Petroleum Jelly		5.00%	18.00%
Transformer Oil		5.00%	18.00%
Waxes all types		5.00%	18.00%

Note :

- In addition to the above , 10% Social Welfare Surcharge is also applicable on the total duties of Customs . However, where CVD is payable in lieu of IGST, social welfare surcharge is not applicable on the amount of CVD.
- In case of ATF, Basic Excise Duty /Additional Customs Duty (CVD) is 2% in place of 11%, for supply to scheduled commuter airlines (SCA) from the regional connectivity scheme (RCS) airports.
- Basic Customs duty is Nil for import of domestic LPG sold to household consumers (including non domestic exempted category) by PSU OMCs. Basic Customs duty rate is 5% for other importers of domestic LPG

Table 8.17 : Actual rate of sales tax/ VAT/GST and other taxes levied by State/UT Governments on major petroleum products as on 01.01.2022

Sl. no.	State/Union Territory	Petrol	Diesel	PDS kerosene	Domestic LPG
		Sales Tax /VAT		GST	
1	Andaman & Nicobar Islands	1%	1%	5%	5%
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	32.66% or Rs.22.63 per litre whichever is higher, Rebate of Rs.5 per Litre & Additional rebate of Rs. 5.3 per litre	23.66% or Rs.17.45 per litre whichever is higher, Rebate of Rs.5 per Litre & Additional rebate of Rs. 5.1 per litre		
5	Bihar	23.58% or Rs 16.65/Litre whichever is higher (30% Surcharge on VAT as irrecoverable tax)	16.37% or Rs 12.33/Litre whichever is higher (30% Surcharge on VAT as irrecoverable tax)		
6	Chandigarh	Rs.10/KL cess +15.24% or Rs.12.42/Litre whichever is higher	Rs.10/KL cess + 6.66% or Rs.5.07/Litre whichever is higher		
7	Chhattisgarh	24% VAT + Rs.2/litre VAT	23% VAT + Rs.1/litre VAT		
8	Dadra & Nagar Haveli and Daman & Diu	12.75% VAT	13.50% VAT		
9	Delhi	19.40% VAT	Rs.250/KL air ambience charges + 16.75% VAT		
10	Goa	20% VAT + 0.5% Green cess	17% VAT + 0.5% Green cess		
11	Gujarat	13.7% VAT+ 4% Cess on Town Rate & VAT	14.9% VAT + 4 % Cess on Town Rate & VAT		
12	Haryana	18.20% or Rs.14.50/litre whichever is higher as VAT+5% additional tax on VAT	16.00% VAT or Rs.11.86/litre whichever is higher as VAT+5% additional tax on VAT		
13	Himachal Pradesh	17.5% or Rs 13.50/Litre- whichever is higher	6% or Rs 4.40/Litre- whichever is higher		
14	Jammu & Kashmir	24% MST+ Rs.2/Litre employment cess, Rebate of Rs.4.50/Litre	16% MST+ Rs.1.00/Litre employment cess, Rebate of Rs.6.50/Litre		
15	Jharkhand	22% on the sale price or Rs. 17.00 per litre, which ever is higher + Cess of Rs 1.00 per Ltr	22% on the sale price or Rs. 12.50 per litre, which ever is higher + Cess of Rs 1.00 per Ltr		
16	Karnataka	25.92% sales tax	14.34% sales tax		
17	Kerala	30.08% sales tax+ Rs.1/litre additional sales tax +1% cess	22.76% sales tax+ Rs.1/litre additional sales tax + 1% cess		
18	Ladakh	15% MST+ Rs.5/Litre employment cess, Reduction of Rs.2.5/Litre	6% MST+ Rs.1/Litre employment cess, Reduction of Rs.0.50/Litre		
19	Lakshadweep	Nil	Nil		
20	Madhya Pradesh	29 % VAT + Rs.2.5/litre VAT+1% Cess	19% VAT+ Rs.1.5/litre VAT+1% Cess		
21	Maharashtra – Mumbai, Thane, Navi Mumbai, Amravati & Aurangabad	26% VAT+ Rs.10.12/Litre additional tax	24% VAT+ Rs.3.00/Litre additional tax		
22	Maharashtra (Rest of State)	25% VAT+ Rs.10.12/Litre additional tax	21% VAT+ Rs.3.00/Litre additional tax		
23	Manipur	25% VAT	13.5% VAT		
24	Meghalaya	13.5% or Rs 11.00/Litre- whichever is higher (Rs.0.10/Litre pollution surcharge)	5% or Rs4.00/Litre- whichever is higher (Rs.0.10/Litre pollution surcharge)		
25	Mizoram	16.36% VAT	5.23% VAT		
26	Nagaland	25% VAT or Rs. 16.04/litre whichever is higher +5% surcharge + Rs.2.00/Litre as road maintenance cess, Rebate Rs. 5.5 per litre	16.50% VAT or Rs. 10.51/litre whichever is higher +5% surcharge + Rs.2.00/Litre as road maintenance cess , Rebate Rs. 5.1 per litre		
27	Odisha	28% VAT	24% VAT		
28	Puducherry	14.55% VAT	8.65% VAT		
29	Punjab	Rs.2050/KL (cess)+ Rs.0.10 per Litre (Urban Transport Fund) + 0.25 per Litre (Special Infrastructure Development Fee)+13.77% VAT plus 10% additional tax or Rs.12.50/Litre whichever is higher	Rs.1050/KL (cess) + Rs.0.10 per Litre (Urban Transport Fund) +0.25 per Litre (Special Infrastructure Development Fee) + 9.92% VAT plus 10% additional tax or Rs.8.24/Litre whichever is higher		
30	Rajasthan	31.04% VAT+Rs 1500/KL road development cess	19.30% VAT+ Rs.1750/KL road development cess		
31	Sikkim	17.30% VAT+ Rs.3000/KL cess	7% VAT + Rs.2500/KL cess		
32	Tamil Nadu	13% + Rs.11.52 per litre	11% + Rs.9.62 per litre		
33	Telangana	35.20% VAT	27% VAT		
34	Tripura	17.50% VAT+ 3% Tripura Road Development Cess	10.00% VAT+ 3% Tripura Road Development Cess		
35	Uttar Pradesh	19.36% or Rs 14.85/Litre whichever is higher	17.08% or Rs 10.41/Litre whichever is higher		
36	Uttarakhand	16.97% or Rs 13.14 Per Ltr whichever is greater	17.15% or Rs Rs 10.41 Per Ltr whichever is greater		
37	West Bengal	25% or Rs.13.12/litre whichever is higher as sales tax+ Rs.1000/KL cess – Rs 1000/KL sales tax rebate (20% Additional tax on VAT as irrecoverable tax)	17% or Rs.7.70/litre whichever is higher as sales tax + Rs 1000/KL cess – Rs 1000/KL sales tax rebate (20% Additional tax on VAT as irrecoverable tax)		

Note:

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

Table 8.18 : Contribution of petroleum sector to exchequer

							(₹/ Crore)
Particulars	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021 (P)	
1. Contribution to Central exchequer							
A.	Tax/ duties on crude oil & petroleum products						
	Cess on crude oil	14514	17741	14789	10676	2384	7062
	Royalty on crude oil / natural gas	4747	6062	5602	3590	1691	2570
	Customs duty	11171	16035	22927	13514	3682	3263
	NCCD on Crude Oil	968	1180	1130	1016	434	514
	Excise duty	229716	214369	223057	372970	131325	170894
	Service tax	1228	340	17	0	0	0
	IGST	9211	16479	13099	11594	4565	8703
	CGST	4488	7437	6831	6158	2246	4801
	Others	125	204	88	365	13	314
	Sub total (A)	276168	279847	287540	419884	146340	198121
B.	Dividend to Government/ income tax etc.						
	Corporate/ income tax	33599	38561	23134	21909	5896	11910
	Dividend income to Central Government	14575	15525	12270	10393	0	2133
	Dividend distribution tax	5981	6415	5462	0	0	0
	Profit petroleum on exploration of oil/ gas*	5839	7694	5909	2883	856	4630
	Sub total (B)	59994	68194	46775	35185	6752	18673
	Total contribution to Central exchequer (A+B)	336163	348041	334315	455069	153092	216794
2. Contribution to State exchequer							
C.	Tax/ duties on crude oil & petroleum products						
	Royalty on crude oil / natural gas	9370	13371	11882	7179	3173	6341
	Sales tax/ VAT	185850	201265	200493	202937	78168	121341
	SGST/UTGST	4974	7961	7345	6121	2256	4850
	Octroi/ duties (incl. electricity duty)	1663	685	716	706	314	414
	tax / others	4745	4114	405	329	144	169
	Sub total (C)	206601	227396	220841	217271	84055	133115
D.	Dividend to Government/ direct tax etc.						
	Dividend income to State Government	262	195	215	379	0	14
	Sub total (D)	262	195	215	379	0	14
	Total contribution to State exchequer (C+D)	206863	227591	221056	217650	84055	133130
Total contribution of petroleum sector to exchequer (1+2)		543026	575632	555370	672719	237148	349923

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

Source: Based on data provided by 16 oil & gas companies

Note: Totals may not tally due to round off

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

(₹/ Crore)							
Sl. no.	State/Union territory	Sales tax/VAT					
		2017-18	2018-19	2019-20	2020-21 (P)	Apr-Sep 2020	Apr-Sep 2021 (P)
1	Andaman & Nicobar Islands	51	92	94	74	32	45
2	Andhra Pradesh	9693	10784	10168	11014	4485	7216
3	Arunachal Pradesh	67	49	26	104	34	69
4	Assam	3108	3879	3641	3747	1532	1908
5	Bihar	5447	6584	6238	5854	1140	3131
6	Chandigarh	54	62	60	60	25	45
7	Chhattisgarh	3682	3986	3877	4107	1548	2183
8 & 9	Dadra and Nagar Haveli and Daman & Diu	42	2	2	1	1	1
10	Delhi	3944	4379	3833	2653	893	1628
11	Goa	657	694	754	682	232	459
12	Gujarat	15593	16229	15337	15141	5950	9927
13	Haryana	7647	8286	7648	7923	3289	5218
14	Himachal Pradesh	344	364	440	882	339	659
15	Jammu & Kashmir	1329	1449	1459	1444	608	1049
16	Jharkhand	3224	2796	3296	3619	1498	2174
17	Karnataka	13306	14417	15381	15476	6287	9413
18	Kerala	7300	7995	8074	6924	2127	3363
19	Ladakh			14	49	20	45
20	Lakshadweep	0	0	0	0	0	0
21	Madhya Pradesh	9380	9485	10720	11908	4607	6474
22	Maharashtra	25256	27191	26791	25430	9750	15993
23	Manipur	162	181	192	265	95	158
24	Meghalaya	0	0	0	0	0	0
25	Mizoram	55	88	91	84	39	68
26	Nagaland	86	97	116	148	50	94
27	Odisha	6870	5660	5495	6224	2220	3426
28	Puducherry	15	8	5	10	3	6
29	Punjab	6062	6576	5548	6291	2665	4224
30	Rajasthan	12094	12714	13319	15119	6677	8554
31	Sikkim	110	134	129	111	37	79
32	Tamil Nadu	15507	18143	18175	17063	6892	10048
33	Telangana	8776	10037	10045	8691	3202	6386
34	Tripura	205	277	384	445	177	202
35	Uttar Pradesh	17420	19168	20112	21956	8493	11914
36	Uttarakhand	1323	1595	1495	1524	618	902
37	West Bengal	7042	7866	7534	7916	2606	4277
	TOTAL	185850	201265	200493	202937	78168	121341

(P)- Provisional

Source: Based on data provided by 16 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	2017-18	2018-19	2019-20	2020-21 (P)	Apr-Sep 2020	Apr-Sep 2021 (P)
1	Andaman & Nicobar Islands	1	0	0	0	0	0
2	Andhra Pradesh	172	257	156	112	48	75
3	Arunachal Pradesh	1	6	0	0	0	0
4	Assam	116	559	475	332	134	208
5	Bihar	91	159	145	122	43	87
6	Chandigarh	1	1	1	1	0	1
7	Chhattisgarh	39	18	9	14	7	16
8 & 9	Dadra and Nagar Haveli and Daman & Diu	10	12	20	20	6	3
10	Delhi	114	52	51	37	17	23
11	Goa	5	3	9	11	3	9
12	Gujarat	1022	2060	1801	1566	464	1388
13	Haryana	379	659	685	529	190	471
14	Himachal Pradesh	15	3	4	6	2	4
15	Jammu & Kashmir	38	20	17	40	14	20
16	Jharkhand	57	13	16	12	5	5
17	Karnataka	329	356	269	260	92	179
18	Kerala	136	146	171	136	46	91
19	Ladakh			1	1	0	0
20	Lakshadweep	0	0	0	0	0	1
21	Madhya Pradesh	73	87	98	68	29	50
22	Maharashtra	797	1272	1126	932	369	766
23	Manipur	2	1	1	2	1	1
24	Meghalaya	0	1	0	0	0	0
25	Mizoram	1	1	1	0	0	0
26	Nagaland	1	1	1	0	0	0
27	Odisha	52	93	192	195	71	177
28	Puducherry	2	1	1	1	1	1
29	Punjab	157	116	128	43	19	162
30	Rajasthan	88	205	176	145	63	90
31	Sikkim	3	2	0	0	0	0
32	Tamil Nadu	517	642	562	439	173	308
33	Telangana	88	19	21	22	9	21
34	Tripura	6	20	17	38	30	8
35	Uttar Pradesh	362	616	619	603	251	366
36	Uttarakhand	20	6	7	8	3	4
37	West Bengal	272	545	553	418	163	313
Others							
1	Other territory (Offshore areas of India beyond 12 Nautical Miles)	8	11	11	7	3	5
TOTAL		4974	7961	7345	6121	2256	4850

(P)- Provisional

Source: Based on data provided by 16 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

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

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

(₹/ Crore)						
Sl. no.	2017-18	2018-19	2019-20	2020-21	Apr-Sep 2020	Apr-Sep 2021
PSU upstream/midstream companies						
ONGC	19945	26765	13464	11246	3254	22682
OIL	2668	2590	2584	1742	-10	1012
GAIL	4618	6026	6621	4890	1495	4393
Total	27231	35380	22668	17878	4740	28088
PSU downstream Oil Marketing Companies (OMCs)						
IOCL	21346	16894	1313	21836	8138	12301
BPCL	7919	7132	2683	19042	4324	4196
HPCL	6357	6029	2637	10664	5291	3719
Total	35622	30055	6634	51542	17753	20216
PSU stand alone refineries						
MRPL	2224	332	-2740	-240	-493	-329
CPCL	913	-213	-2078	238	562	119
NRL	2044	1968	1381	3036	1254	1635
Total	5181	2087	-3437	3033	1323	1426
PSU consultancy company						
EIL	378	370	430	260	141	150
Total	378	370	430	260	141	150
Private sector companies						
RIL	33612	35163	30903	31944	15699	17823
NEL	532	344	2518	467	*	*
Total	34144	35507	33421	32411	15699	17823

* details not provided.

Source: Published results/information provided by oil companies.

Note: Financials are on standalone basis

Table 8.22 : Financial details of oil companies

2020-21										
Particulars	IOCL	BPCL	HPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL	RIL
(₹ Crore)										
Sales turnover	510546	300830	269243	67891	8410	56529	50974	41814	18542	278940
Profit Before Interest and Tax (PBIT)	32810	23946	15162	18617	1222	6542	7	1652	4092	43423
Interest	3094	1328	915	2215	499	156	352	375	9	16211
Tax	7880	3576	3583	5156	(1019)	1496	(105)	1039	1047	(4732)
Profit After Tax (PAT)	21836	19042	10664	11246	1742	4890	(240)	238	3036	31944
Net worth	110500	54545	36186	204559	26211	46611	7528	1425	5596	474483
Borrowings (loan fund)	102327	26315	40009	15023	15718	5991	16225	9167	0	221698
Ratios										
PAT as % of turnover (net sales)	4.28%	6.33%	3.96%	16.57%	20.71%	8.65%	-0.47%	0.57%	16.37%	11.45%
Debt (loan fund) to equity ratio	0.93	0.48	1.11	0.07	0.60	0.13	2.16	6.43	0.00	0.47
Earnings Per Share (EPS)	23.78	96.44	70.57	8.94	16.06	10.85	(1.37)	15.95	41.27	49.66

Apr-Sep 2020										
Particulars	IOCL	BPCL	HPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL	RIL
(₹ Crore)										
Sales turnover	203600	116093	107225	29781	3789	25671	16086	15668	7673	116694
Profit Before Interest and Tax (PBIT)	12361	6824	7602	5822	217	1983	(607)	1094	1686	23034
Interest	1392	600	582	1048	249	77	146	204	3	10070
Tax	2830	1900	1729	1520	(23)	411	(260)	328	429	(2735)
Profit After Tax (PAT)	8138	4324	5291	3254	(10)	1495	(493)	562	1254	15699
Net worth	102245	37692	32799	195495	24095	43432	7269	1754	6552	417603
Borrowings (loan fund)	91505	27849	31963	12111	9418	5317	13156	8890	14	225153
Ratios										
PAT as % of turnover (net sales)	4.00%	3.72%	4.93%	10.93%	-0.25%	5.82%	-3.07%	3.59%	16.34%	13.45%
Debt (loan fund) to equity ratio	0.89	0.74	0.97	0.06	0.39	0.12	1.81	5.07	0.00	0.60
Earnings Per Share (EPS)	8.86	21.98	34.72	2.59	(0.09)	3.32	(2.81)	37.75	17.05	24.39

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

Table 8.23 : Total subsidy/under-recovery on petroleum products & natural gas

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

(P)- Provisional

*on payment basis.

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

Table 8.24 : Quantity and value of Indian crude oil imports

Year	Quantity (MMT)	Quantity (Million Bbl)	\$ Million	Rs. Crore	\$/bbl (approx)
2017-18	220.4	1615.5	87,803	5,66,450	54.3
2018-19	226.5	1660.2	111,915	7,83,183	67.4
2019-20	227.0	1663.9	101,376	7,17,001	60.9
2020-21	196.5	1440.3	62,248	4,59,779	43.2

Conversion factor taken 1 MT = 7.33 bbl



Analysis • Knowledge • Information

Chapter-9 Miscellaneous



Table 9.1 : Average international Calorific Values of different fuels

A.	Oil products	M Cals/tonne or K Cal/Kg
	NGL *	12135
	Kerosene	10638
	Motor Gasoline	11135
	Fuel Oil	10440
B.	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 *NGL: Natural gas Liquids

Conversion factors

Table 9.2 : Weight to volume conversion

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

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

Table 9.3 : Volume conversion

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

Table 9.4 : Contents of LPG & Natural Gas

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

Table 9.5 : Natural Gas Conversions

1 SCM (Standard Cubic Meter)	= 1 cubic metre @ 1 atmosphere pressure and 15.56° C	
1 Cubic Metre	= 35.31 Cubic feet	
1 BCM(Billion Cubic Metre) / Year of gas (consumption or production)=	2.74 MMSCMD	365 days a year
1 TCF (Trillion Cubic Feet) of Gas Reserve	= 3.88 MMSCMD	100% recoverable for 20 years @ 365 days / annum)
1 MMTPA of LNG	= 3.60 MMSCMD	Molecular weight of 18 @ 365 days/annum)
1 MT of LNG	= 1314 SCM	Molecular weight of 18
Gross Calorific Value (GCV)	= 10000 Kcal/ SCM	
Net Calorific Value (NCV)	= 90% of GCV	
1 Million BTU (MMBTU)	= 25.2 SCM	@10000 Kcal/SCM; 1 MMBTU= 252,000 Kcal)
Specific Gravity of Gas	= 0.62	Molecular weight of dry air=28.964 gm/mole)
Density of Gas	= 0.76 Kg/SCM	Molecular weight of gas 18 gm/mol
Gas required for 1 MW of Power generation	= 4541 SCM per day	Station Heat Rate (SHR);~1720 Kcal/Kwh-NCV (50% Thermal Efficiency); Natural Gas GCV-@10000Kcal/SCM
Power Generation from 1 MMSCMD Gas	= 220 MWH	Station Heat Rate (SHR);~1720 Kcal/Kwh-NCV (50% Thermal Efficiency); Natural Gas GCV-@10000Kcal/SCM

Source : GAIL (India) Ltd.

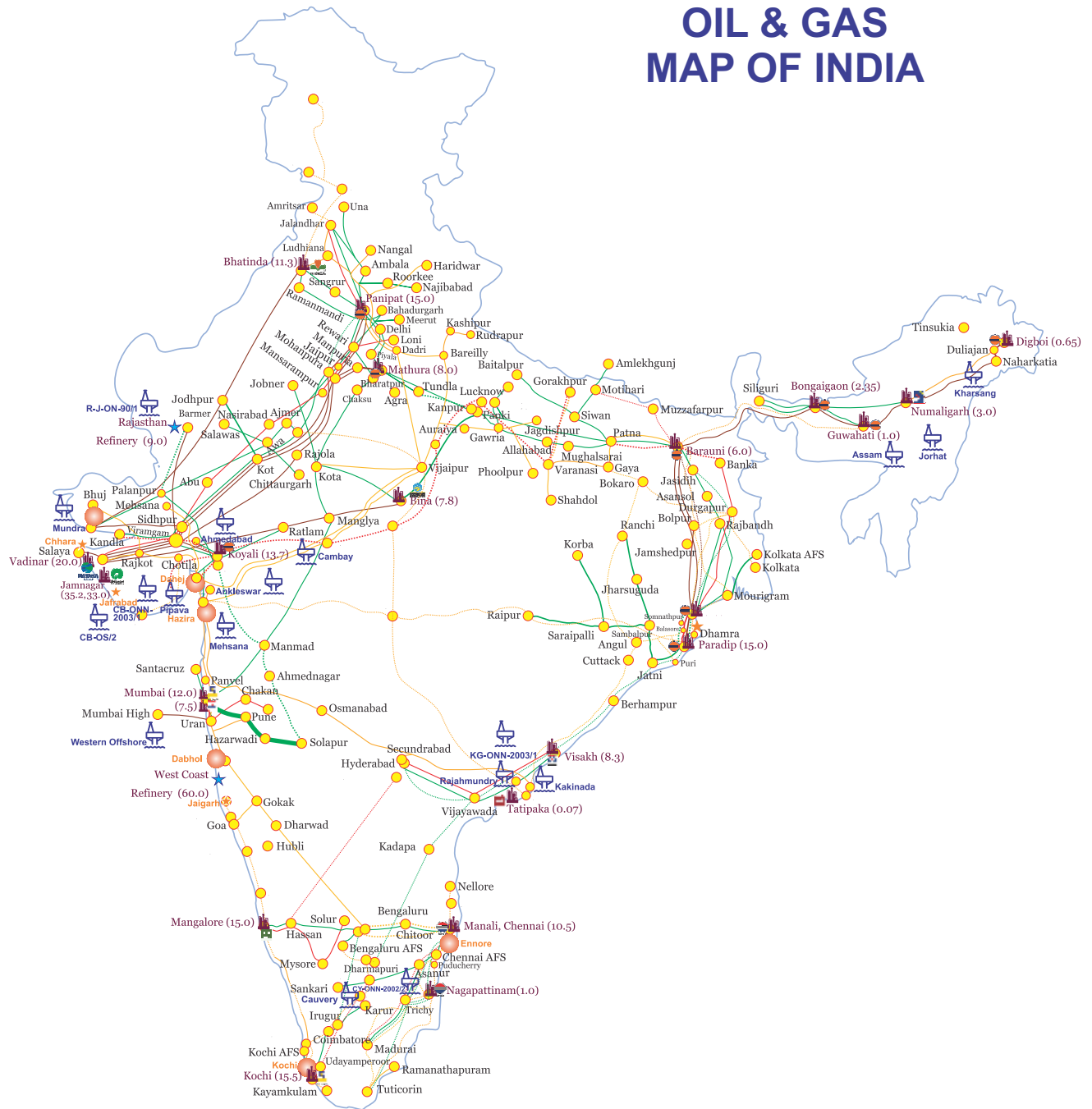
Table 9.6 : Major end use of petroleum products

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

List of Abbreviations

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

OIL & GAS MAP OF INDIA



Designed & Printed by : www.censer.in (Ph) 9810213218

LEGENDS

Refineries

Refineries (Capacity in MMTPA)

Producing Fields

Major Producing Fields

LNG Terminals

- Dabhol, Dahej, Hazira, Kochi, Mundra, Ennore
- (Upcoming Terminals) Dhamra, Jafrabad, Jaigarh, Chhara

LEGENDS

Pipelines Network

- Crude Oil Pipeline
- Ongoing Crude Oil Pipeline
- Product Pipeline
- Ongoing Product Pipeline
- LPG Pipeline
- Ongoing LPG Pipeline
- Gas Pipeline
- Ongoing Gas Pipeline



Petroleum Planning & Analysis Cell

(Ministry of Petroleum & Natural Gas, Government of India)

SCOPE Complex, 2nd Floor Core-8, Lodhi Road, New Delhi-110003

Tel.: 011-24306191/92, 011-24361314, Fax : 011-24361253 www.ppac.gov.in