



INDIA'S OIL & GAS READY RECKONER

Oil Industry Information
at a Glance



July 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:

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

Disclaimer

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

Preface

India is the third largest energy consumer in the world and its energy demand is poised to grow at an average rate of more than 3% till 2045 as compared to less than 1% growth rate for the world's primary energy demand growth during the same period. India's energy demand is expected to reach pre pandemic level during 2021-22 itself and will continue its high growth trajectory for another more than two decades.

The world is seeing greater thrust towards the green and clean energy. The Energy Policy of India is based on the premise that access to energy should be affordable and reliable as enunciated by the Hon'ble Prime Minister in his address during the inaugural event of 4th India Energy Forum CERAWEEK in October 2020. The Hon'ble Prime Minister said that like the seven horses driving the chariot of the Sun God, India's energy map has seven key drivers:

- Accelerating our efforts to move towards a gas-based economy
- Cleaner use of fossil fuels particularly petroleum and coal
- Greater reliance on domestic fuels to drive bio-fuels
- Achieving the renewables target of 450 GW by 2030
- Increasing the contribution of electricity to de-carbonise mobility
- Moving into the emerging fuels including hydrogen
- Digital innovation across all the energy systems

All the stakeholders in the Energy Sector including the PPAC are taking appropriate steps for attaining the energy justice with smaller carbon footprints on the back of these pillars.

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. It is a 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.

During 2020-21, PPAC has also been involved in various studies like All India study on sectoral demand of petrol & diesel, Energy Demand Projection Model (EDPM) for assessing consumption of all POL products during 2020-2045 with 5-year intervals, study on allocation of domestic crude to PSU refineries, recommendation of measures for continued viability of Natural Gas production from nomination fields in the context of 2014 guidelines, review of definition of Indian Basket of Crude and reassessment of Strategies for Import reduction in the Energy Sector.

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 policy making.

Publication entitled 'Ready Reckoner' is brought out twice a year and our endeavour is to deliver accurate and timely information to all stakeholders. This July 2021 edition of PPAC's biannual Ready Reckoner contains the latest data/information for the financial year 2020-21 and historical time series for stakeholders to access the same on a single platform. The Ready Reckoner is also published on PPAC's website (<http://ppac.gov.in>) and on our mobile app - PPACE which is available on 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.

The Ready Reckoner this year has few additional details like the average import prices of LNG and crude oil as well as a separate table on the State wise CGD sales profile segregated into CNG, PNG, commercial etc. 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.

New Delhi
July 29, 2021


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Petroleum Planning & Analysis Cell

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

VISION & MISSION



Vision

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

Mission

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

Objectives

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

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Chapter 1

General



Table 1.1 : Selected indicators of the Indian economy
General

Sl. no.	Particulars	Source	Unit/ Base	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
1	Population [®]	World Bank	Billion	1.32	1.34	1.35	1.37	1.38
2	GDP at constant (2011-12 Prices)	MoC&I	Growth %	8.3	6.8 3 rd RE	6.5 2 nd RE	4.0 1 st RE	-7.3 PE
3	Agricultural production (foodgrains)	MoA	Million tonne	275.11	285.0	285.2	297.5	305.4 3 rd AE
			Growth %	9.4	3.6	0.1	4.3	2.7
4	Index of Industrial Production (Base: 2011-12)	MoSPI	Growth %	4.6	4.4	3.8	-0.8	-8.4
5	Imports	MoC&I	\$ Billion	384.4	465.6	514.1	474.7	389.2
6	Exports	MoC&I	\$ Billion	275.9	303.5	330.1	313.4	290.6
7	Trade balance	MoC&I	\$ Billion	-108.5	-162.1	-184.0	-161.3	-98.6
8	Wholesale Price Index (all commodities) (average)	MoC&I	2011-12 = 100	111.6	114.9	119.8	121.8	123.4
9	All India Consumer Price Index (average):							
	i) Industrial workers	Labour Bureau, Govt. of India	*2001=100 *2016=100	275.9*	284.4*	299.9*	322.5*	119.0*
	ii) Agricultural labourers		1986-87=100	869.8	888.9	907.3	979.6	1033.7
	iii) Rural labourers		1986-87=100	875.0	895.1	915.1	986.0	1039.9
10	Foreign exchange reserves- Total [§]	RBI	\$ Billion	370.0	424.4	411.9	475.6	579.3
11	Outstanding external liabilities (as of end of financial year)	MOF	₹ Crore	2,28,259	2,50,090	2,69,961	2,99,250	3,82,829 (RE)
12	Outstanding internal debt (as of end of financial year)	MOF	₹ Crore	72,07,503	79,84,787	88,13,254	99,47,402	1,17,39,338 (RE)
13	Centrally Sponsored Schemes & other transfers	MOF	₹ Crore	3,91,496	4,58,259	4,77,967	6,31,969	7,61,408 (RE)
14	Gross fiscal deficit	MOF	%	3.5	3.5	3.4	4.6	9.5 (RE)

Note: [®]Population figures have been taken from World Bank International Data Base for 2020; [§]Avg. of September 2020-Mar 21 as base year changed to 2016 from 2001 w.e.f. 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 26, 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.	Particulars	Source	Unit/ Base	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
1	Crude oil production in India	ONGC/OIL/DGH	MMT	36.0	35.7	34.2	32.2	30.5
2	Consumption of petroleum products in India	OMCs/PPAC	MMT	194.6	206.2	213.2	214.1	194.6
3	Petroleum products production in India	Oil Cos	MMT	243.5	254.3	262.4	262.9	233.4
4	Imports & exports							
	Crude oil imports	Oil Cos	\$ Billion	70.2	87.8	111.9	101.4	62.7
	Petroleum products imports	Oil Cos & DGCIS	\$ Billion	10.6	13.6	16.3	17.7	14.2
	Total petroleum imports (crude oil + petroleum products)	Oil Cos & DGCIS	\$ Billion	80.8	101.4	128.3	119.1	76.9
	Petroleum products exports	Oil Cos	\$ Billion	29.0	34.9	38.2	35.8	21.4
5	Gross petroleum imports as % of India's gross imports in value terms	MOC&I/PPAC	%	21.0	21.8	24.9	25.1	19.8
6	Gross petroleum exports as % of India's gross exports in value terms	MOC&I/PPAC	%	10.5	11.5	11.6	11.4	7.4
7	Import dependency (based on consumption)	PPAC	%	81.7	82.9	83.8	85.0	84.4

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

Natural Gas

Sl. no.	Particulars	Source	Unit/ Base	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
1	Gross Production	ONGC/OIL/DGH	MMSCM	31,897	32,649	32,875	31,184	28,672
2	Net Production (net of flare and loss)	ONGC/OIL/DGH	MMSCM	30,848	31,731	32,058	30,257	27,784
3	LNG Import	LNG importing Cos, DGCIS	MMSCM	24,849	27,439	28,740	33,887	32,861
4	Total Consumption including internal use (Net Production+ LNG import)		MMSCM	55,697	59,170	60,798	64,144	60,645
5	Import dependency (based on consumption)	PPAC	%	44.6	46.4	47.3	52.8	54.2

Note : MMSCM : Million Standard Cubic Meter

Table 1.2 : Global 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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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 of fuel	%	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).

Since approximate conversion factors used to convert Exajoules to Mtoe, consumption of Oil may not exactly match with Table 2.2. **Mtoe**: Million tonnes of oil equivalent, **Toe**: Tonnes of oil equivalent Figures are for calendar year.



Analysis • Knowledge • Information

Chapter 2

Exploration & Crude Oil Production



Table 2.1 : World top 30 crude oil proved reserves countries

Sl. 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	South Sudan	0.5	3.5	56.4
25	Egypt	0.4	3.1	14.0
26	Republic of Congo	0.4	2.9	25.7
27	Yemen	0.4	3.0	86.7
28	Malaysia	0.4	2.7	12.5
29	Argentina	0.3	2.5	11.3
30	Syria	0.3	2.5	158.8
	Subtotal	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

Sl. 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

Notes: *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

Sl. no.	Country	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)					
Sl.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	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
PSU companies					
ONGC	20.9	20.8	19.6	19.2	19.1
OIL	3.3	3.4	3.3	3.1	2.9
PSU total	24.1	24.2	22.9	22.4	22.0
PSC total	10.4	9.9	9.6	8.2	7.10
Total crude oil	34.5	34.0	32.5	30.5	29.1
Condensate	1.5	1.6	1.7	1.6	1.4
Total (crude oil + condensate)	36.0	35.7	34.2	32.2	30.5
Total (crude oil + condensate) (crore barrels)	26.4	26.2	25.1	23.6	22.4

Source: Oil companies and DGH

Table 2.6 : Self sufficiency in petroleum products

(Million metric tonne)					
Particulars	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
i) Indigenous crude oil processing	33.5	32.8	31.7	29.3	28.0
a) Products from indigeneous crude	31.3	30.6	29.6	27.3	26.1
b) Products from fractionators	4.3	4.6	4.9	4.8	4.2
ii) Total production from indigenous crude and condensate (a+b)	35.6	35.2	34.5	32.1	30.3
iii) Total domestic consumption	194.6	206.2	213.2	214.1	194.6
Percentage of self sufficiency (ii/iii)	18.3%	17.1%	16.2%	15.0%	15.6%

Source: Oil companies (P): Provisional

Note:

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

Table 2.7 (A) : Status of blocks under NELP (As on 01.04.2021)

Round	Launch year	Offered	Awarded				Relinquished/Proposed for Relinquishment				Operational			
			1999	Shallow water	Onland	Total	Deep water	Shallow water	Onland	Total	Deep water	Shallow water	Onland	Total
NELP-I	1999	48	7	16	1	24	5	15	1	21	2	1		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	0	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	17	32	0	3	6	9
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	6	9	0	1	9	10
TOTAL		360	81	59	114	254	79	48	82	209	2	11	32	45

Source: DGH

Table 2.7(B): Status of blocks under OALP round of HELP and DSF Rounds (As on 01.04.2021)

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			7	7	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	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
Total domestic production (MMTOE)	67.9	68.3	67.1	63.4	59.2
Overseas production (MMTOE)	17.6	22.7	24.7	24.5	21.9
Overseas production as percentage of domestic production	25.9	33.2	36.8	38.7	37.0

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	33	Nos.
Exploration initiated*	10517	Sq. KM
Production of CBM gas April-March 2021 (P)	642.4	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 01.04.2021)

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



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	3822.8
	of which: OECD	1757.7
	Non-OECD	2065.1
	European Union	379.9

Source: BP Statistical Review of World Energy, July 2021
 Figures are for calendar year.

Table 3.4 : Natural gas at a glance

	(MMSCM)				
	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
Gross production	31897	32649	32875	31184	28672
Net Production (net of flare and loss)	30848	31731	32058	30257	27784
LNG import	24849	27439	28740	33887	32861
Total Consumption including internal use (Net Production+ LNG import)	55697	59170	60798	64144	60645
Total consumption (in BCM)	55.7	59.2	60.8	64.1	60.6

Table 3.5 : Natural gas production

		(MMSCM)				
		2016-17	2017-18	2018-19	2019-20	2020-21 (P)
ONGC						
A)	Gross Production	22088	23429	24677	23746	21872
B)	Flared	530	450	449	520	458
C)	Internal Use	4499	4427	4629	4697	4432
D)	Loss	0	0	0	0	0
D) =A-B-C	Net Production for Sale	17059	18553	19599	18529	16982
Oil India Limited						
A)	Gross Production	2937	2881	2722	2668	2480
B)	Flared	117	114	122	155	164
C)	Internal Use	405	398	382	377	371
D)	Loss	2	5	12	13	14
D) =A-B-C	Net Production for Sale	2412	2365	2207	2123	1930
PSC/JVs fields						
A)	Gross Production	6872	6338	5477	4770	4321
B)	Flared	330	261	153	185	199
C)	Internal Use	952	981	1007	978	925
D)	Loss	70	89	81	54	53
E) =A-B-C-D	Net Production for Sale	5520	5007	4235	3552	3143
Grand Total						
A)	Gross Production	31897	32649	32875	31184	28672
B)	Flared	977	824	724	860	822
C)	Internal Use	5856	5806	6017	6052	5729
D)	Loss	72	94	93	67	67
E) =A-B-C-D	Net Production for Sale	24992	25925	26041	24205	22055

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

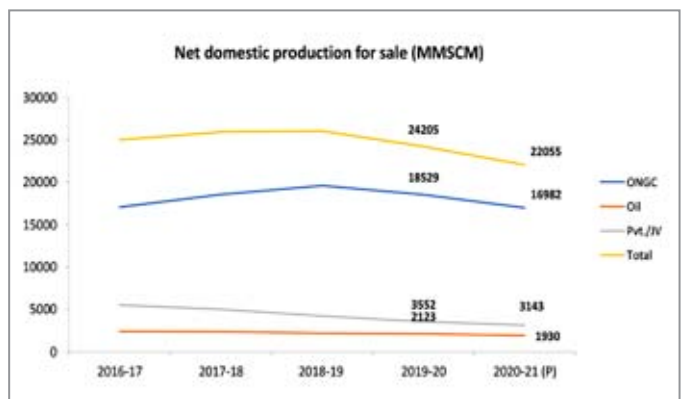
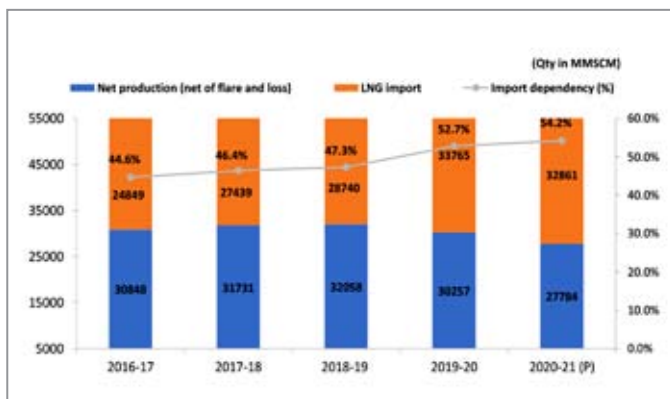


Table 3.6 : PNG data as on 31.03.2021

State/Union Territory	Geographical Area/ CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
Andhra Pradesh	Kakinada	Bhagyanagar Gas Limited	58087	128	2
	West Godavari District	Godavari Gas Private Limited	50762	12	1
	East Godavari District (EAAA)	Godavari Gas Private Limited	49470	5	0
	Vijaywada	Bhagyanagar Gas Limited	43124	53	0
	Krishna District (EAAA)	Megha Engineering & Infrastructure Limited	10160	90	15
		Total	2,11,603	288	18
Andhra Pradesh, Karnataka & Tamil Nadu	Chittoor, Kolar and Vellore Districts	AGP City Gas Private Limited	0	0	1
		Total	0	0	1
Assam	Upper Assam	Assam Gas Company Limited	36406	1179	404
	Cachar, Hailakandi & Karimganj Districts	Purba Bharati Gas Private Limited	285	0	0
		Total	36,691	1,179	404
Bihar	Patna District	GAIL (India) Limited	30336	11	0
		Total	30,336	11	0
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	Chandigarh	Indian-Oil Adani Gas Private Limited	111737	37	11
		Total	1,11,737	37	11
Dadra & Nagar Haveli	UT of Dadra & Nagar Haveli	Gujarat Gas Limited	7458	54	54
		Total	7,458	54	54
Daman & Diu (UT)	UT of Daman	Indian-Oil Adani Gas Private Limited	4817	30	29
		Total	4,817	30	29
Goa	North Goa District	Goa Natural Gas Private Limited	5963	2	9
		Total	5,963	2	9
Gujarat	Surat, Bharuch, Ankleshwar	Gujarat Gas Limited	684828	9187	1010
	Ahmedabad City and Daskroi Area	Adani Gas Limited	420686	2858	854
	Rajkot	Gujarat Gas Limited	258764	1041	1424
	Gandhinagar Mehsana Sabarkantha	Sabarmati Gas Limited	208551	909	366
	Vadodara	Vadodara Gas Limited	178119	2635	7
	Gandhinagar	Gujarat Gas Limited	127460	541	30
	Valsad	Gujarat Gas Limited	110793	364	689
	Navsari	Gujarat Gas Limited	105580	261	52
	Nadiad	Gujarat Gas Limited	64646	391	20
	Anand District (EAAA)	Gujarat Gas Limited	37684	243	17
	Bhavnagar	Gujarat Gas Limited	37070	293	69
	Hazira	Gujarat Gas Limited	36320	132	17
	Anand area including Kanjari & Vadtal Villages (in Kheda District)	Charotar Gas Sahakari Mandali Limited	34867	674	142
	Banaskantha District	IRM Energy Private Limited	25900	107	11
	Surendranagar	Gujarat Gas Limited	25372	238	362
	Jamnagar	Gujarat Gas Limited	23206	171	108
	Panchmahal District	Gujarat Gas Limited	16666	94	84
	Patan District	Sabarmati Gas Limited	13244	25	6
	Amreli District	Gujarat Gas Limited	5318	30	1
	Dahod District	Gujarat Gas Limited	2983	10	21

Table 3.6 : Continued

State/Union Territory	Geographical Area/ CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
Gujarat	Kutch (West)	Gujarat Gas Limited	1916	25	2
	Dahej Vagra Taluka	Gujarat Gas Limited	1113	13	31
	Vadodara	Adani Gas Limited	616	1	88
	Narmada (Rajpipla) District	Gujarat Gas Limited	53	0	0
		Total	24,21,755	20,243	5,411
Haryana	Faridabad	Adani Gas Limited	62536	203	392
	Sonipat	GAIL Gas Limited	25750	42	172
	Gurugram	Haryana City Gas Distribution Limited	22694	142	167
	Panipat District	Indian-Oil Adani Gas Private Limited	16939	11	25
	Rewari District	Indraprastha Gas Limited	10477	27	73
	Kaithal District	Indraprastha Gas Limited	10426	0	0
	Karnal District	Indraprastha Gas Limited	9769	5	9
	Ambala & Kurukshetra Districts	HPOIL Gas Private Limited	6575	0	0
	Yamunanagar District	Bharat Petroleum Corporation Limited	6150	0	0
	Nuh and Palwal Distircts	Adani Gas Limited	1476	4	37
	Rohtak District	Bharat Petroleum Corporation Limited	1424	0	0
	Jhajjar District	Haryana City Gas (KCE) Private Limited	24	0	0
Gurugram	Indraprastha Gas Limited	15814	87	20	
		Total	1,90,054	521	895
Himachal Pradesh	Bilaspur, Hamirpur & Una Districts	Bharat Gas Resources Limited	1000	0	0
		Total	1,000	0	0
Jharkhand	Ranchi District	GAIL (India) Limited	18010	0	0
	East Singhbhum District	GAIL (India) Limited	15078	0	0
	Giridih & Dhanbad Districts	GAIL Gas Limited	5948	0	0
	Seraikela-Kharsawan District	GAIL Gas Limited	2950	0	0
		Total	41,986	0	0
Karnataka	Bengaluru Rural and Urban Districts	GAIL Gas Limited	196086	249	141
	Tumkur District	Megha Engineering & Infrastructure Limited	15724	97	35
	Dharwad District	Indian-Oil Adani Gas Private Limited	13387	5	0
	Belgaum District	Megha Engineering & Infrastructure Limited	12791	65	22
	Dakshina Kannada District*	GAIL Gas Limited	7848	0	0
	Ramanagara District	Maharashtra Natural Gas Limited	1203	0	1
		Total	2,47,039	416	199
Kerala	Ernakulam District	Indian-Oil Adani Gas Private Limited	42429	12	9
	Alapuzzha, Kollam and Thiruvananthapuram Districts	AGP City Gas Private Limited	0	0	3
		Total	42,429	12	12
Madhya Pradesh	Indore (including Ujjain City)	Aavantika Gas Limited	62873	94	236
	Gwalior	Aavantika Gas Limited	24277	44	8
	Dewas	GAIL Gas Limited	13257	28	42
	Satna & Shandol Districts	Bharat Gas Resources Limited	1580	0	0
	Rewa District	Indian Oil Corporation Limited	810	0	0
	Dhar District	Naveriya Gas Private Limited	615	14	0
	Guna District	Indian Oil Corporation Limited	506	0	0

Table 3.6 : Continued

State/Union Territory	Geographical Area/ CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
Madhya Pradesh	Raisen, Shajapur and Sehore Districts	GAIL Gas Limited	44	0	0
	Bhopal & Rajgarh Districts	Think Gas Bhopal Private Limited	1	1	1
		Total	1,03,963	181	287
Maharashtra	Mumbai & Greater Mumbai	Mahanagar Gas Limited	938747	3167	15
	Thane urban and adjoining Municipalities	Mahanagar Gas Limited	623804	943	67
	Pune City including Pimpri - Chichwad & adjoining contiguous areas Hinjewadi, Chakan, Talegaon	Maharashtra Natural Gas Limited	358058	377	225
	Raigarh District (EAAA)	Mahanagar Gas Limited	40288	0	1
	Kolhapur District	HPOIL Gas Private Limited	3037	0	0
	Pune District (EAAA)	Torrent Gas Pune Limited	1488	0	4
	Sindhudurg District	Maharashtra Natural Gas Limited	1438	0	0
	Ratnagiri District	Unison Enviro Private Limited	1193	1	28
	Palghar District & Thane Rural	Gujarat Gas Limited	468	14	54
	Sangli & Satara Districts	Bharat Gas Resources Limited	455	0	0
		Total	19,68,976	4,502	394
Maharashtra & Gujarat	Valsad (EAAA), Dhule & Nashik Districts	Maharashtra Natural Gas Limited	25023	0	0
		Total	25,023	0	0
National Capital Territory of Delhi (UT)	National Capital Territory of Delhi	Indraprastha Gas Limited	1065662	2683	1589
		Total	10,65,662	2,683	1,589
Odisha	Khordha District	GAIL (India) Limited	17152	0	0
	Cuttack District	GAIL (India) Limited	8009	0	0
	Ganjam, Nayagarh & Puri Districts	GAIL Gas Limited	873	0	0
	Sundargarh & Jharsuguda Districts	GAIL Gas Limited	756	0	0
		Total	26,790	0	0
Punjab	Rupnagar District	Bharat Petroleum Corporation Limited	4950	0	0
	Amritsar District	Gujarat Gas Limited	3497	36	3
	Fatehgarh Sahib District	IRM Energy Private Limited	1432	18	48
	Bhatinda District	Gujarat Gas Limited	970	0	0
	Ludhiana District (EAAA), Barnala & Moga Districts	Think Gas Ludhiana Private Limited	110	0	0
	SAS Nagar District (EAAA), Patiala & Sangrur Districts	Torrent Gas Private Limited	22	0	0
		Total	10,981	54	51
Rajasthan	Ajmer, Pali and Rajsamand Districts	Indraprastha Gas Limited	37625	0	0
	Kota	Rajasthan State Gas Limited	16458	17	15
	Bhiwadi (in Alwar District)	Haryana City Gas Distribution (Bhiwadi) Limited	2087	0	53
	Barmer, Jaisalmer & Jodhpur Districts	AGP CGD India Private Limited	37	1	2
	Kota District (EAAA), Baran & Chittorgarh (Only Rawatbhata Taluka) Districts	Torrent Gas Private Limited	2	0	0
		Total	56,209	18	70
Telangana	Hyderabad	Bhagyanagar Gas Limited	143248	28	45
	Medak, Siddipet & Sangareddy Districts	Torrent Gas Private Limited	0	0	4
		Total	1,43,248	28	49

Table 3.6 : Continued

State/Union Territory	Geographical Area/ CGD Networks	Authorized CGD Entity	PNG connections		
			Domestic	Commercial	Industrial
Tripura	Agartala	Tripura Natural Gas Company Limited	42541	491	62
	West Tripura (EAAA) District	Tripura Natural Gas Company Limited	6566	0	0
		Total	49,107	491	62
Uttar Pradesh	Gautam Budh Nagar District	Indraprastha Gas Limited	258734	607	890
	Ghaziabad & Hapur Districts	Indraprastha Gas Limited	244682	304	390
	Kanpur	Central UP Gas Limited	84044	231	81
	Agra	Green Gas Limited	79094	61	17
	Lucknow	Green Gas Limited	69870	57	11
	Meerut	GAIL Gas Limited	49723	44	62
	Varanasi District	GAIL (India) Limited	36405	30	1
	Allahabad	Indian-Oil Adani Gas Private Limited	36142	30	6
	Bareilly	Central UP Gas Limited	34532	129	23
	Meerut District (EAAA), Muzaffarnagar & Shamli Districts	Indraprastha Gas Limited	16525	6	0
	Kanpur (EAAA) District, Fatehpur and Hamirpur Districts	Indraprastha Gas Limited	14404	0	0
	Moradabad	Torrent Gas Moradabad Limited	9346	13	85
	Saharanpur District	Bharat Petroleum Corporation Limited	8902	0	0
	Khurja	Adani Gas Limited	7080	4	232
	Mathura	Sanwariya Gas Limited	4589	39	78
	Amethi, Pratapgarh & Raebareli Districts	Bharat Gas Resources Limited	1824	0	0
	Mirzapur, Chandauli and Sonbhadra Districts	GAIL Gas Limited	1308	0	0
	Jhansi	Central UP Gas Limited	961	0	0
	Faizabad & Sultanpur Districts	Green Gas Limited	841	0	0
	Moradabad (EAAA) District	Torrent Gas Private Limited	674	0	1
Auraiya, Kanpur Dehat & Etawah Districts	Torrent Gas Private Limited	505	0	0	
Allahabad District (EAAA), Bhadohi & Kaushambi Districts	Indian-Oil Adani Gas Private Limited	348	0	0	
Gorakhpur, Sant Kabir Nagar & Kushinagar Districts	Torrent Gas Private Limited	40	0	0	
		Total	9,60,573	1,555	1,877
Uttar Pradesh & Rajasthan	Firozabad (Taj Trapezium Zone)	GAIL Gas Limited	18000	1	341
		Total	18,000	1	341
Uttarakhand	Haridwar District	Haridwar Natrural Gas Private Limited	20946	0	0
	Udham Singh Nagar District	Indian-Oil Adani Gas Private Limited	10196	33	40
	Dehradun District	GAIL Gas Limited	7845	0	0
		Total	38,987	33	40
		Grand Total	78,20,387	32,339	11,803

Sources : PNGRB

Note :

1. All the GAs where PNG connections/CNG Stations 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

Table 3.7: CNG sales in India

		(Sales in TMT) ^a					
State (s) / Union Territory	Company name	No. of companies (as on 01.04.2021)	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
Andhra Pradesh*	Bhagyanagar Gas Limited, Godavari Gas Private Limited, Megha Engineering & Infrastructure Limited	3	29	32	31	21	13
Assam	Assam Gas Company Limited	1	0	0	0	0.02	0.05
Bihar	GAIL (India) Limited, Think Gas Begusarai Pvt Limited	2	0	0	0	2	5
Chandigarh, Haryana, Punjab & Himachal Pradesh	Indian Oil-Adani Gas Pvt. Ltd.	1	0	5	15	21	14
Dadra & Nagar Haveli**	Gujarat Gas Limited	1	0	0	0	3	2
Daman and Diu	Indian Oil-Adani Gas Pvt. Ltd.	1	0	1	2	2	1.37
Delhi NCT***	Indraprastha Gas Ltd .	1	804	1016	1144	1033	785
Goa	Goa Natural Gas Private Limited, Indian Oil-Adani Gas Private Limited	2	0	0	0	0.03	0.15
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	546	612	662	745	649
Gujarat & UT of Daman and Diu	IRM Energy Private Limited	1	0	0	0	0.07	1.36
Haryana	Adani Gas Limited, GAIL Gas Limited, Haryana City Gas Distribution Limited, HPOIL Gas Private Limited, IndianOil-Adani Gas Private Limited, Indraprastha Gas Limited, Hindustan Petroleum Corporation Limited, Haryana City Gas (KCE) Private Limited, Haryana City Gas Distribution (Bhiwadi) Limited, Bharat Gas Resources Limited	10	109	144	179	197	173
Haryana & Himachal Pradesh	Indian Oil-Adani Gas Private Limited	1	0	0	0	0	0.08
Haryana & Punjab	Gujarat Gas Limited	1	0	0	0	0	1.4
Jharkhand	GAIL (India) Limited	1	0	0	0	0.34	1.2
Karnataka	AGP City Gas Private Limited, GAIL Gas Limited, IndianOil-Adani Gas Private Limited, Maharashtra Natural Gas Limited, Megha Engineering & Infrastructure Limited, Unison Enviro Private Limited	6	0	0	0.3	1	3
Kerala	AGP City Gas Private Limited, Indian Oil-Adani Gas Private Limited	1	0	0	1	6	4
Madhya Pradesh	Aavantika Gas Limited, GAIL Gas Limited, Gujarat Gas Limited, Naveriya Gas Private Limited, Rajasthan State Gas Limited, Think Gas Bhopal Private Limited, Indian Oil Corporation Limited (Vijaypur CNG Station)	7	22	25	31	34	24
Madhya Pradesh & Rajasthan	Gujarat Gas Limited	1	0	0	0	0	0.26
Maharashtra	Bharat Gas Resources Limited, Gujarat Gas Limited, HPOIL Gas Private Limited, Mahanagar Gas Limited, Maharashtra Natural Gas Limited, Torrent Gas Pune Limited, Unison Enviro Private Limited	7	593	630	702	738	504
Maharashtra & Gujarat	Maharashtra Natural Gas Limited	1	0	0	0	0	1.4
Odisha	GAIL (India) Limited, GAIL Gas Limited	2	0	0	1	3	2
Puducherry (UT) & Tamil Nadu	Torrent Gas Private Limited	1	0	0	0	0	0.001
Punjab	Bharat Gas Resources Limited, Gujarat Gas Limited, Gujarat State Petronet Limited, IRM Energy Private Limited, Think Gas Ludhiana Private Limited, Torrent Gas Private Limited	6	0	0	1	7	14
Rajasthan	Adani Total Gas Limited, AGP City Gas Private Limited, Dholpur CGD Private Limited, Gujarat Gas Limited, Rajasthan State Gas Limited, Torrent Gas Private Limited	6	4	5	7	9	15
Tamil Nadu	AGP City Gas Private Limited	1	0	0	0	0	0.004
Telangana*	Bhagyanagar Gas Limited, Torrent Gas Private Limited	2	0	0	0	13	9
Tripura	Tripura Natural Gas Company Limited	1	12	13	15	16	18
Uttar Pradesh	Adani Gas Limited, Central UP Gas Limited, GAIL (India) Limited, GAIL Gas Limited, Green Gas Limited, IndianOil-Adani Gas Private Limited, Indraprastha Gas Limited, Sanwariya Gas, Torrent Gas Private Limited, Bagpat Green Energy Pvt. Ltd.	12	245	153	282	392	339
Uttar Pradesh & Uttarakhand	Hindustan Petroleum Corporation Limited	1	0	0	0	0	0.359
Uttar Pradesh & Madhya Pradesh	Adani Gas Limited	1	0	0	0	0.001	0.402
Uttarakhand	GAIL GAs Limited, Haridwar Natural Gas Private Limited, IndianOil-Adani Gas Private Limited,	3	0	0	0.1	1	5
West Bengal	Bengal Gas Company Limited, Great Eastern Energy Corporation Ltd., Indian Oil-Adani Gas Private Limited, Hindustan Petroleum Corporation Limited	4	2	2	3	2	2
Total			2365	2638	3076	3247	2589

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 3.8: CNG stations as on 31.03.2021(P)

State/Union Territory	Geographical Area/ CGD Networks	Authorized CGD Entity	CNG Stations
Andhra Pradesh	Kakinada	Bhagyanagar Gas Limited	12
	West Godavari District	Godavari Gas Private Limited	13
	East Godavari District (EAAA)	Godavari Gas Private Limited	15
	Vijaywada	Bhagyanagar Gas Limited	30
	Krishna District (EAAA)	Megha Engineering & Infrastructure Limited	15
Andhra Pradesh Total			85
Assam	Upper Assam	Assam Gas Company Limited	1
Assam Total			1
Bihar	Patna District	GAIL (India) Limited	9
	Begusarai District	Think Gas Begusarai Private Limited	3
	Aurangabad, Kaimur & Rohtas Districts	Indian Oil Corporation Limited	1
Bihar Total			13
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	Chandigarh	Indian-Oil Adani Gas Private Limited	17
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh Total			17
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	9
Daman and Diu & Gujarat Total			9
Goa	North Goa District	Goa Natural Gas Private Limited	5
	South Goa District	Indian-Oil Adani Gas Private Limited	2
Goa Total			7
Gujarat	Surat, Bharuch, Ankleshwar	Gujarat Gas Limited	108
	Ahmedabad City and Daskroi Area	Adani Gas Limited	70
	Rajkot	Gujarat Gas Limited	74
	Gandhinagar Mehsana Sabarkantha	Sabarmati Gas Limited	113
	Vadodara	Vadodara Gas Limited	20
	Gandhinagar	Gujarat Gas Limited	14
	Valsad	Gujarat Gas Limited	25
	Navsari	Gujarat Gas Limited	23
	Nadiad	Gujarat Gas Limited	32
	Anand District (EAAA)	Gujarat Gas Limited	29
	Bhavnagar	Gujarat Gas Limited	26
	Hazira	Gujarat Gas Limited	1
	Anand area including Kanjari & Vadtal Villages (in Kheda District)	Charotar Gas Sahakari Mandali Limited	7
	Banaskantha District	IRM Energy Private Limited	30
	Surendranagar	Gujarat Gas Limited	18
	Jamnagar	Gujarat Gas Limited	19
	Panchmahal District	Gujarat Gas Limited	25
	Patan District	Sabarmati Gas Limited	22
	Amreli District	Gujarat Gas Limited	13
	Dahod District	Gujarat Gas Limited	11
Kutch (West)	Gujarat Gas Limited	12	
Dahej Vagra Taluka	Gujarat Gas Limited	4	
Vadodara	Adani Gas Limited	6	
Narmada (Rajpipla) District	Gujarat Gas Limited	4	
Ahmedabad City (Only for CNG)	Hindustan Petroleum Corporation Limited	22	

Table 3.8 : Continued

State/Union Territory	Geographical Area/ CGD Networks	Authorized CGD Entity	CNG Stations
Gujarat	Kheda District (EAAA) & Mahisagar District	Adani Gas Limited	13
	Junagadh District	Torrent Gas Private Limited	12
	Ahmedabad District (EAAA)	Gujarat Gas Limited	8
	Surendranagar District (EAAA) & Morbi District (EAAA)	Adani Gas Limited	6
	Navsari District (EAAA), Surat District (EAAA), Tapi District (EAAA) & the Dangs District	Adani Gas Limited	5
	Porbandar District	Adani Gas Limited	4
	Barwala & Ranpur Talukas	Adani Gas Limited	3
Gujarat Total			779
Haryana	Faridabad	Adani Gas Limited	21
	Sonapat	GAIL Gas Limited	18
	Gurugram	Haryana City Gas Distribution Limited	29
	Panipat District	Indian-Oil Adani Gas Private Limited	11
	Rewari District	Indraprastha Gas Limited	15
	Kaithal District	Indraprastha Gas Limited	5
	Karnal District	Indraprastha Gas Limited	10
	Ambala & Kurukshetra Districts	HPOIL Gas Private Limited	8
	Yamunanagar District	Bharat Petroleum Corporation Limited	4
	Nuh and Palwal Districts	Adani Gas Limited	12
	Rohtak District	Bharat Petroleum Corporation Limited	3
	Jhajjar District	Haryana City Gas (KCE) Private Limited	3
	Bhiwani, Charkhi Dadri & Mahendragarh Districts	Adani Gas Limited	12
	Sonapat District (EAAA) & Jind District	Hindustan Petroleum Corporation Limited	8
Hisar District	HCG (KCE) Private Limited	2	
Gurugram	Indraprastha Gas Limited	14	
Haryana Total			175
Haryana & Himachal Pradesh	Panchkula District (EAAA), Sirmaur, Shimla & Solan (EAAA) Districts	Indian-Oil Adani Gas Private Limited	5
Haryana & Himachal Pradesh Total			5
Haryana & Punjab	Sirsa, Fatehabad and Mansa (Punjab) Districts	Gujarat Gas Limited	8
Haryana & Punjab Total			8
Himachal Pradesh	Bilaspur, Hamirpur & Una Districts	Bharat Gas Resources Limited	1
Himachal Pradesh Total			1
Jharkhand	Ranchi District	GAIL (India) Limited	4
	East Singhbhum District	GAIL (India) Limited	4
	Giridih & Dhanbad Districts	GAIL Gas Limited	7
	Seraikela-Kharsawan District	GAIL Gas Limited	5
	Bokaro, Hazaribagh & Ramgarh Districts	Indian Oil Corporation Limited	5
Jharkhand Total			25
Karnataka	Bengaluru Rural and Urban Districts	GAIL Gas Limited	33
	Tumkur District	Megha Engineering & Infrastructure Limited	0
	Dharwad District	Indian-Oil Adani Gas Private Limited	5
	Belgaum District	Megha Engineering & Infrastructure Limited	2
	Dakshina Kannada District*	GAIL Gas Limited	13
	Ramanagara District	Maharashtra Natural Gas Limited	7
	Ballari & Gadag Districts	Bharat Gas Resources Limited	4
	Chitradurga & Davanagere Districts	Unison Enviro Private Limited	3
	Udupi District	Adani Gas Limited	2
	Mysuru, Mandya and Chamarajanagar Districts	AGP City Gas Private Limited	2
	Bidar District	Bharat Gas Resources Limited	1
Karnataka Total			72

Table 3.8 : Continued

State/Union Territory	Geographical Area/ CGD Networks	Authorized CGD Entity	CNG Stations
Kerala	Ernakulam District	Indian-Oil Adani Gas Private Limited	9
	Palakkad & Thrissur Districts	Indian-Oil Adani Gas Private Limited	10
	Alapuzha, Kollam and Thiruvananthapuram Districts	AGP City Gas Private Limited	2
	Kozhikode & Wayanad Districts	Indian-Oil Adani Gas Private Limited	3
	Malappuram District	Indian-Oil Adani Gas Private Limited	3
Kerala Total			27
Madhya Pradesh	Indore (including Ujjain City)	Aavantika Gas Limited	39
	Gwalior	Aavantika Gas Limited	15
	Dewas	GAIL Gas Limited	3
	Satna & Shandol Districts	Bharat Gas Resources Limited	2
	Rewa District	Indian Oil Corporation Limited	3
	Dhar District	Naveriya Gas Private Limited	2
	Guna District	Indian Oil Corporation Limited	1
	Raisen, Shajapur and Sehore Districts	GAIL Gas Limited	4
	Bhopal & Rajgarh Districts	Think Gas Bhopal Private Limited	16
	Ujjain (EAAA) District, Dewas (EAAA) District and Indore (EAAA) District	Gujarat Gas Limited	6
	Gwalior (EAAA) District and Sheopur District	Rajasthan State Gas Limited	2
Shivpuri District	Think Gas Bhopal Private Limited	1	
Madhya Pradesh Total			94
Madhya Pradesh and Rajasthan	Jhabua, Banswara, Ratlam and Dungarpur Districts	Gujarat Gas Limited	8
Madhya Pradesh and Rajasthan Total			8
Madhya Pradesh and Uttar Pradesh	Jhansi (EAAA) District, Bhind, Jalaun, Lalitpur and Datia Districts	Adani Gas Limited	6
Madhya Pradesh and Uttar Pradesh Total			6
Maharashtra	Mumbai & Greater Mumbai	Mahanagar Gas Limited	142
	Thane urban and adjoining Municipalities	Mahanagar Gas Limited	112
	Pune City including Pimpri - Chichwad & adjoining contiguous areas Hinjewadi, Chakan, Talegaon	Maharashtra Natural Gas Limited	87
	Raigarh District (EAAA)	Mahanagar Gas Limited	18
	Kolhapur District	HPOIL Gas Private Limited	6
	Pune District (EAAA)	Torrent Gas Pune Limited	28
	Sindhudurg District	Maharashtra Natural Gas Limited	6
	Ratnagiri District	Unison Enviro Private Limited	15
	Palghar District & Thane Rural	Gujarat Gas Limited	17
	Sangli & Satara Districts	Bharat Gas Resources Limited	9
	Ahmednagar & Aurangabad Districts	Bharat Gas Resources Limited	13
	Latur & Osmanabad Districts	Unison Enviro Private Limited	3
	Maharashtra Total		
Maharashtra & Gujarat	Valsad (EAAA), Dhule & Nashik Districts	Maharashtra Natural Gas Limited	32
Maharashtra & Gujarat Total			32
National Capital Territory of Delhi (UT)	National Capital Territory of Delhi	Indraprastha Gas Limited	436
National Capital Territory of Delhi (UT) Total			436
Odisha	Khordha District	GAIL (India) Limited	10
	Cuttack District	GAIL (India) Limited	6
	Ganjam, Nayagarh & Puri Districts	GAIL Gas Limited	2
	Sundargarh & Jharsuguda Districts	GAIL Gas Limited	2
	Balasore, Bhadrak & Mayurbhanj Districts	Adani Gas Limited	4
Odisha Total			24

Table 3.8 : Continued

State/Union Territory	Geographical Area/ CGD Networks	Authorized CGD Entity	CNG Stations
Puducherry & Tamil Nadu	Karaikal & Nagapattinam Districts	Torrent Gas Private Limited	2
Puducherry & Tamil Nadu Total			2
Punjab	Rupnagar District	Bharat Petroleum Corporation Limited	6
	Amritsar District	Gujarat Gas Limited	14
	Fatehgarh Sahib District	IRM Energy Private Limited	7
	Bhatinda District	Gujarat Gas Limited	5
	Ludhiana District (EAAA), Barnala & Moga Districts	Think Gas Ludhiana Private Limited	11
	SAS Nagar District (EAAA), Patiala & Sangrur Districts	Torrent Gas Private Limited	16
	Hoshiarpur and Gurdaspur Districts	Gujarat Gas Limited	16
	Jalandhar District (EAAA), Kapurthala & SBS Nagar Districts	Think Gas Ludhiana Private Limited	10
	Jalandhar	Jay Madhok Energy Private Limited led Consortium	3
	Ludhiana	Jay Madhok Energy Private Limited led Consortium	3
Ferozepur, Faridkot and Sri Muktsar Sahib Districts	Gujarat Gas Limited	2	
Punjab Total			93
Rajasthan	Ajmer, Pali and Rajsamand Districts	Indraprastha Gas Limited	8
	Kota	Rajasthan State Gas Limited	7
	Bhiwadi (in Alwar District)	Haryana City Gas Distribution (Bhiwadi) Limited	1
	Barmer, Jaisalmer & Jodhpur Districts	AGP CGD India Private Limited	6
	Kota District (EAAA), Baran & Chittorgarh (Only Rawatbhata Taluka) Districts	Torrent Gas Private Limited	11
	Chittorgarh (Other than Rawatbhata Taluka) & Udaipur Districts*	Adani Gas Limited	11
	Jalore and Sirohi Districts	Gujarat Gas Limited	6
	Bhilwara & Bundi Districts	Adani Gas Limited	5
	Dholpur District	Dholpur CGD Private Limited	4
	CNG (DBS) NOC	Rajasthan State Gas Limited	2
Rajasthan Total			61
Tamil Nadu	Tiruppur District	Adani Gas Limited	10
	Cuddalore, Nagapattinam & Tiruvarur Districts	Adani Gas Limited	9
	Ramanathapuram District	AGP CGD India Private Limited	2
Tamil Nadu Total			21
Telangana	Hyderabad	Bhagyanagar Gas Limited	83
	Medak, Siddipet & Sangareddy Districts	Torrent Gas Private Limited	14
Telangana Total			97
Tripura	Agartala	Tripura Natural Gas Company Limited	5
	West Tripura (EAAA) District	Tripura Natural Gas Company Limited	4
	Gomati District	Tripura Natural Gas Company Limited	3
Tripura Total			12
Uttar Pradesh	Gautam Budh Nagar District	Indraprastha Gas Limited	51
	Ghaziabad & Hapur Districts	Indraprastha Gas Limited	56
	Kanpur	Central UP Gas Limited	36
	Agra	Green Gas Limited	25
	Lucknow	Green Gas Limited	37
	Meerut	GAIL Gas Limited	17
	Varanasi District	GAIL (India) Limited	10
	Allahabad	Indian-Oil Adani Gas Private Limited	6
	Bareilly	Central UP Gas Limited	16
	Meerut District (EAAA), Muzaffarnagar & Shamli Districts	Indraprastha Gas Limited	10
	Kanpur (EAAA) District, Fatehpur and Hamirpur Districts	Indraprastha Gas Limited	7
	Moradabad	Torrent Gas Moradabad Limited	6

Table 3.8 : Continued

State/Union Territory	Geographical Area/ CGD Networks	Authorized CGD Entity	CNG Stations
Uttar Pradesh	Saharanpur District	Bharat Petroleum Corporation Limited	6
	Khurja	Adani Gas Limited	6
	Mathura	Sanwariya Gas Limited	11
	Amethi, Pratapgarh & Raebareli Districts	Bharat Gas Resources Limited	6
	Mirzapur, Chandauli and Sonbhadra Districts	GAIL Gas Limited	7
	Jhansi	Central UP Gas Limited	5
	Faizabad & Sultanpur Districts	Green Gas Limited	2
	Moradabad (EAAA) District	Torrent Gas Private Limited	15
	Auraiya, Kanpur Dehat & Etawah Districts	Torrent Gas Private Limited	19
	Allahabad District (EAAA), Bhadohi & Kaushambi Districts	Indian-Oil Adani Gas Private Limited	9
	Basti and Ambedkarnagar Districts	Torrent Gas Private Limited	11
	Gonda and Barabanki Districts	Torrent Gas Private Limited	11
	Azamgarh, Mau and Ballia Districts	Torrent Gas Private Limited	9
	Farrukhabad, Etah and Hardoi Districts	Hindustan Petroleum Corporation Limited	8
	Bareilly (EAAA) District, Pilibhit and Rampur Districts	Hindustan Petroleum Corporation Limited	7
	Bulandshahr District (EAAA), Aligarh & Hathras Districts	Indian-Oil Adani Gas Private Limited	6
	Shahjahanpur and Budaun Districts	Hindustan Petroleum Corporation Limited	6
	Bulandshahr (part) District	Indian-Oil Adani Gas Private Limited	5
	Mainpuri and Kannauj Districts	Hindustan Petroleum Corporation Limited	4
	Bagpat District	Bagpat Green Energy Private Limited	3
Jaunpur and Ghazipur Districts	Indian-Oil Adani Gas Private Limited	3	
Unnao (EAAA) District	Green Gas Limited	1	
Gorakhpur, Sant Kabir Nagar & Kushinagar Districts	Torrent Gas Private Limited	16	
Uttar Pradesh Total			453
Uttar Pradesh & Rajasthan	Firozabad (Taj Trapezium Zone)	GAIL Gas Limited	27
Uttar Pradesh & Rajasthan Total			27
Uttar Pradesh and Uttrakhand	Bijnor and Nainital Districts	Hindustan Petroleum Corporation Limited	6
Uttar Pradesh and Uttrakhand Total			6
Uttrakhand	Haridwar District	Haridwar Natrural Gas Private Limited	4
	Udham Singh Nagar District	Indian-Oil Adani Gas Private Limited	6
	Dehradun District	GAIL Gas Limited	6
Uttrakhand Total			16
West Bengal	Burdwan District	Indian-Oil Adani Gas Private Limited	10
	Kolkata Municipal Corporation and Parts of Adjoining Districts	Bengal Gas Company Limited	2
	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	1
	CNG Stations	Great Eastern Energy Corporation Limited (GEECL)	1
West Bengal Total			16
Grand Total			3,095

Sources : PNGRB & GEECL

Note :

1. All the GAs where PNG connections/CNG Stations 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

Table 3.9 : LNG terminals (Operational)

Location	Promoters	Capacity as on 01.04.2021	% Capacity utilisation (Apr-Mar 2020-21) (P)
Dahej	Petronet LNG Ltd (PLL)	17.5 MMTPA	93.7
Hazira	Shell Energy India Pvt. Ltd.	5 MMTPA	76.8
Dabhol	Konkan LNG Limited	*5 MMTPA	75.6
Kochi	Petronet LNG Ltd (PLL)	5 MMTPA	18.0
Ennore	Indian Oil LNG Pvt Ltd	5 MMTPA	13.0
Mundra	GSPC LNG Limited	5 MMTPA	34.8
Total Capacity		42.5 MMTPA	

*Capacity to increase to 5MMTPA with breakwater; Currently only HP stream of capacity of 2.9MMTPA is commissioned.

Table 3.10 : Import of Liquefied Natural Gas (LNG)

LNG import quantity/value					
Financial year	MMT	MMSCM	Trillion Btu	Value (Mn. USD)	USD /MMBtu (approx)
2016-17	18.8	24,849	986	6,128	6.2
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)	24.8	32,861	1,304	7,415	5.7

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	2.5	5.3
April 2017 - September 2017	2.48	5.56
October 2017 - March 2018	2.89	6.3
April 2018 - September 2018	3.06	6.78
October 2018 - March 2019	3.36	7.67
April 2019 - September 2019	3.69	9.32
October 2019 - March 2020	3.23	8.43
April 2020 - September 2020	2.39	5.61
October 2020 - March 2021	1.79	4.06
April 2021 - September 2021	1.79	3.62

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	68874	22869	2138	29802	123683
Assam	236	126087	416953	1582608	2125885
Bihar	23937	687	58	0	24682
Chandigarh, Haryana, Punjab & Himachal Pradesh	75017	4148	842	1805	81813
Dadra & Nagar Haveli	10187	1586	532	22457	34761
Daman and Diu	8308	310	355	3218	12191
Delhi	3791669	306142	98170	189391	4385371
Goa	1025	140	0	4551	5715
Gujarat	3071580	1162140	165227	10627508	15026455
Gujarat & UT of Daman and Diu	7781	0	0	0	7781
Haryana	897226	50939	17252	603121	1568538
Haryana & Himachal Pradesh	614	0	0	0	614
Haryana & Punjab	9795	0	0	0	9795
Jharkhand	6849	552	0	0	7401
Karnataka	15606	20700	9174	274186	319666
Kerala	22563	531	282	12085	35461
Madhya Pradesh	124802	36205	3724	84946	249677
Madhya Pradesh & Rajasthan	1721	0	0	0	1721
Maharashtra	2638004	573509	154866	609046	3975425
Maharashtra & Gujarat	9244	0	0	0	9244
Odisha	12444	320	0	0	12763
Puducherry (UT) & Tamil Nadu	7	0	0	0	7
Punjab	76896	3820	752	56477	137945
Rajasthan	77686	1483	205	6406	85780
Tamil Nadu	28	2	0	1215	1246
Telangana	47830	28213	472	61416	137932
Tripura	77317	36919	6603	18554	139392
Uttar Pradesh	1744793	239731	44213	2290075	4318812
Uttar Pradesh & Uttarakhand	2169	0	0	0	2169
Uttar Pradesh & Madhya Pradesh	2599	0	0	0	2599
Uttarakhand	28013	4028	391	28675	61107
West Bengal	10090	0	0	0	10090
Grand Total	12864911	2621058	922209	16507543	32915721

*Inputs based on the information submitted by CGD entities. (Provisional)

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 sales for period October 2020 to March 2021.



Chapter 4

Refining & Production



Map of Refineries in India

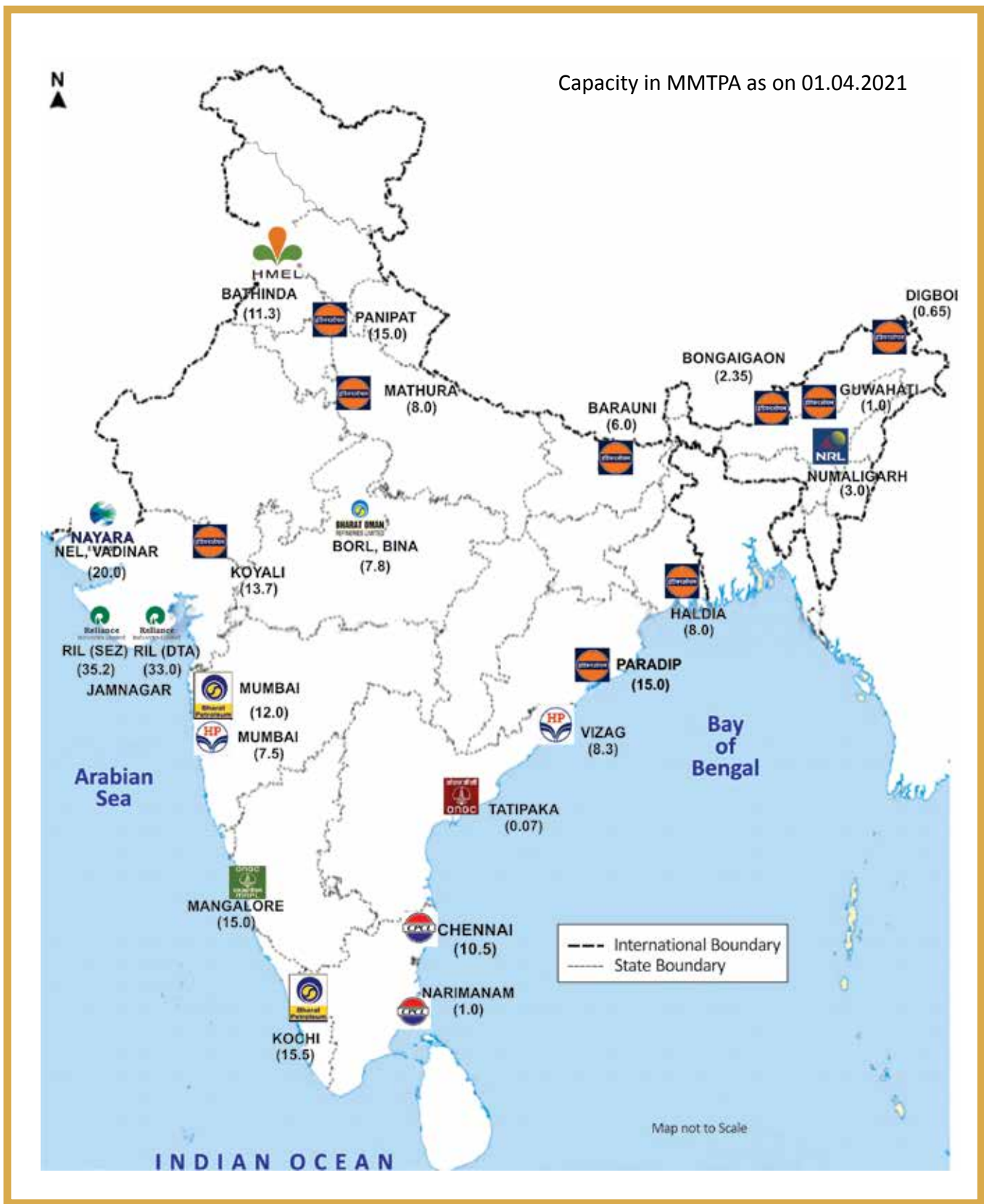


Table 4.1 : Refineries: Installed capacity and crude oil processing

Sl. no.	Refinery	Installed capacity (MMTPA)					Crude Oil Processing (MMT)				
		01.04.2017	01.04.2018	01.04.2019	01.04.2020	01.04.2021 (P)	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
1	Barauni	6.0	6.0	6.0	6.0	6.0	6.5	5.8	6.7	6.5	5.5
2	Koyali	13.7	13.7	13.7	13.7	13.7	14.0	13.8	13.5	13.1	11.6
3	Haldia	7.5	7.5	7.5	8.0	8.0	7.7	7.7	8.0	6.5	6.8
4	Mathura	8.0	8.0	8.0	8.0	8.0	9.2	9.2	9.7	8.9	8.9
5	Panipat	15.0	15.0	15.0	15.0	15.0	15.6	15.7	15.3	15.0	13.2
6	Guwahati	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.9	0.9	0.8
7	Digboi	0.65	0.65	0.65	0.65	0.65	0.5	0.7	0.7	0.7	0.6
8	Bongaigaon	2.35	2.35	2.35	2.35	2.35	2.5	2.4	2.5	2.0	2.5
9	Paradip	15.0	15.0	15.0	15.0	15.0	8.2	12.7	14.6	15.8	12.5
	IOCL total	69.2	69.2	69.2	69.7	69.7	65.2	69.0	71.8	69.4	62.4
10	Mumbai	7.5	7.5	7.5	7.5	7.5	8.5	8.6	8.7	8.1	7.4
11	Visakh	8.3	8.3	8.3	8.3	8.3	9.3	9.6	9.8	9.1	9.1
12	HMEL-Bathinda	9.0	11.3	11.3	11.3	11.3	10.5	8.8	12.5	12.2	10.1
	HPCL total	24.8	27.1	27.1	27.1	27.1	28.3	27.1	30.9	29.4	26.5
13	Mumbai	12.0	12.0	12.0	12.0	12.0	13.5	14.1	14.8	15.0	12.9
14	Kochi	12.4	15.5	15.5	15.5	15.5	11.8	14.1	16.1	16.5	13.3
15	BORL-Bina	6.0	6.0	7.8	7.8	7.8	6.4	6.7	5.7	7.9	6.2
	BPCL total	30.4	33.5	35.3	35.3	35.3	31.7	34.9	36.5	39.4	32.4
16	Manali	10.5	10.5	10.5	10.5	10.5	9.8	10.3	10.3	10.2	8.2
17	CBR	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.4	0.0	0.0
	CPCL total	11.5	11.5	11.5	11.5	11.5	10.3	10.8	10.7	10.2	8.2
18	Numaligarh	3.0	3.0	3.0	3.0	3.0	2.7	2.8	2.9	2.4	2.7
19	Tatipaka	0.07	0.07	0.07	0.07	0.07	0.09	0.08	0.07	0.09	0.08
20	MRPL-Mangalore	15.0	15.0	15.0	15.0	15.0	16.0	16.1	16.2	14.0	11.5
	ONGC total	15.1	15.1	15.1	15.1	15.1	16.1	16.2	16.3	14.0	11.6
21	RIL-Jamnagar (DTA)	33.0	33.0	33.0	33.0	33.0	32.8	33.2	31.8	33.0	34.1
22	RIL-Jamnagar (SEZ)	27.0	35.2	35.2	35.2	35.2	37.4	37.3	37.4	35.9	26.8
23	NEL*-Vadinar	20.0	20.0	20.0	20.0	20.0	20.9	20.7	18.9	20.6	17.1
	All India	234.0	247.6	249.4	249.9	249.9	245.4	251.9	257.2	254.4	221.8

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	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
1	HS crude	177.4	188.4	194.2	192.4	161.3
2	LS crude	67.9	63.6	63.0	62.0	60.5
	Total crude	245.4	251.9	257.2	254.4	221.8
	Share of HS crude in total crude processing	72.3%	74.8%	75.5%	75.6%	72.7%

Source: Oil companies

Table 4.3 : Imported crude & indigenous crude oil processing

(Million metric tonne)						
Sl. no.	Indigenous/ Imported crude	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
1	Imported crude	211.8	219.1	225.5	225.1	193.8
2	Indigenous crude	33.5	32.8	31.7	29.3	28.0
	Total crude	245.4	251.9	257.2	254.4	221.8
	Share of imported crude in total crude processing	86.3%	87.0%	87.7%	88.5%	87.4%

Source: Oil companies

Table 4.4 : Production of petroleum products

(Million metric tonne)					
Products	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
A) From crude oil/refineries					
Light ends	75.0	83.7	85.1	87.4	83.0
of which: LPG	9.2	10.2	10.7	10.9	10.2
MS	36.6	37.8	38.0	38.6	35.8
Naphtha	18.6	18.8	18.4	19.4	18.4
Others	10.7	17.0	18.0	18.5	18.6
Middle distillates	127.9	131.2	136.3	135.5	115.4
of which: SKO	5.9	4.2	4.0	3.2	2.3
ATF	13.8	14.6	15.5	15.2	7.1
HSD	102.1	108.0	110.5	111.1	100.3
LDO	0.6	0.6	0.7	0.6	0.7
Others	5.4	3.7	5.7	5.5	4.9
Heavy ends	36.3	34.8	36.0	35.3	30.8
of which: Furnace Oil	11.8	9.8	9.5	8.9	7.8
LSHS	0.3	0.5	0.4	0.4	0.4
Lube Oil	1.0	1.0	0.9	0.9	1.1
Bitumen	5.2	5.3	5.6	4.9	4.9
RPC/Petcoke	12.9	13.9	13.7	14.6	12.0
Others	5.2	4.3	5.9	5.5	4.6
Sub total (A)	239.2	249.7	257.4	258.2	229.2
B) From natural gas / fractionators					
Sub total (B)	4.3	4.6	4.9	4.8	4.2
of which: LPG	2.1	2.2	2.1	2.0	1.9
Naphtha	1.2	1.2	1.2	1.2	1.0
SKO	0.03	0.05	0.07	0.05	0.03
ATF	0.00	0.01	0.02	0.03	0.02
HSD	0.01	0.01	0.04	0.06	0.06
Others	1.0	1.1	1.5	1.5	1.3
Total production (A + B)	243.5	254.3	262.4	262.9	233.4

Source: Oil companies

Table 4.5 : Production of petroleum products : All sources

Major products	(Million metric tonne)									
	2016-17		2017-18		2018-19		2019-20		2020-21 (P)	
	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage	Qunatity	Percentage
HSD	102.1	41.9	108.1	42.5	110.6	42.1	111.2	42.3	100.4	43.0
MS	36.6	15.0	37.8	14.9	38.0	14.5	38.6	14.7	35.8	15.3
Naphtha	19.7	8.1	20.0	7.9	19.6	7.5	20.6	7.8	19.4	8.3
FO	11.8	4.8	9.8	3.8	9.5	3.6	8.9	3.4	7.8	3.4
ATF	13.8	5.7	14.7	5.8	15.5	5.9	15.2	5.8	7.1	3.0
LPG	11.3	4.6	12.4	4.9	12.8	4.9	12.8	4.9	12.1	5.2
SKO	6.0	2.5	4.3	1.7	4.1	1.5	3.2	1.2	2.3	1.0
Bitumen	5.2	2.1	5.3	2.1	5.6	2.1	4.9	1.9	4.9	2.1
LSHS	0.3	0.1	0.5	0.2	0.4	0.2	0.4	0.2	0.4	0.2
Lubes	1.0	0.4	1.0	0.4	0.9	0.4	0.9	0.4	1.1	0.5
LDO	0.6	0.3	0.6	0.2	0.7	0.3	0.6	0.2	0.7	0.3
RPC/Petcoke	12.9	5.3	13.9	5.5	13.7	5.2	14.6	5.6	12.0	5.2
Others [#]	22.3	9.1	26.2	10.3	31.0	11.8	31.0	11.8	29.5	12.6
Total	243.5	100.0	254.3	100.0	262.4	100.0	262.9	100.0	233.4	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

Year	(Million metric tonne)		
	Consumption [§]	Production from refineries & other sources*	Surplus (+) / Deficit (-)
	(A)	(B)	(B)-(A)
1997-98	84.3	64.7	-19.6
1998-99	90.6	68.4	-22.2
1999-00	97.1	82.9	-14.2
2000-01	100.1	99.6	-0.5
2001-02	100.4	104.3	3.9
2002-03	104.1	108.7	4.5
2003-04	107.8	117.6	9.9
2004-05	111.6	123.3	11.6
2005-06	113.2	124.6	11.4
2006-07	120.7	140.6	19.9
2007-08	128.9	150.4	21.5
2008-09	133.6	157.9	24.3
2009-10	137.8	185.5	47.7
2010-11	141.0	196.2	55.2
2011-12	148.1	204.5	56.3
2012-13	157.1	218.2	61.2
2013-14	158.4	220.7	62.3
2014-15	165.5	221.1	55.6
2015-16	184.7	231.9	47.2
2016-17	194.6	243.5	48.9
2017-18	206.2	254.3	48.1
2018-19	213.2	262.4	49.1
2019-20	214.1	262.9	48.8
2020-21 (P)	194.6	233.4	38.8

Note: [§] includes direct imports by private parties

*Fractionators and gas processing plants

Table 4.7 : Gross Refining Margins (GRM) of refineries

							(\$/bbl)
Company	Refinery	2016-17	2017-18	2018-19	2019-20	2020-21 (P)	
PSU refineries							
IOCL	Barauni	6.52	6.60	3.86	(1.24)	3.98	
	Koyali	7.55	9.44	4.87	1.90	2.83	
	Haldia	6.80	6.86	5.36	(2.44)	4.10	
	Mathura	7.01	7.09	4.65	(1.02)	5.03	
	Panipat	7.95	7.74	4.66	(0.25)	3.23	
	Guwahati**	22.14	21.88	16.35	14.22	31.87	
	Digboi**	24.49	24.86	22.74	17.52	28.62	
	Bongaigaon**	20.15	20.62	16.94	10.49	28.89	
	Paradip	4.22	7.02	4.46	(1.80)	5.35	
	Average	7.77	8.49	5.41	0.08	5.64	
BPCL	Kochi	5.16	6.44	4.27	2.17	4.36	
	Mumbai	5.36	7.26	4.92	2.88	3.76	
	Average	5.26	6.85	4.58	2.50	4.06	
HPCL	Mumbai	6.95	8.35	5.79	3.63	4.10	
	Visakhapatnam	5.51	6.55	4.31	(1.30)	3.67	
	Average	6.20	7.40	5.01	1.02	3.86	
CPCL	Chennai	6.05	6.42	3.70	(1.18)	7.14	
MRPL	Mangalore	7.75	7.54	4.06	(0.23)	3.71	
NRL	Numaligarh**	28.56	31.92	28.11	24.55	37.23	
JV refineries							
BORL	Bina	11.80	11.70	9.80	5.60	6.20	
Private refineries							
RIL	Jamnagar	11.00	11.60	9.20	8.90	*	
NEL®	Vadinar	9.14	8.95	6.97	5.88	*	
Singapore		5.83	7.23	4.88	3.25	0.53	

(P) - Provisional

* Not available; ** GRM of North East refineries are including excise duty benefit. For GRM excluding excise duty benefit, refer table 4.8; ®Nayara Energy Limited (formerly Essar Oil Limited)

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 : GRM of North East refineries excluding excise duty benefit

(\$/bbl)						
Company	Refinery	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
IOCL	Guwahati	1.12	3.70	0.63	(3.34)	2.13
	Digboi	7.73	8.27	8.84	3.35	3.71
	Bongaigaon	6.03	6.22	4.21	(1.84)	3.15
NRL	Numaligarh	8.50	11.43	11.80	7.99	4.09

Source: Information provided by oil companies.

Table 4.9 : Distillate yield of PSU refineries

(Distillate %)						
Company	Refinery	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
IOCL	Barauni	85.3	89.0	87.9	86.9	87.1
	Koyali	81.0	82.5	81	79.5	72.1
	Haldia	66.7	66.9	69.9	69.0	72.2
	Mathura	73.6	75.4	76.1	75.6	72.3
	Panipat	84.1	84.9	82.8	84.8	80.2
	Guwahati	83.5	82.7	81	83.5	82.1
	Digboi	75.3	77.9	75.8	72.5	67.9
	Bongaigaon	83.8	84.3	84.8	80.8	84.8
	Paradip	75.3	79.4	80.8	80.7	79.2
CPCL	Manali	71.6	72.3	75.3	77.6	78.4
	CBR	78.2	79.1	77.3	-	-
HPCL	Mumbai	77.6	77.4	77.6	77.0	76.2
	Visakh	74.0	74.5	74.5	72.1	74.4
BPCL	Mumbai	86.1	84.3	82.2	84.9	83.7
	Kochi	85.2	83.9	82.5	84.2	83.8
NRL	Numaligarh	90.5	86.7	87.1	83.0	86.4
MRPL	Mangalore	77.3	76.5	76.8	76.7	78.1
PSU oil cos. average		79.3	79.7	79.6	80.0	78.6

Source : CHT
P: Provisional

Table 4.10 : Fuel & Loss

(Million metric tonne)																	
Sl. no.	Company	Refinery	2016-17			2017-18			2018-19			2019-20			2020-21 (P)		
			Crude T'put + other inputs	Fuel & Loss		Crude T'put + other inputs	Fuel & Loss		Crude T'put + other inputs	Fuel & Loss		Crude T'put + other inputs	Fuel & Loss		Crude T'put + other inputs	Fuel & Loss	
				Qty	%		Qty	%		Qty	%		Qty	%		Qty	%
1	IOCL	Barauni	6.6	0.6	9.2	6.0	0.5	9.2	6.9	0.6	9.0	6.7	0.6	8.8	5.7	0.557	9.8
2		Koyali	14.6	1.3	9.0	14.5	1.2	8.6	14.2	1.3	9.0	13.9	1.3	9.3	12.4	1.2	10.0
3		Haldia	7.7	0.7	8.8	7.8	0.7	8.4	8.1	0.7	8.3	6.6	0.6	9.6	6.9	0.7	10.5
4		Mathura	9.7	0.7	7.5	9.8	0.7	7.0	10.2	0.7	6.6	9.5	0.6	6.7	9.4	0.7	7.0
5		Panipat	17.2	1.5	8.4	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		Guwahati	1.2	0.1	9.4	1.3	0.1	10.2	1.2	0.1	9.5	1.3	0.1	9.7	1.1	0.1	10.6
7		Digboi	0.6	0.1	11.7	0.7	0.1	10.3	0.8	0.1	10.0	0.7	0.1	11.0	0.7	0.1	11.7
8		Bongaigaon	2.5	0.2	8.3	2.4	0.2	8.7	2.6	0.2	8.2	2.1	0.2	8.5	2.5	0.3	11.1
9		Paradip	8.3	1.3	15.9	12.7	1.4	10.9	14.6	1.4	9.8	15.8	1.5	9.6	12.5	1.4	11.0
		IOCL Total	68.4	6.5		72.6	6.4		75.7	6.4		73.4	6.4		66.1	6.4	
10	HPCL	Mumbai	8.5	0.6	7.2	8.6	0.6	7.2	8.8	0.6	7.0	8.1	0.4	5.1	7.5	0.6	8.0
11		Visakh	9.3	0.7	7.3	9.6	0.7	7.1	9.8	0.7	7.3	9.1	0.7	7.5	9.1	0.7	7.9
12		HMEL-Bathinda	10.6	0.7	6.3	8.9	0.6	6.2	12.6	0.7	5.8	12.3	0.7	5.7	10.1	0.6	6.0
		HPCL Total	28.4	2.0		27.2	1.9		31.2	2.1		29.5	1.8		26.7	1.9	
13	BPCL	Mumbai	13.6	0.6	4.4	14.3	0.7	4.6	14.8	0.6	4.0	15.1	0.6	4.2	13.1	0.5	4.1
14		Kochi	12.0	0.7	6.0	14.5	1.1	7.7	16.4	1.3	7.8	17.2	1.4	8.3	13.9	1.1	8.2
15		BORL-Bina	6.4	0.6	8.8	6.7	0.7	9.7	5.7	0.6	10.2	7.9	0.8	9.9	6.2	0.7	11.8
16	Numaligarh	3.0	0.3	9.8	3.1	0.3	10.1	3.2	0.3	9.5	2.7	0.3	10.0	3.0	0.3	9.9	
		BPCL Total	34.9	2.2		38.7	2.7		40.1	2.7		42.8	3.1		36.1	2.7	
17	CPCL	Manali	9.8	0.9	9.3	10.4	1.0	9.7	10.3	1.1	10.3	10.3	1.0	10.0	8.5	0.9	10.7
18		CBR	0.6	0.03	4.6	0.5	0.03	5.0	0.4	0.02	5.1	0.002	0.001	52.5	0	0	0
		CPCL Total	10.4	0.9		10.9	1.0		10.8	1.1		10.3	1.0		8.5	0.9	
19	ONGC	Tatipaka	0.1	0.003	3.7	0.1	0.004	5.3	0.1	0.003	5.1	0.1	0.007	7.8	0.1	0.004	5.1
20		MRPL-Mangalore	16.3	1.6	10.1	16.4	1.7	10.2	16.5	1.7	10.2	14.1	1.5	10.6	11.5	1.4	11.9
		ONGC Total	16.3	1.6		16.4	1.7		16.6	1.7		14.2	1.5		11.6	1.4	
21	RIL	Jamnagar (DTA)	35.9	2.5	6.9	36.4	2.7	7.4	37.0	2.8	7.5	40.1	3.8	9.5	40.7	4.0	9.9
22		Jamnagar (SEZ)	44.8	3.3	7.5	47.8	3.7	7.8	48.9	3.6	7.4	52.1	4.6	8.9	45.1	4.4	9.8
23	NEL**	Vadinar	21.3	1.2	5.5	21.0	1.2	5.7	19.2	1.1	6.0	21.1	1.2	5.7	17.5	1.0	6.0
		Total	260.4	20.2	7.8	271.0	21.3	7.9	279.6	21.6	7.7	283.5	23.5	8.3	252.3	22.8	9.0

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

Table 4.11 : Specific energy consumption of PSU refineries

(MBTU/Bbl/NRGF)						
Company	Refinery	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
IOCL	Barauni	80.7	77.7	77.9	75.9	77.5
	Koyali	75.2	72.4	75.3	77.4	82.0
	Haldia	83.0	80.8	76.6	88.3	89.7
	Mathura	72.2	68.3	63.9	65.8	63.5
	Panipat	64.9	63.2	64.1	64.5	69.3
	Guwahati	113.8	108.0	112.3	121.2	124.8
	Digboi	114.3	105.5	101.8	101.7	113.3
	Bongaigaon	90.2	91.7	88.6	96.8	108.3
CPCL	Paradip	117.8	72.8	66.8	64.1	69.0
	Manali	92.5	88.6	83.0	81.5	86.5
HPCL	CBR	117.8	123.7	118.1	-	-
	Mumbai	85.7	84.4	82.8	84.8	97.8
BPCL	Visakhapatnam	78.1	77.3	77.3	84.4	81.0
	Mumbai	70.6	66.7	64.7	63.0	64.3
NRL	Kochi	85.8	79.2	71.6	68.2	68.9
	Numaligarh	72.3	64.7	65.9	64.8	64.4
MRPL	Mangalore	79.6	76.7	74.2	75.3	81.4
PSU average		81.2	75.1	72.7	72.8	76.5

(P): Provisional

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

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

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

Table 4.12 : Import / export of crude oil and petroleum products

Import / export	Crude oil & petroleum products	2016-17			2017-18			2018-19			2019-20			2020-21 (P)		
		Quantity	Value		Quantity	Value		Quantity	Value		Quantity	Value		Quantity	Value	
		Million tonne	US\$ (Billion)	Rs. (Crores)	Million tonne	US\$ (Billion)	Rs. (Crores)	Million tonne	US\$ (Billion)	Rs. (Crores)	Million tonne	US\$ (Billion)	Rs. (Crores)	Million tonne	US\$ (Billion)	Rs. (Crores)
I M P O R T	Crude oil	213.9	70.2	4,70,159	220.4	87.8	5,66,450	226.5	111.9	7,83,183	227.0	101.4	7,17,001	198.1	62.7	4,62,996
	of which, PSU/JVs	128.3	44.0	2,94,050	133.0	54.3	3,50,612	142.9	71.9	5,04,524	141.4	64.7	4,58,073	123.5	40.1	2,95,935
	Private	85.6	26.2	1,76,109	87.4	33.5	2,15,839	83.6	40.0	2,78,659	85.5	36.7	2,58,928	74.7	22.6	1,67,060
	Products															
	LPG	11.1	4.8	32,124	11.4	5.8	37,875	13.2	7.2	49,939	14.8	7.1	50,347	16.5	7.3	53,883
	Petrol	0.5	0.2	1,617	0.2	0.1	581	0.7	0.4	3,104	2.1	1.4	9,610	1.3	0.7	4,903
	Naphtha	2.8	1.2	8,374	2.2	1.3	8,161	2.1	1.4	9,665	1.7	0.9	6,678	1.4	0.5	3,442
	Aviation Turbine Fuel	0.3	0.2	1,109	0.3	0.2	1,159	0.3	0.2	1,392	0.1	0.04	309	0.0	0.00	0
	Kerosene	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0
	Diesel	1.0	0.4	2,959	1.4	0.7	4,269	0.6	0.4	2,486	2.8	1.6	11,619	0.7	0.3	2,060
	Lubes/LOBS	2.1	1.3	8,625	2.5	1.9	12,075	2.5	1.9	13,349	2.7	1.7	11,869	2.1	1.3	9,583
	Fuel Oil	0.9	0.3	1,848	1.2	0.5	3,231	1.4	0.7	4,782	4.6	1.6	11,791	6.9	2.1	15,350
	Bitumen	1.0	0.2	1,638	1.0	0.3	1,902	0.9	0.3	2,149	1.6	0.5	3,634	1.6	0.4	2,744
	Petcoke	14.4	1.2	7,929	12.8	1.7	11,100	7.9	1.5	10,350	10.7	1.4	9,713	10.8	0.9	6,966
	Others**	2.2	0.8	5,342	2.6	1.2	8,020	3.9	2.4	16,449	2.7	1.4	10,172	2.1	0.8	6,237
Total product import	36.3	10.6	71,566	35.5	13.6	88,374	33.3	16.3	1,13,665	43.8	17.7	1,25,742	43.5	14.2	1,05,168	
of which, PSU/JVs	12.5	5.5	36,691	12.8	6.5	42,305	14.6	8.1	56,178	20.0	10.2	72,699	18.7	8.3	61,305	
Private	23.7	5.2	34,875	22.7	7.1	46,069	18.8	8.3	57,487	23.8	7.5	53,042	24.8	5.9	43,864	
Total import (crude oil + product)	250.2	80.8	5,41,725	255.9	101.4	6,54,824	259.8	128.3	8,96,848	270.7	119.1	8,42,743	241.6	76.9	5,68,164	
E X P O R T	Products															
	LPG	0.3	0.2	1,168	0.4	0.2	1,501	0.4	0.3	1,976	0.5	0.3	1,970	0.5	0.2	1,797
	Petrol	15.4	7.9	52,920	14.0	8.5	54,580	12.9	8.6	60,419	12.7	7.7	54,512	11.6	5.0	36,530
	Naphtha	8.7	3.7	24,616	9.0	4.5	29,075	7.0	4.1	28,893	8.9	4.4	31,509	6.5	2.5	18,600
	Aviation Turbine Fuel	7.3	3.3	22,294	7.2	3.9	25,348	7.4	4.9	34,030	6.9	4.0	28,458	3.5	1.3	9,377
	Kerosene	0.02	0.01	54	0.02	0.01	68	0.02	0.01	98	0.2	0.1	560	0.02	0.01	48
	Diesel	27.30	11.9	79,857	29.7	15.4	99,454	27.8	17.6	1,23,519	31.7	17.5	1,23,919	30.6	11.1	81,550
	LDO	0.2	0.1	399	0.02	0.01	37	0.1	0.05	364	0.0	0.0	0	0.0	0.0	0
	Lubes/LOBS	0.01	0.02	104	0.01	0.02	118	0.01	0.02	106	0.01	0.01	96	0.01	0.01	93
	Fuel Oil	2.2	0.6	3,930	2.5	0.8	5,291	2.2	0.9	6,537	1.5	0.5	3,811	1.2	0.3	2,316
	Bitumen	0.04	0.01	37	0.1	0.02	119	0.02	0.01	72	0.03	0.01	89	0.01	0.003	23
	Petcoke / CBFS	0.7	0.1	804	0.6	0.1	687	1.1	0.5	3,255	0.5	0.2	1,096	0.6	0.04	286
	Others***	3.3	1.3	8,710	3.4	1.4	9,110	2.1	1.2	8,429	2.9	1.1	7,998	2.3	0.9	6,428
	Total product export	65.5	29.0	1,94,893	66.8	34.9	2,25,388	61.1	38.2	2,67,697	65.7	35.8	2,54,018	56.8	21.4	1,57,047
	of which, PSU/JVs	12.6	5.2	35,102	15.0	7.4	48,100	13.4	8.1	56,415	14.2	7.5	53,276	10.6	4.0	29,594
Private	53.0	23.8	1,59,791	51.8	27.5	1,77,288	47.7	30.2	2,11,282	51.5	28.4	2,00,742	46.1	17.4	1,27,454	
Net import	184.7	51.8	3,46,832	189.1	66.5	4,29,436	198.8	90.0	6,29,152	205.1	83.2	5,88,725	184.8	55.5	4,11,116	
Net product export	29.2	18.4	1,23,327	31.4	21.3	1,37,014	27.7	21.9	1,54,031	21.9	18.2	1,28,276	13.3	7.2	51,879	

Source: Oil companies & DGCIIS, (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.

Net product export = Total product export - Total product import

- Crude oil imports decreased by 12.7% during 2020-21 as compared to 2019-20.
- Imports made due to deficit in production viz. LPG and Lubes/LOBS accounted for 42.9% share of total POL products import during 2020-21 as compared to 39.9% during 2019-20.
- Imports of naphtha and FO were done for commercial and technical considerations and accounted for 18.9% share of total POL products import during 2020-21 as compared to 14.3% during 2019-20.
- Decrease of 13.6% was recorded in POL products export during 2020-21 as compared to during 2019-20 mainly due to decrease in exports of all products except petcoke/CBFS and LOBS/Lube oil.

Table 4.13 : 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 31.05.2021)	73.84	103.11	89.05	0.68
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

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









Major Producing Fields

LNG Terminals

 Dabhol, Dahej, Hazira, Kochi, Mundra, Ennore
 (Upcoming Terminals) Dhamra, Jajra, 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

Note: Pipelines shown are indicative only.

Table 5.1 : Natural Gas Pipelines in the Country - 31.03.2021

S. N.	Network/Region	Entity	Length (Kms)	Authorized capacity/ Declared capacity (mmscmd)	Pipeline size	Pipeline Status	Average flow 2020-21 (mmscmd)	% Capacity utilisation 2020-21	Average flow Oct 2020-Mar 2021 (P) (mmscmd)	% Capacity utilisation Oct 2020-Mar 2021 (P)
1	Assam Natural Gas Pipeline Network	Assam Gas Company Limited (AGCL)	106.7	2.428	31"/20"/16"/14"	Operational	0.953538	39.27%	1.011737	41.67%
2	Cauvery Basin Network	GAIL	240.3	4.330	18"/12"/8"/6"/4"/3"/2"	Operational	1.8	42%	1.55	36%
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%	71.69	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%	16.8	84%
6	KG Basin Network	GAIL	877.9	16.000	18"/16"/14"/12"/8"/6"/4"/2"	Operational	4.13	26%	4.29	27%
7	Gujarat Regional Network	GAIL	608.8	8.310	24"/18"/14"/12"/8"/6"/5"/2"/1"	Operational	3.36	40%	3.67	44%
8	Agartala Regional Network	GAIL	55.4	2.000	12"/10"/8"	Operational	0.97	49%	1	50%
9	Mumbai Regional Network	GAIL	128.7	7.034	26"/20"/18"/12"/4"	Operational	4.84	69%	4.84	69%
10	Dukli - Maharajganj	GAIL	5.2	0.260	4"	Operational	0.05	19%	0.06	23%
11	Chainsa-Jhajjar-Hissar	GAIL	455	35.000	36"/18"/16"/12"/10"/8"-4"	Under Construction	0.94	3%	1.26	4%
12	Dadri-Bawana-Nangal	GAIL	921	31.000	36"/30"/18"/10"/8"	Under Construction	6.07	20%	6.74	22%
13	Kochi-Koottanad-Bangalore-Mangalore	GAIL	1104	16.000	30"/24"/18"/8"/4"	Operational	3.28	21%	3.96	25%
14	Dabhol-Bangalore	GAIL	1414	16.000	36"/30"/24"/18"/10"/8"	Under Construction	1.6	10%	1.78	11%
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%	0.18	1%
16	Srikakulam-Angul	GAIL	690	6.650	24"/18"/12"	Under Construction				
17	Mumbai-Nagpur-Jharsuguda	GAIL	1755	16.500	24"/18"/12"	Under Construction				
18	Hazira-Ankleshwar (HAPI)	GGL	73.2	4.200	18"	Operational	1.02	24.29	0.9	21.43
19	Mehsana - Bhatinda [^]	GIGL	1579	45.940	36"/24"/18"/12"	Under Construction	2.72	5.9%	3.10	6.7%
20	Bhatinda - Gurdaspur [^]	GIGL	346	33.930	24"/18"/16"/12"/8"/6"	Under Construction	0.01	0.03%	0.01	0.0%
21	Mallavaram - Bhopal - Bhilwara - Vijaipur [§]	GITL	2042	78.250	42"/36"/30"/24"/18"/12"	Under Construction	0.24	0.31%	0.41	0.5%
22	High Pressure Gujarat Gas Grid	GSPL	2207	31.000	36"/30"/24"/20"/18"/12"/8"/6"/4"	Operational	36.55	85%	36.6	85.1%
23	Low Pressure Gujarat Gas Grid	GSPL	57.6	12.000	36"/30"/24"/12"	Operational				
24	Dadri-Panipat	IOCL	132	20.000	30"	Operational	5.47	58%	5.94	62%
25	Ennore-Tuticorin	IOCL	1421	84.700	28"/24"/16"/12"/10"	Under Construction	2.11	17%	2.39	20%
26	Uran-Trombay	ONGC	24	6.000	20"	Operational	2.86	48%	3.05	51%
27	Kakinada-Hyderabad-Uran-Ahmedabad (East West Pipeline)	PIL	1460	85.000	30"/28"/24"/20"/8"	Operational	11.99	14.11%	11.92	14.02%
28	Shahdol-Phulpur	RGPL	304	3.500	16"	Operational	0.818	23.38	0.790	22.58
29	North East Gas Grid connecting the eight North Eastern states of Assam, Arunachal Pradesh, Meghalaya, Tripura, Mizoram, Nagaland, Manipur & Sikkim.	Indradhanush Gas Grid Limited	1656	4.750	24"/18"/16"/12"/8"	Under Construction	NIL	NIL	NIL	NIL
30	Kakinada - Vishakhapatnam - Srikakulam	APGDC	391	90.000	24"/18"	Under Construction	NIL	NIL	NIL	NIL
	Total		27871							

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.

Table 5.2 : Existing major crude oil pipelines in India

Type of Pipeline -Onshore/ Offshore	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during
			01.04.2021	01.04.2021	2020-21	2020-21
Onshore	CTF (Central Tank Farm) Kalol to CTF Nawagam - New (New line commissioned in Aug'2010)	ONGC	63	3.1	1.1	33.9
Onshore	Nawagam-Koyali (18" line) New		80	5.4	3.5	64.6
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	2.0	87.0
Onshore	CTF (Central Tank Farm), Ankleshwar to Koyali oil pipeline (AKCL- Ankleshwar Koyali Crude Line)		95	2.2	0.8	34.6
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	0.6	34.3
Onshore	Akholjuni- Koyali oil pipe line (Commissioned in July 2010). Akholjuni to Laxmipura T' point		66	0.5	0.3	55.3
Onshore	Lakwa-Moran oil line (New)		15	1.5	0.4	29.4
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	0.3	19.8
Onshore	Borholla- Jorhat oil line		43	0.6	0.0	0.0
Onshore	Borholla- Jorhat new TPL (New)		43	0.6	0.2	38.1
Onshore	NRM (Narimanam) to CPCL (Chennai Petroleum Corporation Limited)		5	0.7	0.4	54.5
Onshore	KSP-WGGS to TPK Refinery (Kesnapalli-West-Group Gathering Station to Tatipaka)		14	0.1	0.1	80.7
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	19.6
Offshore	Mumbai High - Uran - Trunk (MUT) 30" pipeline		204	15.6	7.8	50.2
Offshore	Heera - Uran - Trunk (HUT) 24" pipeline		81	11.5	3.6	31.2
Offshore	Bombay-Uran Trunk (BUT) 30" pipeline		203	6.4	0.1	1.1
		Sub total ONGC	1283	60.6	21.1	34.8
Onshore	Salaya-Mathura pipeline (SMPL)	IOCL	2646	25.0	23.1	92.5
Onshore	Paradip-Haldia-Barauni pipeline (PHBPL)		1355	15.2	14.9	98.0
Onshore	Mundra-Panipat pipeline		1194	8.4	6.1	72.5
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	44.1	90.8
Onshore	Duliajan-Digboi-Bongaigaon-Barauni pipeline	OIL	1193	9.0	6.0	66.6
Onshore	Mangla-Bhogat pipeline	CAIRN	660	8.7	5.9	68.1
Offshore	Bhogat Marine	CAIRN	28	2.0	1.2	62.3
		Sub total CAIRN	688	10.7	7.2	67.0
Onshore	Mundra- Bathinda pipeline	HMPL	1017	11.3	10.0	88.9
Onshore	Vadinar-Bina pipeline	BORL	937	7.8	6.2	79.7
	Total Crude pipelines		10419	147.9	94.6	64.0

Source: Oil companies

Table 5.3 : Existing major POL pipelines in India

Type of Pipeline	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during
			01.04.2021	01.04.2021	2020-21	2020-21
Petroleum Products Pipelines						
Onshore	Barauni - Kanpur pipeline	IOCL	1227	3.5	3.0	84.5
Onshore	Guwahati -Siliguri pipeline		435	1.4	1.7	119.9
Onshore	Haldia-Barauni pipeline		526	1.3	1.5	117.9
Onshore	Haldia-Mourigram-Rajbandh pipeline		277	1.4	1.5	113.5
Onshore	Koyali-Ahmedabad pipeline		79	1.1	0.5	41.1
Onshore	Koyali-Sanganer pipeline (Incl. JPNPL)		1644	5.0	4.0	80.8
Onshore	Koyali-Ratlam pipeline		265	2.0	0.8	39.0
Onshore	Koyali-Dahej pipeline		197	2.6	0.6	24.4
Onshore	Mathura-Tundla pipeline		56	1.2	0.4	35.9
Onshore	Mathura-Bharatpur pipeline		21		0.2	
Onshore	Mathura-Delhi pipeline		147	3.7	1.8	47.5
Onshore	Panipat-Amabala-Jalandhar (Including Kurukshetra-Roorkee-Najibabad branch line)		495	3.5	2.6	74.2
Onshore	Panipat-Delhi (Including Sonapat-Meerut branch line) pipeline		189	3.0	0.8	25.4
Onshore	Panipat Bijwasan ATF pipeline		111			
Onshore	Panipat-Bathinda pipeline		219	1.5	1.3	86.4
Onshore	Panipat-Rewari pipeline		155	2.1	1.5	69.8
Onshore	Chennai-Trichy-Madurai pipeline		683	2.3	2.5	107.0
Onshore	Chennai - Meenambakkam ATF pipeline		95	0.2	0.1	65.6
Onshore	Chennai-Bengaluru pipeline		290	2.5	1.8	71.8
Onshore	Devangonhi - Devanhalli pipeline		36	0.7	0.3	45.8
Onshore	Paradip Raipur Ranchi pipeline(PRRPL)		1073	5.0	3.5	69.3
Onshore	Kolkata ATF pipeline		27	0.2	0.1	27.5
			Sub total IOCL	8247	44.0	30.2
Onshore	Mumbai-Manmad-Bijwasan pipeline (MMBPL)	BPCL	1389	6.0	6.8	113.0
Onshore	Bina-Kota pipeline (BKPL)		259	4.4	3.4	76.4
Onshore	ATF P/L Mumbai Refinery (MR)-Santacruz		15	1.4	0.3	19.5
Onshore	ATF P/L Kochi Refinery (KR)-Kochi Airport		34	0.6	0.2	28.0
Onshore	Kota - Jobner branch pipeline(1)		211	1.7		
Onshore	Mumbai Refinery- Wadilube Pipeline		12	1.3	0.3	22.6
Onshore	Cochin-Coimbatore-Karur (CCK) pipeline (2)		293	3.3	3.3	99.7
			Sub total BPCL	2213	18.7	14.2
Onshore	Mumbai-Pune-Solapur pipeline	HPCL	508	4.3	3.1	72.9
Onshore	Vizag-Vijaywada-Secunderabad pipeline		572	7.7	4.6	59.2
Onshore	Mundra-Delhi pipeline (1)		1054	6.9	6.8	98.4
Onshore	Ramanmandi-Bahadurgarh pipeline (2)		243	7.1	4.9	69.4

Type of Pipeline	Name of the pipeline	Owner	Length (KM)	Capacity (MMT)	Throughput (MMT)	Percentage utilisation during
			01.04.2021	01.04.2021	2020-21	2020-21
Onshore	Ramanmandi-Bathinda pipeline	HPCL	30	2.1	1.0	49.0
Onshore	Awa-Salawas pipeline		93			
Onshore	Bahadurgarh-Tikrikalan pipeline		14			
Onshore	Rewari- Kanpur Pipeline		443			
Onshore	ATF pipeline from Mumbai Refinery to Mumbai Airport(5)		20	0.5	0.2	35.7
Onshore	Black Oil Pipeline (BOPL)		22	1.5	0.3	22.4
Onshore	Lube Oil Pipeline : Trombay to Wadibundar (3)		17	1.0	0.4	42.7
Onshore	Palanpur-Vadodara Pipeline		235			
	Sub total HPCL		3250	31.1	18.2	58.5
Onshore	Mangalore-Hassan-Bengaluru (MHB) pipeline (1)	Petronet MHB	363	5.6	2.1	38.2
Onshore	Numaligarh-Siliguri pipeline	OIL	654	1.7	1.7	98.8
	Total Petroleum product pipelines (w/o LPG pipelines)		14727	101.1	66.4	65.6
LPG Pipelines						
Onshore	Panipat-Jalandhar pipeline	IOCL	280	0.7	0.6	84.0
Onshore	Paradip Haldia Durgapur pipeline (1)		873	1.3	1.1	89.1
	Sub total IOCL		1153	2.0	1.7	87.3
Onshore/offshore	Mumbai-Uran pipeline	BPCL	28	0.8	0.7	85.1
Onshore	Jamnagar-Loni pipeline	GAIL	1414	2.5	2.8	112.7
Onshore	Vizag-Secunderabad pipeline		618	1.3	1.3	98.3
	Sub total GAIL		2032	3.8	4.1	107.7
Onshore	Mangalore-Hassan-Mysore-Bangalore LPG	HPCL	356	1.9	1.1	55.5
Onshore	Uran-Chakan-Shikrapur LPG Pipeline (4)		169	1.0	0.9	88.4
	Sub total HPCL		525	2.9	2.0	66.7
	Total LPG pipelines		3738	9.5	8.5	89.0
	Total POL pipelines		18465	110.7	74.9	67.7

Source: Oil Companies

Note:

IOCL

(1) PHDPL - Durgapur to Banka commissioned on 3.7.2020 (Length = 193.629 Km)

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 UCSPL includes both HPCL & BPCL volumes.

(5) ATF Pipeline has been derated from 1.10 MMT to 0.5 MMT

Petronet MHB

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



Chapter 6

Sales

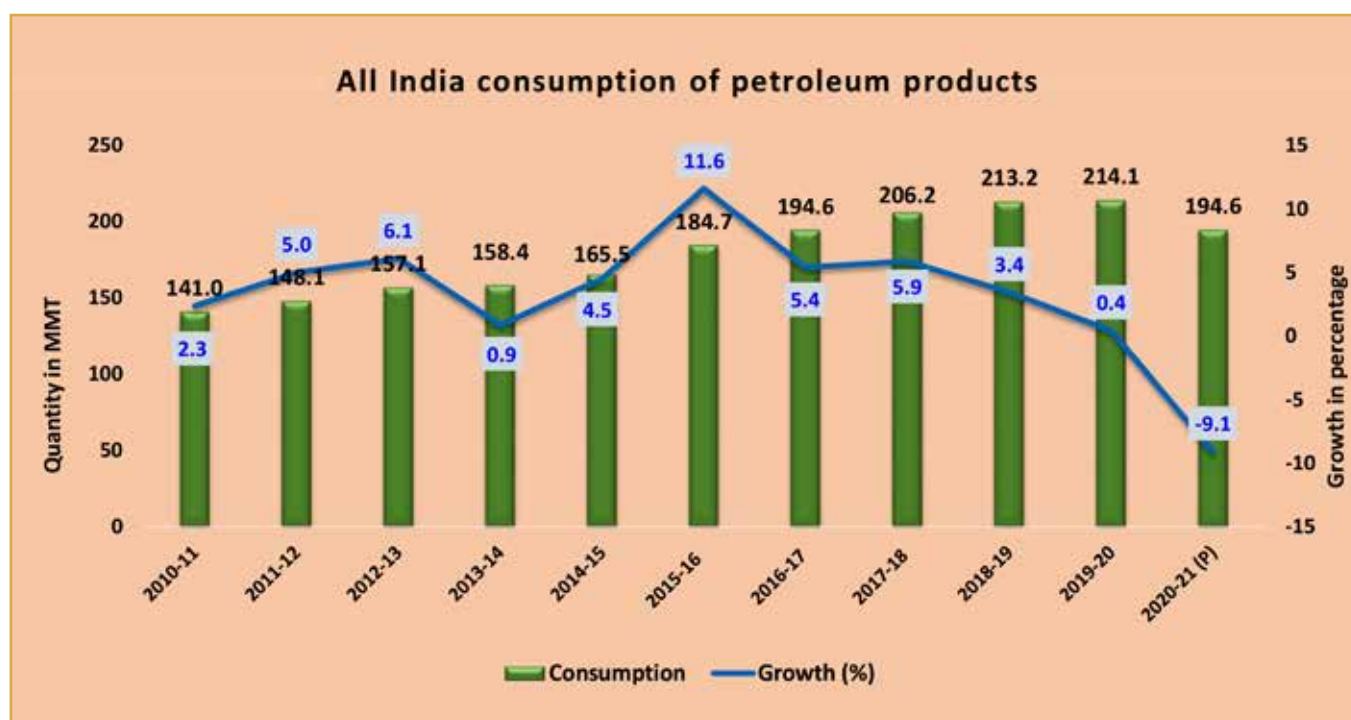


Table 6.1 : Consumption of petroleum products

(Million metric tonnes)											
Products	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
LPG	14.3	15.3	15.6	16.3	18.0	19.6	21.6	23.3	24.9	26.3	27.6
MS	14.2	15.0	15.7	17.1	19.1	21.8	23.8	26.2	28.3	30.0	28.0
Naphtha	10.7	11.2	12.3	11.3	11.1	13.3	13.2	12.9	14.1	14.3	14.3
ATF	5.1	5.5	5.3	5.5	5.7	6.3	7.0	7.6	8.3	8.0	3.7
SKO	8.9	8.2	7.5	7.2	7.1	6.8	5.4	3.8	3.5	2.4	1.8
HSD	60.1	64.8	69.1	68.4	69.4	74.6	76.0	81.1	83.5	82.6	72.7
LDO	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.8
Lubes	2.4	2.6	3.2	3.3	3.3	3.6	3.5	3.9	3.7	3.8	3.5
FO/LSHS	10.8	9.3	7.7	6.2	6.0	6.6	7.2	6.7	6.6	6.3	6.0
Bitumen	4.5	4.6	4.7	5.0	5.1	5.9	5.9	6.1	6.7	6.7	7.1
Petcoke	5.0	6.1	10.1	11.8	14.6	19.3	24.0	25.7	21.3	21.7	18.3
Others*	4.6	4.9	5.5	6.0	5.9	6.4	6.6	8.3	11.7	11.4	10.8
All India	141.0	148.1	157.1	158.4	165.5	184.7	194.6	206.2	213.2	214.1	194.6
Growth (%)	2.3	5.0	6.1	0.9	4.5	11.6	5.4	5.9	3.4	0.4	-9.1

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)



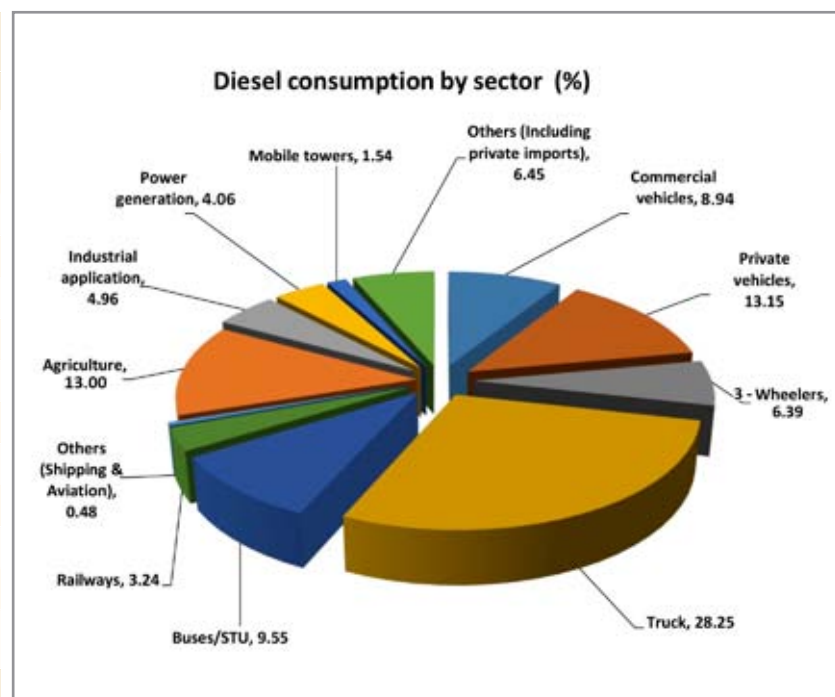
The consumption of petroleum products has gone up from 141.0 MMT in 2010-11 to 194.6 MMT in 2020-21. The compounded annual growth rate (CAGR) of total POL consumption in the last decade has been 3.3%. The CAGR of petcoke (13.9%) consumption has been highest among POL products in the last decade followed by MS (7.0%), LPG (6.8%), LDO (6.4%), bitumen (4.6%), lubes (3.8%), naphtha (2.9%) and HSD (1.9%). CAGR of products grouped under "others" category has been 9.0%. Negative CAGR in the last decade was observed in the consumption of ATF (-3.1%), FO/LSHS (-5.7%) and SKO (-14.8%). Consumption for the FY 20-21 recorded a contraction of -9.1% with a volume of 194.6 MMT as compared to 214.1 MMT during the FY 2019-20.

Table 6.2 : Consumption growth of petroleum products

(Growth in percentage)											
Products	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
LPG	9.1	6.8	2.0	4.4	10.5	9.0	10.1	8.0	6.7	5.7	4.8
MS	10.7	5.6	5.0	8.8	11.4	14.5	8.8	10.1	8.1	6.0	-6.8
Naphtha	5.3	5.1	9.5	-8.0	-2.0	19.8	-0.2	-2.7	9.6	1.0	-0.1
ATF	9.8	9.0	-4.8	4.4	4.0	9.4	11.8	9.1	8.7	-3.6	-53.7
SKO	-4.0	-7.8	-8.8	-4.5	-1.1	-3.7	-20.9	-28.8	-10.0	-30.7	-25.1
HSD	6.8	7.8	6.7	-1.0	1.5	7.5	1.8	6.6	3.0	-1.1	-12.0
LDO	-0.4	-8.9	-4.0	-3.1	-5.4	11.5	10.3	16.7	14.2	5.0	34.6
Lubes	-4.3	8.4	21.4	3.4	0.1	7.9	-2.8	11.9	-5.6	4.5	-7.7
FO/LSHS	-7.2	-13.7	-17.7	-18.6	-4.4	11.3	7.8	-6.0	-2.3	-4.0	-4.9
Bitumen	-8.0	2.2	0.8	7.1	1.3	17.1	0.0	2.5	10.2	0.2	5.9
Petcoke	-24.4	23.2	65.1	16.0	23.8	32.6	24.2	7.1	-16.8	1.7	-15.7
Others	-15.4	7.8	11.9	8.1	-1.4	8.2	3.8	26.5	40.6	-3.1	-4.7
All India	2.3	5.0	6.1	0.9	4.5	11.6	5.4	5.9	3.4	0.4	-9.1

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 - March 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	46.5	38.1	91.4	74.9	0.1	0.1	126.6	103.7	312.0	255.7
Delhi	733.0	36.6	668.8	33.4	0.1	0.006	499.2	24.9	2911.2	145.4
Haryana	868.5	29.0	1011.5	33.8	1.5	0.1	4434.4	148.1	9852.8	329.2
Himachal Pradesh	179.5	23.4	233.1	30.4	8.7	1.1	609.8	79.5	1527.8	199.2
Jammu and Kashmir	210.0	14.1	273.1	18.4	79.0	5.3	576.0	38.7	1300.8	87.4
Ladakh	6.5	18.3	12.5	35.3	47.3	134.2	56.1	159.1	140.6	398.9
Punjab	991.5	31.7	888.2	28.4	1.2	0.04	2741.4	87.7	5963.6	190.9
Rajasthan	1412.7	17.3	1549.4	18.9	2.5	0.03	4336.7	53.0	9201.3	112.5
Uttar Pradesh	3819.4	16.2	3210.0	13.6	23.8	0.1	9384.7	39.7	18091.7	76.5
Uttarakhand	304.5	25.8	293.0	24.8	4.1	0.3	657.1	55.6	1533.5	129.9
SUB TOTAL NORTH	8572.1	19.7	8231.0	18.9	168.4	0.4	23422.1	53.8	50835.5	116.8
Andaman & Nicobar Islands	12.1	29.9	13.8	34.3	0.1	0.2	132.4	327.9	171.5	424.7
Bihar	1643.0	12.8	848.9	6.6	165.4	1.3	2136.5	16.7	5518.1	43.1
Jharkhand	424.6	10.7	512.5	12.9	64.8	1.6	1741.5	43.9	3138.8	79.1
Odisha	692.0	14.6	782.4	16.5	148.1	3.1	2534.5	53.6	5927.5	125.3
West Bengal	1983.9	19.3	997.4	9.7	544.5	5.3	3007.9	29.3	8489.0	82.6
SUB TOTAL EAST	4755.6	14.9	3155.1	9.9	922.9	2.9	9552.9	30.0	23244.8	73.0
Arunachal Pradesh	23.0	13.4	49.5	28.9	10.5	6.2	171.4	100.2	270.5	158.1
Assam	505.7	14.0	431.9	12.0	120.3	3.3	902.8	25.0	2727.4	75.7
Manipur	48.6	14.5	62.1	18.6	9.1	2.7	109.0	32.6	236.7	70.9
Meghalaya	27.4	7.4	81.3	21.9	14.0	3.8	281.0	75.6	409.2	110.0
Mizoram	29.0	21.8	26.0	19.5	2.5	1.9	68.9	51.7	130.4	98.0
Nagaland	24.8	12.6	31.9	16.2	6.7	3.4	88.9	45.2	162.5	82.6
Sikkim	16.2	23.7	15.8	23.1	10.2	14.9	60.4	88.5	108.1	158.5
Tripura	60.0	14.4	53.7	12.9	19.5	4.7	88.7	21.3	229.8	55.1
SUB TOTAL NORTH EAST	734.6	13.9	752.1	14.2	192.8	3.6	1771.0	33.4	4274.7	80.7
Chhattisgarh	344.2	11.2	604.3	19.6	43.8	1.4	1607.7	52.2	3420.7	111.1
Dadra & Nagar Haveli and Daman & Diu	30.5	34.6	29.9	34.0	0.02	0.02	161.7	183.7	541.6	615.2
Goa	65.3	41.7	145.1	92.6	0.3	0.2	233.4	148.9	555.6	354.5
Gujarat	1185.4	16.7	1860.2	26.2	68.2	1.0	5089.8	71.7	21994.4	309.6
Madhya Pradesh	1137.0	13.2	1461.1	17.0	145.9	1.7	3368.9	39.2	7298.1	84.8
Maharashtra	3088.9	24.0	3014.4	23.4	23.8	0.2	8031.2	62.4	17858.2	138.8
SUB TOTAL WEST	5851.4	18.3	7115.1	22.3	282.0	0.9	18492.8	58.0	51668.6	162.0
Andhra Pradesh	1293.0	23.8	1321.9	24.4	0.7	0.01	3405.3	62.8	7266.1	133.9
Karnataka	1840.7	26.4	2123.9	30.4	41.4	0.6	5574.5	79.9	11121.2	159.4
Kerala	1071.6	30.7	1371.1	39.3	53.1	1.5	1922.6	55.1	5462.0	156.5
Lakshadweep	0.8	12.0	0.0	0.0	0.7	11.0	16.0	234.5	17.7	259.8
Puducherry	47.2	30.1	108.4	69.2	0.0	0.0	211.0	134.7	412.9	263.6
Tamil Nadu	2281.4	27.7	2573.3	31.2	130.4	1.6	4997.9	60.7	12166.5	147.7
Telangana	1027.4	26.5	1199.5	30.9	2.7	0.1	3253.3	83.9	6222.8	160.5
SUB TOTAL SOUTH	7562.1	26.8	8698.1	30.9	229.1	0.8	19380.5	68.8	42669.1	151.5
All India	27475.7	19.5	27951.4	19.9	1795.1	1.3	72619.3	51.6	172692.7	122.7

*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 2020 - March 2021

2-Population figures have been taken from Census of India, 2011 and then extrapolated for 01.04.2020 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	2016-17		2017-18		2018-19		2019-20		2020-21 (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	66.3	35.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Himachal Pradesh	18.1	17.9	14.5	14.4	14.5	14.3	11.4	10.8	9.8	6.8
Jammu & Kashmir	73.1	67.9	58.5	57.6	58.5	53.9	45.0	40.9	45.0	36.5
Ladakh							3.5	1.0	3.5	3.5
Punjab	74.3	62.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rajasthan	371.4	355.8	260.0	110.5	138.0	69.3	40.0	16.2	14.2	0.9
Uttar Pradesh	1168.2	1167.6	911.2	901.3	887.9	873.5	517.9	449.5	181.7	26.5
Uttarakhand	31.7	31.2	25.3	13.3	25.3	10.0	8.0	0.5	2.2	0.4
SUB TOTAL NORTH	1803.1	1738.5	1269.5	1097.0	1124.2	1021.0	625.8	518.8	256.4	74.6
Andaman & Nicobar Islands	5.2	4.9	4.1	4.0	4.1	3.8	1.9	1.5	0.0	0.0
Bihar	710.7	705.3	495.4	490.3	332.6	329.6	263.0	243.9	212.7	212.4
Jharkhand	219.7	219.0	186.8	176.3	186.8	150.3	135.2	107.2	90.0	83.2
Odisha	292.3	283.0	248.4	244.3	248.4	247.7	210.6	208.3	194.3	190.3
West Bengal	788.9	788.3	704.0	653.6	704.0	699.3	704.0	692.7	704.0	696.5
SUB TOTAL EAST	2016.8	2000.4	1638.8	1568.5	1476.0	1430.7	1314.8	1253.5	1201.1	1182.4
Arunachal Pradesh	9.3	9.1	7.9	7.7	7.9	7.2	6.4	5.2	4.8	3.7
Assam	289.2	287.8	245.9	245.0	245.9	242.6	181.9	176.9	155.6	153.1
Manipur	21.1	15.2	17.9	18.2	17.9	17.7	13.3	12.7	11.1	11.3
Meghalaya	22.9	22.7	19.4	19.4	19.4	19.3	19.3	18.9	18.9	17.9
Mizoram	6.0	6.0	4.8	4.8	4.8	4.8	3.6	3.6	3.2	3.2
Nagaland	15.1	9.0	12.2	9.5	10.3	9.8	9.3	8.9	8.6	8.4
Sikkim	4.3	4.3	3.5	3.4	3.5	3.4	2.6	2.5	2.3	2.1
Tripura	34.6	34.5	29.4	29.4	29.4	29.3	26.4	26.2	25.2	25.1
SUB TOTAL NORTH EAST	402.4	388.7	340.9	337.4	339.0	334.0	262.7	254.9	229.5	224.8
Chhattisgarh	135.4	121.7	115.1	92.7	115.1	91.5	82.4	69.1	58.3	56.1
Dadra & Nagar Haveli and Daman & Diu	2.4	2.1	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Goa	4.6	2.6	2.3	1.4	2.1	1.4	0.8	0.6	0.4	0.4
Gujarat	493.0	492.7	344.5	338.2	249.7	248.7	138.8	120.8	84.0	83.1
Madhya Pradesh	442.4	427.2	345.0	336.9	336.2	325.9	260.7	238.5	213.4	187.1
Maharashtra	563.6	518.0	384.7	377.8	286.7	241.9	106.5	52.9	46.5	21.6
SUB TOTAL WEST	1641.4	1564.3	1192.0	1147.2	989.8	909.5	589.3	482.1	402.6	348.2
Andhra Pradesh	225.7	191.5	56.4	26.6	0.0	0.0	0.0	0.0	0.0	0.0
Karnataka	287.5	260.3	156.0	126.5	156.0	112.5	84.3	66.4	42.5	38.7
Kerala	88.3	88.3	58.7	58.7	55.6	55.6	41.7	41.7	37.1	37.1
Lakshadweep	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.6	0.8	0.9
Puducherry	3.8	3.8	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0
Tamil Nadu	307.6	307.6	204.5	204.9	193.8	193.8	145.3	145.3	129.2	129.2
Telangana	155.4	133.9	103.4	100.8	97.9	94.3	56.6	29.8	16.0	2.9
SUB TOTAL SOUTH	1069.3	986.4	580.6	519.0	504.1	456.9	328.7	283.8	225.5	208.8
All India	6933.0	6678.4	5021.8	4669.2	4433.0	4152.1	3121.3	2793.2	2315.0	2038.8

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%). Allocation during the year 2020-21 also decreased by 25.8% as compared with the allocation in the year 2019-20.

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

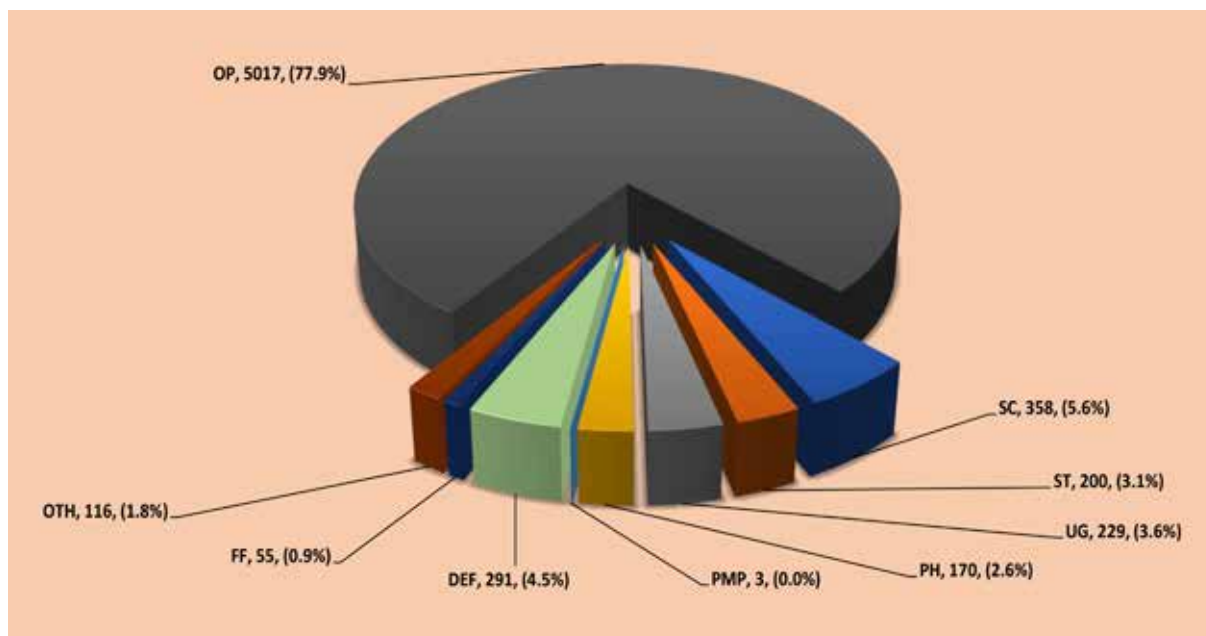
State/UT	Number of Retail Outlets (as on)					Number of SKO / LDO agencies (as on)				
	1.4.2017	1.4.2018	1.4.2019	1.4.2020	1.04.2021 (P)	1.4.2017	1.4.2018	1.4.2019	1.4.2020	1.04.2021 (P)
Chandigarh	41	41	42	42	47	12	12	12	12	12
Delhi	396	397	398	398	400	116	116	116	116	111
Haryana	2726	2862	2933	3060	3412	141	141	141	141	139
Himachal Pradesh	414	432	439	494	563	26	26	26	26	26
Jammu and Kashmir	491	500	504	530	552	45	45	45	45	45
Ladakh	3	3	3	3	12	2	2	2	2	2
Punjab	3380	3427	3453	3551	3772	237	237	237	237	237
Rajasthan	4116	4476	4661	4967	5615	250	250	250	250	248
Uttar Pradesh	7069	7473	7762	8210	9315	696	696	695	691	675
Uttarakhand	570	590	601	629	686	73	73	73	73	69
SUB TOTAL NORTH	19206	20201	20796	21884	24374	1598	1598	1597	1593	1564
Andaman & Nicobar Islands	12	14	14	16	16	2	2	2	2	2
Bihar	2604	2695	2860	2968	3158	372	372	371	371	362
Jharkhand	1189	1207	1216	1358	1535	87	87	87	87	87
Odisha	1639	1681	1704	1894	2070	177	177	177	177	176
West Bengal	2299	2333	2363	2523	2750	458	458	458	457	455
SUB TOTAL EAST	7743	7930	8157	8759	9529	1096	1096	1095	1094	1082
Arunachal Pradesh	74	85	94	116	152	33	33	33	33	33
Assam	828	871	897	979	1104	359	359	359	359	359
Manipur	85	97	104	136	160	36	36	36	36	36
Meghalaya	198	203	208	225	238	35	35	35	35	35
Mizoram	37	41	43	45	55	19	19	19	19	19
Nagaland	70	73	79	94	120	19	19	19	19	19
Sikkim	50	51	51	55	57	12	12	12	12	12
Tripura	68	71	72	79	94	40	40	40	40	40
SUB TOTAL NORTH EAST	1410	1492	1548	1729	1980	553	553	553	553	553
Chhattisgarh	1176	1249	1280	1462	1808	108	108	108	108	108
Dadra & Nagar Haveli and Daman & Diu	63	63	62	61	61	7	7	7	7	7
Goa	115	116	118	118	122	22	22	22	22	22
Gujarat	3765	4025	4159	4573	5149	478	476	473	473	470
Madhya Pradesh	3528	3711	3832	4230	4981	284	284	284	284	284
Maharashtra	5684	5970	6148	6457	7048	767	767	767	766	752
SUB TOTAL WEST	14331	15134	15599	16901	19169	1666	1664	1661	1660	1643
Andhra Pradesh	3197	3336	3430	3722	4047	413	413	394	394	384
Karnataka	4027	4215	4385	4813	5499	323	318	315	315	311
Kerala	2048	2100	2140	2238	2396	237	237	237	237	234
Lakshadweep	0	0	0	0	0	0	0	0	0	0
Puducherry	160	165	165	164	174	8	8	8	8	8
Tamil Nadu	5039	5387	5638	5802	6355	466	466	466	465	458
Telangana	2434	2625	2767	3077	3571	183	183	202	202	202
SUB TOTAL SOUTH	16905	17828	18525	19816	22042	1630	1625	1622	1621	1597
All India	59595	62585	64625	69089	77094	6543	6536	6528	6521	6439

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

• On an all India basis the percentage growth in the number of retail outlets from 01.04.2017 to 01.04.2021 has been 29.4%. The region wise growth is highest for the North Eastern region (40.4%), followed by Western region (33.8%), Southern region (30.4%), Northern region (26.9%) 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 6439) on 01.04.2021 (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 01.04.2021 (P)

Particulars	IOCL	BPCL	HPCL	RIL/ RBML*	NEL	Shell	Others	Total
POL terminal/depots (Nos.) [§]	118	79	80	18	3	-	6	304
Aviation fuel stations (Nos.) [@]	121	61	46	31	-	-	1	260
Retail Outlets (total) (Nos.) [^]	32,062	18,637	18,634	1,420	6,059	264	18	77,094
out of which Rural ROs (Nos.)	9,915	4,258	4,543	127	1,998	56	3	20,900
SKO/LDO agencies (Nos.)	3,871	930	1,638	-	-	-	-	6,439
LPG distributors (total) (Nos.) (PSUs only)	12,726	6,165	6,192	-	-	-	-	25,083
LPG bottling plants (Nos.) (PSUs only) [#]	93	53	51	-	-	-	3	200
LPG bottling capacity (TMTPA) (PSUs only) ^{&}	10,244	4,920	5,912	-	-	-	173	21,249
LPG active domestic consumers (Nos. crore) (PSUs only)	13.6	7.4	7.9	-	-	-	-	28.9

[§](Others=4 MRPL & 2 NRL); [@](Others=ShellMRPL -1); [^](Others=MRPL); [#](Others=NRL-1, OIL-1, CPCL-1); [&](Others=NRL-30, OIL-23, CPCL-120); *RBML- Reliance BP Mobility Limited

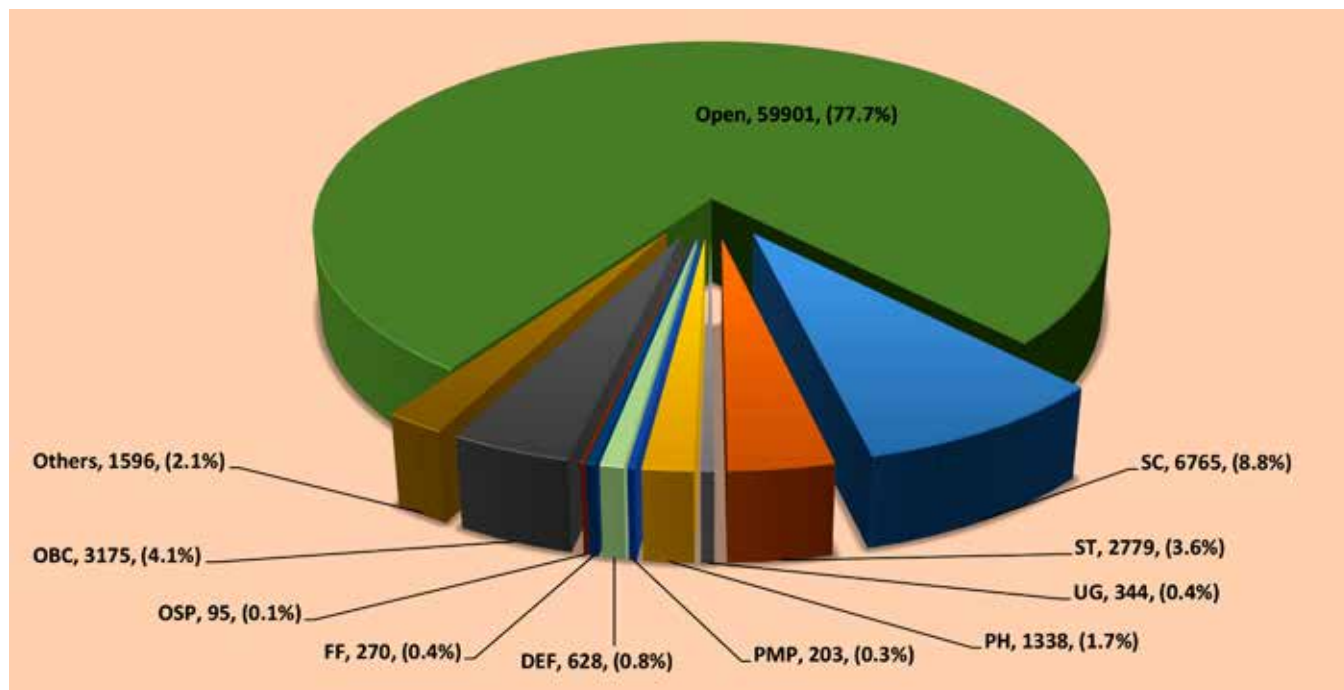
Source: Oil companies

All India number of retail outlets in PSU and private category



On 1.04.2021 the number of public sector oil company owned retail outlets was 69351 out of a total of 77094 outlets on all India basis, whereas the number of retail outlets owned by private oil companies was 7743. Participation by private sector in retail outlet business started in FY 2004 with 27 retail outlets. As on 01.04.2021 it accounted for 10.0% of the total market representation.

Category wise retail outlets (Total 77094) as on 01.04.2021



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)

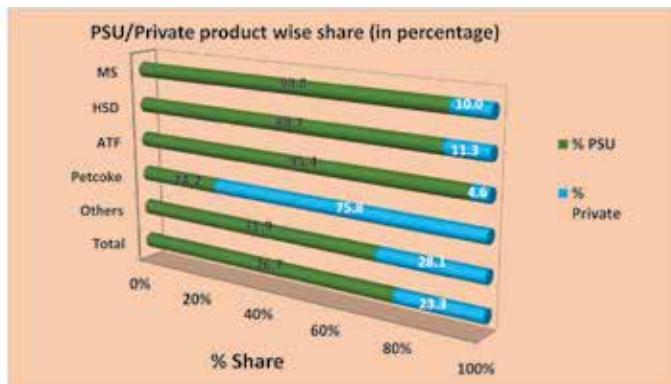
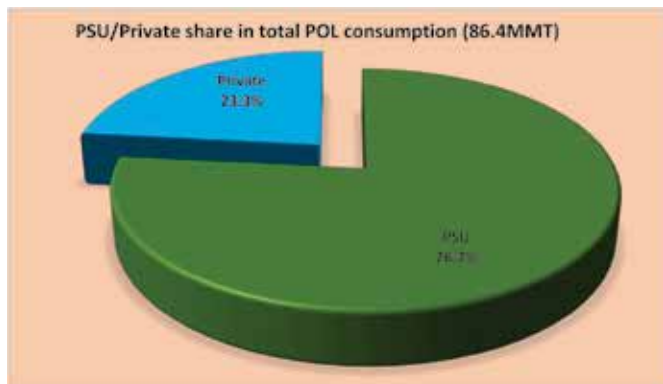
(Thousand metric tonne)

Product	2017-18			2018-19			2019-20			2020-21 (P)		
	PSU	Private	Total	PSU	Private	Total	PSU	Private	Total	PSU	Private	Total
LPG	22977	364	23342	24591	316	24907	26126	204	26330	27476	115	27591
MS	24329	1846	26174	25959	2326	28284	27179	2797	29975	25159	2792	27951
Naphtha	5207	7681	12889	5583	8548	14131	6479	7789	14268	6041	8216	14257
ATF	6988	645	7633	7683	617	8300	7598	400	7999	3534	171	3705
SKO	3845	0	3845	3459	0	3459	2397	0	2397	1795	0	1795
HSD	74382	6692	81073	75775	7753	83528	73825	8777	82602	64490	8230	72720
LDO	519	0	519	577	21	598	602	25	628	713	132	845
Lubes	1345	2539	3884	1313	2355	3668	1317	2517	3833	1475	2063	3539
FO/LSHS	5665	1056	6721	5596	968	6564	5172	1129	6302	4925	1070	5995
Bitumen	4883	1202	6086	5683	1024	6708	4995	1725	6720	5356	1762	7118
PetCoke	5176	20480	25657	5770	15576	21346	5634	16074	21708	4419	13872	18291
Others	3422	4922	8343	4189	7534	11723	4381	6984	11365	3954	6871	10825
Total	158739	47427	206166	166178	47038	213216	165704	48422	214127	149337	45295	194632

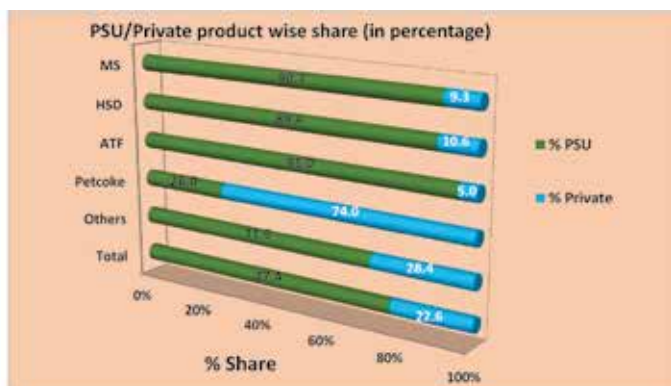
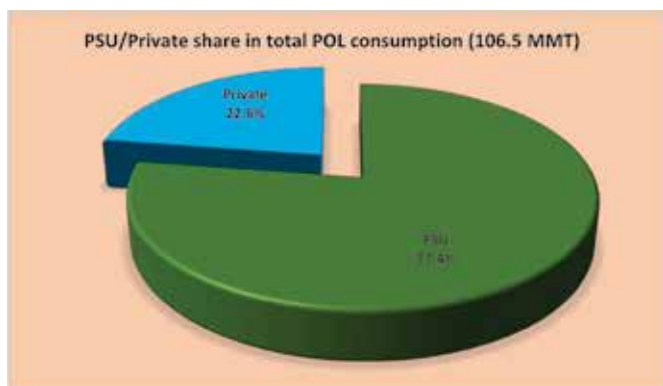
Source: Oil companies, Directorate General of Commercial Intelligence and Statistics (DGCIS) & SEZ data (included from FY 2017-18 onwards).
(Oil company sales+Private imports+SEZ sales to DTA=Consumption)

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

2020-21 (P)



2019-20



- The share of the private sector in total consumption increased during 2020-21(P) by 0.7% as compared to the same period last year.
- The share of the private sector during 2020-21(P) increased in MS (0.7%), HSD (0.7%) and Petcoke (1.8%) compared to 2019-20.
- This was mainly because of lower de-growth in consumption of MS, HSD and ATF in private sector as compared to growth in PSU.
- In the private sector growth has been observed for naphtha (5.5%), LDO (420.8%) and bitumen (2.1%).
- In respect of all other products (except MS, HSD, ATF & petcoke) including lubes, bitumen, LDO and naphtha, the private sector share has decreased by -0.2% during 2020-21 (P) as compared to 2019-20.

Table 6.8 : Ethanol blending programme

Sl.no.	State	(1st December 2019 to 30th November 2020) Ethanol Supply Year*		(1st December 2020 to 31st May 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%	8.4	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%	5.6	9.4%
6	Chandigarh	0.0	8.9%	0.0	9.3%
7	Chhattisgarh	4.7	6.2%	3.8	8.8%
8	Dadar & Nagar Haveli and Daman & Diu	0.0	4.1%	0.0	9.7%
9	Delhi	6.7	7.3%	3.0	10.0%
10	Goa	0.8	4.8%	1.2	9.6%
11	Gujarat	12.4	6.3%	9.3	9.4%
12	Haryana	13.1	9.5%	7.9	10.0%
13	Himachal Pradesh	1.6	7.9%	1.3	9.7%
14	Jammu & Kashmir	0.0	0.0%	0.1	0.3%
15	Jharkand	2.4	3.8%	2.0	5.2%
16	Karnataka	18.8	7.3%	14.2	9.7%
17	Lakshadweep	0.0	0.0%	0.0	0.0%
18	Kerala	0.0	0.1%	3.3	3.1%
19	Ladakh	0.0	0.0%	0.0	0.0%
20	Madhya Pradesh	10.2	6.3%	7.4	8.7%
21	Maharashtra	21.9	5.7%	21.9	9.6%
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%	1.6	2.8%
27	Pondicherry	0.0	0.4%	0.0	4.3%
28	Punjab	11.5	9.1%	6.9	9.6%
29	Rajasthan	2.7	1.4%	4.4	4.7%
30	Sikkim	0.0	0.0%	0.0	0.0%
31	Tamil Nadu	3.5	1.1%	13.3	7.1%
32	Telangana	4.7	3.1%	8.1	8.9%
33	Tripura	0.0	0.0%	0.0	0.0%
34	Uttar Pradesh	40.1	9.5%	26.1	9.9%
35	Uttarakhand	2.4	9.7%	1.4	10.0%
36	West Bengal	1.4	1.1%	1.2	1.5%
Grand Total		173.0	5.0%	152.5	7.7%

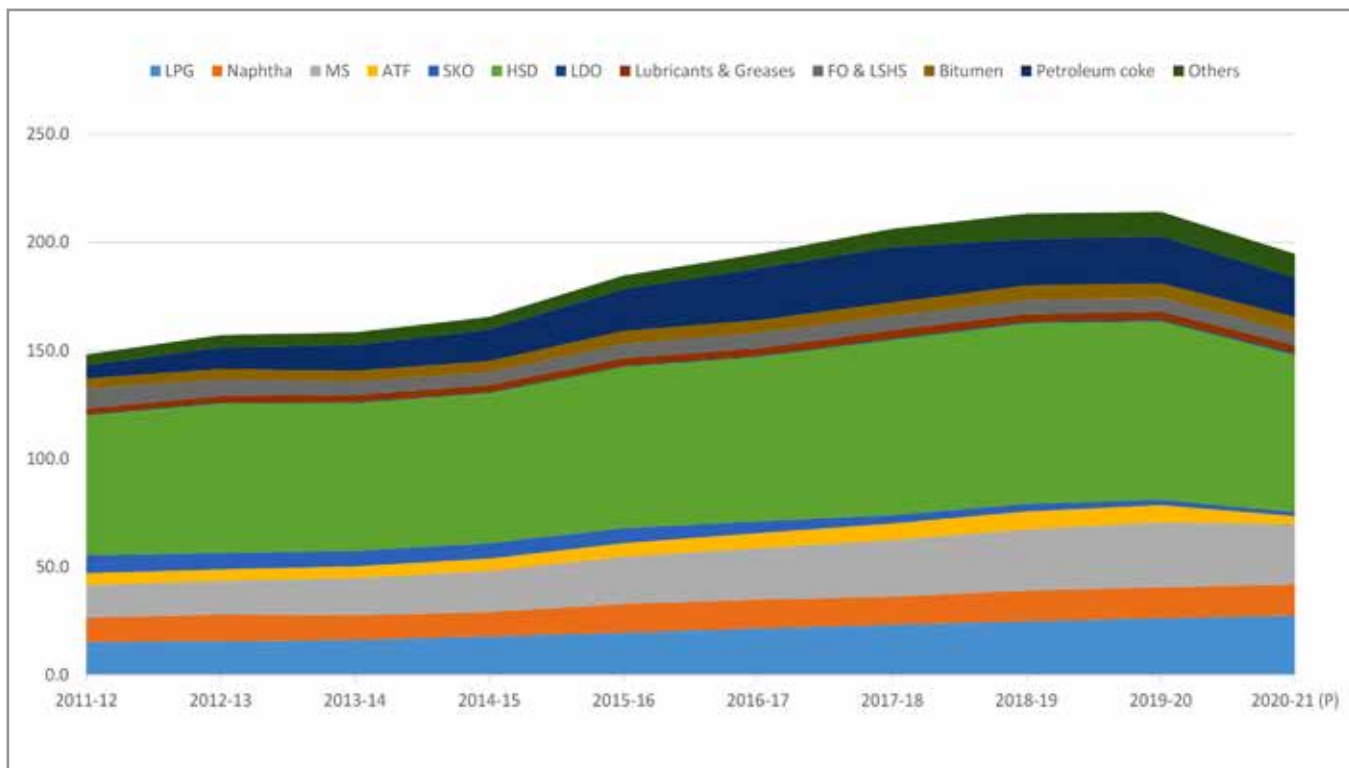
* Ethanol Supply Year : Ethanol supplies take place between 1st December of the present year to 30th November of the following year.

**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.

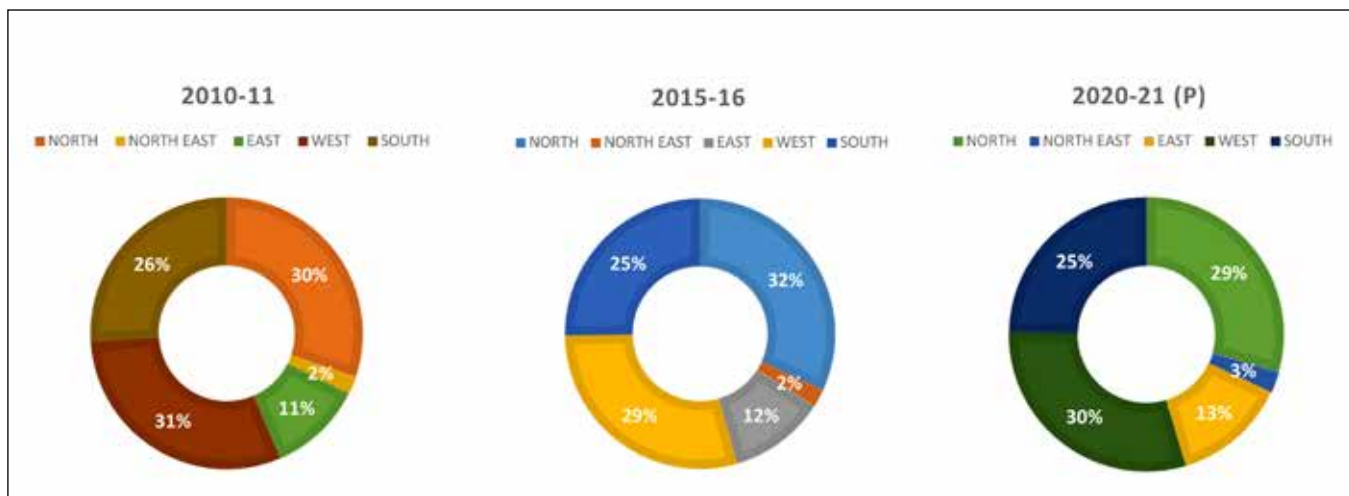
Note: With effect from 01.04.2019, EBP Programme has been extended to whole of India except UTs of Andaman & Nicobar Islands and Lakshadweep.

POL consumption by product

Million metric tonne



Distribution of total domestic POL sales in India





Chapter 7

LPG



Table 7.1 : LPG marketing at a glance

Particulars	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 (P)
	(Thousand metric tonne)					
LPG production	10568	11253	12364	12786	12823	12072
LPG consumption	19623	21608	23342	24907	26330	27591
PSU sales	19134	21179	22977	24591	26126	27476
of which:						
Domestic	17182	18871	20352	21728	23076	25117
Non-Domestic	1464	1776	2086	2364	2614	1885
Bulk	317	364	355	318	263	355
Auto LPG	171	167	184	180	172	118
Imports	8959	11097	11379	13235	14809	16527
of which:						
PSU imports	8470	10668	11015	12919	14605	16412
Private imports	489	429	364	316	204	115
	(Lakh)					
Enrolment (domestic)	204.5	331.7	284.7	455.1	161.1	85.8
As on	1.4.2016	1.4.2017	1.4.2018	1.4.2019	1.4.2020	1.4.2021
LPG active domestic customers	1,663	1,988	2,243	2,654	2,787	2,895
PMUY beneficiaries	-	200	356	719	802	800
Non-domestic customers	23.3	25.3	27.9	30.2	32.4	33.9
	(Percent)					
LPG coverage (Estimated)	61.9	72.8	80.9	94.3	97.5	99.8
	(Nos.)					
LPG distributors	17916	18786	20146	23737	24670	25083
of which:						
Shehri Vitrak	7492	7677	7821	7908	7914	7899
Rurban Vitrak	2852	3152	3463	3626	3671	3697
Gramin & Durgam Kshetriya Vitrak	7572	7957	8862	12203	13085	13487
Auto LPG dispensing stations (ALDS)	676	675	672	661	657	651
	(Thousand metric tonne per annum)					
Bottling capacity (rated)	15172	16264	17395	18338	20292	21249
	(Thousand metric tonne)					
Gross tankage	869	878	912	929	978	994

Source: 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 methodology used by PSU OMCs for estimating LPG Coverage is under review.

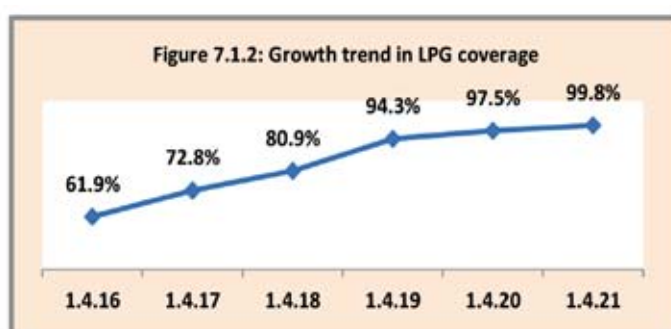
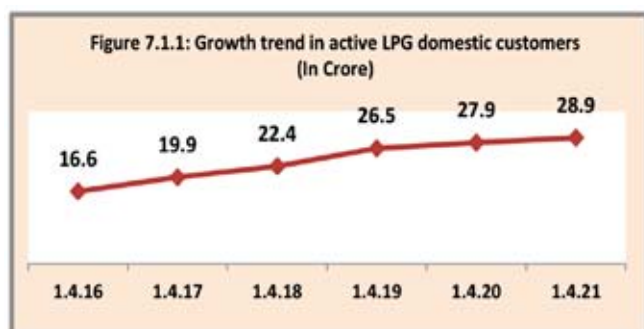


Table 7.2: LPG coverage (estimated) as on 01.04.2021 (P)

(Number in lakhs)				
State/UT	No. of households Census 2011	Estimated households as on 1.04.2021	Active connections as on 1.04.2021	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 methodology used by PSU OMCs for estimating LPG Coverage is under review.



Table 7.3: BPL households covered under PMUY Scheme as on 01.04.2021 (P)

(Number in lakhs)	
State/UT	Number of BPL households
Chandigarh	0.00
Delhi	0.76
Haryana	7.27
Himachal Pradesh	1.36
J & K + LADAKH	12.41
Punjab	12.20
Rajasthan	63.60
Uttar Pradesh	147.33
Uttarakhand	4.03
Sub Total North	248.96
Arunachal Pradesh	0.45
Assam	34.74
Manipur	1.56
Meghalaya	1.51
Mizoram	0.28
Nagaland	0.54
Sikkim	0.09
Tripura	2.72
Sub Total North East	41.88
Andaman & Nicobar Islands	0.13
Bihar	85.24
Jharkhand	32.59
Odisha	47.37
West Bengal	88.39
Sub Total East	253.70
Chhattisgarh	29.89
Dadra & Nagar Haveli	0.15
Daman & Diu	0.00
Goa	0.01
Gujarat	28.99
Madhya Pradesh	71.44
Maharashtra	44.20
Sub Total West	174.68
Andhra Pradesh	3.92
Karnataka	31.43
Kerala	2.56
Lakshadweep	0.00
Puducherry	0.14
Tamil Nadu	32.38
Telangana	10.71
Sub Total South	81.14
All India	800.36

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

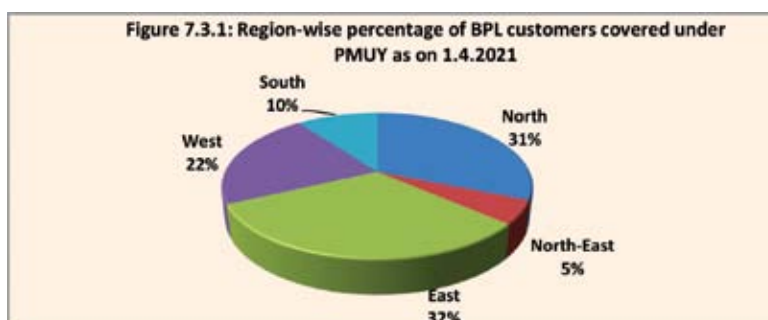


Table 7.4 : LPG domestic customers enrolment (14.2 kg/5 kg) by PSU OMCs

State/UT	2020-21		
	14.2 Kg	5 Kg	Total
Chandigarh	0.07	0.0000	0.07
Delhi	1.00	0.0012	1.00
Haryana	2.71	0.0035	2.72
Himachal Pradesh	0.68	0.0018	0.68
J & K + LADAKH	0.58	0.0063	0.59
Punjab	2.23	0.0059	2.24
Rajasthan	2.34	0.0080	2.35
Uttar Pradesh	14.82	0.0436	14.86
Uttarakhand	1.07	0.0025	1.07
Sub Total North	25.51	0.07	25.58
Arunachal Pradesh	0.15	0.0005	0.15
Assam	2.23	0.0032	2.23
Manipur	0.38	0.0005	0.38
Meghalaya	0.15	0.0006	0.15
Mizoram	0.15	0.0002	0.15
Nagaland	0.15	0.0005	0.16
Sikkim	0.12	0.0003	0.12
Tripura	0.18	0.0004	0.18
Sub Total North East	3.51	0.01	3.51
Andaman & Nicobar Islands	0.05	0.0000	0.05
Bihar	9.56	0.0199	9.58
Jharkhand	1.33	0.0030	1.33
Odisha	2.13	0.0097	2.14
West Bengal	6.64	0.0184	6.66
Sub Total East	19.71	0.05	19.76
Chhattisgarh	1.12	0.0043	1.13
Dadra & Nagar Haveli	0.05	0.0000	0.05
Daman & Diu	0.00	0.0000	0.00
Goa	0.15	0.0001	0.15
Gujarat	3.16	0.0033	3.16
Madhya Pradesh	2.86	0.0164	2.88
Maharashtra	9.84	0.0096	9.85
Sub Total West	17.18	0.03	17.22
Andhra Pradesh	3.55	0.0025	3.55
Karnataka	5.12	0.0120	5.13
Kerala	2.48	0.0023	2.48
Lakshadweep	0.02	0.0000	0.02
Puducherry	0.09	0.0004	0.09
Tamil Nadu	4.94	0.0158	4.95
Telangana	3.53	0.0018	3.53
Sub Total South	19.72	0.03	19.75
All India	85.63	0.20	85.82

Source: PSU OMCs (IOCL, BPCL and HPCL)

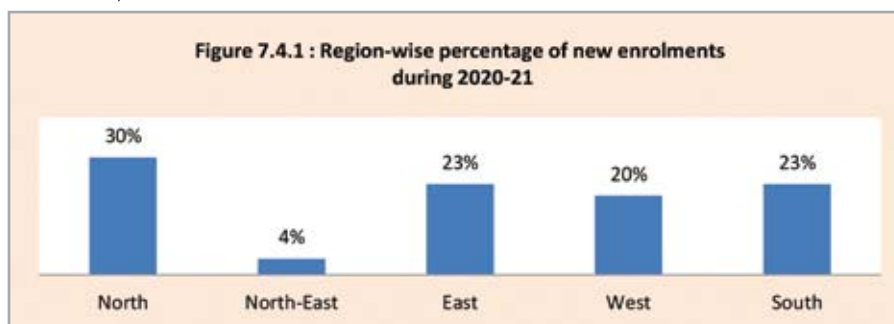
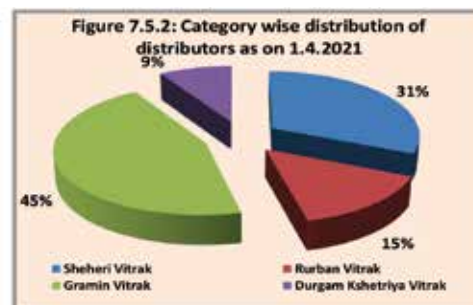


Table 7.5 : Number of LPG distributors as on 01.04.2021 (New Scheme)

(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	281	101	232	9	623
Himachal Pradesh	69	13	93	31	206
J & K + Ladakh	130	43	75	39	287
Punjab	334	252	242	29	857
Rajasthan	438	162	652	133	1385
Uttar Pradesh	1004	705	2229	188	4126
Uttarakhand	114	106	60	34	314
Sub Total North	2717	1382	3583	463	8145
Arunachal Pradesh	6	6	30	43	85
Assam	128	104	305	53	590
Manipur	15	13	35	38	101
Meghalaya	22	9	18	15	64
Mizoram	11	6	26	16	59
Nagaland	15	11	17	40	83
Sikkim	9	1	11	5	26
Tripura	18	9	38	12	77
Sub Total North-East	224	159	480	222	1085
Andaman & Nicobar Islands	0	4	4	1	9
Bihar	240	251	1453	49	1993
Jharkhand	163	50	323	36	572
Odisha	173	99	549	134	955
West Bengal	399	163	909	58	1529
Sub Total East	975	567	3238	278	5058
Chhattisgarh	105	75	164	190	534
Dadra & Nagar Haveli	2	1	0	0	3
Daman & Diu	3	0	0	0	3
Goa	44	4	6	1	55
Gujarat	418	118	440	30	1006
Madhya Pradesh	470	212	415	431	1528
Maharashtra	1002	190	817	197	2206
Sub Total West	2044	600	1842	849	5335
Andhra Pradesh	317	241	397	107	1062
Karnataka	534	141	512	74	1261
Kerala	226	132	308	25	691
Lakshadweep	1	0	0	0	1
Puducherry	15	10	3	0	28
Tamil Nadu	567	362	586	117	1632
Telangana	279	103	336	67	785
Sub Total South	1939	989	2142	390	5460
All India	7899	3697	11285	2202	25083

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.





Chapter 8

Prices & 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 31.05.2021)	65.03
2021 : Month wise	
January	54.79
February	61.22
March	64.73
April	63.40
May	66.95
June	71.98
July	73.54

Note: 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 previous 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

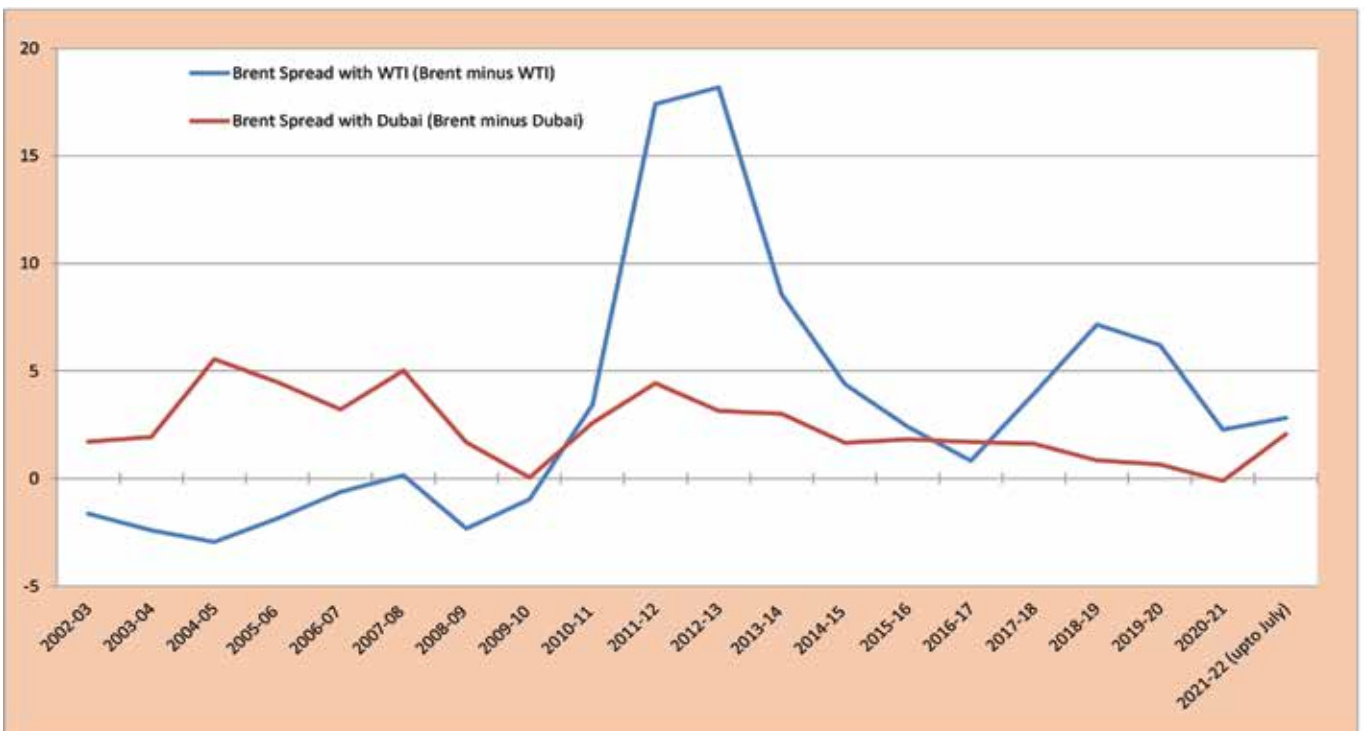


Table 8.2 : Price build-up of PDS kerosene at Mumbai

Elements	Unit	As on 1.06.2021
Price before taxes and dealers' commission	₹/litre	34.93
Add : Dealers' commission	₹/litre	2.64
Add : GST (incl GST on dealers' commission)	₹/litre	1.88
Retail selling price	₹/litre	39.45

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

Elements	Unit	As on 1.06.2021
Price before taxes and distributors' commission	₹/14.2 kg cylinder	708.63
Add : Distributors' commission	₹/14.2 kg cylinder	61.84
Add : GST (including GST on Distributors' Commission)	₹/14.2 kg cylinder	38.53
Retail selling price	₹/14.2 kg cylinder	809.00

Table 8.4 : Price build-up of petrol at Delhi

Elements	Unit	As on 1.06.2021
Price charged to dealers (excluding excise duty and VAT)	₹/litre	35.99
Add : Excise duty	₹/litre	32.90
Add : Dealers' commission (average)	₹/litre	3.79
Add : VAT (including VAT on dealers' commission)	₹/litre	21.81
Retail selling price	₹/litre	94.49

-As per IOCL.

Table 8.5 : Price build-up of diesel at Delhi

Elements	Unit	As on 1.06.2021
Price charged to dealers (excluding excise duty and VAT)	₹/litre	38.49
Add : Excise duty	₹/litre	31.80
Add : Dealers' commission (average)	₹/litre	2.59
Add : VAT (including VAT on dealer's commission)	₹/litre	12.50
Retail selling price	₹/litre	85.38

-As per IOCL.

Table 8.6 : Break up of Central excise duty on petrol & diesel as on 01.06.2021

Particulars	₹/litre	
	Petrol	Diesel
Basic duty	1.40	1.80
Additional excise duty (Road & Infrastructure Cess)	18.00	18.00
Special additional excise duty	11.00	8.00
Agriculture Infrastructure and Development Cess	2.50	4.00
Total excise duty	32.90	31.80

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 1.06.2021 at Mumbai

Particulars	₹/litre	Share in RSP (%)
Price before taxes and dealers' commission	34.93	88.5%
Customs duty	-	-
GST (Including GST on dealers' commission)	1.88	-
Total taxes	1.88	4.8%
Dealers' commission	2.64	6.7%
Retail selling price	39.45	100.0%

Table 8.8 : Share of taxes in retail selling price of domestic LPG as on 1.06.2021 at Delhi

Particulars	₹/14.2 kg cylinder	Share in RSP (%)
Price before taxes and distributors' commission	708.63	87.6%
Customs duty	-	-
GST (including GST on distributors' commission)	38.53	-
Total taxes	38.53	4.8%
Distributors' commission	61.84	7.6%
Retail selling price	809.00	100.0%

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

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

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

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

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

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

Table 8.11 : Wholesale dealers' commission on PDS kerosene

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

Table 8.12: Distributors' commission on domestic LPG

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

Table 8.12 : Continued

Effective date	14.2 KG cyl.	(₹/cylinder)	
		Additional commission for sale at market determined price (₹/14.2 KG cyl.)	5 KG cyl.
01-Feb-18	48.89	0.34	24.20
01-Mar-18	48.89	0.28	24.20
01-Apr-18	48.89	0.23	24.20
01-Jun-18	48.89	0.29	24.20
01-Jul-18	48.89	0.36	24.20
01-Aug-18	48.89	0.42	24.20
01-Sep-18	48.89	0.46	24.20
01-Oct-18	48.89	0.54	24.20
01-Nov-18	48.89	0.63	24.20
07-Nov-18	50.58	0.63	25.29
01-Dec-18	50.58	0.45	25.29
01-Jan-19	50.58	0.28	25.29
01-Feb-19	50.58	0.24	25.29
01-Mar-19	50.58	0.30	25.29
01-Apr-19	50.58	0.31	25.29
01-Jun-19	50.58	0.35	25.29
01-Jul-19	50.58	0.21	25.29
01-Aug-19	56.20	-	28.10
01-Sep-19	59.02	-	29.51
01-Oct-19	61.84	-	30.92

Source: MoP&NG circulars & OMCs

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

Country	Indian rupees (₹)/ litre/ 14.2 kg cyl.	
	Kerosene	Domestic LPG
India (Delhi)	39.45 [#]	809.00 ^{**}
Pakistan	37.80	947.88
Bangladesh	56.64	593.90
Sri Lanka	25.86	626.55
Nepal (Kathmandu)	67.02	885.13

[#] at Mumbai effective 1.06.2021 for PDS Kerosene , ^{**}Non subsidised Domestic LPG effective 1.06.2021

Note - Prices for neighboring countries as available on their respective website as on 1.06.2021.

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 01.06.2021

State/Union Territory	City	Petrol	Diesel	Domestic LPG (₹/14.2 KG Cylinder)
		(₹/litre)		Non subsidized
Andaman & Nicobar Islands	Port Blair	79.30	79.72	885.00
Andhra Pradesh	Vizag	99.42	93.73	817.50
Arunachal Pradesh	Itanagar	87.71	82.49	875.00
Assam	Guwahati	90.20	85.23	858.00
Bihar	Patna	96.64	90.66	907.50
Chandigarh	Chandigarh	90.89	85.04	818.50
Chhattisgarh	Raipur	92.76	92.38	880.50
Dadra & Nagar Haveli	Silvasa	90.13	90.56	824.00
Daman & Diu	Daman	90.02	90.45	819.00
Delhi	New Delhi	94.49	85.38	809.00
Goa	Panjim	92.39	90.11	823.00
Gujarat	Gandhinagar	91.68	92.13	835.00
Haryana	Ambala	91.78	85.46	827.00
Himachal Pradesh	Shimla	92.12	84.57	853.50
Jammu & Kashmir	Srinagar	97.67	89.03	925.00
Jharkhand	Ranchi	91.04	90.15	866.50
Karnataka	Bengaluru	97.64	90.51	812.00
Kerala	Thiruvananthapuram	96.47	91.74	818.50
Ladakh	Leh	100.12	92.02	1046.50
Madhya Pradesh	Bhopal	102.61	93.89	815.00
Maharashtra	Mumbai	100.72	92.69	809.00
Manipur	Imphal	98.45	89.11	961.00
Meghalaya	Shillong	90.03	84.21	876.50
Mizoram	Aizawl	91.61	84.57	961.00
Nagaland	Kohima	94.19	88.25	828.50
Odisha	Bhubaneswar	95.22	93.03	835.50
Puducherry	Puducherry	94.70	88.90	821.50
Punjab	Jullunder	95.65	87.38	839.00
Rajasthan	Jaipur	101.02	94.19	813.00
Sikkim	Gangtok	95.35	87.65	962.00
Tamil Nadu	Chennai	95.99	90.12	825.00
Telangana	Hyderabad	98.20	93.08	861.50
Tripura	Agartala	94.75	89.05	970.00
Uttar Pradesh	Lucknow	91.83	85.77	847.00
Uttarakhand	Dehradun	92.44	86.06	828.50
West Bengal	Kolkata	94.50	88.23	835.50

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

Table 8.15 : Retail selling price of PDS kerosene at major cities as on 01.06.2021

State	City	(₹/litre)
Maharashtra	Mumbai	39.45
Tamil Nadu	Chennai	15.00
West Bengal	Kolkata	41.93

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 01.06.2021

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.18.00/ ltr.	Rs.1.40/ltr	Rs.11.00/ltr	Rs.18.00/ltr.	Rs.2.50/ltr.
Petrol (branded)	2.50%	Rs.2.60/ltr. + Rs.11.00/ ltr SAD + Rs.2.50/ ltr AIDC	Rs.18.00/ ltr.	Rs.2.60/ltr	Rs.11.00/ltr	Rs.18.00/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.18.00/ ltr.	Rs.1.80/ltr	Rs.8.00/ltr	Rs.18.00/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.18.00/ ltr.	Rs.4.20/ltr	Rs.8.00/ltr	Rs.18.00/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: 1. 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.

2. 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.

3. 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 01.06.2021

Sl.no.	State/Union Territory	Petrol	Diesel	PDS kerosene	Domestic LPG
		Sales Tax /VAT		GST	
1	Andaman & Nicobar Islands	6%	6%		
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	20.00%	12.50%		
4	Assam	32.66% or Rs.22.63 per litre whichever is higher as VAT minus Rebate of Rs.5 per Litre	23.66% or Rs.17.45 per litre whichever is higher as VAT minus Rebate of Rs.5 per Litre		
5	Bihar	26% or Rs 16.65/Litre whichever is higher (30% Surcharge on VAT as irrecoverable tax)	19% or Rs 12.33/Litre whichever is higher (30% Surcharge on VAT as irrecoverable tax)		
6	Chandigarh	Rs.10/KL cess +22.45% or Rs.12.58/Litre whichever is higher	Rs.10/KL cess + 14.02% or Rs.7.63/Litre whichever is higher		
7	Chhattisgarh	25% VAT + Rs.2/litre VAT	25% VAT + Rs.1/litre VAT		
8	Dadra & Nagar Haveli and Daman & Diu	20% VAT	20% VAT		
9	Delhi	30% VAT	Rs.250/KL air ambience charges + 16.75% VAT		
10	Goa	27% VAT + 0.5% Green cess	23% VAT + 0.5% Green cess		
11	Gujarat	20.1% VAT+ 4% Cess on Town Rate & VAT	20.2% VAT + 4 % Cess on Town Rate & VAT		
12	Haryana	25% or Rs.15.62/litre whichever is higher as VAT+5% additional tax on VAT	16.40% VAT or Rs.10.08/litre whichever is higher as VAT+5% additional tax on VAT		
13	Himachal Pradesh	25% or Rs 15.50/Litre- whichever is higher	14% or Rs 9.00/Litre- whichever is higher		
14	Jammu & Kashmir	24% MST+ Rs.5/Litre employment cess, Reduction of Rs.0.50/Litre	16% MST+ Rs.1.50/Litre employment cess		
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	35% sales tax	24% 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	24% MST+ Rs.5/Litre employment cess, Reduction of Rs.2.5/Litre	16% MST+ Rs.1/Litre employment cess , Reduction of Rs.0.50/Litre		
19	Lakshadweep	Nil	Nil	5%	5%
20	Madhya Pradesh	33 % VAT + Rs.4.5/litre VAT+1%Cess	23% VAT+ Rs.3/litre VAT+1% Cess		
21	Maharashtra – Mumbai, Thane & Navi Mumbai	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	36.50% VAT	22.50% VAT		
24	Meghalaya	20% or Rs15.00/Litre- whichever is higher (Rs.0.10/Litre pollution surcharge)	12% or Rs9.00/Litre- whichever is higher (Rs.0.10/Litre pollution surcharge)		
25	Mizoram	25% VAT	14.5% VAT		
26	Nagaland	25% VAT or Rs. 16.04/litre whichever is higher +5% surcharge + Rs.2.00/Litre as road maintenance cess	16.50% VAT or Rs. 10.51/litre whichever is higher +5% surcharge + Rs.2.00/Litre as road maintenance cess		
27	Odisha	32% VAT	28% VAT		
28	Puducherry	26% VAT	17.75% VAT		
29	Punjab	Rs.2050/KL (cess)+ Rs.0.10 per Litre (Urban Transport Fund) + 0.25 per Litre (Special Infrastructure Development Fee)+24.79% VAT+10% additional tax on VAT	Rs.1050/KL (cess) + Rs.0.10 per Litre (Urban Transport Fund) +0.25 per Litre (Special Infrastructure Development Fee) + 15.94% VAT+10% additional tax on VAT		
30	Rajasthan	36% VAT+Rs 1500/KL road development cess	26% VAT+ Rs.1750/KL road development cess		
31	Sikkim	25.25% VAT+ Rs.3000/KL cess	14.75% VAT + Rs.2500/KL cess		
32	Tamil Nadu	15% + Rs.13.02 per litre	11% + Rs.9.62 per litre		
33	Telangana	35.20% VAT	27% VAT		
34	Tripura	25% VAT+ 3% Tripura Road Development Cess	16.50% VAT+ 3% Tripura Road Development Cess		
35	Uttar Pradesh	26.80% or Rs 18.74/Litre whichever is higher	17.48% or Rs 10.41/Litre whichever is higher		
36	Uttarakhand	25% or Rs 19 Per Ltr whichever is greater	17.48% 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.17/KL exemption – 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, Haryana, Madhya Pradesh, Punjab, Rajasthan, Chandigarh, Puducherry, Andaman & Nikobar, Meghalaya , Dadar Nagar Haveli and Daman & Diu.

Table 8.18 : Contribution of petroleum sector to exchequer

(₹ Crore)					
Particulars	2017-18	2018-19	2019-20	2020-21 (P)	
1. Contribution to Central exchequer					
A.	Tax/ duties on crude oil & petroleum products				
	Cess on crude oil	14514	17741	14789	10676
	Royalty on crude oil / natural gas	4747	6062	5602	3590
	Customs duty	11171	16035	22927	13512
	NCCD on Crude Oil	968	1180	1130	1016
	Excise duty	229716	214369	223057	371726
	Service tax	1228	340	17	0
	IGST	9211	16479	13099	11594
	CGST	4488	7437	6831	6158
	Others	125	204	88	365
	Sub total (A)	276168	279847	287540	418637
B.	Dividend to Government/ income tax etc.				
	Corporate/ income tax	33599	38561	23134	21909
	Dividend income to Central Government	14575	15525	12270	10393
	Dividend distribution tax	5981	6415	5462	0
	Profit petroleum on exploration of oil/ gas*	5839	7694	5909	2873
	Sub total (B)	59994	68194	46775	35174
Total contribution to Central exchequer (A+B)	336163	348041	334315	453812	
2. Contribution to State exchequer					
C.	Tax/ duties on crude oil & petroleum products				
	Royalty on crude oil / natural gas	9370	13371	11882	7179
	Sales tax/ VAT	185850	201265	200493	202937
	SGST/UTGST	4974	7961	7345	6121
	Octroi/ duties (incl. electricity duty)	1663	685	716	706
	Entry tax / others	4745	4114	405	329
	Sub total (C)	206601	227396	220841	217271
D.	Dividend to Government/ direct tax etc.				
	Dividend income to State Government	262	195	215	379
	Sub total (D)	262	195	215	379
Total contribution to State exchequer (C+D)	206863	227591	221056	217650	
Total contribution of petroleum sector to exchequer (1+2)	543026	575632	555370	671461	

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

Note: Totals may not tally due to round off

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

(₹ Crore)					
Sl. no.	State/Union territory	Sales tax/VAT			
		2017-18	2018-19	2019-20	2020-21 (P)
1	Andaman & Nicobar Islands	51	92	94	74
2	Andhra Pradesh	9693	10784	10168	11014
3	Arunachal Pradesh	67	49	26	104
4	Assam	3108	3879	3641	3747
5	Bihar	5447	6584	6238	5854
6	Chandigarh	54	62	60	60
7	Chhattisgarh	3682	3986	3877	4107
8 & 9	Dadra and Nagar Haveli and Daman & Diu	42	2	2	1
10	Delhi	3944	4379	3833	2653
11	Goa	657	694	754	682
12	Gujarat	15593	16229	15337	15141
13	Haryana	7647	8286	7648	7923
14	Himachal Pradesh	344	364	440	882
15	Jammu & Kashmir	1329	1449	1459	1444
16	Jharkhand	3224	2796	3296	3619
17	Karnataka	13306	14417	15381	15476
18	Kerala	7300	7995	8074	6924
19	Ladakh			14	49
20	Lakshadweep	0	0	0	0
21	Madhya Pradesh	9380	9485	10720	11908
22	Maharashtra	25256	27191	26791	25430
23	Manipur	162	181	192	265
24	Meghalaya	0	0	0	0
25	Mizoram	55	88	91	84
26	Nagaland	86	97	116	148
27	Odisha	6870	5660	5495	6224
28	Puducherry	15	8	5	10
29	Punjab	6062	6576	5548	6291
30	Rajasthan	12094	12714	13319	15119
31	Sikkim	110	134	129	111
32	Tamil Nadu	15507	18143	18175	17063
33	Telangana	8776	10037	10045	8691
34	Tripura	205	277	384	445
35	Uttar Pradesh	17420	19168	20112	21956
36	Uttarakhand	1323	1595	1495	1524
37	West Bengal	7042	7866	7534	7916
	TOTAL	185850	201265	200493	202937

(P)- Provisional

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

Note: The amounts have been rounded off to the nearest crore, hence some amounts are shown as zero.

Totals may not tally due to round off

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

					(₹ Crore)
Sl. no.	State/Union territory/Others	2017-18	2018-19	2019-20	2020-21 (P)
States/UTs					
1	Andaman & Nicobar Islands	1	0	0	0
2	Andhra Pradesh	172	257	156	112
3	Arunachal Pradesh	1	6	0	0
4	Assam	116	559	475	332
5	Bihar	91	159	145	122
6	Chandigarh	1	1	1	1
7	Chhattisgarh	39	18	9	14
8 & 9	Dadra and Nagar Haveli and Daman & Diu	10	12	20	20
10	Delhi	114	52	51	37
11	Goa	5	3	9	11
12	Gujarat	1022	2060	1801	1566
13	Haryana	379	659	685	529
14	Himachal Pradesh	15	3	4	6
15	Jammu & Kashmir	38	20	17	40
16	Jharkhand	57	13	16	12
17	Karnataka	329	356	269	260
18	Kerala	136	146	171	136
19	Ladakh			1	1
20	Lakshadweep	0	0	0	0
21	Madhya Pradesh	73	87	98	68
22	Maharashtra	797	1272	1126	932
23	Manipur	2	1	1	2
24	Meghalaya	0	1	0	0
25	Mizoram	1	1	1	0
26	Nagaland	1	1	1	0
27	Odisha	52	93	192	195
28	Puducherry	2	1	1	1
29	Punjab	157	116	128	43
30	Rajasthan	88	205	176	145
31	Sikkim	3	2	0	0
32	Tamil Nadu	517	642	562	439
33	Telangana	88	19	21	22
34	Tripura	6	20	17	38
35	Uttar Pradesh	362	616	619	603
36	Uttarakhand	20	6	7	8
37	West Bengal	272	545	553	418
Others					
1	Other territory (Offshore areas of India beyond 12 Nautical Miles)	8	11	11	7
TOTAL		4974	7961	7345	6121

(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)				
Companies	2017-18	2018-19	2019-20	2020-21 (P)
PSU upstream/midstream companies				
ONGC	19945	26765	13464	11246
OIL	2668	2590	2584	1742
GAIL	4618	6026	6621	4890
Total	27231	35380	22668	17878
PSU downstream Oil Marketing Companies (OMCs)				
IOCL	21346	16894	1313	21836
BPCL	7919	7132	2683	19042
HPCL	6357	6029	2637	10664
Total	35622	30055	6634	51542
PSU stand alone refineries				
MRPL	2224	332	(2740)	(240)
CPCL	913	(213)	(2078)	238
NRL	2044	1968	1381	3036
Total	5181	2087	(3437)	3033
PSU consultancy company				
EIL	378	370	430	260
Total	378	370	430	260
Private sector companies				
RIL	33612	35163	30903	31944
NEL	532	344	1485	*
Total	34144	35507	32388	31944

(P)- Provisional

* 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

2019-20									
Particulars	IOCL	BPCL	HPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL
(₹ Crore)									
Sales turnover	562088	326393	286250	95701	11761	71730	60728	48624	14072
Profit Before Interest and Tax (PBIT)	2285	4853	2654	23698	2619	8052	(3213)	(2603)	1737
Interest	5979	2182	1082	3310	499	109	745	413	2
Tax	(5007)	(12)	(1065)	6924	(464)	1323	(1217)	(938)	353
Profit After Tax (PAT)	1313	2683	2637	13464	2584	6621	(2740)	(2078)	1381
Net worth	93769	33214	28962	193095	24387	41854	7767	1192	5304
Borrowings (loan fund)	116545	41875	43021	13949	8885	5257	11896	8698	74
Ratios									
PAT as % of turnover (net sales)	0.23%	0.82%	0.92%	14.07%	21.97%	9.23%	-4.51%	-4.27%	9.82%
Debt (loan fund) to equity ratio	1.24	1.26	1.49	0.07	0.36	0.13	1.53	7.30	0.01
Earnings Per Share (EPS)	1.43	13.64	17.31	10.70	23.83	14.68	(15.64)	(139.52)	18.78
2020-21 (P)									
Particulars	IOCL	BPCL	HPCL	ONGC	OIL	GAIL	MRPL	CPCL	NRL
(₹ Crore)									
Sales turnover	510546	300830	269243	67891	8410	56529	50974	41814	18542
Profit Before Interest and Tax (PBIT)	32810	23946	15162	18617	1222	6542	7	1652	4092
Interest	3094	1328	915	2215	499	156	352	375	9
Tax	7880	3576	3583	5156	(1019)	1496	(105)	1039	1047
Profit After Tax (PAT)	21836	19042	10664	11246	1742	4890	(240)	238	3036
Net worth	110500	54545	36186	204559	26211	46611	7528	1425	5596
Borrowings (loan fund)	102327	26315	40009	15023	15718	5991	16225	9167	0
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%
Debt (loan fund) to equity ratio	0.93	0.48	1.11	0.07	0.60	0.13	2.16	6.43	0.00
Earnings Per Share (EPS)	23.78	96.44	70.57	8.94	16.06	10.85	(1.37)	15.95	41.27

(P) - Provisional

Source: Published results/ Information provided by oil companies.

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

(₹ Crore)				
Particulars	2017-18	2018-19	2019-20	2020-21 (P)
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	₹ Crore	\$/bbl (approx)
2017-18	220.4	1615.5	87,803	5,66,450	54.3
2018-19	226.5	1660.2	1,11,915	7,83,183	67.4
2019-20	227.0	1663.9	1,01,376	7,17,001	60.9
2020-21 (P)	198.1	1452.1	62,711	4,62,996	43.2

(P)- provisional

Conversion factor taken 1 MT = 7.33 bbl



Chapter 9

Miscellaneous



Table 9.1 : Average international Calorific Values of different fuels

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

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

Conversion factor : 1 K Cal = 4.19 K Joules, *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	= 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./ PPAC

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 permittees as auto fuel.
Naphtha	Feedstock/fuel for fertiliser units, feedstock for petrochemical sector and fuel for power plants.
MS	Fuel for passenger cars, taxies, 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.
Petrloleum 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



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



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