Azadi Ka Amrit Mahotsav

PPAC's Snapshot of India's Oil & Gas data

Abridged Ready Reckoner

November 2022

G20 भारत 2023 INDIA

वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

PPAC

Analysis • Knowledge • Information

Petroleum Planning & Analysis Cell

(Ministry of Petroleum & Natural Gas)

Snapshot of India’s Oil & Gas data

Monthly Ready Reckoner

November, 2022

PPAC
Analysis • Knowledge • Information

Petroleum Planning & Analysis Cell

(Ministry of Petroleum & Natural Gas)

Petroleum Planning & Analysis Cell (PPAC), an attached office of the Ministry of Petroleum & Natural Gas (MoPNG), Government of India, collects and analyses data on the Oil and Gas sector. It disseminates many reports on the Oil & Gas sector to the various stakeholders. The data is obtained from the Public Sector companies, Government agencies as well as the Private companies. Given the ever-increasing demand for energy and transition of energy demand to renewables and Biofuels, Policy makers and Analysts need to be well informed about the updated trends in the Oil & Gas industry.

The Snapshot of India's Oil & Gas data (Monthly Ready Reckoner), released by PPAC, provides monthly data/information in a single volume for the latest month and historical time series. The Snapshot of India's Oil & Gas data is also published on PPAC's website (www.ppac.gov.in) and is accessible on mobile app-PPACE.

This publication is a concerted effort by all divisions of PPAC. The cooperation of the Oil and Gas industry is acknowledged for their timely inputs.

Note: Reported data may undergo change on receipt of actuals

Table of contents

Highlights for the month

- Indigenous crude oil and condensate production during November 2022 was down by 1.1 % than that of November 2021 as compared to a de-growth of 2.2 % during October 2022. OIL registered a growth of 8.8 % and ONGC registered a growth of 0.186 % during November 2022 as compared to November 2021. PSC registered de-growth of 8.5 % during November 2022 as compared to November 2021. De-growth of 1.4 % was registered in the total crude oil and condensate production during April - November 2022 over the corresponding period of the previous year.
- Crude oil processed during November 2022 was 19.6 MMT, which was 8.9 % lower than November 2021 as compared to a de-growth of 2.6 % during October 2022. Growth of 6.8 % was registered in the total crude oil processing during April-November 2022 over the corresponding period of the previous year.
- Crude oil imports increased by 3.1% and 11.6% during November 2022 and April-November 2022 respectively as compared to the corresponding period of the previous year. The net import bill for oil & gas was $12.3 billion in November 2022 compared to $10.4 billion in November 2021. In this the crude oil imports constitutes $12.3 billion, LNG imports $1.6 billion and the exports were $3.8 billion during November 2022.
- The price of Brent Crude averaged $91.67/bbl during November 2022 as against $93.33/bbl during October 2022 and $81.44/bbl during November 2021. The Indian basket crude price averaged $87.55/bbl during November 2022 as against $91.70/bbl during October 2022 and $80.64 /bbl during November 2021.
- Production of petroleum products saw a de-growth of 9.3 % during November 2022 over November 2021 as compared to a de-growth of 3.1 % during October 2022. Growth of 5.7 % was registered in the total POL production during April-November 2022 over the corresponding period of the previous year.
- POL products imports increased by 8.9% during November 2022 and by 8.6% during April-November 2022 respectively as compared to the corresponding period of the previous year. Increase in POL products imports during April-November 2022 were due to increase in imports of all products except liquified petroleum gas (LPG), aviation turbine fuel (ATF), superior kerosene oil (SKO) and fuel oil (FO) etc.

•	Exports of POL products decreased by 18.1% during Nvember 2022 and by 0.7% during April- November 2022 respectively as compared to the corresponding period of the previous year. Decrease in POL products exports during April- November 2022 were due to decrease in exports of motor spirit (MS), naphtha, superior kerosene oil (SKO), high speed diesel (HSD), fuel oil (FO) and bitumen etc.
•	The consumption of petroleum products during April-Nov 2022 with a volume of 145.21 MMT reported a growth of 11.6% compared to the volume of 130.14 MMT during the same period of the previous year. This growth was led by 8.1% growth in MS, 19.2% in HSD & 22.5% in ATF consumption besides Bitument and Lubes & Greases during the period. The consumption of petroleum products during Nov 2022 recorded a growth of 10.2% with a volume of 18.84 MMT compared to the same period of the previous year.
•	Ethanol blending with Petrol was 10.54% during Nov 2022 and cumulative ethanol blending during December 2021- Nov 2022 was 10.02%.
•	Total Natural Gas Consumption (including internal consumption) for the month of November 2022 was 5102 MMSCM which was 3.1 % lower than the corresponding month of the previous year. The cumulative consumption of 40944 MMSCM for the current year till November 2022 was lower by 6.3 % compared with the corresponding period of the previous year.
•	Gross production of natural gas for the month of November 2022 (P) was 2839 MMSCM which was lower by 1.1% compared with the corresponding month of the previous year. The cumulative gross production of natural gas of 22904 MMSCM for the current financial year till November 2022 was higher by 0.6% compared with the corresponding period of the previous year.
•	LNG import for the month of November 2022 (P) was 2322 MMSCM which was 5.9% lower than the corresponding month of the previous year. The cumulative import of 18577 (P) MMSCM for the current year till November 2022 was lower by 13.5% compared with the corresponding period of the previous year.

PART-A

Economic Indicators

1. Selected indicators of the Indian economy

	Economic indicators	Unit/ Base	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
1	Population (basis RGI projections)	Billion	1.309	1.323	1.337	1.351	1.365	1.377
2	GDP at constant (2011-12 Prices)	Growth %	6.8 3rd RE	6.5 2nd RE	4.0 1st RE	-6.6 1st RE	8.7 PE (2021-22)	9.7 QE (H1, 2022-23)
3	Agricultural Production (Food grains)	MMT	285.0	285.2	297.5	310.7	315.7 4th AE	149.9 1st AE (Kharif)
		Growth %	3.6	0.1	4.3	4.5	1.6	-
4	Gross Fiscal Deficit (as percent of GDP)	%	3.5	3.4	4.6	9.5 RE	6.8 BE	6.4 BE

	Economic indicators	Unit/ Base	2020-21	2021-22 (P)	Nov		April-Nov	
					2021-22	2022-23 (P)	2021-22	2022-23 (P)
5	Index of Industrial Production (Base: 2011-12)	Growth %	-8.4	11.4	4.2*	-4.0* QE	20.5#	5.3#
6	Imports^	$ Billion	394.4	611.9	53.6	56.7	328.1	436.8
7	Exports^	$ Billion	291.8	419.7	35.7	29.8	234.0	263.4
8	Trade Balance	$ Billion	-102.6	-192.2	-17.9	-26.9	-94.2	-173.5
9	Foreign Exchange Reserves @	$ Billion	579.3	617.6	637.7	550.1	-	-

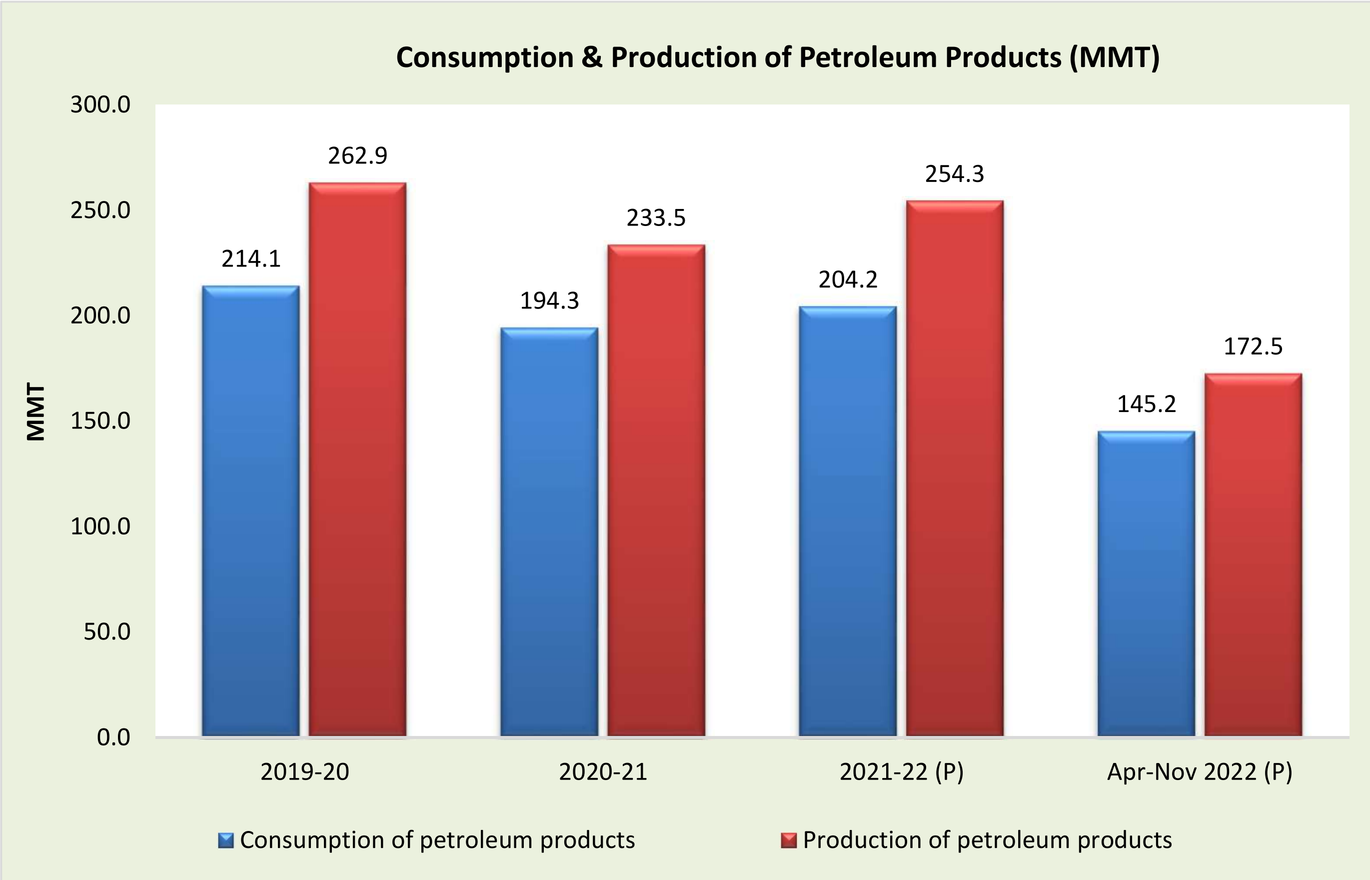
Population projection by RGI is taken as on 1st July for the year. IIP is for the month of *Oct and #April-Oct; @2020-21-as on March 26, 2021, 2021-22 - as on March 26, 2022, Nov 2021 as on Nov 26, 2021 and Nov 2022-as on Nov 28, 2022; ^Imports & Exports are for Merchandise for the month of October 22; E: Estimates; PE: Provisional Estimates; AE-Advanced Estimates; RE-Revised Estimates; QE-Quick Estimates.

Source: Registrar General India**,** Ministry of Commerce & Industry, Ministry of Statistics and Programme Implementation, Ministry of Agriculture & Farmer's Welfare, Ministry of Finance, Reserve Bank of India

2. Crude oil, LNG and petroleum products at a glance

	Details	Unit/ Base	2020-21	2021-22 (P)	Nov 2021-22 (P)	Nov 2022-23 (P)	April-Nov 2021-22 (P)	April-Nov 2022-23 (P)
1	Crude oil production in India#	MMT	30.5	29.7	2.4	2.4	19.9	19.6
2	Consumption of petroleum products*	MMT	194.3	204.2	17.1	18.8	130.1	145.2
3	Production of petroleum products	MMT	233.5	254.3	22.3	20.3	163.3	172.5
4	Gross natural gas production	MMSCM	28,672	34,024	2,869	2,839	22,777	22,904
5	Natural gas consumption	MMSCM	60,815	63,907	5,267	5,102	43,694	40,944
6	Imports & exports:							
	Crude oil imports	MMT	196.5	212.4	18.3	18.9	136.9	152.8
		$ Billion	62.2	120.7	10.6	12.3	71.7	113.6
	Petroleum products (POL) imports*	MMT	43.2	42.1	3.4	3.7	26.4	28.7
		$ Billion	14.8	25.2	2.4	2.1	15.5	18.5
	Gross petroleum imports (Crude + POL)	MMT	239.7	254.4	21.7	22.6	163.3	181.5
		$ Billion	77.0	145.9	13.0	14.4	87.2	132.2
	Petroleum products (POL) export	MMT	56.8	62.8	5.2	4.3	40.1	39.8
		$ Billion	21.4	44.4	3.7	3.8	25.5	40.6
	LNG imports*	MMSCM	33,031	30,776	2,469	2,322	21,472	18,577
		$ Billion	7.9	13.4	1.2	1.6	8.2	12.8
	Net oil & gas imports	$ Billion	63.5	114.9	10.4	12.2	69.9	104.3
7	Petroleum imports as percentage of India's gross imports (in value terms)	%	19.5	23.8	24.2	25.4	26.6	30.3
8	Petroleum exports as percentage of India's gross exports (in value terms)	%	7.3	10.6	10.5	12.7	10.9	15.4
9	Import dependency of crude oil (on POL consumption basis)	%	84.4	85.7	85.1	89.1	85.0	86.9

#Includes condensate; *Private direct imports are prorated for the period April'22 to Nov'22 for POL. LNG Imports figures from DGCIS are prorated for Oct-Nov 2022. Total may not tally due to rounding off.


Consumption & Production of Petroleum Products (MMT)
MMT
300.0
250.0
200.0
150.0
100.0
50.0
0.0
262.9
214.1
233.5
194.3
254.3
204.2
172.5
145.2
2019-20
2020-21
2021-22 (P)
Apr-Nov 2022 (P)
Consumption of petroleum products
Production of petroleum products

PART-B

Crude Oil, Refining & Production

3. Indigenous crude oil production (Million Metric Tonnes)

Details	2020-21	2021-22	Nov			April-Nov		
			2021-22	2022-23 Target*	2022-23 (P)	2021-22	2022-23 Target*	2022-23 (P)
ONGC	19.1	18.5	1.5	1.6	1.5	12.3	12.8	12.4
Oil India Limited (OIL)	2.9	3.0	0.2	0.3	0.3	2.0	2.3	2.1
Private / Joint Ventures (JVs)	7.1	7.0	0.6	0.8	0.5	4.7	5.8	4.2
Total Crude Oil	**29.1**	**28.4**	**2.3**	**2.7**	**2.3**	**19.0**	**20.9**	**18.7**
ONGC condensate	1.1	0.9	0.08	0.0	0.1	0.6	0.0	0.7
PSC condensate	0.3	0.30	0.03	0.0	0.03	0.21	0.0	0.19
Total condensate	**1.4**	**1.2**	**0.10**	**0.0**	**0.1**	**0.8**	**0.0**	**0.9**
Total (Crude + Condensate) (MMT)	**30.5**	**29.7**	**2.4**	**2.7**	**2.4**	**19.9**	**20.9**	**19.6**
Total (Crude + Condensate) (Million Bbl/Day)	0.61	0.60	0.59	0.65	0.59	0.60	0.63	0.59

*Provisional targets inclusive of condensate.

4. Domestic and overseas oil & gas production (by Indian Companies)

Details	2020-21	2021-22 (P)	Nov		April-Nov	
			2021-22 (P)	2022-23 (P)	2021-22 (P)	2022-23 (P)
Total domestic production (MMTOE)	59.2	63.7	5.3	5.2	42.6	42.5
Overseas production (MMTOE)	21.9	21.8	1.8	1.5	14.7	12.7

Source: ONGC Videsh, GAIL, OIL , IOCL, HPCL & BPRL

5. High Sulphur (HS) & Low Sulphur (LS) crude oil processing (MMT)

Details		2020-21	2021-22	Nov		April-Nov	
				2021-22	2022-23 (P)	2021-22	2022-23 (P)
1	High Sulphur crude	161.4	185.0	16.4	15.0	117.7	128.7
2	Low Sulphur crude	60.3	56.7	5.0	4.6	38.0	37.6
Total crude processed (MMT)		**221.8**	**241.7**	**21.5**	**19.6**	**155.7**	**166.3**
Total crude processed (Million Bbl/Day)		4.45	4.85	5.25	4.78	4.68	5.00
Percentage share of HS crude in total crude oil processing		**72.8%**	**76.6%**	**76.5%**	**76.4%**	**75.6%**	**77.4%**

6. Quantity and value of crude oil imports			
Year	**Quantity (MMT)**	**$ Million**	**Rs. Crore**
2020-21	196.5	62,248	4,59,779
2021-22 (P)	212.4	120,675	9,01,262
April-Nov 2022(P)	152.8	113,618	8,99,560

7. Self-sufficiency in petroleum products (Million Metric Tonnes)							
Particulars		**2020-21**	**2021-22 (P)**	**Nov**		**April-Nov**	
				2021-22 (P)	**2022-23 (P)**	**2021-22 (P)**	**2022-23 (P)**
1	Indigenous crude oil processing	28.0	27.0	2.4	1.9	18.0	17.8
2	Products from indigenous crude (93.3% of crude oil processed)	26.1	25.2	2.2	1.8	16.8	16.6
3	Products from fractionators (Including LPG and Gas)	4.2	4.1	0.3	0.3	2.8	2.4
4	Total production from indigenous crude & condensate **(2 + 3)**	30.3	29.3	2.5	2.1	19.6	19.0
5	Total domestic consumption	194.3	204.2	17.1	18.8	130.1	145.2
% Self-sufficiency (4 / 5)		**15.6%**	**14.3%**	**14.9%**	**10.9%**	**15.0%**	**13.1%**

8. Refineries: Installed capacity and crude oil processing (MMTPA / MMT)

Sl. no.	Refinery	Installed capacity (01.01.2022) MMTPA	Crude oil processing (MMT)							
			2020-21	2021-22	Nov			April-Nov		
					2021-22	2022-23 (Target)	2022-23 (P)	2021-22	2022-23 (Target)	2022-23 (P)
1	Barauni (1964)	6.0	5.5	5.6	0.5	0.5	0.6	3.3	4.2	4.5
2	Koyali (1965)	13.7	11.6	13.5	1.1	1.2	1.3	8.4	9.4	10.4
3	Haldia (1975)	8.0	6.8	7.3	0.7	0.7	0.7	5.4	5.6	5.7
4	Mathura (1982)	8.0	8.9	9.1	0.9	0.8	0.8	5.9	6.1	6.2
5	Panipat (1998)	15.0	13.2	14.8	1.3	1.3	0.7	9.9	9.2	9.1
6	Guwahati (1962)	1.0	0.8	0.7	0.08	0.1	0.1	0.38	0.7	0.7
7	Digboi (1901)	0.65	0.6	0.7	0.06	0.03	0.06	0.5	0.4	0.5
8	Bongaigaon(1979)	2.70	2.5	2.6	0.2	0.2	0.2	1.8	1.6	1.8
9	Paradip (2016)	15.0	12.5	13.2	1.1	1.3	1.331	8.0	8.5	8.1
	IOCL-TOTAL	**70.1**	**62.4**	**67.7**	**6.0**	**6.1**	**5.8**	**43.5**	**45.8**	**47.1**
10	Manali (1969)	10.5	8.2	9.0	0.8	0.9	0.9	5.3	6.7	7.4
11	CBR (1993)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CPCL-TOTAL	**10.5**	**8.2**	**9.0**	**0.8**	**0.9**	**0.9**	**5.3**	**6.7**	**7.4**
12	Mumbai (1955)	12.0	12.9	14.4	1.3	1.2	1.2	9.3	9.1	9.2
13	Kochi (1966)	15.5	13.3	15.4	1.4	1.4	1.4	9.7	10.1	10.0
14	Bina (2011)	7.8	6.2	7.4	0.7	0.6	0.7	4.7	4.9	5.1
	BPCL-TOTAL	**35.3**	**32.4**	**37.2**	**3.4**	**3.2**	**3.3**	**23.7**	**24.1**	**24.2**
15	Numaligarh (1999)	3.0	2.7	2.6	0.2	0.2	0.2	1.8	1.9	2.1

Sl. no.	Refinery	Installed capacity (1.01.2022) (MMTPA)	Crude oil processing (MMT)							
			2020-21	2021-22	Nov			April-Nov		
					2021-22	2022-23 (Target)	2022-23 (P)	2021-22	2022-23 (Target)	2022-23 (P)
16	Tatipaka (2001)	0.066	0.081	0.075	0.007	0.005	0.006	0.048	0.041	0.049
17	MRPL-Mangalore (1996)	15.0	11.5	14.9	1.5	1.4	1.5	9.1	10.3	11.2
	ONGC-TOTAL	**15.1**	**11.6**	**14.9**	**1.5**	**1.4**	**1.5**	**9.1**	**10.3**	**11.3**
18	Mumbai (1954)	9.5	7.4	5.6	0.5	0.4	0.8	2.6	5.7	6.4
19	Visakh (1957)	8.3	9.1	8.4	0.8	0.9	0.8	5.2	6.1	6.0
20	HMEL-Bathinda (2012)	11.3	10.1	13.0	1.1	0.9	1.0	8.7	7.7	8.4
	HPCL- TOTAL	**29.1**	**26.5**	**27.0**	**2.4**	**2.3**	**2.6**	**16.5**	**19.4**	**20.8**
21	RIL-Jamnagar (DTA) (1999)	33.0	34.1	34.8	3.0	3.0	2.6	22.9	22.9	23.3
22	RIL-Jamnagar (SEZ) (2008)	35.2	26.8	28.3	2.5	2.5	2.7	19.4	19.4	18.0
23	NEL-Vadinar (2006)	20.0	17.1	20.2	1.7	1.7	0.0	13.5	13.5	12.0
All India (MMT)		**251.2**	**221.8**	**241.7**	**21.5**	**21.3**	**19.6**	**155.7**	**163.9**	**166.3**
All India (Million Bbl/Day)		**5.02**	**4.45**	**4.85**	**5.25**	**5.20**	**4.78**	**4.68**	**4.92**	**5.00**

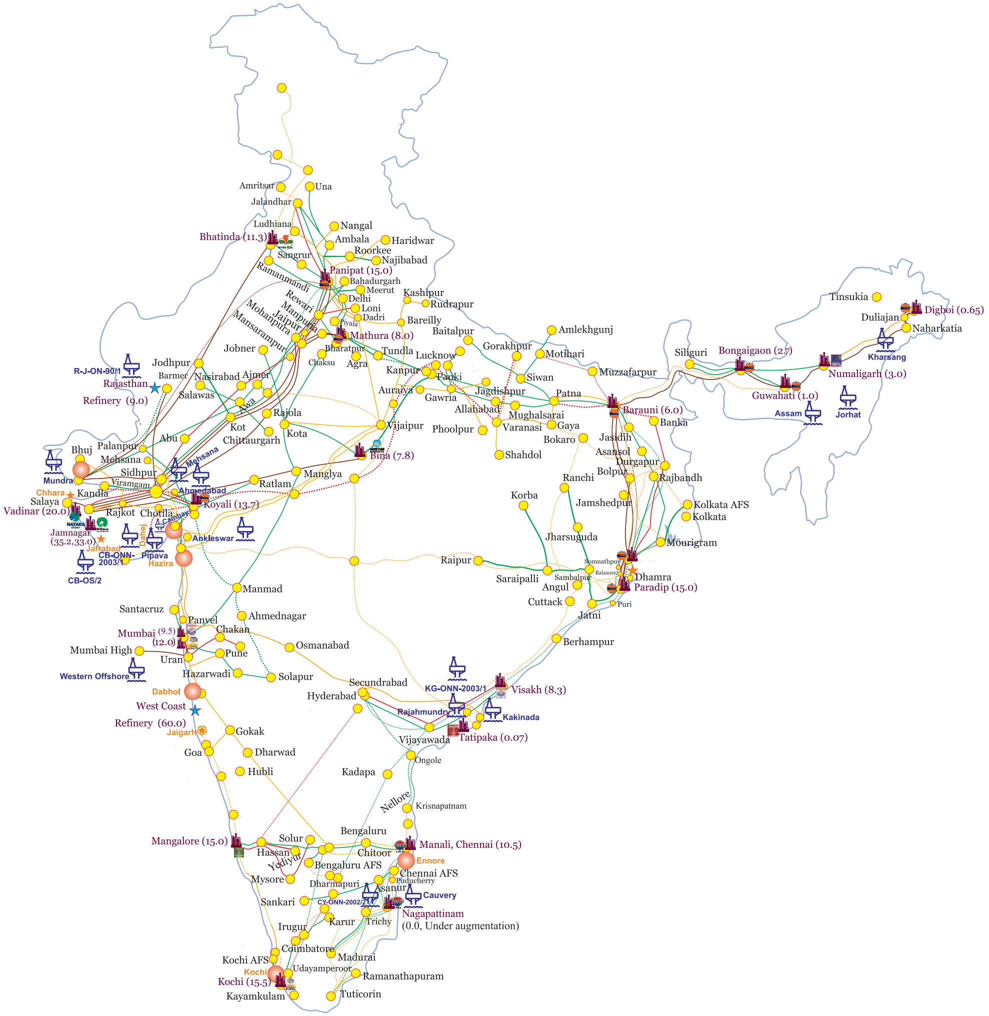
Note: Provisional Targets; Some sub-totals/ totals may not add up due to rounding off at individual levels.

9. Major crude oil and product pipeline network (as on 01.12.2022)

Details		ONGC	OIL	Cairn	HMEL	IOCL	BPCL	HPCL	Others*	Total
Crude Oil	Length (KM)	1,284	1,193	688	1,017	5,301	937			**10,420**
	Cap (MMTPA)	60.6	9.0	10.7	11.3	48.6	7.8			**147.9**
Products	Length (KM)		654			10,899	2,596	3,775	2,386	**20,310**
	Cap (MMTPA)		1.7			55.4	23.0	34.1	9.4	**123.6**

*Others include GAIL and Petronet India. HPCL and BPCL lubes pipeline included in products pipeline data

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

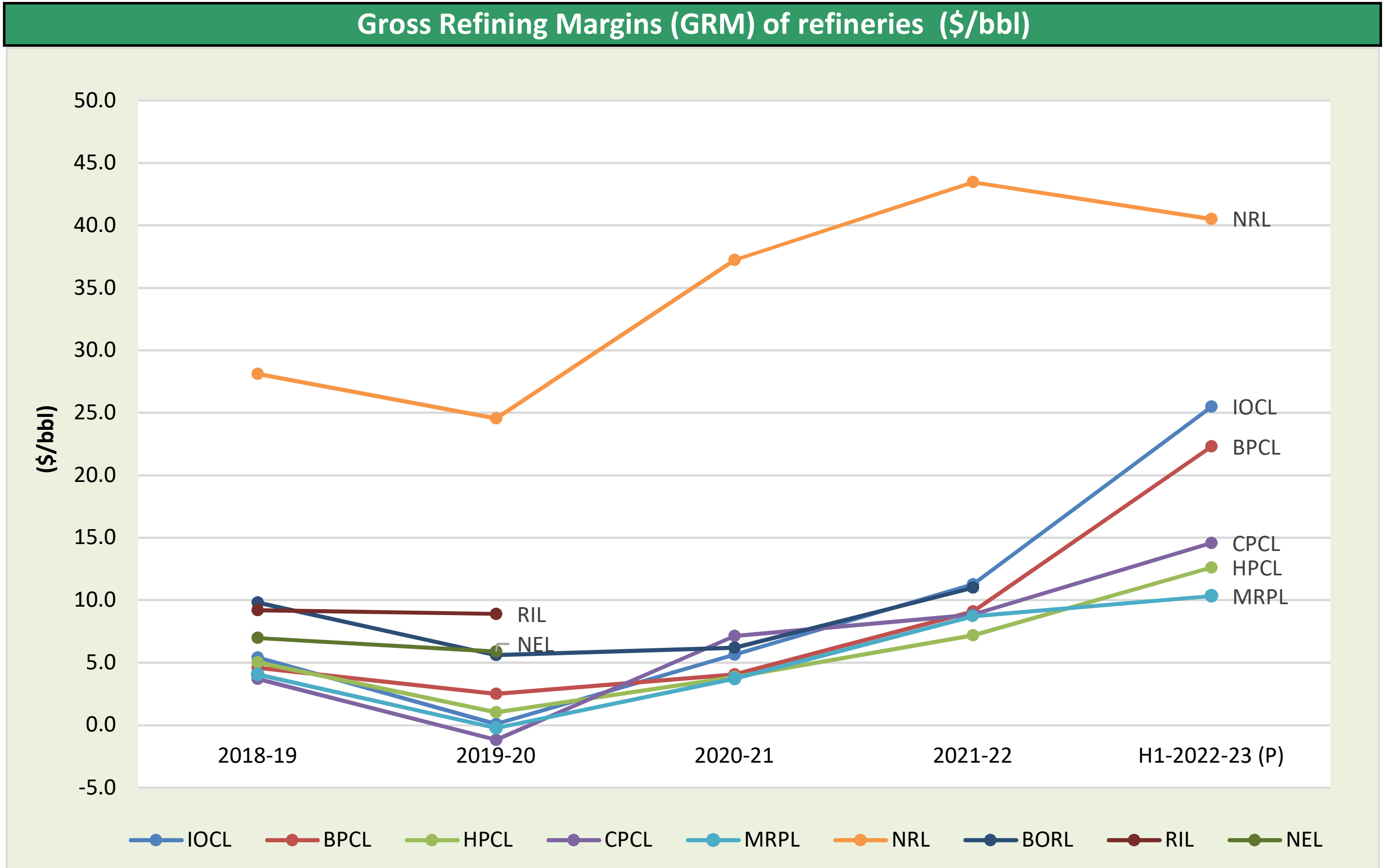
CHT, MoP&NG PPAC, MoP&NG

10. Gross Refining Margins (GRM) of refineries ($/bbl)				
Company	**2019-20**	**2020-21**	**2021-22**	**H1-2022-23 (P)**
IOCL	0.08	5.64	11.25	25.49
BPCL	2.50	4.06	9.09	22.30
HPCL	1.02	3.86	7.19	12.62
CPCL	-1.18	7.14	8.85	14.58
MRPL	-0.23	3.71	8.72	10.33
NRL	24.55	37.23	43.46	40.51
BORL	5.60	6.20	11.00	#
RIL	8.90	*	*	*
NEL	5.88	*	*	*

GRM of North Eastern refineries are including excise duty benefit

BPCL figures effective 2022-23 includes BORL also after its merger with BPCL

*Not available



GRM of North Eastern refineries are including excise duty benefit

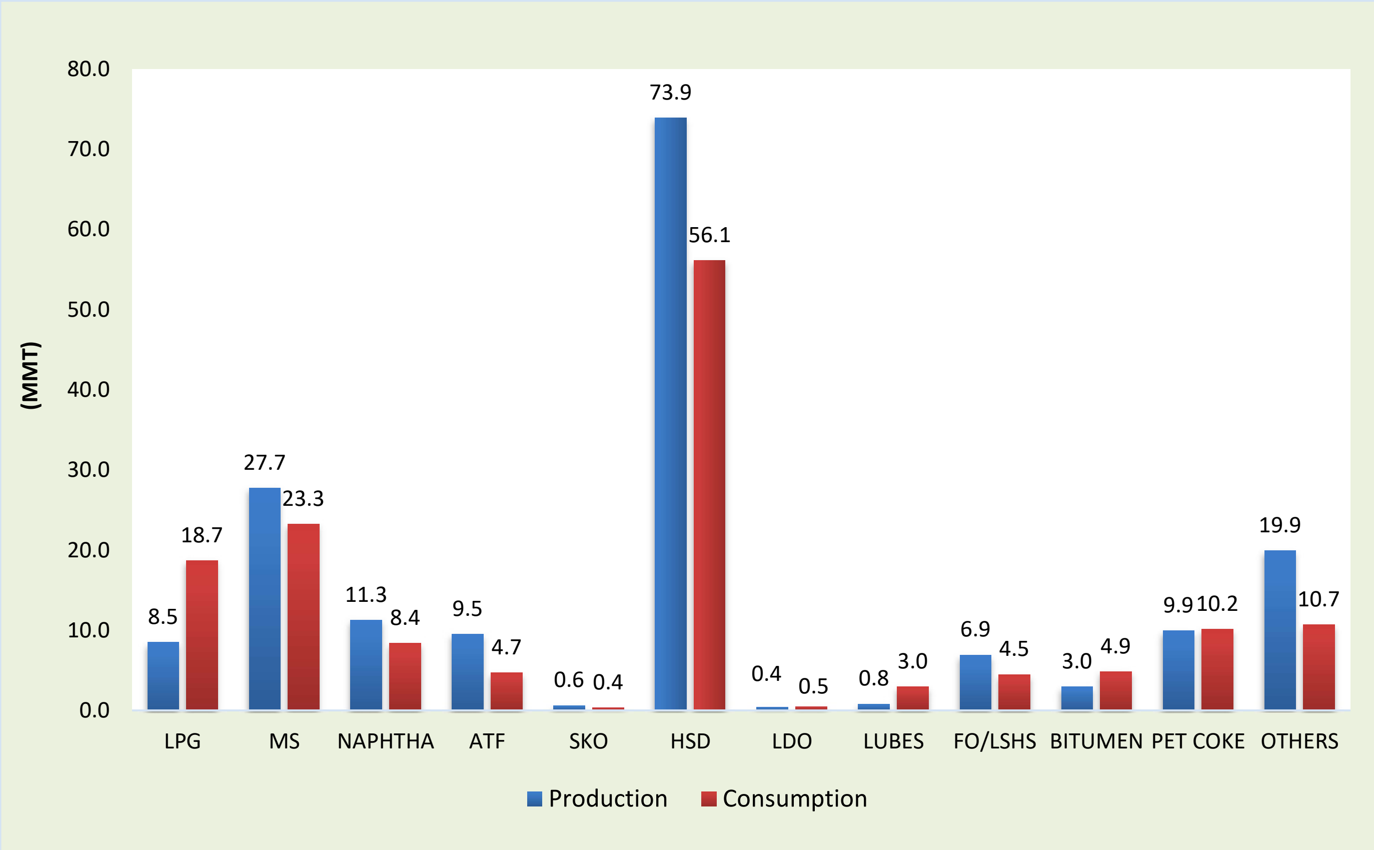
PART-C

Consumption

11. Production and consumption of petroleum products (Million Metric Tonnes)												
Products	**2020-21**		**2021-22 (P)**		**Nov 2021**		**Nov 2022 (P)**		**Apr-Nov 2021**		**Apr-Nov 2022 (P)**	
	Prod	**Cons**	**Prod**	**Cons**	**Prod**	**Cons**	**Prod**	**Cons**	**Prod**	**Cons**	**Prod**	**Cons**
LPG	12.1	27.6	12.2	28.3	1.1	2.3	1.0	2.5	7.8	18.4	8.5	18.7
MS	35.8	28.0	40.2	30.8	3.7	2.6	3.3	2.9	25.6	20.1	27.7	23.3
NAPHTHA	19.4	14.1	20.0	14.3	1.6	1.2	1.2	1.0	13.2	9.5	11.3	8.4
ATF	7.1	3.7	10.3	5.0	1.1	0.5	1.2	0.6	6.2	3.0	9.5	4.7
SKO	2.4	1.8	1.9	1.5	0.2	0.1	0.1	0.0	1.2	1.0	0.6	0.4
HSD	100.4	72.7	107.2	76.7	9.5	6.5	8.4	7.8	69.1	48.8	73.9	56.1
LDO	0.7	0.9	0.8	1.0	0.08	0.07	0.06	0.06	0.5	0.7	0.4	0.5
LUBES	1.1	4.1	1.2	4.6	0.1	0.4	0.1	0.4	0.7	2.9	0.8	3.0
FO/LSHS	7.4	5.6	8.9	6.3	0.8	0.5	0.7	0.6	5.7	4.1	6.9	4.5
BITUMEN	4.9	7.5	5.1	7.9	0.4	0.6	0.4	0.7	2.9	4.4	3.0	4.9
PET COKE	12.0	15.6	15.5	15.8	1.4	1.1	1.1	1.1	9.8	8.9	9.9	10.2
OTHERS	30.2	12.8	30.9	12.1	2.4	1.2	2.6	1.2	20.4	8.4	19.9	10.7
ALL INDIA	**233.5**	**194.3**	**254.3**	**204.2**	**22.3**	**17.1**	**20.3**	**18.8**	**163.3**	**130.1**	**172.5**	**145.2**
Growth (%)	**-11.0%**	**-8.9%**	**8.9%**	**5.1%**	**4.3%**	**-11.6%**	**-9.3%**	**10.2%**	**10.6%**	**5.8%**	**5.7%**	**11.6%**

Note: Prod - Production; Cons - Consumption

Petroleum Products: April-Nov 2022 (P) (MMT)



12. Kerosene allocation vs upliftment (Kilo Litres)

Product	2019-20		2020-21		2021-22		2022-23 (P)*	
	Allocation	Upliftment	Allocation	Upliftment	Allocation	Upliftment	Allocation	Upliftment
PDS Kerosene	31,21,328	27,93,217	23,15,008	20,38,790	17,83,344	16,59,906	10,31,604	3,03,438

* Allocation is for Q1, Q2 & Q3, 2022-23 and upliftment is for Apr-Nov 2022

13. Ethanol blending programme

Particulars	Ethanol Supply Year *				
	2018-19	2019-20	2020-21	2021-22 (P)	
				Nov-22	Dec'21-Nov'22
Ethanol received by PSU OMCs under EBP Program (in Cr. Litrs)	188.6	173.0	296.1	31.6	408.1
Ethanol blended under EBP Program (in Cr. Litrs)	191.2	170.5	302.3	38.3	433.6
Average Percentage of Blending Sales (EBP%)	5.0%	5.0%	8.1%	10.5%	10.0%

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

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

14. Industry marketing infrastructure (as on 01.12.2022) (Provisional)

Particulars	IOCL	BPCL	HPCL	RIL/RBML/RSIL	NEL	SHELL	Others	Total
POL Terminal/ Depots **(Nos.)**$	120	82	82	18	3		6	**311**
Aviation Fuel Stations **(Nos.)**@	129	62	52	30			2	**275**
Retail Outlets (total) **(Nos.)**,^	35,431	20,605	20,697	1,515	6,561	340	43	**85,192**
out of which Rural ROs	11,406	5,066	5,115	130	2,142	87	13	**23,959**
SKO/LDO agencies **(Nos.)**	3,871	927	1,638					**6,436**
LPG Distributors (total) **(Nos.) (PSUs only)**	12,841	6,231	6,261					**25,333**
LPG Bottling plants **(Nos.) (PSUs only)**#	95	54	53				3	**205**
LPG Bottling capacity **(TMTPA) (PSUs only)**&	10,598	4,890	6,170				203	**21,861**
LPG active domestic consumers **(Nos. crore) (PSUs only)**	14.6	8.1	8.6					**31.3**

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

Industry Alternate fuel infrastructure at Retail outlets (Nos. of ROs as on 01.12.2022) (Provisional)

Alternate fuel	PSU	Private	Total
CNG_LNG	4107	37	4144
EV Charging	4671	27	4698
Auto LPG	553	127	680
Compressed Bio-Gas outlets	70	0	70
Total Retail outlets with at least one Alternate fuel	8819	187	9006

PART-D

LPG

15. LPG consumption (Thousand Metric Tonne)

LPG category	2020-21	2021-22	Nov			April-Nov		
			2021-22	2022-23 (P)	Growth (%)	2021-22	2022-23 (P)	Growth (%)
1. PSU Sales :								
LPG-Packed Domestic	25,128.1	25,501.6	2,102.7	2,135.6	1.6%	16,604.3	16,637.6	0.2%
LPG-Packed Non-Domestic	1,886.0	2,238.8	194.8	264.1	35.6%	1,427.5	1,655.8	16.0%
LPG-Bulk	361.9	390.9	27.6	52.2	89.0%	244.2	262.6	7.5%
Auto LPG	118.4	122.0	10.9	9.3	-14.6%	80.1	73.4	-8.4%
Sub-Total (PSU Sales)	27,494.3	28,253.3	**2,336.0**	**2,461.2**	**5.4%**	**18,356.1**	**18,629.4**	**1.5%**
2. Direct Private Imports*	64.2	82.0	11.00	6.4	-42.2%	55.0	50.9	-7.5%
Total (1+2)	27,558.4	28,335.3	**2,347.0**	**2,467.6**	**5.1%**	**18,411.1**	**18,680.3**	**1.5%**

*Apr -Nov 2022 DGCIS data is prorated

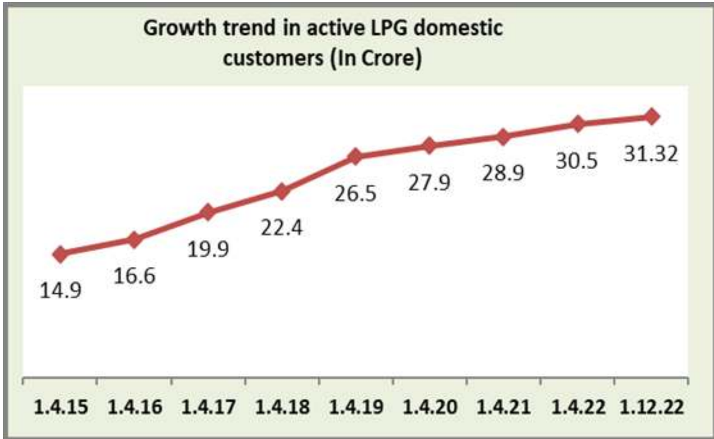
16. LPG marketing at a glance

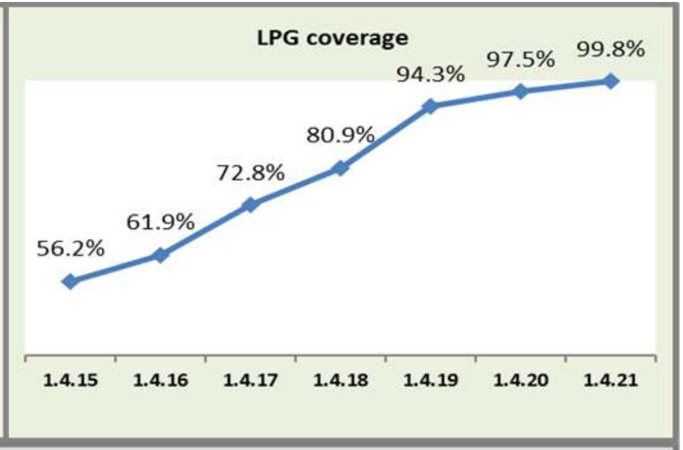
Particulars (As on 1st of April)	Unit	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	1.12.22 (P)
LPG Active Domestic Customers	(Lakh)					1486	1663	1988	2243	2654	2787	2895	3053	3132
	Growth						11.9%	19.6%	12.8%	18.3%	5.0%	3.9%	5.5%	3.7%
LPG Coverage (Estimated)	(Percent)					56.2	61.9	72.8	80.9	94.3	97.5	99.8	-	-
	Growth						10.1%	17.6%	11.1%	16.5%	3.4%	2.3%	-	-
PMUY Beneficiaries	(Lakh)							200	356	719	802	800.4	899.0	957.0
	Growth								77.7%	101.9%	11.5%	-0.2%	12.2%	8.7%
LPG Distributors	(No.)	10541	11489	12610	13896	15930	17916	18786	20146	23737	24670	25083	25269	25333
	Growth	8.8%	9.0%	9.8%	10.2%	14.6%	12.5%	4.9%	7.2%	17.8%	3.9%	1.7%	0.7%	0.6%
Auto LPG Dispensing Stations	(No.)	604	652	667	678	681	676	675	672	661	657	651	601	567
	Growth	12.7%	7.9%	2.3%	1.6%	0.4%	-0.7%	-0.1%	-0.4%	-1.6%	-0.6%	-0.9%	-8.5%	-10.6%
Bottling Plants	(No.)	183	184	185	187	187	188	189	190	192	196	200	202	205
	Growth	0.5%	0.5%	0.5%	1.1%	0.0%	0.5%	0.5%	0.5%	1.1%	2.1%	2.0%	1.0%	3.0%

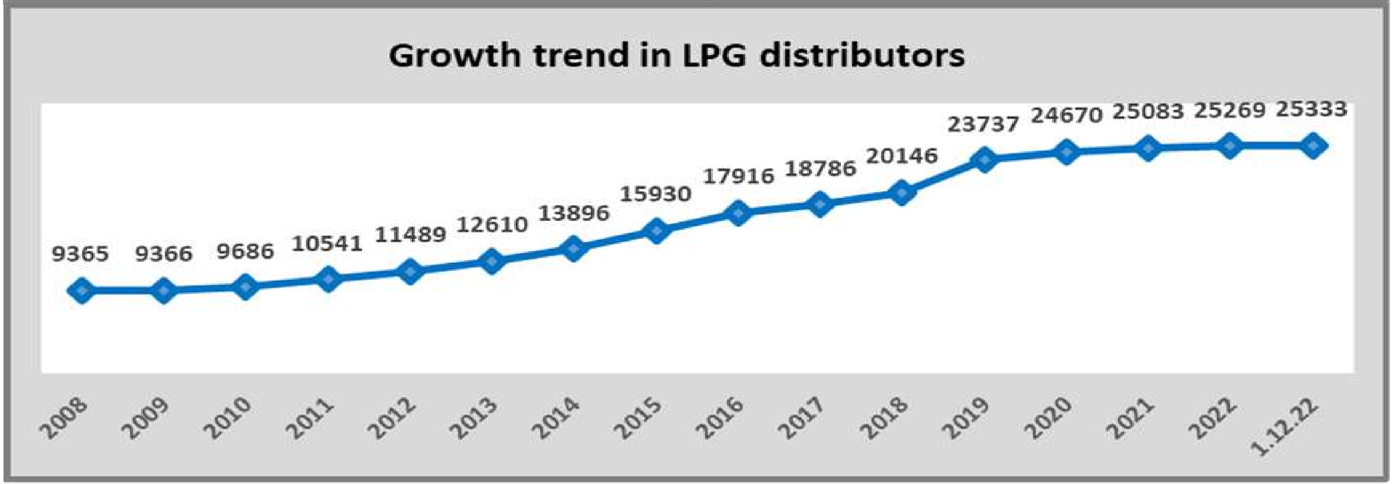
Source: PSU OMCs (IOCL,BPCL and HPCL)

1.Growth rates as on 01.12.2022 are with respect to figs as on 01.12.2021. Growth rates as on 1 April of any year are with respect to figs as on 1 April of previous year.

2. The LPG coverage is calculated by PSU OMCs based upon the active LPG domestic connections and the estimated number of households. The number of households has been projected by PSU OMCs based on 2011 census data. Factors like increasing nuclearization of families, migration of individuals/ families due to urbanization and reduction in average size of households etc. impact the growth of number of households. Due to these factors, the estimated no. of households through projection of 2011 census data may slightly differ from the actual no. of households in a State/UT. Further, this methodology does not include PNG (domestic) connections.

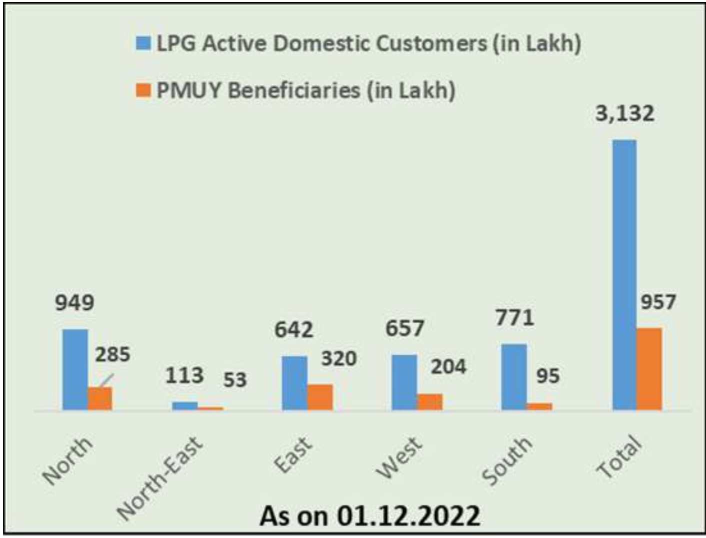

Growth trend in active LPG domestic customers (In Crore)
14.9
16.6
19.9
22.4
26.5
27.9
28.9
30.5
31.32
1.4.15
1.4.16
1.4.17
1.4.18
1.4.19
1.4.20
1.4.21
1.4.22
1.12.22

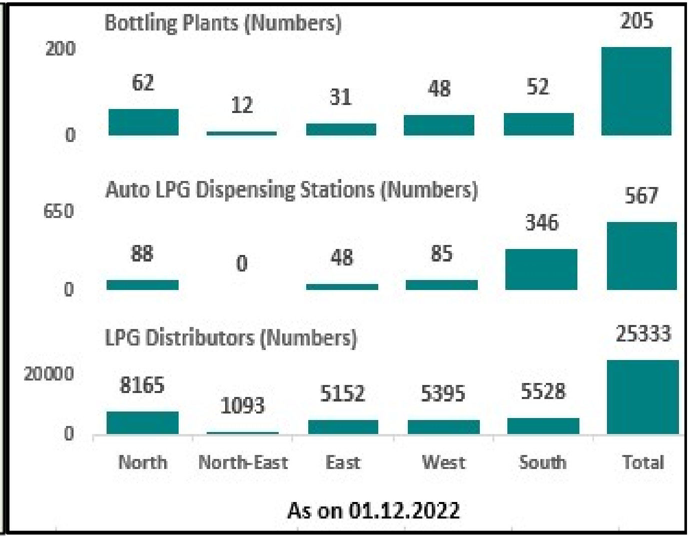

LPG coverage
56.2%
61.9%
72.8%
80.9%
94.3%
97.5%
99.8%
1.4.15
1.4.16
1.4.17
1.4.18
1.4.19
1.4.20
1.4.21


Growth trend in LPG distributors
9365
9366
9686
10541
11489
12610
13896
15930
17916
18786
20146
23737
24670
25083
25269
25333
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
1.12.22

17-Region-wise data on LPG marketing (As on 01.12.2022)						
Particulars	**North**	**North-East**	**East**	**West**	**South**	**Total**
LPG Active Domestic Customers (in Lakh)	949.0	112.9	641.9	656.7	771.5	3132.0
PMUY Beneficiaries (in Lakh)	285.0	52.6	320.3	204.4	94.7	957.0
LPG Distributors (Numbers)	8165	1093	5152	5395	5528	25333
Auto LPG Dispensing Stations (Numbers)	88	0	48	85	346	567
Bottling Plants* (Numbers)	62	12	31	48	52	205

*Includes Numaligarh BP, Duliajan BP and CPCL BP.





PART-E

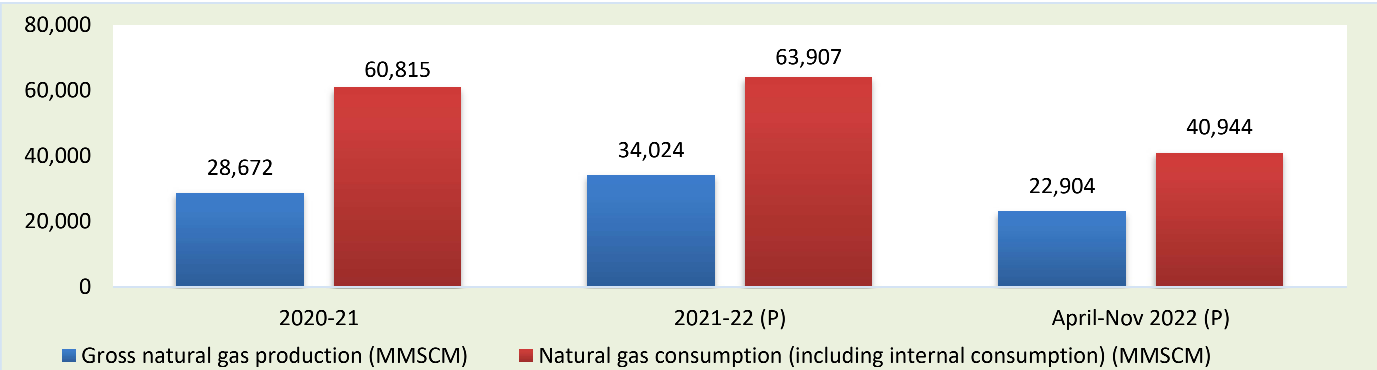
Natural Gas

18. Natural gas at a glance

(MMSCM)

Details	2020-21 (P)	2021-22 (P)	Nov			April-Nov		
			2021-22 (P)	2022-23 (Target)	2022-23 (P)	2021-22 (P)	2022-23 (Target)	2022-23 (P)
(a) Gross production	28,672	34,024	2,869	2,938	2,839	22,777	23,668	22,904
- ONGC	21,872	20,629	1,727	1,685	1,619	13,785	13,592	13,377
- Oil India Limited (OIL)	2,480	2,893	249	306	251	1,949	2,484	2,037
- Private / Joint Ventures (JVs)	4,321	10,502	893	947	969	7,043	7,592	7,489
(b) Net production (excluding flare gas and loss)	27,784	33,131	2,798		2,779	22,222		22,367
(c) LNG import#	33,031	30,776	2,469		2,322	21,472		18,577
(d) Total consumption including internal consumption (b+c)	60,815	63,907	5,267		5,102	43,694		40,944
(e) Total consumption **(in BCM)**	60.8	63.9	5.3		5.1	43.7		40.9
(f) Import dependency based on consumption (%), {c/d*100}	54.3	48.2	46.9		45.5	49.1		45.4

Oct - Nov 2022 DGCIS data prorated.



19. 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		17886	Sq. KM
Area awarded		20460	Sq. KM
Blocks awarded*		36	Nos.
Exploration initiated (Area considered if any boreholes were drilled in the awarded block)		10667***	Sq. KM
Production of CBM gas	April-Nov 2022 (P)	455.31	MMSCM
Production of CBM gas	Nov 2022 (P)	54.97	MMSCM

*ST CBM Block awarded & relinquished twice- in CBM Round II and Round IV -Area considered if any boreholes were drilled in the awarded block.

**MoPNG awarded 04 new CBM Blocks (Area 3862 sq. km) under Special CBM Bid Round 2021 in September 2022.

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

20. Common Carrier Natural Gas pipeline network as on 30.09.2022

Nature of pipeline		GAIL	GSPL	PIL	IOCL	AGCL	RGPL	GGL	DFPCL	ONGC	GIGL	GITL	Others*	Total
Operational	Length	9,577	2,695	1,459	143	107	304	73	42	24				**14,424**
	Capacity	167.2	43.0	85.0	20.0	2.4	3.5	5.1	0.7	6.0				-
Partially commissioned#	Length	4,777			282						1,254	365		**6,678**
	Capacity				-						-	-		-
Total operational length		**14,354**	**2,695**	**1,459**	**425**	**107**	**304**	**73**	**42**	**24**	**1,254**	**365**	**0**	**21,102**
Under construction	Length	5,097	100		1,149						1,078	1,666	2,915	**12,005**
	Capacity	-	3.0		-						-	-	-	-
Total length		**19,451**	**2,795**	**1,459**	**1,574**	**107**	**304**	**73**	**42**	**24**	**2,332**	**2,031**	**2,915**	**33,107**

Source: PNGRB; Length in KMs ; Authorized Capacity in MMSCMD; *Others-APGDC, HEPL, IGGL, IMC, Consortium of H-Energy

Total authorized Natural Gas pipelines including Tie-in connectivity, dedicated & STPL is 35208 Kms (P)

21. Existing LNG terminals

Location	Promoters	Capacity as on 01.12.2022	% Capacity utilisation (April-Oct 2022)
Dahej	Petronet LNG Ltd (PLL)	17.5 MMTPA	80.6
Hazira	Shell Energy India Pvt. Ltd.	5.2 MMTPA	47.4
Dabhol	Konkan LNG Limited	*5 MMTPA	22.5
Kochi	Petronet LNG Ltd (PLL)	5 MMTPA	17.0
Ennore	Indian Oil LNG Pvt Ltd	5 MMTPA	13.0
Mundra	GSPC LNG Limited	5 MMTPA	17.7
Total Capacity		**42.7 MMTPA**	

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

22. Status of PNG connections and CNG stations across India (Nos.), as on 31.10.2022(P)

State/UT (State/UTs are clubbed based on the GAs authorised by PNGRB)	CNG Stations	PNG connections		
		Domestic	Commercial	Industrial
Andhra Pradesh	147	241,015	405	32
Andhra Pradesh, Karnataka & Tamil Nadu	28	170	0	1
Assam	1	46,589	1,313	439
Bihar	69	83,778	51	2
Bihar & Jharkhand	1	5,347	0	0
Chandigarh (UT), Haryana, Punjab & Himachal Pradesh	24	24,303	105	19
Dadra & Nagar Haveli (UT)	7	9,915	53	53
Daman & Diu (UT)	4	5,134	46	42
Daman and Diu & Gujarat	13	1,555	3	0
Goa	11	10,326	15	26
Gujarat	966	2,835,650	21,648	5,743
Haryana	287	283,733	792	1,348
Haryana & Himachal Pradesh	9	0	0	0
Haryana & Punjab	16	0	0	0
Himachal Pradesh	7	3,304	0	0
Jharkhand	62	92,478	2	0
Karnataka	226	358,744	478	267
Kerala	91	22,034	18	14
Kerala & Puducherry	9	0	0	0
Madhya Pradesh	192	177,348	301	391
Madhya Pradesh and Chhattisgrah	3	0	0	0
Madhya Pradesh and Rajasthan	24	143	0	0
Madhya Pradesh and Uttar Pradesh	16	0	0	0
Maharashtra	608	2,528,474	4,536	804
Maharashtra & Gujarat	50	130,928	3	12
National Capital Territory of Delhi (UT)	464	1,320,168	3,322	1,760
Odisha	43	73,599	5	0
Puducherry & Tamil Nadu	8	65	0	0
Punjab	177	49,962	246	214
Rajasthan	194	172,655	54	206
Tamil Nadu	151	13	0	5
Telangana	130	176,138	71	90
Tripura	18	57,104	506	62
Uttar Pradesh	674	1,263,905	2,051	2,406
Uttar Pradesh & Rajasthan	37	18,958	36	340
Uttar Pradesh and Uttrakhand	16	6,263	0	0
Uttrakhand	29	63,758	46	72
West Bengal	41	0	0	0
Total	**4,853**	**10,063,556**	**36,106**	**14,348**

Source: 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. State/UTs wherever clubbed are based on the GAs authorised by PNGRB.

23. Domestic natural gas price and gas price ceiling (GCV basis)

Period	Domestic Natural Gas price in US$/MMBTU	Gas price ceiling in US$/MMBTU
November 2014 - March 2015	5.05	-
April 2015 - September 2015	4.66	-
October 2015 - March 2016	3.82	-
April 2016 - September 2016	3.06	6.61
October 2016 - March 2017	2.50	5.30
April 2017 - September 2017	2.48	5.56
October 2017 - March 2018	2.89	6.30
April 2018 - September 2018	3.06	6.78
October 2018 - March 2019	3.36	7.67
April 2019 - September 2019	3.69	9.32
October 2019 - March 2020	3.23	8.43
April 2020 - September 2020	2.39	5.61
October 2020 - March 2021	1.79	4.06
April 2021 - September 2021	1.79	3.62
October 2021 - March 2022	2.90	6.13
April 2022 - September 2022	6.10	9.92
October 2022 - March 2023	8.57	12.46

24. CNG/PNG prices

City	CNG (Rs/Kg)	PNG (Rs/SCM)	Source
Delhi	78.61	53.59	IGL website (15.12.2022)
Mumbai	89.50	54.00	MGL website (15.12.2022)

Indian Natural Gas Spot Price for Physical Delivery

IGX Price Index Month	Avg. Price		Volume (MMSCM)	Source
	INR/MMBtu	$/MMBtu		
Nov 2022	1222	14.94	68.58	As per IGX website: www.igxindia.com

*Prices are weighted average prices | $1=INR 81.81 | 1 MMBtu=25.2 SCM

PART-F

Taxes & Duties on Petroleum Products

25. Information on Prices, Taxes and Under-recoveries/Subsidies

International FOB prices/ Exchange rates ($/bbl)

Particulars	2020-21	2021-22	Nov 2022
Crude oil (Indian Basket)	44.82	79.18	87.55
Petrol	47.68	89.66	93.13
Diesel	47.86	88.45	123.18
Kerosene	43.60	85.31	116.76
LPG ($/MT)	415.17	692.67	610.00
FO ($/MT)	259.30	445.25	379.11
Naphtha ($/MT)	378.93	698.25	635.18
Exchange (Rs./$)	74.20	74.51	81.81

Customs, excise duty & GST rates

Product	Basic customs duty #	Excise duty	GST rates
Petrol	2.50%	Rs 19.90/Ltr	**
Diesel	2.50%	Rs 15.80/Ltr	**
PDS SKO	5.00%	Not Applicable	5.00%
Non-PDS SKO	5.00%	Not Applicable	18.00%
Domestic LPG	Nil***	Not Applicable	5.00%
Non Domestic LPG	5.00%	Not Applicable	18.00%
Furnace Oil (Non-Fert)	2.50%	Not Applicable	18.00%
Naphtha (Non-Fert)	1.00%	Not Applicable	18.00%
ATF	5.00%	11% *	**
Crude Oil	Rs.1/MT+ Rs.50/-MT as NCCD	Rs.1/MT+ Cess@20% + Rs.50 /-MT NCCD + Rs. 1700/ MT SAED ^^	**

*2% for scheduled commuter airlines from regional connectivity scheme airports ** GST Council shall recommend the date on which GST shall be levied on petroleum crude , HSD, MS, natural gas and ATF; # Social welfare surcharge @ 10% is levied on aggregate duties of Customs excluding CVD in lieu of IGST.*** Customs duty is Nil for import of Domestic LPG sold to household consumers (including NDEC) by PSU OMCs. Customs duty rate is 5% for other importers of domestic LPG, ^^ Effective 16.12.2022 SAED on crude oil.

Price buildup of petroleum products (Rs./litre/Cylinder) *

Particulars	Petrol	Diesel
Price charged to dealers (excluding Excise Duty and VAT)	57.36	58.16
Excise Duty	19.90	15.80
Dealers' Commission (Average)	3.75	2.55
VAT (incl VAT on dealers' commission)	15.71	13.11
Retail Selling Price	**96.72**	**89.62**

Particulars	PDS SKO	Subsidised Domestic LPG
Price before taxes and dealers'/distributors' commission	72.74	938.02
Dealers'/distributors' commission	2.67	64.84
GST (incl GST on dealers'/distributors' commission)	3.77	50.14
Retail Selling Price	**79.18**	**1053.00**

*Petrol and Diesel at Delhi as per IOCL are as on 1st December 2022. PDS SKO at Mumbai as on 1st December 2022 and Subsidised Domestic LPG at Delhi as on 1st December 2022.

25. Information on Prices, Taxes and Under-recoveries/Subsidies

PDS Kerosene /DBTL Subsidy

PDS Kerosene

Product	2018-19	2019-20	2020-21
	Rs./Crore		
Under recovery	5,950	1,833	0
Subsidy under DBTK #	98	42	0
Total	**6,048**	**1,875**	**0**

#DBTK subsidy excludes cash incentive/ assistance for establishment of institutional mechanisam for direct transfer of subsidy paid to States/UTs. DBTK subsidy for 2019-20 is till Oct 2019.

Domestic LPG under DBTL (Direct benefit transfer for LPG)

Particulars	2018-19	2019-20	2020-21
	Rs./Crore		
DBTL subsidy	31,447	22,635	3,559
PME &IEC^	92	91	99
Total	**31,539**	**22,726**	**3,658**

^ on payment basis (PME & IEC- Project Management Expenditure & Information Education and Communication)

Sales & profit of petroleum sector (Rs. Crores)

Particulars	2021-22		H1-2022-23 (P)	
	Turnover	PAT	Turnover	PAT
Upstream/midstream Companies (PSU)	215,625	54,557	167,641	35,760
Downstream Companies (PSU)	15,29,502	39,355	9,68,108	-21,201
Standalone Refineries (PSU)	169,984	7,859	130,942	5,439
Private-RIL	466,425	39,084	304,026	22,011

Borrowings of OMCs (Rs. Crores), As on

Company	Mar`21	Mar'22	Sept`22 (P)
IOCL	102,327	110,799	140,322
BPCL	26,315	24,123	48,237
HPCL	40,009	43,193	68,546

Petroleum sector contribution to Central/State Govt.

Particulars	2020-21	2021-22	H1-2022-23 (P)
Central Government	4,55,069	492,303	197,055
% of total revenue receipts	28%	24%	
State Governments	2,17,650	282,122	160,242
% of total revenue receipts	8%	8%	
Total (Rs. Crores)	**6,72,719**	**7,74,425**	**357,296**

Total Subsidy as a percentage of GDP (at current prices)

Particulars	2018-19	2019-20	2020-21
Petroleum subsidy	0.23	0.13	0.06

Note: GDP figure for 2018-19, 2019-20 and 2020-21 are Revised Estimates.

**Totals may not tally due to roundoff.

PART-G

Miscellaneous

26. Capital expenditure of PSU oil companies

(Rs in crores)

Company	2019-20	2020-21	2021-22 (P)	2022-23 (P)	
				Target (Annual)	April -Nov 22
ONGC Ltd	30,115	26,441	26,621	29,950	16,320
ONGC Videsh Ltd (OVL)	5,363	5,351	4,836	8,180	1,720
Oil India Ltd (OIL)	3,724	12,802	4,239	4,302	2,489
GAIL (India) Ltd	4,381	5,560	6,970	7,500	4,825
Indian Oil Corp. Ltd. (IOCL)	28,316	27,195	29,604	28,549	20,717
Hindustan Petroleum Corp. Ltd (HPCL)	13,773	14,036	16,205	14,500	7,694
Bharat Petroleum Corp. Ltd (BPCL)	10,255	10,697	11,449	10,000	8,131
Mangalore Refinery & Petrochem Ltd (MRPL)	1,318	2,218	604	815	248
Chennai Petroleum Corp. Ltd (CPCL)	969	592	575	584	391
Numaligarh Refinery Ltd (NRL)	536	981	3,403	6,774	3,599
Balmer Lawrie Co. Ltd (BL)	40	42	23	40	16
Engineers India Ltd (EIL)	164.43	730	67	160	39
Total	**98,955**	**106,642**	**104,596**	**111,354**	**66,187**

Includes expenditure on investment in JV/subsidiaries.

(P) Provisional

Totals may not tally due to roundoff.

27. Conversion factors and volume conversion

Weight to volume conversion

Product	Weight (MT)	Volume (KL)	Barrel (bbl)
LPG	1	1.844	11.60
Petrol (MS)	1	1.411	8.88
Diesel (HSD)	1	1.210	7.61
Kerosene (SKO)	1	1.285	8.08
Aviation Turbine Fuel (ATF)	1	1.288	8.10
Light Diesel Oil (LDO)	1	1.172	7.37
Furnace Oil (FO)	1	1.0424	6.74
Crude Oil	1	1.170	7.33

Exclusive Economic Zone

200 Nautical Miles	370.4 Kilometers

Volume conversion

From	To
1 US Barrel (bbl)	159 litres
1 US Barrel (bbl)	42 US Gallons
1 US Gallon	3.78 litres
1 Kilo litre (KL)	6.29 bbl
1 Million barrels per day	49.8 MMTPA

Energy conversion

1 Kilocalorie (kcal)	4.187 kJ
1 Kilocalorie (kcal)	3.968 Btu
1 Kilowatt-hour (kWh)	860 kcal
1 Kilowatt-hour (kWh)	3,412 Btu

Natural gas conversions

1 Standard Cubic Metre (SCM)	35.31 Cubic Feet	1 MMBTU	25.2 SCM @10000 kcal/SCM
1 Billion Cubic Metres (BCM)/year of Gas	2.74 MMSCMD	GCV (Gross Calorific Value)	10,000 kcal/SCM
1 Trillion Cubic Feet (TCF) of Gas Reserve	3.88 MMSCMD	NCV (Net Calorific Value)	90% of GCV
1 Million Metric Tonne Per Annum (MMTPA) of LNG	3.60 MMSCMD	Gas required for 1 MW power generation	4,541 SCM/day
1 MT of LNG	1,325 SCM	Power generation from 1 MMSCMD of gas	220 MW

Petroleum Planning & Analysis Cell

(Ministry of Petroleum & Natural Gas, Government of India)
SCOPE Complex, 2nd Floor Core-8, Lodhi Road, New Delhi-110003
Tel.: 011-24306191/92, 011-24361314, Fax : 011-24361253 www.ppac.gov.in