

Chapter

Consumption of Energy Resources

6



CHAPTER 6

Consumption of Energy Resources

Consumption

The study of consumption patterns of energy in any economy is vital to understand how final demand drives energy use or consumption. SEEA – Energy states that “resource uses and environmental pressures, which occur at the level of production, can in fact be viewed as determined by final use, which initiated the production chain”.

Moreover, to fully understand the climate-change process, the data on many consumption activities, such as heating of houses and buildings, usage of electricity, various industrial processes and transportation, which entail combustion processes are required.

Energy-related air emissions are being measured and tracked by global economies, because most economic activities are linked to combustion/consumption that is needed for energy production.

With the increasing focus on sustainable consumption and production patterns world over, resource uses and environmental pressures are being viewed as determinants or drivers of the final use and consumption of products.

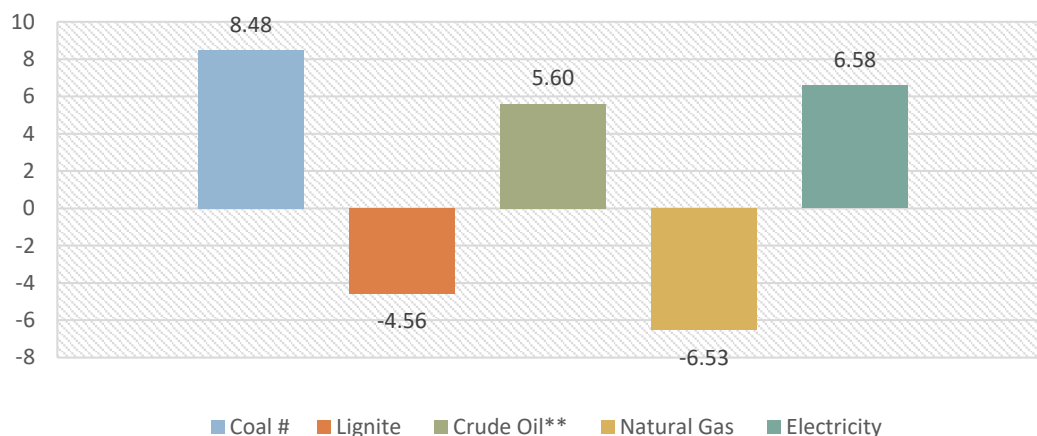
According to the International Energy Agency, where India is an Association country since March 2017, Total Energy Consumption (TEC) in an economy is a good indicator of efficient or non-efficient end-use in economic activities and may indicate course-correction measures to sustainability. It is defined to include the sum of the consumption in the end-use sectors and for non-energy use. Energy used for transformation processes and for own use of the energy producing industries is excluded. Thus, final consumption reflects for the most part, deliveries to consumers and represents the quantity of all energy necessary to satisfy inland consumption.

This chapter presents the total consumption of energy resources along with sector wise end use of different energy resources and products in India.

Highlights

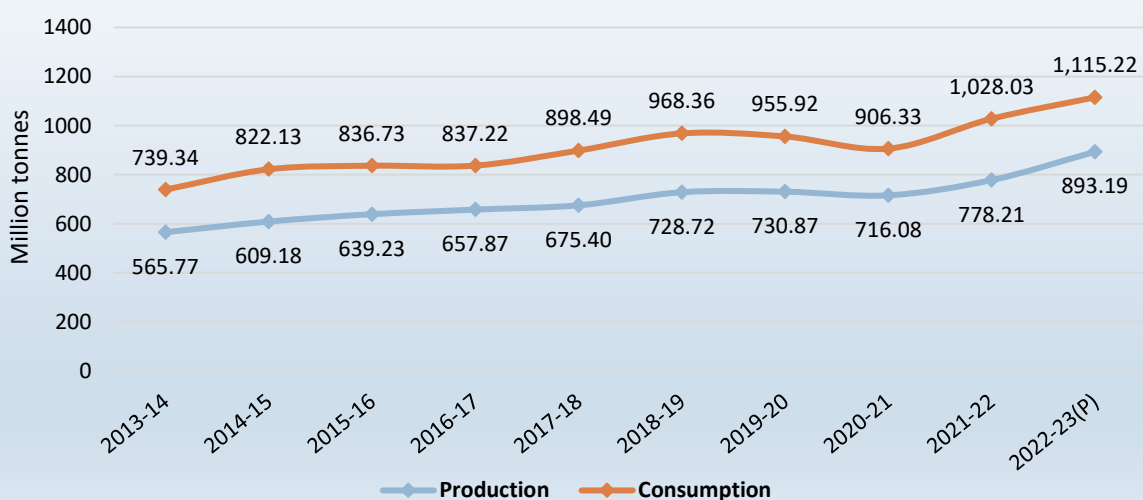
- During the FY: 2022-23, India has experienced a rather steady growth rate of consumption. Surmounting over the grappling moments of global pandemic, all the sectors have experienced with a healthy growth rates displaying a steady recovery of the Indian Economy.

Fig 6.1 : Growth rate of consumption during FY : 2022-23(P) w.r.t 2021-22



- India is one of the largest producers and consumer of coal. After registering a significant growth during FY: 2021-22 over 2019-20 (13.4%), the story of the increasing demand and consumption continues during FY:2022-23 (8.5%) over FY:2021-22 (Table 6.1).

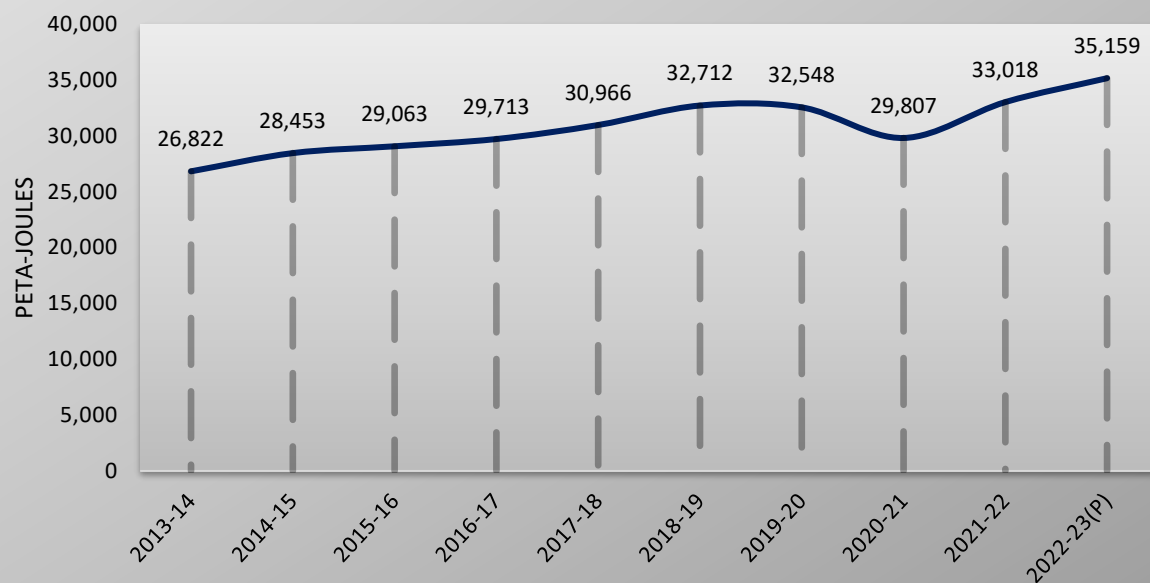
Fig 6.2 : Yearwise Trend of Production and Consumption of Coal in India during FY:2013-14 to FY:2021-22(P)



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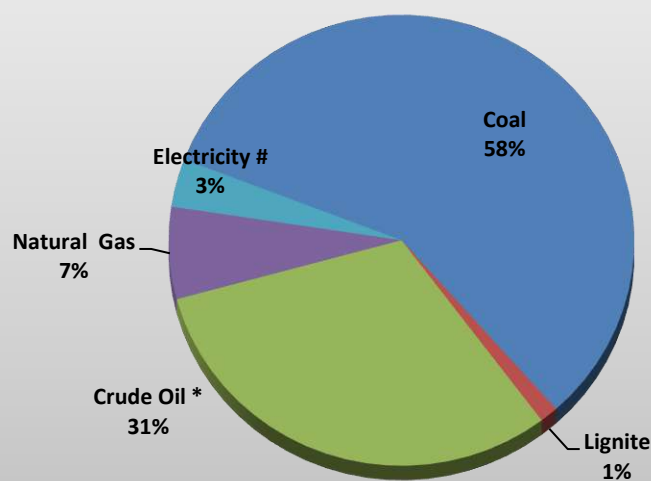
India has experienced a healthy growth in consumption of Energy. A growth from a figure of 26,822 Petajoule (PJ) during 2013-14 to 35,159 Petajoule (PJ) in 2022-23 (P). The total consumption of energy has increased from 33,018 PJ in 2021-22 to 35,159 PJ in 2022-23(P), an increase of 6.48%. Coal and Lignite together has registered the highest growth of close to 8.63% during FY:2022-23(P) over last year

Fig 6.3 : Trend of total consumption of Energy in India during FY: 2013-14 to FY: 2022-23 (P)



- The consumption of energy in petajoules from Coal and Lignite was highest which accounted for about 59% of the total consumption during 2022-23(P) followed by Crude Oil (31%) and Natural Gas (7%) (Table 6.2).

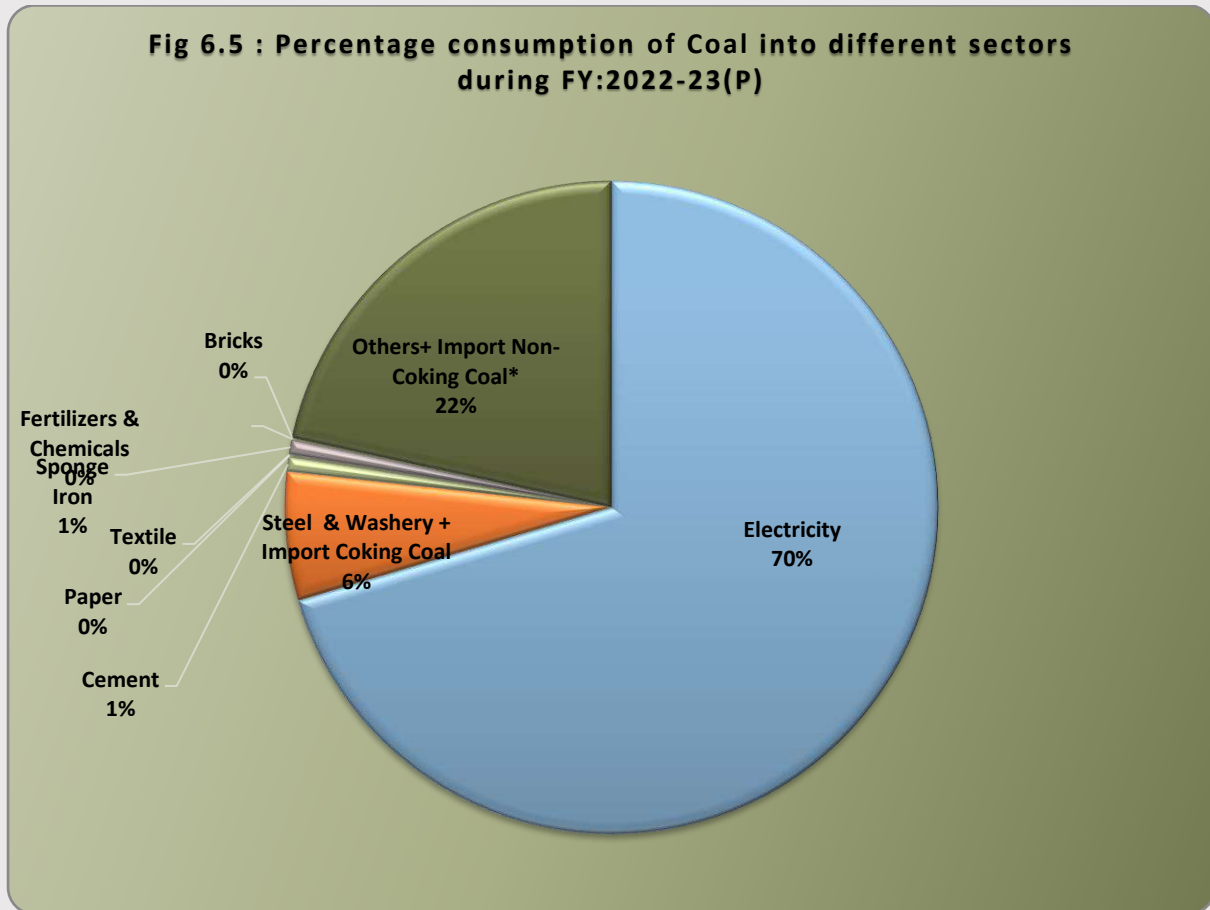
Fig 6.4: Sourcewise Consumption of Energy during 2022-23 (P)



Total Energy Consumption = 35,159 PJ

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- Electricity Sector remains the biggest consumer of Raw Coal and Lignite in India with this sector consuming as much as 70.40% of the total consumption of coal and 83.16% of total consumption of lignite in India in 2022-23(P). (Table 6.3 & Table 6.4)



- Consumption of Lignite was increased from 32.94 MT in 2020-21 to 49.08 MT in 2021-22 which is almost 17.67%. The sharp increase can be attributed to the higher demand in Electricity/Power sector during FY: 2021-22 which has continued its' increasing trend even during FY: 2022-23.
- Petroleum products have experienced a steady growth over time. From a figure of 157.06 MTs during 2012-13 to 214.13 MTs during 2019-20 i.e. a growth of 36% over a span of 7 years. However, during FY:2020-21 the same has been decreased by 9.26% and stood at 194.30 MTS primarily because of COVID-19 pandemic. During FY:2022-23(P) the same has registered a positive growth rate of 10.57% over last year and stood at 223.01 MTs. Among all the products the High-Speed Diesel Oil (HSDO) accounted for 38.52% of total consumption, followed by Petrol (15.68%), LPG (12.78%) and Pet Coke (8.23%) (Table 6.5).

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Fig 6.6 : Trend of total consumption of Petroleum Products in India during FY: 2013-14 to FY: 2022-23 (P)

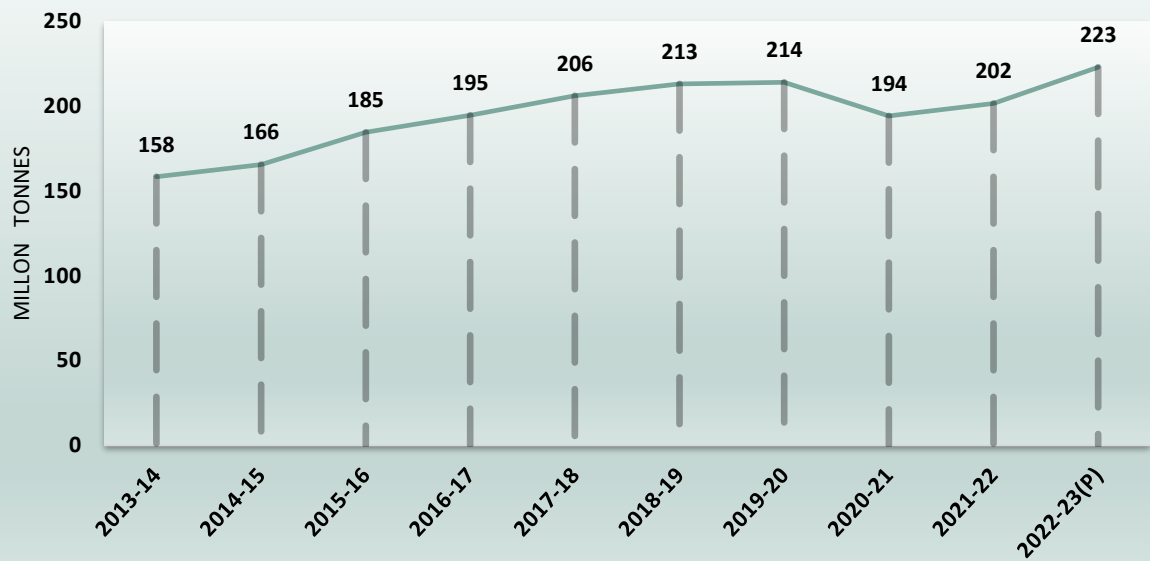
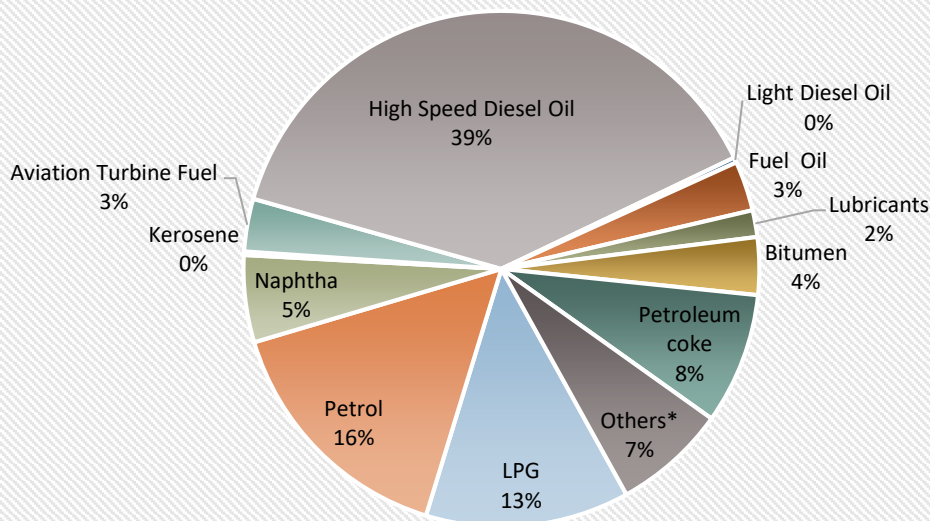
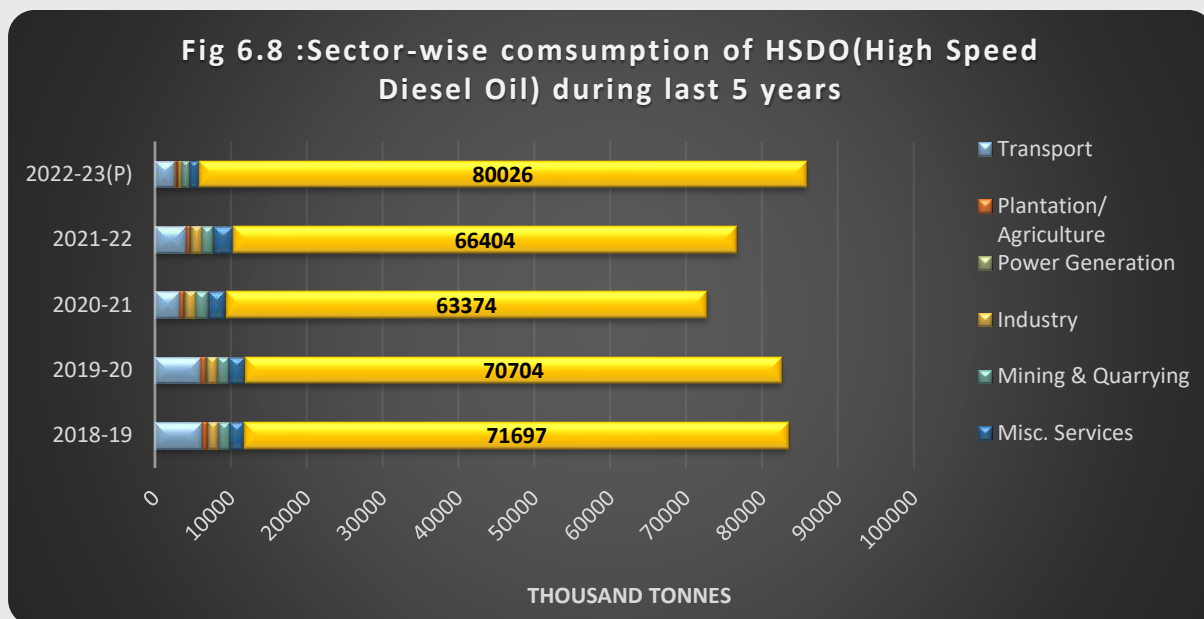


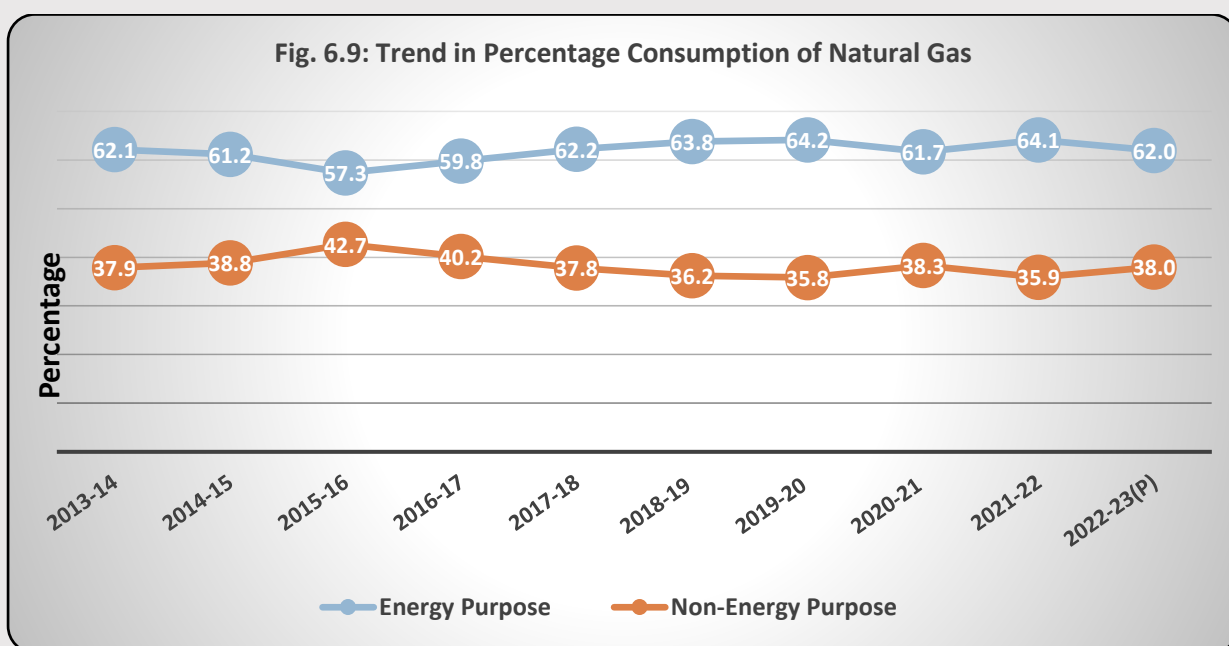
Fig 6.7 : Consumption of Petroleum Products- By type during FY:2022-23 (P)



- Among all the Petroleum Products the HSDO, which has the highest share of consumption (38.52%) during FY: 2022-23(P), experienced a positive growth of 12.05% over last year. The Petrol and Pet-Coke are also having a growth of 13.38% and 28.68% respectively over last year. The HSD has also registered a positive growth during FY:2022-23(P); with a growth of 12.05% over last year it has stood at a figure of 85.90 MTs in 2022-23(P), as compared to 76.66 MTs during 2021-22(Table 6.5).



- The impact of energy policies of recent time is evident on the consumption of kerosene as a fuel in the country. the consumption of Kerosene has seen a steady decreasing trend with a CAGR of (-) 25.78% from 2013-14 to 2022-23(P) (Table 6.5).
- The consumption of Natural Gas has experienced a fluctuation over time. During FY: 2022-23(P) the consumption against the *Energy Purpose* has experienced a negative growth of -7.7% (from 39,414 BCM during 2021-22 to 36,383 BCM during 2022-23(P)); the *Non-Energy Purpose* however has experienced a meagre growth of 1.1% (from 22,077 BCM during 2021-22 to 22,319 BCM during 2022-23(P)).



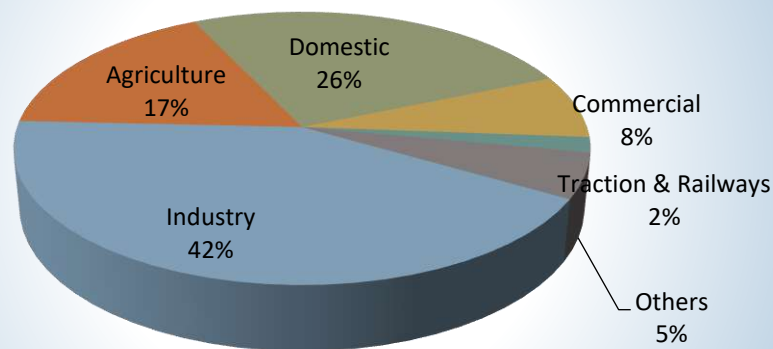
- The maximum use of Natural Gas is in fertilizers industry (32.35%) followed by *City or Local Natural Gas Distribution Network incl. Road Transport* (20.06%). Industry wise off-take of natural gas shows that, out of the Total Consumption (*Availability Basis (Net*

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Production + LNG Imports)), while 62% of natural gas has been used for Energy purposes, 38% is used for Non-energy purposes (Table 6.7).

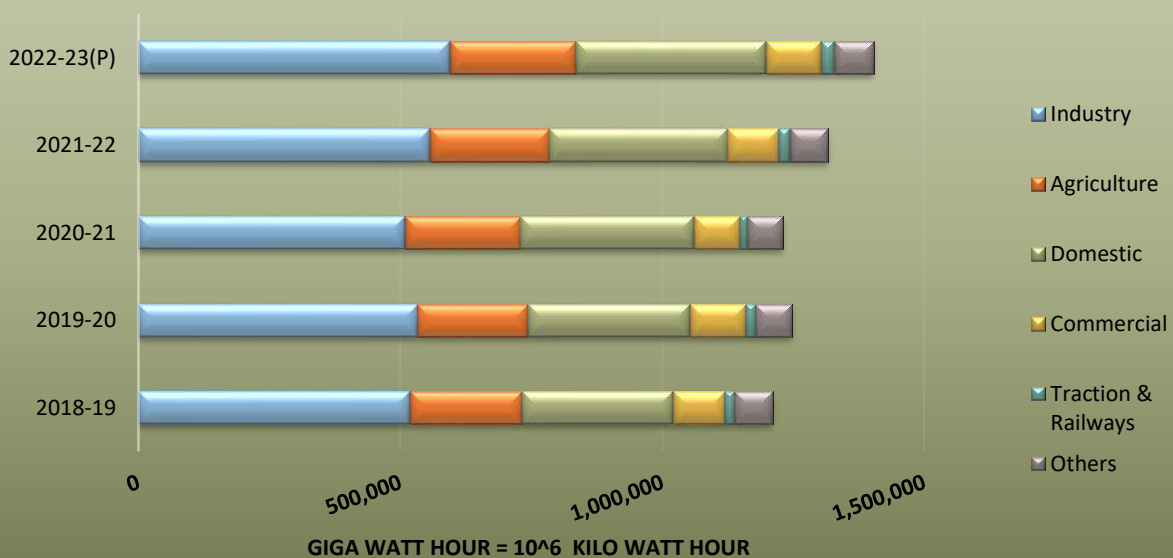
- The estimated electricity consumption increased from 8,24,301 GWh during 2012-13 to 12,96,300 GWh during 2021-22(P), showing a CAGR of 5.16%. Out of the total consumption of electricity in 2021-22(P), industry sector accounted for the largest share (41.16%), followed by domestic (25.77%), agriculture (17.67%) and commercial sectors (8.29%). The Domestic sector has experienced the highest CAGR of 6.87 between FY:2012-13 to FY:2021-22(P) (Table 6.8).

Fig 6.10: Consumption of Electricity by Sectors during 2022-23(P)



Total Electricity Consumption = 14,03,400 GWh

Fig 6.11: Sector-wise consumption of Electricity during last 5 years



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Table 6.1: Year wise Consumption of Energy Resources in Physical Units

Year	Coal #	Lignite	Crude Oil**	Natural Gas	Electricity
	(Million Tonnes)		MMT	(Billion Cubic Metres)	(GWh)
1	2	3	4	5	6
2013-14	739	44	222	52	8,74,209
2014-15	822	47	223	51	9,48,522
2015-16	837	42	233	53	10,01,191
2016-17	837	43	245	56	10,61,183
2017-18	898	46	252	59	11,23,427
2018-19	968	46	257	61	12,09,972
2019-20	956	42	254	64	12,48,086
2020-21	906	38	222	61	12,30,208
2021-22	1,028	49	242	64	13,16,765
2022-23(P)	1,115	47	255	60	14,03,400
Growth rate of 2022-23 over 2021-22(%)	8.48	-4.56	5.60	-6.53	6.58
CAGR 2013-14 to 2022-23 (P) (%)	4.67	0.72	1.54	1.52	5.40

P: Provisional

GWh = Giga Watt hour = 10⁶ x Kilo Watt hour

**Crude oil in terms of refinery crude throughput.

Does not include Lignite

Sources:

1. Ministry of Coal
2. Ministry of Petroleum & Natural Gas.
3. Central Electricity Authority.

Table 6.2: Year wise Consumption of Energy Resources in Energy Units

Year	Coal	Lignite	Crude Oil *	Natural Gas	Electricity #	(In Petajoules)
						Total
1	2	3	4	5	6	7
2013-14	14,214	419	9,520	2,017	652	26,822
2014-15	15,812	448	9,552	1,976	664	28,453
2015-16	16,041	403	9,964	2,023	632	29,063
2016-17	15,972	412	10,499	2,145	684	29,713
2017-18	16,707	442	10,780	2,279	757	30,966
2018-19	18,072	437	11,006	2,342	855	32,712
2019-20	17,814	403	10,885	2,471	975	32,548
2020-21	16,616	367	9,489	2,362	972	29,807
2021-22	18,648	469	10,342	2,485	1,074	33,018
2022-23(P)	20,257	447	10,921	2,323	1,211	35,159
% Share in total consumption for 2022-23 (P)	57.6	1.3	31.1	6.6	3.4	100.0
CAGR 2013-14 to 2022-23(%)	4.02	0.72	1.54	1.58	7.12	3.05

*: Crude oil in terms of refinery crude processed.

P: Provisional.

#: Include Hydro, Nuclear and other renewable sources electricity from utilities

Note: The figure against electricity has been calculated using the following formula:

Generation from Electricity (Utility) from Hydro, Nuclear and other RE - Losses

Sources:

1. Ministry of Coal
2. Ministry of Petroleum & Natural Gas.
3. Central Electricity Authority.

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Table 6.3: Year wise Consumption of Coal - Industrywide

(Million Tonnes)

Year	Electricity	Steel & Washery + Import Coking Coal	Cement	Paper	Textile	Sponge Iron	Fertilizers & Chemicals	Bricks	Others+ Import Non-Coking Coal*	Total
1	2	3	4	5	6	7	8	9	10	11 = 2 to 10
2011-12	410.37	47.86	13.18	2.03	0.26	21.69	3.19	0.13	140.04	638.73
2012-13	446.76	51.70	13.11	2.12	0.30	20.90	2.86	2.01	173.62	713.39
2013-14	448.95	53.05	11.94	1.91	0.36	18.49	2.64	4.01	198.00	739.34
2014-15	497.70	56.24	11.36	1.65	0.42	17.77	2.70	0.09	234.22	822.13
2015-16	517.77	57.08	8.99	1.21	0.27	7.76	2.62	0.07	240.95	836.73
2016-17	535.04	51.98	6.36	1.18	0.24	5.56	2.45	0.10	234.31	837.22
2017-18	585.49	58.45	7.71	1.51	0.24	8.53	2.16	0.12	234.30	898.49
2018-19	621.64	64.65	8.82	1.64	0.20	12.09	1.79	0.09	257.44	968.36
2019-20	626.15	63.74	8.57	1.33	0.10	10.53	1.76	0.03	243.72	955.92
2020-21	581.23	60.17	6.75	1.05	0.08	9.57	1.53	0.03	245.93	906.33
2021-22	710.05	66.28	7.31	1.24	0.08	9.02	1.31	0.02	232.72	1,028.03
2022-23(P)	785.13	70.84	8.12	1.20	0.09	8.06	0.95	0.11	240.72	1,115.22
Percentage Distribution (in 2022-23)	70.40	6.35	0.73	0.11	0.01	0.72	0.09	0.01	21.58	100.00
Growth rate of 2022-23 over 2021-22(%)	10.57	6.87	11.12	-3.30	15.00	-10.69	-	-	3.44	8.48
CAGR 2013-14 to 2022-23(%)	6.41	3.27	-4.19	-4.98	-	-8.82	-10.75	-	2.19	4.67

(P): Provisional

* Includes colliery consumption, jute, coal for soft coke & other industries

Source: Ministry of Coal

Table 6.4: Year wise Consumption of Lignite - Industry wise

(Million Tonnes)

Year	Electricity	Steel & Washery	Cement	Paper	Textile	Brick	Others *	Total
1	2	3	4	5	6	7	8	9=2 to 8
2013-14	36.34	0.03	1.49	1.29	0.73	1.00	3.02	43.90
2014-15	39.47	0.02	1.27	0.65	2.89	0.67	1.98	46.95
2015-16	37.56	0.01	0.23	0.43	1.73	0.39	1.87	42.21
2016-17	38.82	0.04	0.29	0.53	1.29	0.42	1.77	43.16
2017-18	38.84	0.12	1.09	0.76	2.46	0.38	2.67	46.32
2018-19	37.73	0.09	1.80	0.60	2.61	0.63	2.34	45.81
2019-20	36.33	0.02	1.00	0.55	0.16	0.47	3.75	42.27
2020-21	32.94	0.02	0.81	0.57	0.29	0.43	3.44	38.49
2021-22	38.76	0.26	1.55	2.11	2.08	1.13	3.20	49.08
2022-23(P)	38.96	0.12	0.84	0.92	2.62	0.61	2.78	46.84
Distribution (%) in 2022-23	83.16	0.26	1.79	1.96	5.60	1.30	5.93	100.00
Growth rate of 2022-23 over 2021-22(%)	0.52	-	-	-	-	-	-13.17	-4.56
CAGR 2013-14 to 2022-23(%)	0.78	16.97	-6.20	-3.69	-	-5.41	-0.92	0.72

(P): Provisional

* Includes Sponge Iron, colliery consumption., jute, bricks, coal for soft coke, chemicals, fertilisers & other industries consumption and imported lignite

Source: Ministry of Coal

Table 6.5 : Yearwise Consumption of Petroleum Products - Categorywise (Million Tonnes)																
Year	Light Distillates			Middle Distillates						Heavy Ends				Total Consumption	Refinery Fuel and Losses	Total including Refinery Fuel and losses
	LPG	Petrol	Naphtha	Kerosene	Aviation Turbine Fuel	High Speed Diesel Oil	Light Diesel Oil	Fuel Oil	Lubricants	Bitumen	Petroleum coke	Others*				
1	2	3	4	5	6	7	8	9	10	11	12	13	14=2 to13	15	16	
2013-14	16.29	17.13	11.31	7.16	5.50	68.36	0.39	6.24	3.31	5.01	11.76	5.96	158.41	17.87	176.27	
2014-15	18.00	19.08	11.08	7.09	5.72	69.42	0.37	5.96	3.31	5.07	14.56	5.87	165.52	17.67	183.19	
2015-16	19.62	21.85	13.27	6.83	6.26	74.65	0.41	6.63	3.57	5.94	19.30	6.35	184.67	18.77	203.45	
2016-17	21.61	23.76	13.24	5.40	7.00	76.03	0.45	7.15	3.47	5.94	23.96	6.59	194.60	20.07	214.67	
2017-18	23.34	26.17	12.89	3.85	7.63	81.07	0.52	6.72	3.88	6.09	25.66	8.34	206.17	21.16	227.33	
2018-19	24.91	28.28	14.13	3.46	8.30	83.53	0.60	6.56	3.67	6.71	21.35	11.72	213.22	21.45	234.67	
2019-20	26.33	29.98	14.27	2.40	8.00	82.60	0.63	6.30	3.83	6.72	21.71	11.36	214.13	23.61	237.74	
2020-21	27.56	27.97	14.10	1.80	3.70	72.71	0.86	5.59	4.10	7.52	15.61	12.79	194.30	22.81	217.10	
2021-22	28.25	30.85	13.25	1.49	5.01	76.66	1.02	6.26	4.54	7.82	14.26	12.30	201.70	24.34	226.04	
2022-23(P)	28.50	34.98	12.16	0.49	7.37	85.90	0.72	6.95	3.74	8.04	18.34	15.81	223.01	25.95	248.96	
% Distribution in 2022-23(P)	12.78	15.68	5.45	0.22	3.30	38.52	0.33	3.12	1.68	3.61	8.23	7.09	100.00	-	-	
Growth rate of 2022-23 over 2021-22 (%)	0.88	13.38	-8.21	-	-	12.05	-	11.06	-	2.87	-	-	10.57	6.59	10.14	
CAGR 2013-14 to 2022-23(%)	6.41	8.26	0.81	-	3.29	2.57	7.24	1.22	1.38	5.40	5.07	11.46	3.87	4.23	3.91	

(P) : Provisional; Consumption includes sales by oil companies, own consumption and direct private imports

* : Includes those of light & middle distillates and heavy ends and sales through private parties.

Total may not tally due to rounding off.

Source: Ministry of Petroleum & Natural Gas.

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Table 6.6 (A): Year wise Consumption of Selected Petroleum Products – Sector-wise(end use)

('000 Tonnes)

Petroleum Product	Year	Transport	Plantation/ Agriculture	Power Generation	Industry	Mining & Quarrying	Resellers/Retail	Misc. Services	Pvt Imports	Total
1	2	3	4	5	6	7	8	9	10	11 =3 to10
High Speed Diesel Oil	2011-12	5529	684	168	1649	1181	53208	2262	70	64750
	2012-13	5160	617	214	1628	1073	58021	2320	47	69080
	2013-14	3203	429	204	687	873	61465	1426	77	68364
	2014-15	4617	575	197	794	998	60383	1768	83	69416
	2015-16	5765	630	224	1096	1184	63754	1940	55	74647
	2016-17	5658	607	208	1033	1224	65072	2179	46	76027
	2017-18	5999	618	223	1155	1255	69846	1887	90	81073
	2018-19	6210	639	222	1264	1465	71697	1938	93	83528
	2019-20	6011	616	214	1334	1542	70704	2064	117	82602
	2020-21	3257	571	204	1355	1642	63374	2232	79	72713
	2021-22	4089	530	213	1291	1540	66404	2552	39	76659
2022-23(P)	2607	299	166	439	1053	80026	1242	67	85898	
Growth rate of 2022-23 over 2021-22(%)		-36.24	-43.70	-22.28	-65.97	-31.64	20.51	-51.34	72.89	12.05
CAGR 2013-14 to 2022-23 (%)		-2.26	-3.95	-2.30	-4.85	2.10	2.98	-1.52	-1.55	2.57

Source: Ministry of Petroleum & Natural Gas

Table 6.6(A-1): Distribution of High-Speed Diesel (HSD) under Reseller/ Retail into different End-Use sectors

('000 Tonnes)

FY	Road Transport	Shipping	Railways	Agriculture	Power Generation	Other Consumer/ Industrial Goods	Others	Total
2021-22	51,663	531	1,394	3,187	1,062	4,183	4,383	66,404
2022-23(P)	62,260	640	1,681	3,841	1,280	5,042	5,282	80,026

Note: The above end-use distribution of High-Speed Diesel (HSD) (under Retail/Reseller segment) has been made based on the findings mentioned in Figure 17 (End-use share (%) of diesel (retail and direct) across India) of Sectoral Study Report of PPAC (https://ppac.gov.in/uploads/rep_studies/1666932000_ExecutiveSummarySectoralConsumptionStudy.pdf).

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Table 6.6 (B): Year wise Consumption of Selected Petroleum Products - Sector wise (end use)

('000 Tonnes)

Petroleum Product	Year	Transport	Plantation/ Agriculture	Power Generation	Industry	Mining & Quarrying	Resellers/Retail	Misc. Services	Pvt Imports	Total
1	2	3	4	5	6	7	8	9	10	11 =3 to10
Light Diesel Oil	2013-14	3.85	1.35	131.77	63.66	3.44	0.69	181.56	0.00	386.32
	2014-15	4.95	1.06	132.18	54.63	3.80	3.81	164.83	0.00	365.26
	2015-16	3.74	1.26	154.21	60.79	2.23	1.11	183.77	0.00	407.11
	2016-17	7.23	2.02	174.35	59.50	2.30	1.04	202.54	0.00	448.98
	2017-18	7.16	9.29	142.94	148.82	6.12	2.57	206.89	0.00	523.79
	2018-19	9.98	15.65	276.51	174.77	22.42	33.33	65.32	0.00	597.97
	2019-20	4.55	12.47	342.15	153.33	14.44	37.53	63.33	0.00	627.80
	2020-21	5.02	15.30	252.28	308.66	7.71	124.83	128.90	12.36	855.06
	2021-22	6.04	17.75	288.58	296.79	10.28	205.95	187.20	4.91	1017.50
	2022-23(P)	7.48	13.76	260.59	232.97	12.52	60.64	131.75	5.24	724.95
Growth rate of 2022-23 over 2021-22(%)		-	-	-9.70	-21.51	21.82	-70.56	-29.62	6.69	-28.75
CAGR 2013-14 to 2022-23(%)		7.66	29.45	7.87	15.51	15.43	64.43	-3.50	-	7.24

Source: Ministry of Petroleum & Natural Gas

Table 6.6 (C): Year wise Consumption of Selected Petroleum Products - Sector wise (end use)

('000 Tonnes)

Pet-Product	Year	Transport	Plantation/ Agriculture	Power Generation	Industry	Mining & Quarrying	Resellers /Retail	Misc. Services	Pvt Imports	Total
1	2	3	4	5	6	7	8	9	10	11 =3 to10
Furnace Oil	2013-14	315	75	536	1833	38	309	1985	696	5787
	2014-15	346	56	446	1748	45	197	2175	570	5584
	2015-16	380	57	430	2136	53	270	2564	592	6482
	2016-17	444	51	361	2492	71	357	2485	784	7046
	2017-18	601	50	314	2346	68	321	2234	672	6605
	2018-19	786	78	339	2577	54	298	1449	611	6195
	2019-20	849	71	303	2143	84	290	1398	775	5912
	2020-21	1022	80	226	1874	92	268	1330	316	5208
	2021-22	1209	65	312	2092	127	211	1388	411	5815
	2022-23(P)	1561	50	418	1964	94	153	1404	537	6181
Growth rate of 2022-23 over 2021-22(%)		29.11	-22.30	34.20	-6.12	-25.98	-27.48	1.15	30.48	6.30
CAGR 2013-14 to 2022-23(%)		19.45	-4.27	-2.72	0.77	10.47	-7.51	-3.77	-2.84	0.74

Source: Ministry of Petroleum & Natural Gas

Chapter 6: Consumption of Energy Resources

Table 6.6 (D): Year wise Consumption of Selected Petroleum Products - Sector wise (end use)

('000 Tonnes)									
Petroleum Product	Year	Plantation/ Agriculture	Power Generation	Industry	Mining & Quarrying	Resellers /Retail	Misc. Services	Pvt Imports	Total
1	2	3	4	5	6	7	8	9	10 =3 to 9
Low Sulphur Heavy Stock	2013-14	0.00	328.14	76.32	0.00	0.00	44.25	0.00	448.71
	2014-15	0.00	226.18	103.54	0.00	0.00	47.50	0.00	377.22
	2015-16	0.00	50.70	70.45	0.00	0.00	29.23	0.00	150.38
	2016-17	0.00	16.43	50.88	0.00	0.00	36.91	0.00	104.23
	2017-18	1.18	0.00	53.78	0.31	14.67	46.33	0.00	116.27
	2018-19	7.90	9.31	175.13	0.00	48.04	128.67	0.00	369.04
	2019-20	6.42	17.88	201.93	0.00	50.29	113.02	0.00	389.54
	2020-21	6.79	10.71	196.23	0.00	48.50	115.97	0.00	378.20
	2021-22	6.51	29.66	191.26	0.00	67.39	151.88	0.00	446.70
2022-23(P)	3.51	18.86	250.30	0.00	83.62	416.70	0.00	773.00	
Growth rate of 2022-23 over 2021-22(%)		-	-36.41	30.87	-	24.09	-	-	73.05
CAGR 2013-14 to 2022-23 (%)		-	-27.19	14.11	-	-	28.30	-	6.23

Source: Ministry of Petroleum & Natural Gas

Table 6.6 (E) : Yearwise Consumption of Selected Petroleum Products - Sectorwise(end use)

('000 Tonnes)												
Petroleum Product	Year	Transport	Plantation/ Agriculture	Power Generation	Manufacturing/ Non domestic	Mining	Domestic Distribution	Non- Domestic /Industry/Co mmercial	Reseller/ Retail	Other/ Misc. Services	Private Import	Total
1	2	3	4	5	6	7	8	9	10	11	12	13= 3 to 12
Liquefied Petroleum Gas	2013-14	194.97	3.95	2.57	134.75	0.00	14411.60	1073.60	57.77	45.95	368.50	16293.65
	2014-15	164.59	6.09	3.08	207.92	0.00	16040.39	1050.98	45.19	52.68	429.17	18000.10
	2015-16	171.83	7.13	2.68	201.66	0.00	17181.72	1464.37	44.92	59.87	489.05	19623.22
	2016-17	168.07	7.75	2.19	220.03	0.00	18871.36	1775.91	67.03	66.56	429.31	21608.21
	2017-18	185.09	7.46	1.25	204.57	0.00	20351.78	2085.82	74.25	67.13	364.46	23341.82
	2018-19	181.11	21.98	1.77	204.23	0.35	21728.02	2364.39	0.01	88.93	315.98	24906.79
	2019-20	172.79	25.70	1.49	153.40	0.07	23075.97	2614.43	0.00	81.90	204.04	26329.78
	2020-21	119.01	28.11	0.35	214.98	1.50	25128.09	1885.96	0.88	115.38	64.17	27558.43
	2021-22	122.99	29.57	0.41	180.03	3.48	25501.59	2238.83	2.46	174.07	0.06	28253.49
	2022-23(P)	108.43	21.71	0.61	228.53	4.90	25381.60	2606.06	1.83	149.75	0.08	28503.50
Growth rate of 2022-23 over 2021-22(%)		-11.84	-26.58	-	26.94	-	-0.47	16.40	-	-13.97	-	0.88
CAGR 2013-14 to 2022-23 (%)		-6.31	20.84	-14.75	6.05	-	6.49	10.36	-	14.03	-	6.41

Source: Ministry of Petroleum & Natural Gas

Chapter 6: Consumption of Energy Resources

Table 6.6 (F) : Year wise Consumption of Selected Petroleum Products - Sector wise(end use)

('000 Tonnes)

Petroleum Product	Year	Fertiliser Sector	Petro Chemicals	Power Sector	Steel Plants	Others	Private Import	Total
1	2	3	4	5	6	7	8	9 = 3 to 8
Naptha	2013-14	516	9464	215	0	240	870	11305
	2014-15	301	9530	199	0	208	844	11082
	2015-16	316	10350	50	0	37	2517	13271
	2016-17	349	10210	60	0	199	2423	13241
	2017-18	368	10011	67	0	405	2038	12889
	2018-19	352	10602	5	0	462	2711	14131
	2019-20	150	10874	0	0	880	2364	14268
	2020-21	66	11339	70	0	885	1740	14100
	2021-22	0	11904	6	0	799	536	13246
	2022-23(P)	0	10434	19	0	714	991	12158
Growth rate of 2022-23 over 2021-22(%)		-	-12.35	-	-	-10.73	-	-8.21
CAGR 2013-14 to 2022-23 (%)		-	1.09	-	-	12.86	1.46	0.81

Source: Ministry of Petroleum & Natural Gas

Table 6.6 (G): Year wise Consumption of Selected Petroleum Products - Sector wise (end use)

('000 Tonnes)

Petroleum Product	Year	Domestic/PDS	Commercial/ Industry	Others	Total
1	2	3	4	5	6= 3 to 5
SKO(Kerosene)	2013-14	7009	107	49	7165
	2014-15	6917	60	109	7087
	2015-16	6649	64	113	6826
	2016-17	5197	84	116	5397
	2017-18	3634	97	115	3845
	2018-19	3231	97	131	3459
	2019-20	2174	87	137	2397
	2020-21	1587	69	143	1798
	2021-22	1292	64	138	1493
	2022-23(P)	308	54	127	490
Growth rate of 2022-23 over 2021-22(%)		-76.14	-14.93	-7.81	-67.22
CAGR 2013-14 to 2022-23 (%)		-29.33	-7.30	11.27	-25.78

Source: Ministry of Petroleum & Natural Gas

Chapter 6: Consumption of Energy Resources

Table 6.7: Year wise Consumption of Natural Gas – Sectorwise

(Figures in MMSCM)

Sector	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23(P)	% Share of Total
	1	2	3	4	5	6	7	8	9	10	11
(a) Energy Purpose											
Power	11,284	10,720	10,889	11,616	12,028	12,005	11,080	10,836	10,157	8,153	13.59
Industrial & Manufacturing	261	533	545	794	999	1,086	701	555	829	865	1.44
City or Local Natural Gas Distribution Network incl. Road Transport	5,904	5,416	5,464	7,350	8,585	9,206	10,883	9,230	12,175	12,028	20.06
Agriculture (Tea Plantation)	196	180	187	183	189	192	200	177	156	154	0.26
Internal Consumption for Pipeline System	372	351	410	471	496	541	525	439	486	1,764	2.94
Refinery	3,968	4,575	5,077	5,374	6,533	7,047	7,786	7,911	5,312	3,909	6.52
LPG Shrinkage	982	1,005	754	759	798	874	858	900	1,070	976	1.63
Miscellaneous	7,479	5,941	4,111	3,929	3,226	3,393	4,209	4,569	9,229	8,534	14.23
Total (a)	30,446	28,721	27,437	30,478	32,854	34,343	36,241	34,617	39,414	36,383	61
(b) Non-Energy Purpose											
Fertilizer Industry	15,869	15,190	16,135	15,429	14,676	14,987	16,115	17,781	18,079	19,400	32.35
Petrochemical	2,405	2,890	3,733	4,170	4,024	3,386	3,569	3,072	2,864	1,959	3.27
Sponge Iron	274	154	544	885	1,278	1,124	567	647	1,134	960	1.60
Total (b)	18,548	18,234	20,412	20,484	19,978	19,497	20,251	21,500	22,077	22,319	37
Total Sectorial Sales (a+b)	48,994	46,955	47,849	50,961	52,832	53,840	56,492	56,117	61,491	58,702	98
Total Consumption **	52,375	51,300	52,517	55,697	59,170	60,796	64,144	60,981	64,159	59,969	100
Total Consumption in MMSCMD	143	141	143	153	162	167	175	167	176	164	

Note: **: Availability Basis (Net Production + LNG Imports)

P: Provisional

1. Re-classification among the sectors of consumption of natural gas under energy and non-energy sectors, has been done depending on usage. Sectors where natural gas is being used as feedstock are classified as consumption of gas under non-energy purpose whereas those sectors where natural gas is being used as fuel are classified as consumption of gas under energy purpose.

2. Sectorial Sales/consumption of natural gas includes RLNG.

3. Total may not tally due to rounding off.

4. The reasons for the variation between the consolidated availability and the consumption can be attributed to stock changes, conversion factor (volume/energy) and the provisional data reported by the companies.

5. LPG shrinkage is being shifted from Non-Energy purpose to Energy Purpose. Since, LPG shrinkage is a transformation process and LPG produced is used for energy purposes to meet domestic / household energy requirements.

Source: Ministry of Petroleum and Natural Gas

Chapter 6: Consumption of Energy Resources

Table 6.8: Year wise Consumption of Electricity - Sector wise

(in Giga Watt Hour = 10⁶ Kilo Watt Hour)

Year	Industry	Agriculture	Domestic	Commercial	Traction & Railways	Others	Total Electricity Consumed
1	2	3	4	5	6	7	8=2 to 7
2011-12	3,52,291	1,40,960	1,71,104	65,381	14,206	41,252	7,85,194
2012-13	3,65,989	1,47,462	1,83,700	72,794	14,100	40,256	8,24,301
2013-14	3,84,418	1,52,744	1,99,842	74,247	15,540	47,418	8,74,209
2014-15	4,18,346	1,68,913	2,17,405	78,391	16,177	49,289	9,48,522
2015-16	4,23,523	1,73,185	2,38,876	86,037	16,594	62,976	10,01,191
2016-17	4,40,206	1,91,151	2,55,826	89,825	15,683	68,493	10,61,183
2017-18	4,68,613	1,99,247	2,73,545	93,755	17,433	70,834	11,23,427
2018-19	5,19,196	2,13,409	2,88,243	98,228	18,837	72,058	12,09,972
2019-20	5,32,820	2,11,295	3,08,745	1,06,047	19,148	70,031	12,48,086
2020-21	5,08,776	2,21,303	3,30,809	86,950	14,668	67,701	12,30,208
2021-22	5,56,481	2,28,451	3,39,780	97,121	21,935	72,996	13,16,765
2022-23(P)	5,95,000	2,40,800	3,62,000	1,05,100	25,000	75,500	14,03,400
% share in 2022-23(%)	42.40	17.16	25.79	7.49	1.78	5.38	100.00
Growth rate of 2022-23 over 2021-22(%)	6.92	5.41	6.54	8.22	13.97	3.43	6.58
CAGR 2013-14 to 2022-23 (%)	4.97	5.19	6.82	3.94	5.43	5.30	5.40

(P): Provisional

Source: Central Electricity Authority.

Table 6.9: Electricity Generated (from Utilities), Distributed, Sold and Transmission & Distribution Losses

(in Giga Watt hour =10⁶ Kilo Watt hour)

Year	Net Electricity Generated from Utilities	Purchases from Non-Utilities + Net Import from Other Countries	Net Electricity Available for Supply	Sold to Ultimate Consumers	Loss in transmission & distribution	Loss in transmission & distribution (%)
1	2	3	4=2+3	5	6=4-5	7
2013-14	9,56,488	17,948	9,74,436	7,51,908	2,22,528	22.84%
2014-15	10,40,582	13,773	10,54,355	8,14,250	2,40,105	22.77%
2015-16	10,88,282	15,947	11,04,228	8,63,364	2,40,864	21.81%
2016-17	11,54,314	8,977	11,63,290	9,14,093	2,49,197	21.42%
2017-18	12,21,307	11,198	12,32,505	9,73,131	2,59,375	21.04%
2018-19	12,88,393	19,291	13,07,685	10,37,518	2,70,167	20.66%
2019-20	13,00,116	22,932	13,23,048	10,52,346	2,70,701	20.46%
2020-21	12,92,715	21,310	13,14,025	10,41,656	2,72,369	20.73%
2021-22	13,97,707	16,197	14,13,903	11,41,485	2,72,418	19.27%
2022-23(P)	15,14,894	14,577	15,29,471	12,49,926	2,79,545	18.28%
Growth rate of 2022-23 over 2021-22(%)	8.38	-10.00	8.17	9.50	2.62	-5.14
CAGR 2013-14 to 2022-23 (%)	5.24	-2.28	5.14	5.81	2.57	-2.44

(P): Provisional

Source: Central Electricity Authority.