

Demand for Grants 2023-24 Analysis

Petroleum and Natural Gas

The Ministry of Petroleum and Natural Gas is concerned with exploration and production of oil and natural gas, refining, distribution and marketing, import and export, and conservation of petroleum products. This note looks at the proposed expenditure of the Ministry for 2023-24, and the trends in spending over the last few years.

Overview of Finances¹

In 2023-24, the Ministry has been allocated Rs 41,008 crore, a 21% increase over the revised estimates for 2022-23.

Table 1: Allocation to the Ministry of Petroleum and Natural Gas (in Rs crore)

Major Heads	Actuals 21-22	RE 22-23	BE 23-24	% Change (BE over RE)
Capital Support to OMCs	0	0	30,000	-
One Time Grant to OMCs	0	22,000	0	-
SPR	339	219	5,711	2509%
LPG Subsidy	3,421	9,171	2,257	-75%
Others	1,993	2,494	3,040	22%
Total	5,754	33,884	41,008	21%

Note: SPR - Strategic Petroleum Reserves. OMC – Oil Marketing Company
Sources: Union Budget Documents 2023-24; PRS.

Historically, the Ministry’s expenditure has followed the price of crude oil. Since 2011-12, the highest expenditure of the Ministry has been in the year 2012-13 when the price of crude oil rose above USD 100/bbl. This has been because the government subsidised the prices of oil for the public and the under-recoveries were borne by the government when the prices rose.

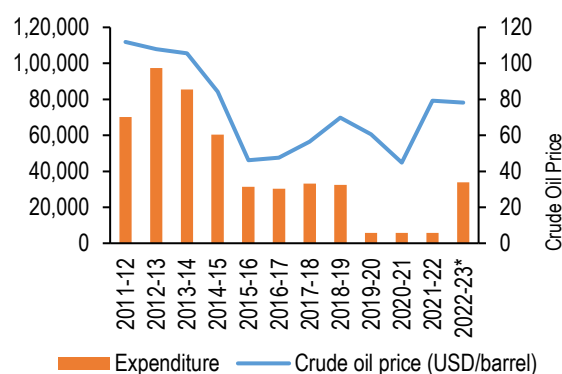
Earlier, the rise in crude oil prices led to a rise in expenditure since the government controlled the retail prices of petrol and diesel. By controlling the prices, retail customers were shielded from global increases and fluctuations in oil prices. The government issued oil bonds to oil marketing companies (OMCs) in lieu of cash subsidies from 2002 to offset the loss faced due to under recoveries.² As of February 2023, the outstanding value of the oil bonds is Rs 92,200 crore (Rs 1,06,933 crore including interest). With some of the bonds maturing in the next financial year, the value of the outstanding bonds will reduce to Rs 76,614 crore by February 2024. All the bonds will mature by April 2026 (See Annexure).³

Announcements in 2023-24 Budget Speech

Rs 35,000 crore will be allocated towards priority capital investments to enable energy transition, achieve net zero targets and energy security.

Denatured ethyl alcohol will be exempt from basic customs duty to support the Ethanol Blending Program.

Figure 1: Expenditure of Ministry (Rs Crore)



Note: Price of crude oil is the Indian Basket of crude oil; Data for 2022-23 is till December 2022.
Sources: Petroleum Planning and Analysis Cell; Union Budget 2023-24; PRS.

Since 2014, the price of petrol and diesel are no longer set by the government but by OMCs based on market conditions and have been revised daily since 2017.⁴

Under-recoveries, which are the difference between the cost of production and the selling price of commodities (petrol, diesel, kerosene, LPG), have been on a downward trend since the government has allowed OMCs to determine prices.^{5,6} Under-recoveries on petrol ended in 2011 and on diesel in 2014. Since 2017 there have been no under recoveries on domestic LPG. However, between June 2020 and June 2022, international price of LPG rose by around 300%.⁷ In order to insulate domestic consumers, the government did not pass on the entire increase in costs to the consumers and domestic LPG prices rose by 72%.⁷ The government provided a one-time grant of Rs 22,000 crore to the PSU OMCs in October 2022 for these under-recoveries.⁸

The Ministry has allocated Rs 30,000 crore towards equity infusion in OMCs.¹ Company-wise breakup was not provided in budget documents.⁹

Oil imports

India is heavily dependent on imports for its consumption of oil. Thus, prices of retail products are affected by international prices and geopolitical events. India imports crude oil from over fifty countries in 2022; however, the top three countries make up 54% of the imports.¹⁰ Imports from Russia shot up by 162% between 2021-22 and 2022-23.¹¹

Table 2: Import and export of petroleum products (in USD million)

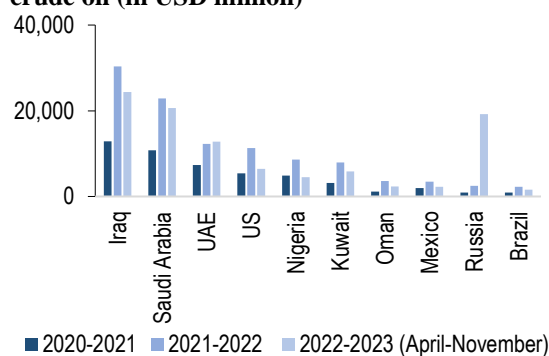
Year	Total Imports	Total Exports
2011-12	1,53,879	59,319
2012-13	1,56,883	58,848
2013-14	1,55,427	60,664
2014-15	1,24,882	47,277
2015-16	73,924	27,059
2016-17	80,810	29,049
2017-18	1,01,440	34,940
2018-19	1,28,255	38,236
2019-20	1,19,065	35,848
2020-21	77,018	21,406
2021-22*	1,45,915	44,438

* Data for 2021-22 is provisional.

Sources: Petroleum Planning and Analysis Cell; PRS.

As of 2021, Russia is the third largest producer of oil, producing 11% of the world's supply. India is the third largest consumer of oil, consuming 5% of the world's supply.¹² Following the Russia-Ukraine conflict in February 2022, several heavy sanctions were placed upon Russia. However, India's import of Russian oil has prevented a spike in energy prices. According to provisional data from the Ministry of Commerce, Russia will become the third largest exporter of crude oil to India in 2022-23.¹³

Figure 2: Countries from where India imports crude oil (in USD million)



Sources: Department of Commerce Export Import Data Bank (HSN Code 2709); PRS.

Taxes on fuel

Petrol and diesel are not taxed under GST; instead, the central government levies a basic custom duty

and excise duty, along with various cesses. In addition to these, states can levy their own duties such as VAT.

Table 3: Breakup of taxes on petrol and diesel

Breakup of Taxes (in Rs/litre)	Petrol		Diesel	
	Oct 21	Feb 23	Oct 21	Feb 23
Basic Customs Duty	2.5%	2.5%	2.5%	2.5%
Additional Customs Duty (CVD)	14.9	14.9	13.8	13.8
Additional Customs Duty	18.0	5.0	18.0	2.0
Basic Excise Duty	1.4	1.4	1.8	1.8
Special Additional Excise Duty	11.0	11.0	8.0	8.0
Agriculture Infrastructure and Development Cess	2.5	2.5	4.0	4.0
Road and Infrastructure Cess	13.0	5.0	8.0	2.0

Sources: Petroleum Planning and Analysis Cell; PRS.

Between November 2021 and February 2023, the central government reduced the additional customs duty and the road an infrastructure cess by Rs 13 for petrol and Rs 16 for diesel.¹⁴ This duty cut was done to ease the prices of petrol and diesel across the nation as the price of crude increased in 2022.¹⁴

Table 4: Contribution of petroleum to Union taxes (in Rs crore)

Year	Taxes Collected Through Petroleum	Contribution of Petroleum to Central Tax Revenue
2014-15	1,26,025	14%
2015-16	2,09,354	22%
2016-17	2,73,225	25%
2017-18	2,76,168	22%
2018-19	2,79,847	21%
2019-20	2,87,540	21%
2020-21	4,19,884	29%
2021-22	4,31,609	24%

Source: Petroleum Planning and Analysis Cell, Receipt Budget 2016-17 to 2023-24

Petroleum is a large source of revenue for central and state exchequers. In 2021-22, the central government earned Rs 4.3 lakh crore from the petroleum sector with states earning Rs 1.6 lakh crore (See Annexure).¹⁵ The collections from petroleum made up 24% of the central tax revenue. This makes petroleum a valuable source of revenue for the central government and for state governments.

LPG Subsidy

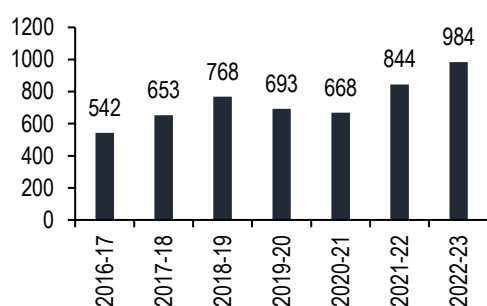
The Ministry provides subsidy on LPG cylinders to consumers. Prior to 2013, this subsidy was provided in the form of subsidized cylinders. Following the launch of the PAHAL (Pryatakh Hanstantrit Labh) scheme in 2013, this subsidy is directly credited to the bank accounts of the

beneficiary.¹⁶ In 2023-24, the Ministry has budgeted Rs 2,257 crores on the LPG subsidy, which is a 75% decrease from the revised estimates of 2022-2023. The LPG subsidy constitutes 5.5% of the allocation to the Ministry.

Direct Benefit Transfer – PAHAL

The PAHAL scheme was launched initially in 2013 (with 54 districts in the first phase) and launched in the rest of the country in January 2015.¹⁷ Under the scheme, a consumer can avail Direct Benefit Transfer (DBT) cash-subsidy for an LPG cylinder. The beneficiaries buy LPG cylinders at market rate and subsequently receive subsidies directly in their bank accounts.

Figure 3: Average price of non-subsidised LPG (in Rs per 14.2 kg cylinder)

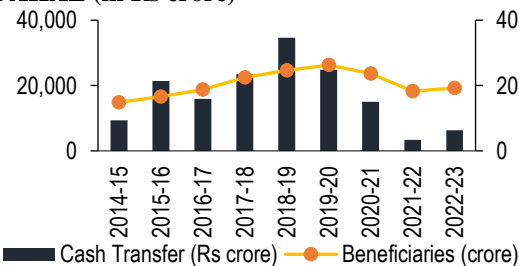


Source: Indian Oil Corporation Limited; PRS.

In 2023-24, Rs 180 crore has been earmarked for DBT-PAHAL. This is the same as the allocation in the revised estimates for 2022-23. As mentioned earlier, even though the price of LPG has risen, the government has regulated the retail prices offered by OMCs. The government has instead compensated OMCs with a one-time grant of Rs 22,000 crore to cover their losses. Targeted subsidies undertaken under the PM Ujjwala Yojana have also shifted some of the burden from the OMCs to the Ministry.

According to the government, the PAHAL scheme has also resulted in cumulative savings of Rs 72,910 crore as of March 2021.¹⁸ Further, 4.11 crore duplicate, fake/non-existent and inactive LPG connections have been eliminated.¹⁸ There are 1.79 crore non-subsidised customers, out of which 1.08 crore are those who have given up their LPG subsidy under the 'Give It Up' campaign.¹⁸

Figure 4: Cash transfer and beneficiaries under PAHAL (in Rs crore)



Sources: Direct Benefit Transfer website; PRS.

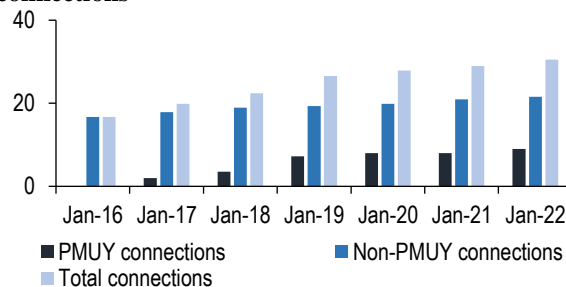
The Comptroller and Auditor General (CAG) released a report on 'Implementation of PAHAL Scheme' in 2016.¹⁹ It noted that the scheme appears to have addressed the concern regarding diversion of subsidised LPG cylinders to commercial consumers.¹⁹ However, the risk of diversion of non-subsidised domestic LPG to commercial consumers still remains as there is a significant difference in the cost of non-subsidised domestic LPG and commercial LPG.¹⁹ Commercial LPG is sold in 19 kg cylinders as opposed to 14.2 kg cylinders for domestic use. Thus, it is priced higher.

Pradhan Mantri Ujjwala Yojana

The Pradhan Mantri Ujjwala Yojana (PMUY) was launched in May 2016 to provide LPG connections to adult women of poor households.²⁰ The eligibility list includes households belonging to the Socio Economic Caste Census (SECC) list or SC/ST households, Most Backward Classes households, PM Awas Yojana (Gramin) households, Antyodaya Anna Yojana households, forest dwellers, resident of islands, tea garden workers or households not mentioned in the above categories provided they submit relevant documentation.²¹ The scheme targeted providing three crore connections to women by March 2018 which was achieved by February 2018.²²

In August 2021, the government launched Phase 2 of PMUY (Ujjwala 2) with a target to release one crore PMUY connections that was also achieved in January 2022.²² Subsequently, the government decided to release 60 lakh more connections under Ujjwala 2, which has been achieved in January 2023.²² As of February 1, 2023, the government has released a total of 9.6 crore PMUY connections.²² Cumulatively, the highest number of connections have been released to Uttar Pradesh (1.8 crore), West Bengal (1.2 crore), and Bihar (1.1 crore).²²

Figure 5: PMUY and cumulative LPG connections



Note: No new PMUY Connections were released in 2020-21. Sources: Indian Petroleum & Natural Gas Statistics 2021-22; PRS.

In 2022-23, PMUY was allocated Rs 800 crore at the budget stage.¹ However, in the revised estimates the allocation shot up to Rs 8,010 crore. This can be attributed to a subsidy of Rs 200 per 14.2 kg cylinder of LPG, up to 12 refills a year, for PMUY beneficiaries. This subsidy, started in

2022-23, intends to encourage the use of LPG and is directly credited to the beneficiary's bank account.²³ There is no allocation for this subsidy in 2023-24.

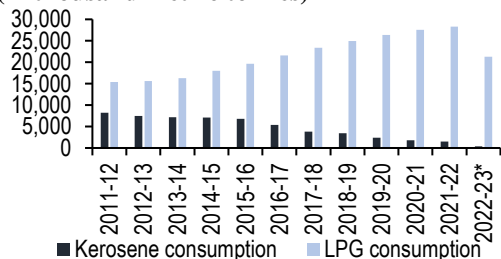
Fuels used for cooking in India: According to the National Family Health Survey-5 (2019-21), 89.7% of households in urban areas used clean fuel for cooking.²⁴ In rural areas, the number drops to 43.2% of households. On average, 58.6% of households use a clean fuel for cooking as compared to 43.8% (an increase of 14.8%) in the NFHS in 2015-16.²⁴

Kerosene Subsidy

The government provides a subsidy for kerosene; however, there has been no allocation for the subsidy in 2022-23 or in the current budget. The government has been attempting to eliminate kerosene subsidy to reduce usage of kerosene and encourage the use of LPG as a cleaner alternative. In 2021-22, the government spent Rs 1.5 crore on the subsidy. In the revised estimates of 2022-23, no allocation has been made towards the subsidy.

Between 2011-12 and 2021-22, the consumption of kerosene has reduced by 82%.²⁵ This can be attributed to the aggressive curbing of the subsidy, as well as the promotion of LPG. The government has also invested in infrastructure for LPG such as building new distribution centres, pipelines, terminals and increasing the processing capacity.²⁶ Currently, only eleven states/Uts have zero PDS kerosene consumption, with Uttarakhand being the latest state to have zero sales for 2021-22.²⁶

Figure 6: Consumption of LPG and kerosene (in thousand metric tonnes)



Note: * Data for 2022-23 is from April-December 2022.
Sources: Petroleum Analysis and Planning Cell; PRS.

Production, Imports and Exports

India depends heavily on imports to meet its energy requirements. In 2021-22, India has imported 2,12,382 thousand metric tonnes (TMT) of crude oil. Since 2011-12, the import of crude oil has been increasing at an average rate of 2% a year.²⁷ Crude oil is refined to produce various products such as petrol, diesel, LPG and kerosene.²⁷ These petrochemicals are final products, raw materials and intermediaries in the production of various goods across sectors. India also exports some products. However, the quantity of exports has marginally increased from

60,837 TMT in 2011-12 to 62,755 TMT in 2021-22.²⁷

India's production of crude oil and condensate has fallen from 3,082 TMT in 2011-12 to 29,688 TMT in 2021-22 at an average rate of 2% per annum.²⁸ The Ministry has attributed this to the faster depletion of the oil fields than expected.²⁹ As of 2021-22, the top three exporters of oil to India were Iraq, Saudi Arabia, and the United Arab Emirates (UAE). However, as per data from April-November 2022, Russia is expected to surpass the UAE as the third largest exporter of crude oil to India in 2022-23.³⁰

India exported petroleum products worth USD 67 billion in 2021-22.³⁰ India's top export countries for the year were Singapore (USD 6.1 billion), the United Arab Emirates (USD 5.7 billion) and the Netherlands (USD 5.3 billion).³⁰ In 2022-23, between April to November, India exported USD 65 billion worth of petroleum products. Its top export countries were the Netherlands (USD 6.4 billion), the United Arab Emirates (USD 5.5 billion), and the United States of America (USD 3.7 billion).³⁰

LNG Production and Imports

Apart from crude oil, India is also a large consumer of Liquefied Natural Gas (LNG). In 2021-22, India's imports as a percentage of consumption of LNG were 48% which is much higher than 2011-12 levels (28%).³¹

Figure 7: Production and Import of LNG (MMSCM)



MMSCM: Million Metric Standard Cubic Meters.

Note: Data for 2022-23 is from April-December 2022.

Sources: Petroleum Planning and Analysis Cell; PRS.

In 2021-22, India produced 33,131 MMSCM (Million Metric Standard Cubic Meters) of LNG and imported 30,776 MMSCM.³¹ The amount of LNG being produced in India has been declining at an average rate of 6% every year since 2011-12, while the amount of LNG imported over the same period has risen by 7% on average.³¹

A key factor in increasing the use of natural gas as an energy source is infrastructure. As of September 2022, the total operational length of the natural gas pipeline network is 21,102 km.³² This

includes 6,678 km of partially commissioned pipelines.³² A further 12,005 km of pipelines is under construction, which would bring the total length to 33,107 km.³²

Currently, India has five operational LNG terminals with a total capacity of 40.4 MMT-PA (Million Metric Tonnes Per Annum).²⁶ Six more terminals are planned/under construction, which will provide an additional capacity of 22.3 MMT-PA.²⁶

Strategic Petroleum Reserves

The Indian Strategic Petroleum Reserve Ltd. Is a government undertaking that has established Strategic Petroleum Reserves (SPR) which can be used in emergencies and/or supply chain disruptions. Under Phase-I of the program, India has set up an SPR capacity of 5.33 MMT (Million Metric Tonnes), which can cover 9.5 days of India's demand of crude oil.³³

Green Hydrogen

Green hydrogen uses solar or wind energy to produce hydrogen.³⁴ While Green Hydrogen comes under the Ministry of New and Renewable Energy, it is an important component in ensuring energy security. Under the National Green Hydrogen Mission, the government is investing Rs 19,744 crore to develop at least 5 MMT of production capacity.³⁵ Green hydrogen has uses in a variety of sectors and is expected to reduce imports and carbon emissions. It can be used as a fuel for automobiles, replace LNG as an energy source and be used to create fertilizer among other uses.³⁶

Table 5: SPR Location, Capacity (in MMT) and Status

Location	Capacity	Status
Vishakapatnam	1.33	Completed
Manglauru	1.5	Completed
Padur	2.5	Completed
Chandrikhol	4	In Progress
Padur (Phase II)	2.5	In Progress

Source: Ministry of Petroleum and Natural Gas; PRS.

The completion of the additional caverns (Chandrikhol and Padur, Phase II) will provide India with a further capacity of 6.5 MMT of strategic reserves, which can cover an additional 12 days of domestic demand.³³

In 2023-24, Rs 5,000 crore has been allocated to ISPRL to buy crude oil to fill strategic reserves. Moreover, Rs 508 crore has been allocated towards the construction of caverns.

Energy Security

The Standing Committee on Petroleum and Natural Gas (2021-22) has taken cognizance of India's heavy reliance on imports to meet its energy needs and has made recommendations on the same.²⁹ The government has a four-plank

program to ensure energy security: (i) diversify energy sources, (ii) increase exploration and production, (iii) use alternate energy sources, and (iv) transition to hydrogen and electric vehicles.³⁷

Diversification of energy sources

In 2021-22, India imported crude oil from 39 countries compared to 27 in 2006-07.³⁷ The exploration acreage is expected to increase to 5,00,000 sq. km. by 2025 and to 10,00,000 sq. km. by 2030.³⁷

Ethanol Blending

Ethanol Blending is the practice of blending ethanol with petrol for retail sale. It has benefits such as reduced emissions and lesser dependence on crude oil. In 2013-14, India would blend 1.53% ethanol with petrol, which has increased to 10.17% in 2021-22.³⁸ On February 6, 2023, the government began the first phase of selling E20 petrol, which is petrol blended with 20% ethanol.³⁸ E20 blended fuel has been launched at 84 outlets in 11 states/Uts. According to the government, since 2014, the ethanol blending program has helped save foreign exchange of Rs 54,000 crore due to the lesser imports (as compared to without ethanol blending).³⁸

A key constraint for ethanol blending is the production of ethanol. A large amount of ethanol is produced using molasses which is derived from sugarcane. The current production capacity of ethanol for blending and other purposes is 947 crore litres, out of which 619 crore litre is molasses based and 328 crore litre is grain-based production.³⁹ Sugarcane is a water intensive crop; hence increased production could have adverse consequences for water security.

PM JI-VAN Yojana

In March 2019, the government notified the PM JI-VAN (Pradhan Mantri Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran Yojana).⁴⁰ This scheme provides support for setting up second generation ethanol projects. These projects can produce ethanol using lignocellulosic biomass and other renewable feedstock.⁴¹

In 2023-24, the Ministry has budgeted Rs 227 crore for the scheme, which is an increase of 173% from the revised estimates of 2022-23. Under the scheme, the government provides financial support of at most Rs 150 crore for each commercial project, and Rs 15 crore for each demonstration project.⁴¹ The projects seek to improve commercial viability, research and development and adoption of technologies in producing second generation ethanol.⁴¹

As of July 21, 2022, the government has provided Rs 152 crore of support to four commercial projects in Bathinda (Punjab), Panipat (Haryana), Bargarh (Odisha) and Numaligarh (Assam) as well

as a demonstration project in Panipat. The commercial projects are in advanced stages of construction and are expected to be commissioned in 2022-23.⁴¹

Autonomous Bodies

The Ministry has set up the Indian Institute of Petroleum Energy (IPE) in 2017 as an autonomous institute under the Ministry to provide skilled labour for the petroleum sector.⁴² It is an Institute of National Importance and is backed by an Act of Parliament.⁴³ The IPE was set up in Vishakhapatnam, Andhra Pradesh, with the state government providing 200 acres of land.⁴² It is strategically located near the KG-Basin (a large natural gas basin), the Vishakhapatnam refinery

and the planned Kakinada petrochemical complex. In 2017, the Cabinet approved Rs 655 crore of capital expenditure for the project and contributed Rs 200 crore to the endowment fund.⁴² In addition, OMCs also contributed Rs 200 crore to the endowment fund. For 2023-24, the Ministry has budgeted Rs 168 crore towards capital expenditure for the project, against Rs 100 crore for the revised estimates of 2022-23.¹

The Standing Committee also noted that another Institute; the Centre for Excellence of Energy (CEE) in Bangalore, had received no allocation in the budget for 2022-23. The CEE has not received any allocation in the revised estimates for 2022-23 or the estimates for 2023-24. The institute has been established for basic research.

Annexure

Table 6: Oil Bond dues (in Rs Crore)

Year	Repayment	Interest
2023-24	15,586	6,848
2024-25	39,701	5,153
2025-26	36,913	2,732

Sources: Receipts Budget 2023-24; PRS calculations.

Table 7: Contribution of Taxes from Petroleum to Central and State Exchequers (Rs Crore)

Year	Contribution to Central Tax Revenue	Contribution to State Tax Revenue	Total Contribution of Petroleum to Tax Revenue	Central Net Tax Revenue	Contribution of Petroleum to Central Taxes
2014-15	1,26,025	1,60,526	2,86,551	9,03,615	14%
2015-16	2,09,354	1,60,114	3,69,468	9,43,319	22%
2016-17	2,73,225	1,89,587	4,62,812	11,01,372	25%
2017-18	2,76,168	2,06,601	4,82,769	12,42,488	22%
2018-19	2,79,847	2,27,396	5,07,243	13,17,211	21%
2019-20	2,87,540	2,20,841	5,08,381	13,56,902	21%
2020-21	4,19,884	2,17,271	6,37,155	14,26,287	29%
2021-22	4,31,609	2,81,972	7,13,581	18,04,794	24%
2022-23	1,74,471	1,60,112	3,34,583	20,86,662	8%

Note: 2022-23 data is provisional and from April – December. Central Net Tax Revenue for 2022-23 is based on Revised Estimates. Source: Budget Receipts 2016-17 – 2023-24; Petroleum Planning and Analysis Cell; PRS Calculations.

¹ Demand No. 76 Ministry of Petroleum and Natural Gas, Notes on Demands for Grants 2023-2024, <https://www.indiabudget.gov.in/doc/eb/sbe76.pdf>.

² “Government Sanctions Issue of Rs. 9,000 Crore Bonds to Oil Companies.” Press Information Bureau, April 1, 2002, <https://archive.pib.gov.in/archive/releases98/1yr2002/rapr2002/01042002/r010420027.html>.

³ Receipt Budget 2023-2024, Ministry of Finance Budget Division, <https://www.indiabudget.gov.in/doc/rec/allrec.pdf>.

⁴ “Daily revision in retail selling prices of petrol & diesel across the country w.e.f. 16th June 2017.” Press Information Bureau, June 8, 2017, <https://pib.gov.in/PressReleasePage.aspx?PRID=1492299>.

⁵ “Deregulation of Petroleum Prices.” Press Information Bureau, March 11, 2015, <https://pib.gov.in/newsite/PrintRelease.aspx?relid=116818>.

⁶ Petroleum Prices and Under Recoveries, Petroleum Planning and Analysis Cell, Ministry of Petroleum and Natural Gas, <https://ppac.gov.in/prices/petroleum-prices-and-under-recoveries>.

⁷ “Cabinet approves Rupees 22,000 crore as one time grant of PSU OMCs for losses in Domestic LPG.” Press Information Bureau, October 12, 2021, <https://pib.gov.in/PressReleasePage.aspx?PRID=1867088>.

⁸ “Cabinet approved Rupees 22,000 crore as one time grant of PSU OMCs for losses in Domestic LPG”, Press Information Bureau, Cabinet, October 12, 2022, <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1867085>.

- ⁹ Investment in Public Enterprises, Expenditure Profile 2023-24, Ministry of Finance, <https://www.indiabudget.gov.in/doc/eb/stat26.pdf>.
- ¹⁰ Export/Import Data Bank, Department of Commerce, Ministry of Commerce and Industry, <https://tradestat.commerce.gov.in/eidb/lcoment.asp>.
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- ¹³ Monitoring Dashboard, Department of Commerce, accessed on February 10, 2023, <https://dashboard.commerce.gov.in/commercedashboard.aspx>.
- ¹⁴ Lok Sabha Unstarred Question No. 125, Minister of Petroleum and Natural Gas, December 15, 2022, <https://pqals.nic.in/annex/1710/AS125.pdf>.
- ¹⁵ Contribution to Central and State Exchequer, Petroleum Planning and Analysis Cell, Ministry of Petroleum and Natural Gas, <https://ppac.gov.in/prices/contribution-to-central-and-state-exchequer>.
- ¹⁶ “PAHAL (Pratyaksh Hanstantrit Labh).” Ministry of Petroleum and Natural Gas, Accessed on February 10, 2023, <https://mopng.gov.in/en/marketing/pahal>.
- ¹⁷ “About the Scheme”, PAHAL-Direct Benefits Transfer for LPG(DBTL) Consumers Scheme, Accessed February 19, 2023, <http://petroleum.nic.in/dbt/whatisdbtl.html>.
- ¹⁸ Estimated Benefits/ Gains from DBT and Other Governance Reform, Direct Benefit Transfer, <https://dbt Bharat.gov.in/estimatedgain>.
- ¹⁹ Implementation of PAHAL (DBTL) Scheme, Comptroller and Auditor General of India, 2016, https://cag.gov.in/webroot/uploads/download_audit_report/2016/Union_Commercial_Compliance_Full_Report_25_2016_English.pdf.
- ²⁰ “PM to launch Ujjwala 2.0 on 10th August”, Press Information Bureau, Prime Minister’s Office, August 8, 2021, <https://pib.gov.in/PressReleasePage.aspx?PRID=1743813>.
- ²¹ “Cabinet approves enhancement of target under Pradhan Mantri Ujjwala Yojana.” Press Information Bureau, February 7, 2018, <https://pib.gov.in/newsite/PrintRelease.aspx?relid=176351>.
- ²² Lok Sabha Starred Question No. 2, Minister of Petroleum and Natural Gas, February 2, 2023, <https://pqals.nic.in/annex/1711/AS2.pdf>.
- ²³ Lok Sabha Unstarred Question No. 2618, Minister of Petroleum and Natural Gas, December 22, 2022, <https://pqals.nic.in/annex/1710/AU2618.pdf>.
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