

# Demand for Grants 2017-18 Analysis

## Petroleum and Natural Gas

This note looks into the expenditure of the Ministry of Petroleum and Natural Gas. It analyses various heads of expenditure of the Ministry, and how global trends in crude oil prices affect the Ministry’s expenditure and revenues.

### Overview of the Ministry

The Ministry of Petroleum and Natural Gas is the central Ministry responsible for managing the production and supply of petroleum and natural gas in the country. It acts as the nodal Ministry of Government of India for the exploration and exploitation of petroleum resources and natural gas. It also looks after the production, supply, distribution, marketing and pricing of the said products. It also looks into oil refineries, lube plants and additives for petroleum products.<sup>1</sup>

These tasks are carried out by the Petroleum and Natural Gas Authority Board, Oil Industry Development Board, Oil Industry Safety Directorate, nine Public Sector Undertakings (PSUs) of the Ministry such as ONGC, and by enforcing all relevant statutes, regulations and rules pertaining to the sector. The Petroleum Planning and Analysis Cell is responsible for administration of subsidies on PDS kerosene, domestic Liquid Petroleum Gas (LPG). It is also tasked with maintenance of records and forecasting of trends concerning the Ministry’s subjects such as production, trade and consumption of crude oil and petroleum products.

The Ministry also performs research and development in the sector through its affiliate organisations like the Petroleum Conservation Research Association, Centre for High Technology, Indian Institute for Petroleum Energy, etc.

### Overview of finances

#### Revenue

Central government levies royalty and licensing fees on production of petroleum from the country’s offshore fields. In 2017-18, the Ministry has budgeted to generate Rs 15,820 crore of such revenue. This is a 0.8% increase over the revised estimates of 2016-17.

#### Expenditure

Table 1 presents the breakup of the Ministry’s expenditure. In 2017-18, the budgetary allocation for the Ministry is Rs 29,158 crore, which is 3.6% lower than the revised estimates of 2016-17. This is driven by reduction in subsidy burden of the Ministry. In 2016-17, the Ministry’s expenditure

was revised to Rs 30,242 crore, which is 3.7% higher than the budget estimates of 2016-17.

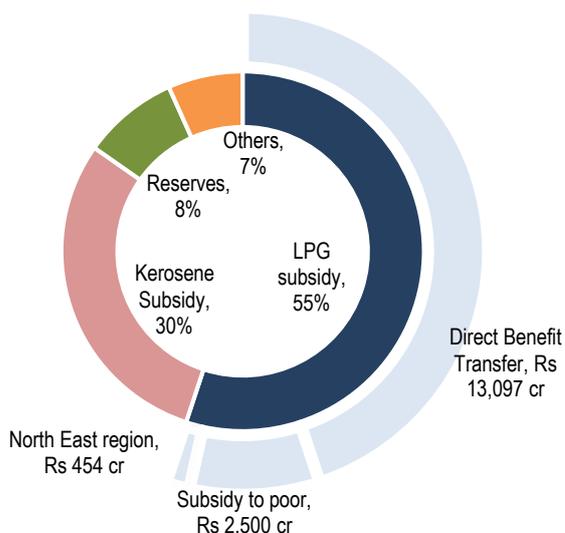
**Table 1: Breakup of expenditure of the Ministry (Rs crore)**

	2015-16	2016-17 RE	2017-18 BE	% change (2017-18 BE/2016-17 RE)
<b>Strategic Oil Reserves</b>	1,160	2,046	2,579	26.1%
<b>LPG Subsidy</b>	22,660	18,678	16,076	-13.9%
<b>Kerosene Subsidy</b>	7,339	8,854	8,924	0.8%
<b>Pipeline Project</b>	-	450	1,200	166.7%
<b>Others</b>	128	214	379	77.1%
<b>Grand Total</b>	<b>31,287</b>	<b>30,242</b>	<b>29,158</b>	<b>-3.6%</b>

Sources: Union Budget Documents, 2017-18; PRS.

Subsidies on LPG is the largest expenditure of the Ministry. In 2017-18, it accounted to 55% (Rs 16,051 crore) of the Ministry’s expenditure. LPG subsidies comprise of Rs 13,097 crore spending on providing direct benefit transfers to LPG customers. Another Rs 2,500 crore is allocated for providing LPG connections to poor households. In addition, Rs 454 crore is allocated for providing subsidies to north-east region.

**Figure 1: Breakup of Ministry’s expenditure and LPG subsidy (Rs crore)**



Sources: Union Budget Documents 2017-18; PRS.

Rs 8,662 crore is allocated on kerosene subsidy provided to oil marketing companies. Further, Rs 2,500 crore is allocated for creation of crude oil

reserves under the India Strategic Petroleum Reserves Limited. In addition, Rs 1,200 crore is allocated for the construction of Phulpur Dhamra Haldia Pipeline Project.

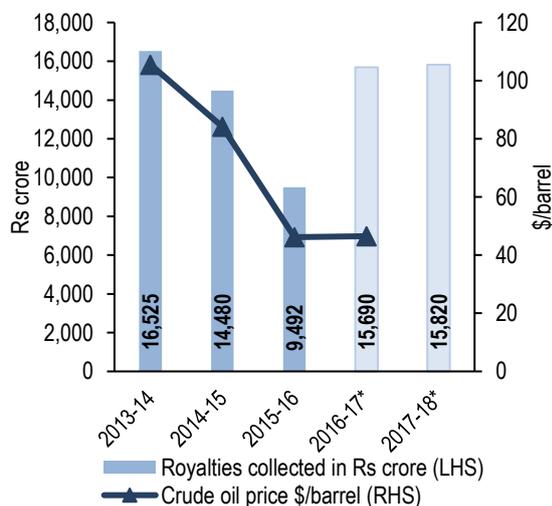
### Analysis of finances and issues

#### Fall in global crude oil prices may affect revenue from royalties

The government levies royalties and licensing fee on the exploration and production of petroleum. These royalties are levied based on the value of petroleum produced by the oil companies. Since value of petroleum is calculated based on global crude oil prices, the amount of revenue collected through royalties is affected by changes in global crude oil prices.

For example, the government collected Rs 16,524 crore as royalties in 2013-14, when crude oil price was \$106/barrel. This was reduced to Rs 9,492 crore in 2015-16, as the price of crude oil dropped to \$46/barrel. However, the government estimates to raise Rs 15,690 crore in 2016-17. This is 65% higher than the revenue collection in 2015-16, while the crude oil price is similar in both the years (\$46.1/barrel in 2015-16 vs. \$46.4/barrel in 2016-17). Also, note that the domestic production of crude oil has only grown by 4.5% in 2016-17.<sup>2</sup>

**Figure 2: Revenue from royalties and licensing fee on oil production (Rs crore)**



Sources: Union Budget Documents 2013-14 to 2017-18; Petroleum Planning and Analysis Cell; PRS.  
 Note: Revenue for 2016-17 and 2017-18 are estimates. Crude oil prices for 2016-17 is the monthly average for the months April 2016 to January 2017.

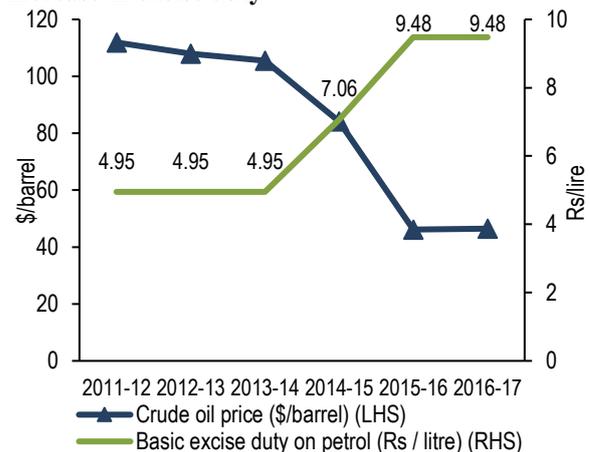
#### Fall in crude oil prices is coupled with increase in excise duty

The decrease in crude oil prices in the last six years has been coupled with an increase in excise duty levied on petroleum. The price of crude oil has decreased from \$112/barrel in 2011-12 to

\$46/barrel in 2016-17. The decrease in crude oil prices has reflected in: (i) higher revenue collection through increase in excise duty; and (ii) short term decrease in retail petroleum prices for consumers in the short term.

**Excise duty:** Figure 3 presents the drop in crude oil prices since 2011-12 and the corresponding increase in excise duty levied on petrol. Note that while the price of crude oil has decreased \$106/barrel in 2013-14 to \$46 in 2015-16, the excise duty on petrol has nearly doubled from Rs 4.95/litre in 2013-14 to Rs 9.48/litre in 2015-16.<sup>2</sup> Similarly, increase in excise duty on diesel helped the government achieve higher growth in revenue collection. The revenue from excise duty on petroleum products is estimated to grow at an average rate of 26% from Rs 1,35,404 crore in 2013-14 to Rs 3,42,550 crore in 2017-18. This growth is higher when compared to other central taxes such as income tax, and service tax, which grew at 16% and 15% respectively, during the same period.<sup>3</sup>

**Figure 3: Fall in crude oil prices coupled with increase in excise duty**

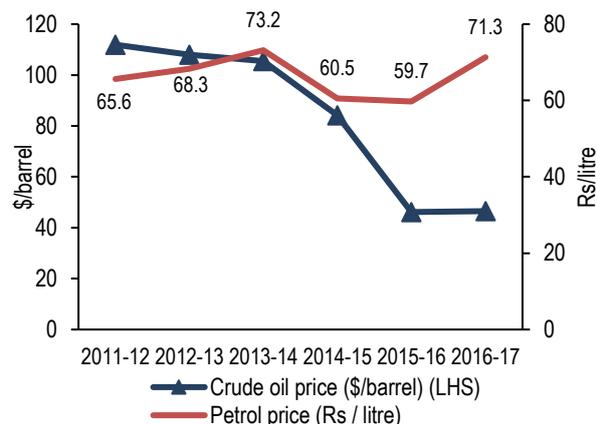


Sources: Petroleum Planning and Analysis Cell; Central Bureau of Excise and Customs; PRS.

Note: Crude oil prices for 2016-17 is the monthly average for the months April 2016 to January 2017; Data on excise duty is the rate of duty at the end of the corresponding financial year.

**Retail prices of petroleum products:** The retail price of petrol has decreased since 2013-14, reflecting the decrease in crude oil prices. In 2013-14, when the price of crude oil is \$106/barrel, the retail price of petrol was at its peak, at Rs 73.1/litre (Delhi prices). This decreased to Rs 59.7/litre, when the crude oil price decreased to \$46.1/barrel in 2015-16.<sup>2</sup> However, note that while the price of crude oil remained \$46.4/barrel in 2016-17, the retail price of petrol has been increased to 71.3/litre. Figure 4 presents the change in retail prices of petrol along the change in crude oil prices.

**Figure 4: Fall in crude oil prices vs. change in retail price of petrol**



Sources: Petroleum Planning and Analysis Cell; PRS.

Note: Retail price of Petrol is for the New Delhi region; Crude oil prices for 2016-17 is the monthly average for the months April 2016 to January 2017.

### Reduction in subsidy burden primarily driven by fall in crude oil prices, partially by plugging of leakages

Since 2013-14, subsidies provided by the government on various petroleum products has seen a constant decline. In 2012-13, Rs 96,879 crore was provided as subsidies to oil marketing companies for providing petroleum products at a lower price. This is estimated to be Rs 25,000 crore in 2017-18.

The reduction in subsidy amount is driven by two factors: (i) plugging leakages in the subsidy system using direct benefit transfers, and (ii) fall in crude oil prices.

**Plugging leakages:** PAHAL is a direct benefit transfer scheme, which was initially launched in June 2013, and re-launched in November 2014. It is introduced to limit diversion of domestic LPG subsidised cylinders to commercial sector and weeds out duplication of connections. Under the scheme, consumers pay market price for the purchase of cylinders. Oil marketing companies deposit the subsidy amount into the bank accounts of the consumers.

According to a report of the Comptroller and Auditor General (CAG), out of reduction in subsidy burden of the Ministry, only 7.5% is resulting due to plugging leakages through PAHAL, while the rest is driven by fall in crude oil prices.<sup>4</sup>

According to the CAG, as of December 2015, there are 1.55 crore customers who are not part of the PAHAL scheme.<sup>4</sup> The CAG noted that there might be several customers in the 1.55 crore population who are eligible for subsidy, but could not avail it.

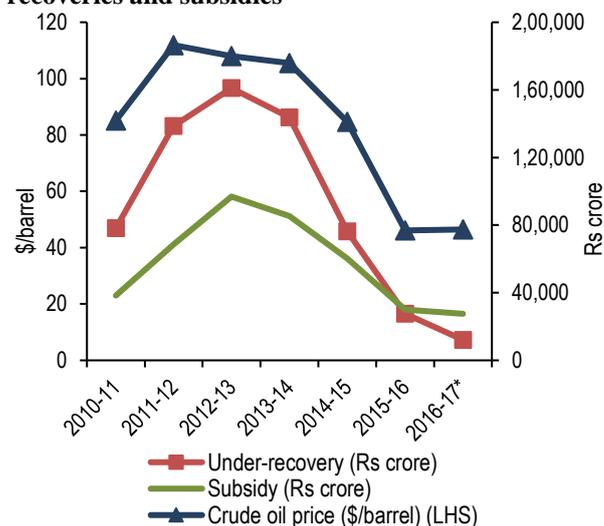
**Fall in crude oil prices:** Fall in crude oil prices has reduced the cost of supply of petroleum products.

Therefore, the burden of oil marketing companies to supply petroleum products at a lower rate has reduced. This resulted in lowering the burden of the Ministry to compensate for the under-recoveries of oil marketing companies. Under-recovery is the amount by which the cost of supplying petroleum products exceeds the price paid by customers.

Between 2010-11 and 2012-13, reflecting the increase in the crude oil prices, the under-recoveries of the oil marketing companies increased from Rs 78,190 crore to Rs 1,61,029 crore. As a result, the subsidy provided by the government has increased from Rs 38,371 crore in 2010-11 to Rs 96,879 crore in 2012-13.

However, with the subsequent fall in crude oil prices, the under-recoveries have reduced to Rs 27,571 crore in 2015-16, resulting in a reduction of subsidy burden to Rs 29,999 crore.

**Figure 5: Impact of crude oil prices on under-recoveries and subsidies**



Sources: Union Budget Documents 2013-14 to 2017-18; Petroleum Planning and Analysis Cell; PRS.

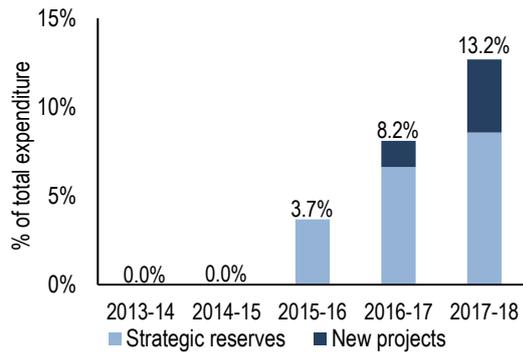
Note: Crude oil prices for 2016-17 is the monthly average for the months April 2016 to January 2017. Under-recoveries data for 2016-17 is till December 2016.

### Spending on capital expenses since 2015-16

Capital expenses correspond to spending on items that create capital assets. In the years 2013-14 and 2014-15, the Ministry had zero capital expenditure, implying no money spent on creating assets. However, between 2015-16 and 2017-18, the government increased the capital expenditure from 3.7% to 13.2% of the total expenditure.

Between 2015-16 and 2017-18, the government is budgeting to spend Rs 5,653 crore on creating oil reserves, owing to lower crude oil prices. In addition, Rs 1,650 crore is estimated to be spent on building the Phulpur Dhamra Haldia Pipeline Project between 2016-17 and 2017-18.

**Figure 6: Capital expenses as a percentage of total expenditure of the Ministry**

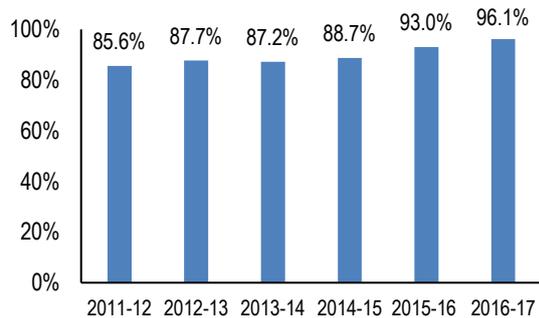


Sources: Union Budget Documents 2015-16 to 2017-18; PRS.

### Dependence on imports

A large portion of the country's consumption of petroleum products is met by imports. In 2016-17 (as of January 2017), total consumption of petroleum products is estimated to be 161.4 million metric tonnes. On the other hand, over the same period, 155.1 million metric tonnes of crude oil and petroleum products are being imported. This is 96.1% of the consumption.

**Figure 7: Imports of crude oil as a percentage of annual consumption**



Sources: Petroleum Planning and Analysis Cell; PRS.

Note: Data for 2016-17 is the average of prices for the months April 2016 to January 2017. Crude oil imports is net of exports.

Further, this dependence on imports is increasing over time. In 2011-12, 85.6% of consumption of petroleum products was met through imports, when compared to 96.1% in 2016-17.

The Standing Committee on Petroleum and Natural Gas noted that there have been delays in obtaining licenses for exploration activities from various agencies within the government. The Committee recommended that it is very important to lay down a consistent and predictable licensing environment in the country in order to attract interest from national and global players who have the potential to invest in the sector.<sup>5</sup>

### Diversion of domestic LPG to commercial purposes

PAHAL scheme was introduced to stop leakages in LPG subsidy by identifying the consumer based on a unique identity. Every customer could avail subsidy for up to 12 cylinders per year. The scheme is expected to prevent leakages by removing duplicates in beneficiaries of subsidies, and track the number of cylinders subsidised per customer.

However, the CAG noted that there is diversion of both subsidised and unsubsidised domestic LPG cylinders for commercial purposes.<sup>4</sup> This is because, currently commercial cylinders are priced at a higher than domestic cylinders. This is creating incentives for domestic cylinders which are availed at lower prices to be diverted for commercial purposes.

### Duplication and integrity of subsidy recipient database

The CAG noted that despite multiple efforts to weed out duplication by the National Informatics Centre and the oil marketing companies, there has been a considerable number of duplicated connection with exact matches of name and address.<sup>4</sup> Further, there has been unblocking of such connections that had been flagged without recording of reasons and adequate documentation. The CAG recommended that the integrity of the database should be maintained. There should be an institution for appropriate checks and transparent documentation.

<sup>1</sup> Ministry of Petroleum and Natural Gas, <http://petroleum.nic.in/>.

<sup>2</sup> Petroleum Planning and Analysis Cell, <http://www.ppac.org.in>.

<sup>3</sup> Union Budget Documents, 2015-16, 2017-18, [indiabudget.nic.in](http://indiabudget.nic.in).

<sup>4</sup> Report of the Comptroller and Auditor General on the implementation of the PAHAL Scheme, 2016, [http://www.cag.gov.in/sites/default/files/audit\\_report\\_files/Union\\_Commercial\\_Compliance\\_Full\\_Report\\_25\\_2016\\_English.pdf](http://www.cag.gov.in/sites/default/files/audit_report_files/Union_Commercial_Compliance_Full_Report_25_2016_English.pdf)

<sup>5</sup> 12<sup>th</sup> Report, Standing Committee on Petroleum and Natural Gas (2015-16): 'Demand for Grants 2016-17', Lok Sabha, April, 2016.

[http://164.100.47.193/Isscommittee/Petroleum%20&%20Natural%20Gas/16\\_Petroleum\\_And\\_Natural\\_Gas\\_12.pdf](http://164.100.47.193/Isscommittee/Petroleum%20&%20Natural%20Gas/16_Petroleum_And_Natural_Gas_12.pdf).

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