MONTHLY REPORT ON INDIGENOUS CRUDE OIL PRODUCTION, IMPORT AND PROCESSING

&

PRODUCTION, IMPORT AND EXPORT OF PETROLEUM PRODUCTS

May 2017

Analysis • Knowledge • Information

Petroleum Planning & Analysis Cell

(Ministry of Petroleum & Natural Gas)

1. In this report, indigenous crude oil production, imports and processing as well as production and imports/exports of petroleum products by oil companies are analyzed on a monthly basis to assess the domestic availability of petroleum products in the country for consumption.

Highlights

- Indigenous crude oil production during May, 2017 was marginally higher by 0.7% than that of May, 2016. PSU companies OIL and ONGC registered a growth of 6.1% and 2.5% respectively during May 2017 as compared to May 2016. However PSC fields registered de-growth of 4.5% during the month. In PSC fields there was a reduction of 42 TMT mainly contributed by Rajasthan Mangala fields, Panna Mukta fields and Ravva fields as compared to May 2016. In PSU fields there was an increase of 63 TMT contributed by OIL and ONGC.
- Import of crude oil increased by 1.4% during May 2017 as compared to May 2016.
- Total crude oil processed during May, 2017 was 20826 TMT, an increase of 4.4% over May, 2016. There was a decrease of 4.5% in indigenous crude oil processed over May 2016.
- Production of petroleum products during May, 2017 saw a growth of 5. 5% over May, 2016.
- Import of petroleum products marginally increased by 0.8% during May, 2017 over the corresponding period of 2016. LPG, Lubes and Pet-coke imports contributed to 65.7 % share of total POL imports during May, 2017.
- Export of POL products increased by 8.7% during May, 2017 as compared to May, 2016 primarily due to higher production as well as higher surplus availability of POL products like Naphtha and HSD in RIL (SEZ) / EOL, which constituted around 53.1% of total POL exports.

2. Indigenous crude oil and condensate production

2.1. Indigenous crude oil and condensate production increased by 0.7% during May 2017 as compared to May 2016. On cumulative basis marginal growth of 0.1% was recorded during April -May 2017 as compared to the corresponding period in 2016-17.

- OIL's crude oil production in May 2017 was higher by 6.1% as compared to May 2016. On cumulative basis growth of 5.3% was recorded during April-May 2017 as compared to the corresponding period in 2016-17.

- In case of ONGC, crude oil and condensate production in May 2017 was higher by 2.5% as compared to May 2016. On cumulative basis growth of 2.5% was recorded during April-May 2017 mainly contributed by South Gujarat and Bassein fields, as compared to the corresponding period in 2016-17.
- Indigenous crude oil and condensate production under PSC fields decreased by 4.5% during May 2017 as compared to May 2016. On cumulative basis de-growth of 6.5% was recorded during April-May 2017 as compared to the corresponding period in 2016-17.
- Lower indigenous crude oil and condensate production under PSC fields during May 2017 was observed in Rajasthan fields as around 100 wells were closed either due to higher water cut or require work over job. Poor reservoir performance of Bhagyam wells also resulted in lower production. In Panna-Mukta fields MB and MA wells were closed for riser line pigging on 13 and 14 May 2017. Natural decline in Panna Mukta (SHELL) and Ravva (CIL) fields was another contributing factor for lower production.
- Indigenous crude oil and condensate production in the country is given in Table-1.

Table-1: Indigenous Crude oil and Condensate production (Thousand Metric Tonnes)

Oil Company	Product	May 2016-17	May 2017-18$^{(P)}$	May Change (%)	April- May 2016-17	April- May 2017-18 $^{(P)}$	April- May Change (%)
OIL	**Crude oil**	**271**	**288**	**6.1**	**533**	**561**	**5.3**
ONGC	Crude oil	1547	**1570**	**1.5**	3047	**3086**	**1.3**
	Condensate	341	365	**6.8**	643	696	**8.2**
	Total	**1888**	**1935**	**2.5**	**3690**	**3782**	**2.5**
PSC FIELDS	Crude oil	918	877	**-4.5**	1811	1695	**-6.4**
	Condensate	0.5	0.2	**-67.3**	1.2	0.6	**-52.8**
	Total	**919**	**877**	**-4.5**	**1813**	**1695**	**-6.5**
Total	Crude oil	2736	2735	**-0.1**	5391	5342	**-0.9**
	Condensate	342	365	**6.7**	644	696	**8.0**
Grand Total	**Crude oil + Condensate**	**3078**	**3099**	**0.7**	**6035**	**6038**	**0.1**

Note: All figures are provisional. Source : Oil Companies & DGH

3. Crude oil processing by Oil Companies

3.1. Crude oil processed (indigenous/ imported) in the country by PSU/JV/Private sector refining companies is given in Table-2.

Table-2: Crude Oil Processed						
						(Thousand Metric Tonnes)
Oil Company	May			April- May		
	2016-17	2017-18(P)	Change (%)	2016-17	2017-18 (P)	Change (%)
PSU / JV						
Indigenous	2303	2455	**6.6**	4624	4842	**4.7**
Imported	10835	10632	**-1.9**	21105	20748	**-1.7**
PSU/JV	**13138**	**13088**	**-0.38**	**25730**	**25590**	**-0.5**
Indigenous	592	310	**-47.6**	1109	635	**-42.7**
Imported	6226	7428	**19.3**	13273	14590	**9.9**
Private	**6817**	**7738**	**13.5**	**14383**	**15226**	**5.9**
Total of which	**19955**	**20826**	**4.4**	**40112**	**40816**	**1.8**
Indigenous	**2895**	**2765**	**-4.5**	**5734**	**5477**	**-4.5**
Imported	**17061**	**18061**	**5.9**	**34379**	**35339**	**2.8**
Note: All figures are provisional. Source : Oil Companies						

Based on processing of indigenous crude oil/condensate and the country's domestic POL consumption, self-sufficiency of petroleum products was 16.2% in May 2017 as against 17.8% during May 2016 due to reduction in indigenous crude oil processing and increased domestic consumption. On cumulative basis self-sufficiency was 16.4% during April – May 2017 against 17.8% during April - May 2016. Import dependency has grown from 68.3% to 82.1% during the last five years due to growing consumption and stagnant indigenous crude oil production.

3.2. **Significant variations in crude oil processing by refineries are analysed below:**

Analysis of the type of crude processed (i.e. Indigenous, low sulphur & high sulphur) in Indian refineries during April-May 2017 is given below:

- Overall indigenous crude oil processing during April-May 2017 reduced by 4.5% over April-May 2016. The decrease was mainly on account of private companies which registered a reduction of 42.7% in processing of indigenous crude oil processing against 4.7% increase registered by PSU/JV companies during April-May 2017 in comparison to April-May 2016. MRPL Mangalore, IOCL Panipat and IOCL Koyali contributed to an increase of 190.3 TMT, 69.9 TMT and 42.5 TMT respectively in processing of Mangala crude during April-May 2017 as compared to April-May 2016. Among private refineries RIL (DTA) Jamnagar and EOL Vadinar registered a reduction of 292.8 TMT and 181.2 TMT in processing of Mangala crude during April-May 2017 as compared to April-May 2016. The overall Mangala crude oil processed during April-May 2017 was 1226.4 TMT against 1397.7 TMT processed in the corresponding period of the previous year. Lower production from Rajasthan and Gujarat offshore fields was the main reason for overall lesser indigenous crude oil processing during the period.

- Indian refineries processed 74.2% of high sulphur crudes during May 2017 as compared to 71.5% in May 2016.
- On cumulative basis 73.9% of high sulphur crudes was processed during April - May 2017 against 71.7% in the corresponding period of 2016-17. There was an overall increase of 4.9% (1404 TMT) in high sulphur crude processing in April-May 2017 over April-May 2016.
- An overall increase of 1.8% (704 TMT) was observed in total crude processed in April-May 2017 over April-May 2016.

4. Production of Petroleum Products

4.1. Petroleum products (grade-wise) production figures in May 2017 vis-a-vis May 2016 and in the current year against the previous year are given in Table-3.

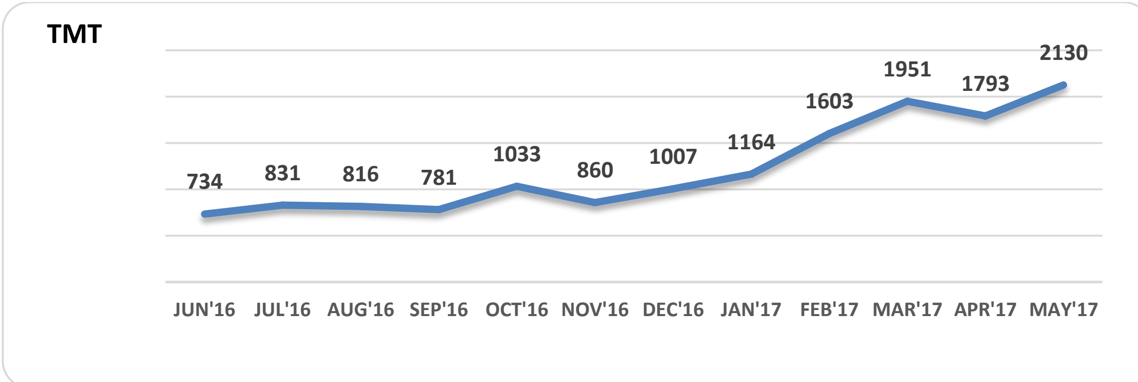
Table-3: Production of Petroleum Products						
(Thousand Metric Tonnes)						
PRODUCTS	May			April- May		
	2016-17	2017-18(P)	Change (%)	2016-17	2017-18 (P)	Change (%)
LPG	870	955	**9.7**	1712	1854	**8.3**
NAPHTHA	1364	1794	**31.5**	2725	3362	**23.4**
MS BS-III	887	0	**-100**	1702	20	**-98.8**
MS BS-IV	804	2130	**164.8**	1566	3923	**150.5**
MS Others	1525	1116	**-26.8**	2917	2350	**-19.4**
ATF	1057	1121	**6.0**	2216	2270	**2.4**
SKO	583	371	**-36.3**	1090	762	**-30.0**
HSD BS-III	3004	5	**-99.8**	5809	89	**-98.5**
HSD BS-IV	2501	6102	**143.9**	4950	11496	**132.3**
HSD Others	2602	2813	**8.1**	5386	5771	**7.1**
LDO	37	58	**59.2**	72	83	**15.4**
LUBES	87	79	**-9.6**	166	151	**-9.4**
FO	1131	992	**-12.3**	2168	1583	**-27.0**
LSHS	29	23	**-20.2**	47	46	**-1.6**
BITUMEN	578	601	**4.1**	1168	1140	**-2.3**
RPC (Petcoke)	962	1147	**19.3**	1940	2206	**13.7**
Others	2068	1896	**-8.3**	4004	3661	**-8.6**
TOTAL, of which	**20090**	**21204**	**5.5**	**39639**	**40767**	**2.8**
REFINERIES	**19796**	**20904**	**5.6**	**39091**	**40203**	**2.8**
FRACTIONATORS	**294**	**301**	**2.1**	**548**	**564**	**2.9**
Note: All figures are provisional. Source : Oil Companies						
** Others include products like Propylene, solvents (Hexane, Benzene, Toluene, Xylene and Specialty solvents), Reformate, Mineral Turpentine Oil, Carbon Black Feed Stock, Waxes, Sulphur etc.*						

4.2. **Significant variations in petroleum products production by refineries/fractionators are analysed below:**

- Production of petroleum products from refineries and fractionators increased by 5.5% in May 2017 as compared to May 2016. On cumulative basis an increase of 2.8% was registered during April- May 2017 over April -May 2016.

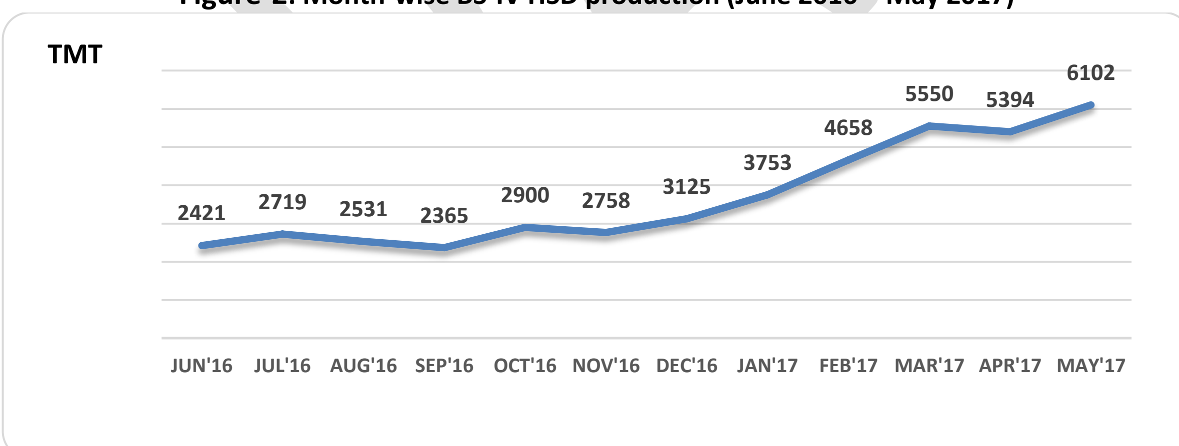
- MS BS-IV production increased by 164.8% during May 2017 as compared to May 2016. On cumulative basis an increase of 150.5% was registered during April- May 2017 over April -May 2016. The month-wise production trend for BS- IV MS is shown in figure 1.

Figure-1: Month-wise BS-IV MS production (June 2016 – May 2017)



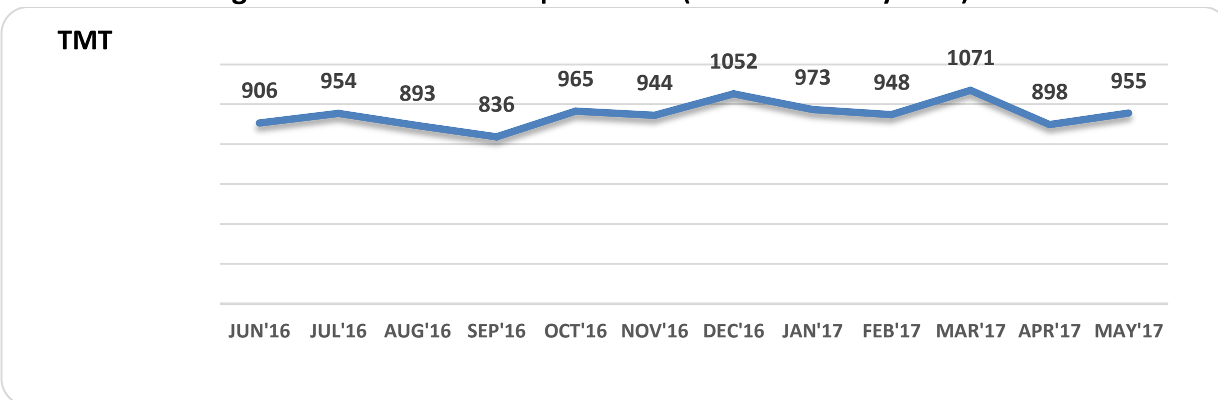
- HSD BS-IV production increased by 143.9% during May 2017 as compared to May 2016. On cumulative basis an increase of 132.3% was registered during April- May 2017 over April -May 2016. The month-wise production trend for BS- IV HSD is shown in figure 2.

Figure-2: Month-wise BS-IV HSD production (June 2016 – May 2017)



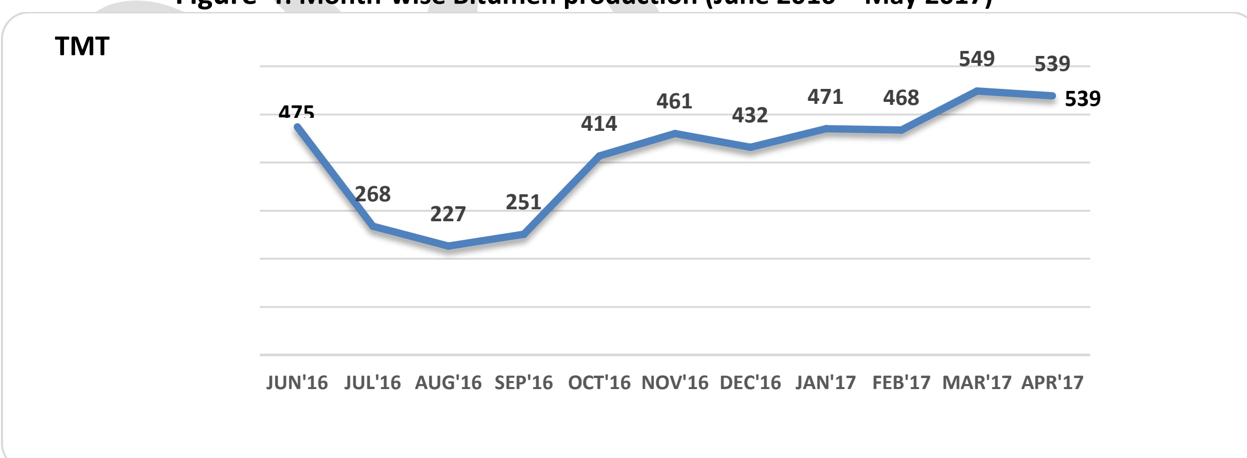
• LPG production increased by 9.7% during May 2017 as compared to May 2016. On cumulative basis an increase of 8.3% was registered during April- May 2017 over April -May 2016. The trend in LPG production over the last twelve months is shown in figure 3:

Figure-3: Month-wise LPG production (June 2016 – May 2017)



• Bitumen production increased by 4.1% during May 2016 as compared to May 2017. However on cumulative basis a decrease of 2.3% was registered during April- May 2017 over April -May 2016. The trend in bitumen production over the last twelve months is shown in figure 4:

Figure-4: Month-wise Bitumen production (June 2016 – May 2017)



• Naphtha production increased by 31.5% in May 2017 as compared to May 2016. On cumulative basis an increase of 23.4% was registered during April- May 2017 over April -May 2016.

- ATF production increased by 6% in May 2017 as compared to the same period of the previous year. On cumulative basis an increase of 2.4% was registered during April- May 2017 over April -May 2016.

- SKO production continued to show a declining trend with decrease of 36.3% during May 2017 as compared to May 2016. On cumulative basis a decrease of 30% was registered during April- May 2017 over April -May 2016.

- Pet coke production increased by 19.3% during May 2017 as compared to May 2016. On cumulative basis an increase of 13.7% was registered during April- May 2017 over April -May 2016.

On overall basis petroleum products availability during May 2017 from refineries and fractionators was 21204 TMT against domestic consumption of 17791 TMT leaving a surplus of 3414 TMT. However some petroleum products like naphtha and lubes were still imported to meet specific requirements (quality & specifications) of the user industries. Imports were also resorted to, to meet domestic consumption of LPG and bitumen for which there is a deficit in indigenous production.

5. Import of Crude oil and Petroleum Products

5.1 **Details of import of crude oil and petroleum products are given in Table-4 below:**

Table-4: Import of Crude oil and Petroleum Products						
(Thousand Metric Tonnes)						
IMPORT	**May**			**April- May**		
	2016-17	**2017-18 (P)**	**Change (%)**	**2016-17**	**2017-18 (P)**	**Change (%)**
CRUDE OIL						
PSU/JV	10914	10213	**-6.4**	21963	21586	**-1.7**
Private	6613	7559	**14.3**	13524	14444	**6.8**
Total	**17527**	**17772**	**1.4**	**35487**	**36030**	**1.5**
PRODUCTS						
Product #	**2016-17**	**2017-18 (P)**	**Change (%)**	**2016-17**	**2017-18 (P)**	**Change**
LPG	850	747	**-12.0**	1653	1647	**-0.4**
MS	157	0	**-100.0**	230	0	**-100.0**
Naphtha	222	235	**5.8**	460	445	**-3.3**
ATF	28	28	**0.4**	51	56	**11.0**
SKO	0	0	0	0	0	0
HSD	222	439	**97.4**	726	442	**-39.1**
LOBS/Lube oil	171	168	**-1.8**	350	336	**-4.1**
Fuel Oil	66	88	**34.6**	147	165	**12.6**
Bitumen	145	78	**-46.0**	268	157	**-41.4**
Petcoke	1111	1142	**2.8**	1905	2284	**19.9**
Others$	133	204	**53.6**	398	341	**-14.3**
Total	**3104**	**3131**	**0.8**	**6188**	**5873**	**-5.1**
PSU/JV	1263	1193	**-5.6**	2664	2089	**-21.6**
Private	1841	1938	**5.3**	3524	3784	**7.4**

Note: All figures are provisional. Source : Oil Companies
 # DGCI&S data is estimated.
$ Others include SKO, Paraffin wax, Petroleum Jelly, LSWR, Aviation Gas etc.

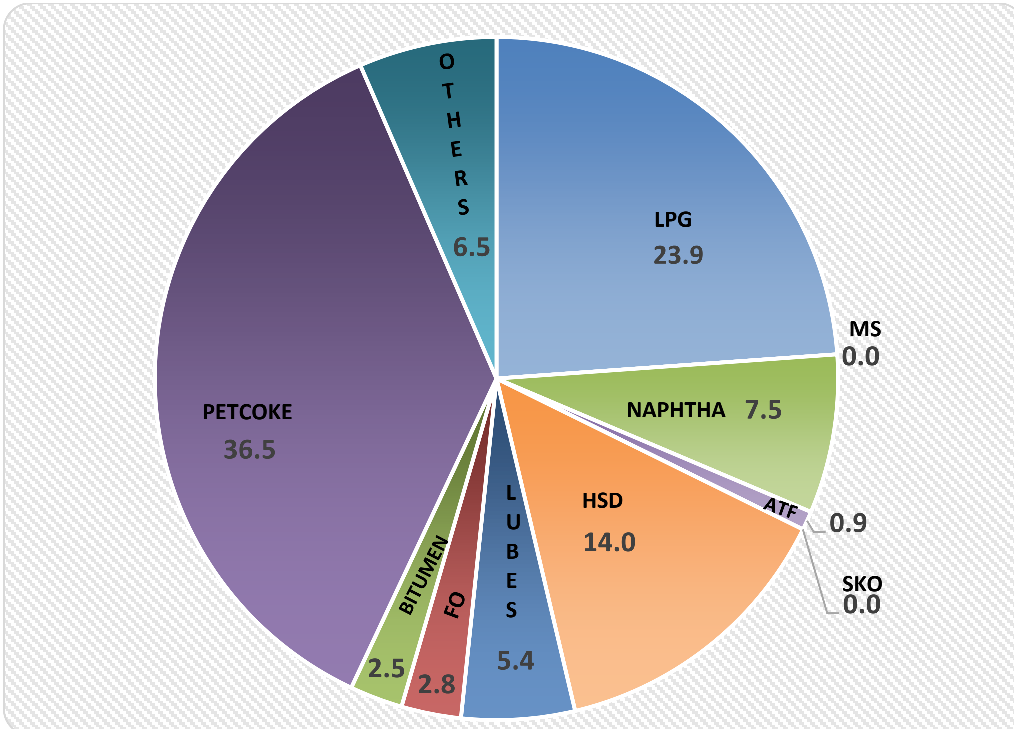
5.2 **Significant variations in import of crude oil and petroleum products are analysed below:**

- Crude oil imports during May 2017 increased by 1.4% (245 TMT) as compared to May 2016 despite planned turnaround of HMEL refinery in May 2017. On cumulative basis an increase of 1.5% (543 TMT) was registered during April-May 2017 as compared to April – May 2016.
- Crude oil imports from Mexico by private refineries increased to 837 TMT in May 2017 as compared to 236 TMT during the same month of the previous year. Also, in May 2017, RIL refineries (DTA and SEZ) added Brazilian crude oil (474 TMT) in their import basket for the first time this year. A notable addition to the import basket during May 2017 was Russia with IOCL and RIL importing 859 TMT.

- Crude oil imports of PSU/JV oil companies during May 2017 decreased by 6.4% (701 TMT) as compared to May 2016 mainly due to nil imports by HMEL in view of planned turnaround during May 2017. On cumulative basis PSU/JV companies registered a decrease of 1.7% in crude oil imports in April-May 2017 as compared to the corresponding period of the previous year.
- Crude oil imports of private oil companies during May 2017 increased by 14.3% as compared to May 2016 due to increase in crude throughput i.e. capacity utilization of 116.1% as compared 102.3% during May 2016. The increase in crude imports during May 2017 was mainly from Brazil, Russia and Mexico. On cumulative basis private companies registered an increase of 6.8% in crude oil imports in April-May 2017 as compared to the corresponding period of the previous year.
- Import of POL products marginally increased by 0.8% (26 TMT) during May 2017 as compared to May 2016. During May 2017, 61.9% of POL imports were reported by private oil companies (including private parties- data on average basis is sourced from DGCI&S). On cumulative basis a decrease of 5.1% (315 TMT) was registered during April-May 2017 as compared to April – May 2016 due to reduction in import of MS, and HSD by OMCs.
- In May 2017 HSD imports of 436 TMT were undertaken by PSU OMCs to comply with BS-IV specification norms across the country. Since the whole country has become BS-IV compliant from 01.04.2017, imports were done to bridge the deficit in supply and domestic demand of HSD.
- Import of LPG and petcoke accounted for 60.4% share of the total petroleum product imports during May 2017. Around 96% of LPG is imported by PSU oil companies to meet supply-demand gap of LPG for domestic requirement. LPG accounted for 23.9% of the total POL imports during May 2017. Petcoke imports (low value) were mainly done by cement and steel industry as a cheap substitute of coal.

- The percentage share of all major products in the cumulative imports of the country during May 2017 is shown in the following figure-5:

Figure-5: Percentage share of petroleum products in imports (May 2017)



6. Export of Petroleum Products

6.1 The details of export of petroleum products are given in Table-5 below:

Table-5: Export of Petroleum Products						
	(Thousand Metric Tonnes)					
Product	**May**			**April- May**		
	2016-17	**2017-18(P)**	**Change (%)**	**2016-17**	**2017-18 (P)**	**Change (%)**
LPG	29	29	**0.0**	56	58	**3.3**
MS	1561	1390	**-10.9**	2929	2485	**-15.1**
NAPHTHA	593	696	**17.5**	1087	1445	**33.0**
ATF	598	482	**-19.5**	1273	1044	**-17.9**
HSD	1437	1955	**36.1**	3498	4199	**20.0**
FUEL OIL	118	130	**10.4**	206	242	**17.3**
OTHERS	260	312	**20.0**	429	694	**62.0**
TOTAL	**4596**	**4995**	**8.7**	**9477**	**10168**	**7.3**

Note: All figures are provisional. Source : Oil Companies
'% Others in export include CBFS, VGO, Hexane, Benzene, MTO, Sulphur etc.

6.2 **Significant variations in export of petroleum products in the country are analysed below:**

- Export of petroleum products increased by 8.7 % during May 2017 as compared to May 2016 primarily due to higher surplus availability of POL products like naphtha and HSD in the private sector, which constituted 53.1% of total POL exports. On cumulative basis the export of petroleum products increased by 7.3% during April–May 2017 as compared to April–May 2016. Naphtha, HSD and FO were the major contributors in the cumulative growth. Export volumes share of MS, naphtha, HSD and ATF was 90.2% during April-May 2017.
- Tertiary amyl methyl ether's (TAME) exports were reported by RIL-DTA which is used for enhancing octane number of gasoline pool in refineries.
- Trend of export of petroleum products by PSUs / JVs and private sector in the country is given in Table-6 below:

Table-6: Export of Petroleum Products						
				(Thousand Metric Tonnes)		
Oil Company	May			April- May		
	2016-17	2017-18 (P)	Change (%)	2016-17	2017-18 (P)	Change (%)
PSU / JV	831	1055	**26.9**	1522	2079	**36.6**
Private	3765	3941	**4.7**	7955	8089	**1.7**
TOTAL	**4596**	**4995**	**8.7**	**9477**	**10168**	**7.3**

Note: All figures are provisional. Source : Oil Companies

Salient features of exports by PSU/JV and Private oil companies

- PSU/JV oil companies' exports registered growth of 26.9% during May 2017 as compared to May 2016 wherein export of ATF and HSD contributed to 18.0%. On cumulative basis PSU/JV companies' exports registered a growth of 36.6% during April–May 2017 as compared to the corresponding period of the previous year wherein ATF, MS and HSD contributed 12.4%.
- Private oil companies' petroleum products exports registered increase of 4.7% in May 2017 as compared to May 2016 mainly due to increase in export of naphtha and HSD. On overall basis the private companies registered growth of 1.7% in exports of petroleum products during April-May 2017 as compared to April- May 2016.

- Private oil companies' export of POL products accounted for 78.9% of total petroleum product exports during May 2017 as compared to 81.9% in May 2016. On cumulative basis private oil companies' exports of POL products accounted for 79.6% during April-May 2017 as compared to 83.9% in April - May 2016.

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