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**STANDING COMMITTEE ON CHEMICALS & FERTILIZERS
(2020-21)**

SEVENTEENTH LOK SABHA

**MINISTRY OF CHEMICALS AND FERTILIZERS
(DEPARTMENT OF CHEMICALS AND PETROCHEMICALS)**

**DEMAND AND AVAILABILITY OF PETROCHEMICALS
INCLUDING IMPORTS AND EXPORTS**

SIXTEENTH REPORT



LOK SABHA SECRETARIAT

NEW DELHI

MARCH, 2021 /PHALGUNA, 1942 (SAKA)

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Presented to Lok Sabha on 17.03.2021

Laid in Rajya Sabha on 17.03.2021

LOK SABHA SECRETARIAT
NEW DELHI

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INDEX

CONTENTS		PAGE
COMPOSITION OF THE COMMITTEE (2020-21)		(iii)
INTRODUCTION		(v)
Chapter I	Introductory Petrochemicals and its importance	1
Chapter II	Demand and Availability of Petrochemicals	3
Chapter III	Imports and Exports of Petrochemicals	14
Chapter IV	Challenges before Petrochemicals Sector and Step forward	24
OBSERVATIONS / RECOMMENDATIONS		32
APPENDICES		
1.	Minutes of Sitting of the Standing Committee on Chemicals & Fertilizers (2019-20) held on 4.12.2019.	47
2.	Minutes of Sitting of the Standing Committee on Chemicals & Fertilizers (2020-21) held on 19.2.2021	50

**COMPOSITION OF THE STANDING COMMITTEE ON CHEMICALS & FERTILIZERS
(2020-21)**

Smt. Kanimozhi Karunanidhi - Chairperson

**MEMBERS
LOK SABHA**

2	Shri Maulana Badruddin Ajmal
3	Shri Deepak Baij
4	Shri Ramakant Bhargava
5	Shri Prataprao Govindrao Patil Chikhalikar
6	Shri Rajeshbhai Naranbhai Chudasama,
7	Shri Ramesh Chandappa Jigajinagi
8	Shri Pakauri Lal
9	Shri Kripanath Mallah
10	Shri Satyadev Pachauri
11	Smt Aparupa Poddar
12	Dr. M.K.Vishnu Prasad
13	Shri Atul Kumar Singh alias Atul Rai
14	Shri Arun Kumar Sagar
15	Shri M. Selvaraj
16	Shri Pradeep Kumar Singh
17	Shri Uday Pratap Singh
18	Shri Indra Hang Subba
19	Shri Er. Bishweswar Tudu
20	Shri Prabhubhai Nagarbhai Vasava
21	Dr. Sanjeev Kumar Singari#

RAJYA SABHA

22	Shri G.C.Chandrashekhar
23	Dr. Anil Jain
24	Shri Ahmad Ashfaque Karim
25	Shri M.V. Shreyams Kumar
26	Shri Jaiprakash Nishad
27	Shri Anthiyur P. Selvarasu
28	Shri Arun Singh\$
29	Shri A.D. Singh
30	Shri Vijay Pal Singh Tomar
31	Shri K. Vanlalvena

SECRETARIAT

1.	Shri Manoj K. Arora	-	Officer on Special Duty
2.	Shri N.K.Jha	-	Director
3.	Shri C. Kalyanasundaram	-	Additional Director
4.	Shri Gagan Kumar	-	Committee Officer

\$Re-nominated to the Committee w.e.f. 23.12.2020.

#Nominated to the Committee w.e.f 28.12.2020 vice Shri Nandigam Suresh.

INTRODUCTION

I, the Chairperson, Standing Committee on Chemicals and Fertilizers (2020-21) having been authorised by the Committee to submit the Report on their behalf, present this Sixteenth Report (Seventeenth Lok Sabha) on 'Demand and Availability of Petrochemicals Including Imports and Exports' pertaining to the Department of Chemicals and Petrochemicals.

2. The subject 'Demand and Availability of Petrochemicals Including Imports and Exports' was taken up by the Standing Committee on Chemicals and Fertilizers (2019-20) for examination and report. The Committee took the oral evidence of the representatives of the Department of Chemicals and Petrochemicals on the subject at their sitting held on 4.12.2019.

3. The Standing Committee on Chemicals and Fertilizers (2020-21) considered and adopted this Report at their sitting held on 19.2.2021.

4. The Committee wish to express their thanks to the Officers of the Ministry of Chemicals and Fertilizers (Department of Chemicals and Petrochemicals) for their cooperation in furnishing the written replies and other information and for placing their views before the Committee.

5. The Committee also place on record their appreciation for the valuable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

6. For facility of reference and convenience, the observations/recommendations of the Committee have been printed in bold letters at the end of the Report.

New Delhi;
12 March, 2021
21 Phalgun, 1942 (Saka)

KANIMOZHI KARUNANIDHI
Chairperson
Standing Committee on
Chemicals and Fertilizers

Abbreviations

PE- Polyethylene

PP- Polypropylene

PVC- Poly Vinyl Chloride

PS- Polystyrene

PTA- Purified Terephthalic Acid

MEG- Mono Ethylene Glycol

SBR- Styrene Butadiene Rubber

PBR- Poly Butadiene Rubber

BR- Butyl Rubber

LAB- Linear Alkyl Benzene

PC- Poly Carbonate

ABS- Acrylonitrile Butadiene Styrene

PA- Polyamide

HS- Harmonized System

Chapter I

Introductory

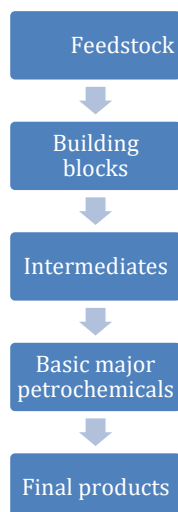
Petrochemicals and its importance

1.1 Petrochemicals are the chemical products derived from hydrocarbons which in-turn, are generally derived from crude oil and natural gas. Among the various fractions produced by distillation of crude oil, petroleum gases, naphtha, kerosene and gas oil are the main feedstocks for petrochemical industry. Ethane, propane and natural gas liquids obtained from natural gas are the other important feedstock used in the Petrochemicals industry. Petrochemical industry plays a vital role in economic growth and development of manufacturing sector. The value addition in the petrochemicals industry is higher than most of the other industry sectors.

1.2 Petrochemicals and Plastics play a very important role by providing solutions in the day to day life of human needs, and also help in national development by providing a host of items which help in the well-being of the mankind in the form of shelter, clothing and health care. The Petrochemicals and plastics were invented and developed during the 19th and 20th centuries and new innovations in this field along with biodegradable and compostable plastics are taking place continuously. The Indian petrochemical sector is well developed and has been recording a steady growth in the overall industrial scenario.

1.3 The Petrochemical industry, which entered in the Indian industrial scene in 1970s, registered a rapid growth in the 1980s and 1990s. Petrochemical industry mainly comprise of synthetic fibre /yarn, polymers, Synthetic Rubber (elastomers), Synthetic detergent intermediates, performance plastics and plastic processing industry. The total production of petrochemicals in the country for the year 2018-19 is of the order of approximately 24.6 million tonnes

1.4 Structure of Petrochemical Industry can be represented as following :



1.5 Naphtha and Natural Gas are important feedstock for manufacturing petrochemicals. Naphtha is an important input containing olefins (Ethylene, Propylene, Butadiene) and aromatics (Benzene, Toluene, Xylenes) components, whereas only olefins can be made by cracking of Natural Gas. Many important petrochemicals like LDPE, LLDPE, HDPE, EDC, PVC, Polyols, Polypropylene and Butadiene can be manufactured from olefinic fraction of naphtha. Other important chemicals like cumene, aniline, xylenes can be manufactured from aromatic fraction of naphtha. These are very important petrochemicals finding applications in plastics, PET bottles, Polyester fiber, detergents, textiles chemicals, foams, coatings, adhesives, automotives components, synthetic resins, tyres, footwears etc.

1.6 Today, petrochemical products permeate the entire spectrum of daily use items and cover almost every sphere of life like clothing, housing, construction, furniture, automobiles, household items, agriculture, horticulture, irrigation, packaging, medical appliances, electronics and electrical etc. Since it is very much necessary to ensure availability of petrochemicals products to the entire population of this huge country, this Committee have selected the subject "Demand and Availability of Petrochemicals including imports and exports" for detailed examination of various aspects of the subject. The following chapters deal with the various aspects pertaining to the subject.

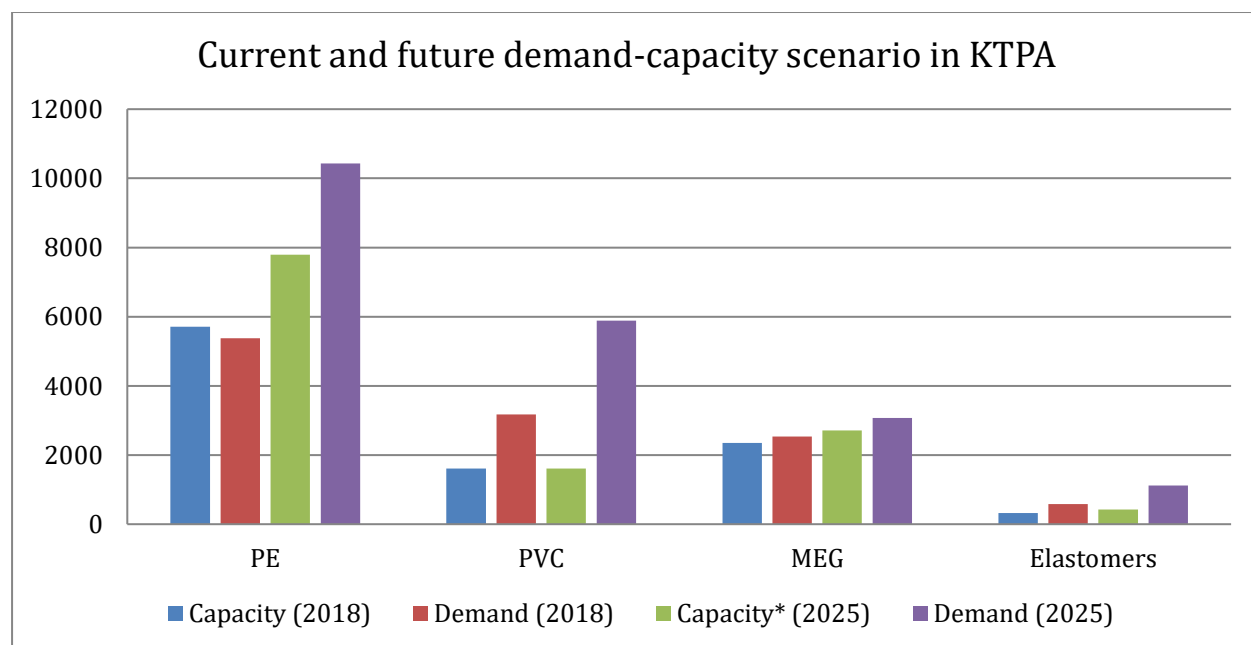
Chapter II

Demand and Availability of Petrochemicals

A. Demand and Supply Scenario

2.1 The average domestic demand growth of petrochemical products have been increasing in the country at a rate of ~7-8% Compound Annual Growth Rate(CAGR) because of improved standards of living, expanding economy and favorable demographics etc.. The growth of petrochemical production could not match with the demand growth which resulted in increase in imports. Demand and capacity for production of major important petrochemicals in India in the year 2018-19 and the projected demand and capacity for the year 2025 in KTPA (000' Metric Tonnes per annum) are as follows:

	Capacity (2018-19)	Demand (2018-19)	Capacity* (2025)	Demand (2025)
PE	5710	5374	7790	10430
PP	5100	5100	9325	9440
PVC	1610	3170	1610	5885
PTA	6600	6181	9185	8632
MEG	2354	2533	2711	3073
SBR/BR	290	430	530	803
Total(KTPA)	21664	22788	31151	38263

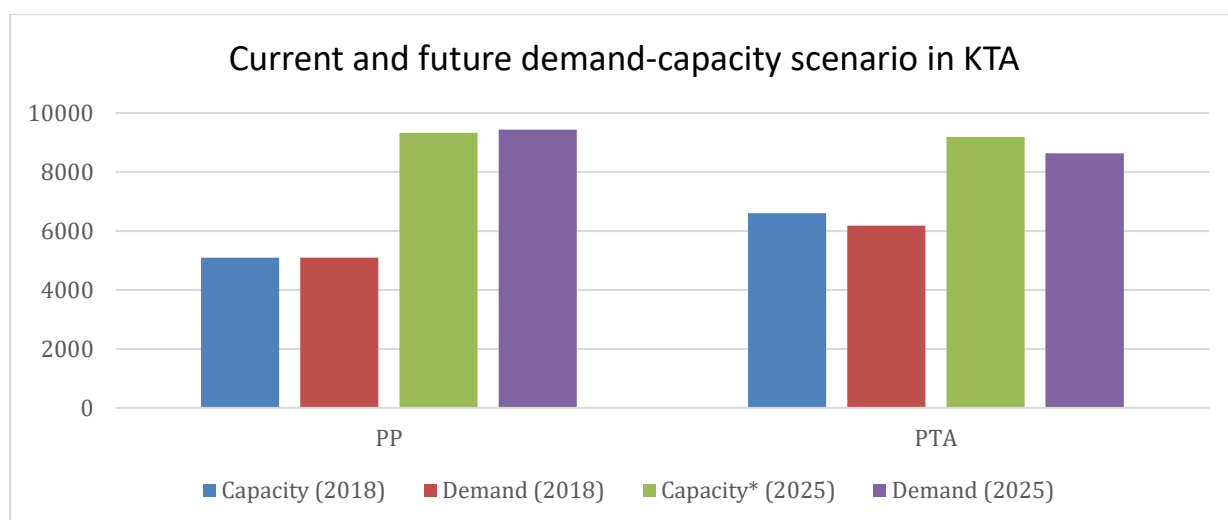


The capacity for polyethylene (PE) in the year 2018 was more than the demand; however by the year 2025 projected demand will surpass the projected capacity for the production of PE in the country.

Demand for Poly vinyl chloride (PVC) in the year 2018 was 3170 KTPA against the installed capacity of 1610 KTPA. In the year 2025 projected demand for the PVC will further increase to 5885 KTPA without any capacity addition.

Demand for MEG- Mono Ethylene Glycol in the year 2018 was 2533 KTPA against the installed capacity of 2354 KTPA which is expected to further increase to 3073 KTPA against the capacity of 2711 KTPA in the year 2025.

Demand for Elastomers is projected to increase to 1118 KTPA by the year 2025 from the 584 KTPA in 2018 however capacity will increase only to 420 KTPA by the year 2025 from the level of 320 KTPA in the year 2018.



In the case of Polypropylene (PP) increase in demand will be almost covered by the increased installed capacity by the year 2025 and installed capacity for Purified Terephthalic Acid (PTA) is expected to be more than the projected demand by the year 2025 as was the case in the year 2018.

2.2 Perusal of above analysis shows that the Demand will surpass the capacity to produce petrochemicals in the country by the year 2025.

2.3 Demand and supply forecast for the year 2025 is almost balanced for PP and PTA. However, capacity is less than demand in respect of PE, PVC, MEG and Elastomers. When asked about steps proposed to be taken to increase production capacity of each of these Petrochemicals the Department in its written reply stated as follows:-

“To increase production capacity of PE, PVC, MEG and Elastomers the Department has recommended for increase in import duty of these products and to make them globally cost competitive.”

2.4 When asked further about the response of the Department of revenue on these recommendations the Department of Chemicals and Petrochemicals has furnished the following submission:-

“The Department has recommended for increase in import duty on PE, PVC, MEG and Elastomers to make them globally cost competitive. The Department of Revenue has not accepted all the recommendations. However, it was communicated by DoR that fresh proposal with latest information and data may be sent.”

2.5 Details of indigenous manufacturers of Petrochemicals and their capacity in Million Metric Tonnes per annum are given below:

Major Petrochemicals* Manufacturers in India		
S. No.	COMPANY	CAPACITY
		(MMTPA)
1	Indian Oil Ltd. Corporation (IOCL)	3.08
2	GAIL	0.80
3	HPCL–Mittal Energy Limited(HMEL)	0.47
4	Mangalore Refinery and Petrochemicals Ltd. (MRPL)	0.44
5	ONGC Petro additions Ltd. (OPaL)	1.70
6	ONGC Mangalore Petrochemicals Ltd. (OMPL)	0.90
7	Brahmputra Cracker & Polymer Ltd. (BCPL)	0.30
PSU/JV		7.70
1	Reliance	13.00
2	MCPI Pvt. Ltd.	1.30
3	Hindustan Petroleum Ltd. (HPL)	1.06
4	India Glycols Limited (IGL)	0.20
5	Others	5.90
Private		21.46
Total		29.10

(Source: IOCL)

*Capacities of Polypropylene/ Polyethylene/ Polyvinylchloride/ Purified terephthalic acid/ Mono Ethylene glycol/ Linear alkyl benzene (PP/PE/PVC/PTA/MEG/Elastomers/LAB)

B. Joint Committee to examine petrochemical demand supply scenario and draft perspective plan.

2.6 Out of total production capacity of 29.10 MMTPA, Private sector accounts for 21.46 MMTPA and the Public sector/JV accounts for only 7.70 MMTPA. In this regard, the committee pointed out that contribution of PSUs/JVs in manufacture of Petrochemicals is far less than the private sector and asked

whether any steps are being taken/ proposed to be taken to increase/ add production capacity of Public Sector units. The Department in its written reply stated as under:-

“ A Committee constituted jointly by the Ministry of Petroleum and Natural Gas and the Department of Chemicals & Petrochemicals with expert members from PSUs and others to examine petrochemical supply demand scenario. Draft report of the Committee is being considered for growth of petrochemical industry. The measures include enhanced research & development towards new/ innovative technologies/ products, facilitation of industry to create new capacities to bridge the growing demand and supply gap of the country. Global pandemic, due to COVID19 from March 2020, has changed and disrupted the scenario of world economy. The draft of the Committee report is now being reviewed to meet the challenges associated with COVID19”.

However the salient features of draft report are as under:

- i. To review the existing plans for Public Sector Refineries for petrochemicals production and to examine how they could be better aligned with the needs of the country for Petrochemicals and fuel products.
- ii. To recommend changes/modifications, if any, in the PCPIR Policy of the Government.
- iii. To recommend broad policy options for implementing the recommendations of the report.

2.7 Based on the demand and supply scenario of the report, the steps initiated include analysis of global vis-à-vis regional supply and demand, key challenges and policy formulation for growth of domestic petrochemical industry. Details of major upcoming Petrochemical Plants, which have been tabulated in Para 2.13 of this Report, shows that both the private and PSUs are taking interest in expanding their business in Petrochemical Sector.”

2.8 A draft Petrochemicals Perspective plan was prepared in consultation with MoP&NG, EIL, IOC and other stakeholders. Salient features of this plan are placed below:

- a. Existing market scenario in Building blocks, Intermediates and End products.
- b. Estimation of the supply & demand of Building blocks, Intermediates and End products both in short term as well as long term
- c. Present capacity of Ethylene & Propylene production, anticipated expansion in capacity and gap in demand / availability.

- d. Feed-stock management suggestions for generation of additional building blocks by means of Naphtha Pooling, Release of Naphtha being used in power generation, utilization of Pet coke / Coal for reduction of Import Dependence on Petrochemicals.

2.9 In addition to above, DCPC has asked EIL to prepare the perspective plan based on the projected Supply & Demand of Petrochemicals with possible Refinery & Petrochemicals complex configurations involving various feed-stock routes and expected investment & return in each configuration. Draft Plan is to be re-looked in view of COVID19 which has changed the entire scenario of the world economy

C. Present, upcoming and future petrochemical projects

2.10 As per the information given by the Department of Chemicals and Petrochemicals, presently there are eleven crackers in the country with combined ethylene capacity of about 7.27 million tonnes per annum as per details given below:

S.No	Owner	No. of Crackers	Feedstock	Total Design Capacity (KTPA Ethylene)
1	GAIL	2	Gas	860
2	HPL	1	Naphtha	700
3	IOCL	1	Naphtha	857
4	RIL	5	Gas + Naphtha	3580
5	BCPL	1	Gas + Naphtha	220
6	OPaL	1	Gas + Naphtha	1060
Sub Total		11		7277

2.11 Apart from the 11 existing Crackers following 2 crackers having a combined capacity of 2200 KTPA are under construction:-

Under Construction			
HMEL	1	Gas + Naphtha	1200
HRRL	1	Gas + Naphtha	1000
Total	2		2200

2.12 During Audio-Visual presentation to the Committee on the subject, the Secretary, Department of Chemicals and Petrochemicals made the following submission regarding additional requirement of crackers by the year 2025 :-

Additional Ethylene required	5703 KTPA
Additional Propylene required	115 KTPA
Total number of crackers required (at 1500 KTPA Ethylene capacity)	4
Approximate Investment (in Rs. Crore)	Rs.1,60,000

2.13 Details of upcoming indigenous manufacturers of Petrochemicals are given below:

Sl.No.	Company/ Location	Product	Capacity (KTA)	Estimated Investment in RS. Cr	Expected Commissioning
1	HPCL-Mittal Energy Limited(HMEL), Bathinda, Punjab	PP&PE	1700	24000	2021
2	IOCL, Panipat, Haryana Vadorara, Gujarat Barauni, Bihar & CPCL-Nagapattinam, Tamil Nadu	PP	1510	6800	2025
3	HPCL-Rajasthan Refinery Limited(HRRL), Barmer, Rajasthan	PP& PE	1950	21000	2023
4	Nayara, Vadinar, Gujarat	PP	450	5600	2024
5	GAIL, Usar, Maharashtra	PP	500	8800	2024
6	IOCL, Paradip, Odisha	PTA	1200	9137	2024
7	JBF, Mangalore, Karnataka	PTA	1200	4100	2021
8	IOCL, Paradip, Odisha	MEG	357	5654	2021
9	Reliance Jamnagar, Gujarat Sibur,	Elastomers	100	4200	2020

2.14 Announced/Under Study integrated petrochemical Projects are as under:

- a) "RRPCL at Raigad, Maharashtra -ethylene cracker (~5 MMTPA) and downstream petrochemicals of 15 MMTPA with an investment of Rs. 1,75,000 Cr.
- b) Nayara Energy Ltd at Vadinar, Gujarat – Ethylene cracker of 1.8 MMTPA & downstream units at estimated cost of Rs. 30,000- 40,000 Cr.
- c) RIL (COTC) at Jamnagar, Gujarat - converting existing refinery to chemicals with an investment of Rs. 70,000 Cr.

d) HPL at Balasore, Odisha - Aromatic complex of 1.8 MMTPA and ethylene cracker complex of 1.08 MMTPA at a combined investment of Rs 78,000 Cr."

2.15 The Committee observed that the percentage of production of polymers was 61% during 2018-19 and enquired about the production percentage of other major petrochemicals. In this regard, the Department of Chemicals and Petrochemicals in a written reply furnished the following information:-

The percentage production of synthetic fibres, elastomers, synthetic detergent intermediaries and performance plastics, during 2018-19, was as under:

(Figures in '000 MT)		
Group	2018-19	Share in %
Synthetic Fibres	3601	22.14
Polymers	10040	61.72
Elastomers (S. Rubber)	351	2.16
Synth. Detergent Intermediaries	687	4.22
Performance Plastics	1589	9.76
Total Basic Major Petrochemicals	16268*	100

* monitored by DCPC for selected units and products(Source: S& M Division of DCPC)

2.16 On perusal of the above statement, the Committee enquired whether the domestic production capacity was able to meet the domestic demand for these petrochemical products. In this regard, the Department of Chemicals and Petrochemicals clarified in a written reply that the domestic production capacity was able to meet 84% of the total demand of major petrochemicals. The shortfall was met through imports. The details may be seen as under:-

Major Petrochemical	Qty in '000 MT		
	2018-19		
	Production	Demand	Deficit
Synthetic Fibres	7842	8714	-872
Polymers	12006	14069	-2063
Synthetic Rubber	350	897	-547
Synthetic Detergent Intermediates	687	918	-231
Performance Plastics	1605	1899	-294
Others	2200	2831	-631
Total	24690	29328	-4638

2.17 On being asked as to what the Department is doing to bring in investment in the petrochemicals sector as supply of Petrochemicals is increasing at the rate of 4-5% per year but there is need to increase the supply at the rate of 9% per

year, to meet the increasing demand, for which huge investment is required, the Secretary of the Department submitted before the Committee as under:

"These are the new units that are coming up. The construction has already started. What I mean to say is this. The future of PTA, MEG and crackers appear to be good, provided the construction happen quickly, and then they come into production. The second thing is this. There are some of the projects that have already been announced but under study. They have been announced in the sense that their intention has been announced. One is Ratnagiri project. If it really comes, it is going to really change the scenario. In fact, almost 18 to 20 million tonnes may be produced, may be coming out of that refinery. So, it is a huge project."

2.18 When it was further asked if there is any hurdle in Ratnagiri project, the secretary further informed during the oral evidence as follows:-

"Yes, Madam. The project has been approved but there is a problem of land issue. Originally, in the place Ratnagiri due to which its name has come as 'Ratnagiri', there are a lot of resistance for land acquisition. The State Government announced that that particular land will not be acquired, and they were looking for an alternate site, which is perhaps closer to Mumbai, in Raigad district. Only the issue of land is the main problem now. If the State Government is able to solve this problem, this project is going to change the scenario of the country as far as chemicals and petrochemicals are concerned. In fact, there may be a significant addition to GDP growth because of the investments that are going to come, that is, 50 per cent from Indian side and 50 per cent from the Middle East. This is going to significantly alter the scenario. This is regarding one project. The second project is Nayara, earlier known as Essar. They have announced this project but the study is going on. It has Ethylene Cracker of 1.8 million tonnes capacity, a huge cracker. They have announced Rs. 40,000 crore for it. Reliance is also now talking about an investment of Rs. 70,000 crore in crude to chemicals. I forgot to mention one point, Madam. The traditional route, rather the existing route is this. From crude oil, refining is done, then naphtha is produced. After that, it is cracked, and we get the petrochemicals. This is the traditional route. But a new route is coming up in the world. It is directly crude into chemicals. Now, the conversion, world over, is fluctuating near about 10 to 15 per cent. But from crude to chemicals, the conversion is about 45 per cent to 50 per cent. In fact, now, they are talking of 85 per cent. Patent has been filed to convert crude oil directly to petrochemicals up to 85 per cent but that is at patent stage. The established units are around 40 to 45 per cent. In fact, Singapore unit is talking about 50 per cent. ExxonMobil unit in Singapore is now talking of converting 50 per cent of the crude oil to petrochemicals. So, in India also, Reliance has recently talked about it. I do not know how much will it

fructify. If it really comes about directly from crude, without going in for petrol, diesel, and all this route, and we get ethylene, propylene, benzene, toluene, and xylene directly, that will alter the scenario.

In addition, Madam, the Haldia Petrochemicals has announced an investment of Rs. 78,000 crore on the East Coast for an aromatics complex in ethylene cracker. Why I have not indicated this here is because they are under study; they have just been announced. They are at pre-feasibility, feasibility stage I, II, III. So, when they will do that and the final investment decisions are taken, then only we will try and put it here. But at least people are talking about it and they are showing interest. So, we expect that these investments would lead to the reduction in deficit which was pointing out particularly for ethylene and to some extent propylene and so on and so forth."

D. Installed Capacity and utilization

2.19 The details on Installed capacity, Production, and Capacity Utilization of Basic Major Petrochemicals are as below:-

Production & Capacity Utilization of Basic Major Petrochemicals				
(Figures in 000'MT)				
Group	2015-16	2016-17	2017-18	2018-19
1. Synthetic Fibres/Yarn				
1a.Fibre intermediates - PTA				
Capacity	5,575	6,475	6,200	6,430
Production	4,293	5,210	5,723	5,698
Capacity Utilisation (%)	77.00	80.50	92.30	88.60
Group				
1b.Fibre Intermediates – MEG				
Capacity	1,329	1,329	1,670	2,349
Production	1,111	1,095	1,323	2,143
Capacity Utilisation (%)	83.60	82.40	79.20	91.20
2. Polymers				
Capacity	9768	9839	12121	13004
Production	8839	9163	10298	12006
Capacity Utilisation (%)	90.5	93.1	84.96	92.3
3. Synthetic Rubber				
Capacity	425	425	425	425
Production	242	285	308	350
Capacity Utilisation (%)	56.8	67	72.3	82.35
4. Synthetic Detergent Intermediates				

Capacity	687	687	687	687
Production	566	664	743	687
Capacity Utilisation (%)	82.3	96.6	108.1	100
5. Performance Plastics				
Capacity	2514	2479	2349	2520
Production	1700	1799	1719	1605
Capacity Utilisation (%)	67.6	72.6	73.2	63.69
6. Others				
Capacity	2976	2976	2976	2976
Production	1847.2	1958	2075.5	2200
Capacity Utilisation (%)	62.069	65.793	69.74	73.9
Total Basic Major Petrochemicals (1 to 6)				
Capacity	23,274	24,210	26,428	28,391
Production	18,598	20,174	22,189	24,689
Capacity Utilisation (%)	79.9	83.3	84.0	87.0

2.20 In regard to the above queries, the Department made the following submission in its written reply :

- i. "The main reason for low capacity utilization is due to shifting of usage from performance plastics to commodity plastics, as the cost of production of commodity plastics is comparatively lower than that of performance plastics. The cost of production of performance plastics is dependent on various factors including scale of production, cost of feedstock, which are globally uncompetitive, which encourages cheaper imports. In order to improve capacity utilization of polymers, synthetic rubbers & performance plastics, and to make them globally cost competitive; import duty on these products has been recommended to increase."

D. Measures to meet the domestic demand, reduce imports and boost exports

2.21 The Committee desired to know about the steps taken or being taken by the Department of Chemicals and Petrochemicals to meet the increasing demands of petrochemical products and to cut down on its import so that the 'Make in India' can be given a huge boost. To this the department in its written reply has stated that the measures to reduce imports include, expanding domestic production capacities close to 7 MMTPA. Further, 17.6 MMTPA capacity addition plan is at various stages of study/approval. The Committee were further informed by the Department that the following steps are being taken by them to meet domestic demand, attract investment, new capacity creation for import substitution and boost exports with employment generation:-

- (i) Strengthening 4 Petroleum Chemicals and Petrochemicals Investment Regions (PCPIRs), while setting up of one cracker complex in each PCPIR.
- (ii) Fiscal incentives for import substitution, promotion of Make in India and export promotion.
- (iii) Setting up of Advisory Forum for better interaction with industry to build confidence and also ease of doing business.
- (iv) Ensuring quality with formulation of new BIS standards and making them mandatory.
- (v) Chemicals regulation for monitoring of chemicals and petrochemicals for better trade facilitation.
- (vi) Skilling & Employment.
- (vii) Technology Support Services.
- (viii) Issues of duty structures on feed-stocks and Petrochemical products, as per domestic capacity/requirement are taken up.

Chapter III

Imports and Exports of Petrochemicals

A. Naphtha production, import and export

3.1 Among the various fractions produced by distillation of crude oil, petroleum gases and naphtha, are the main feedstocks for petrochemical industry. Naphtha production, Import and Export are as follows:

Unit '000 MT				
Year	Production	Imports	Exports	Consumption
2015-16	17,861	2,931	7,116	13,271
2016-17	19,946	2,777	8,727	13,241
2017-18	20,006	2150	8,951	12,549
2018-19*	19,786	2,082	6,963	14,131

*Provisional

B. Imports of Petrochemicals

3.2 The overall Petrochemicals imports during 2018-19 stands at around Rs. 1,28,000 crore approximately, which is 3.56% of the total national imports. Out of this, the imports of major petrochemicals (group-wise) during the last five years

IMPORT OF BASIC MAJOR PETROCHEMICALS (Group-wise)										
[QTY in '000 MT & VAL in Rs. Cr]										
PRODUCT	2014-15		2015-16		2016-2017		2017-2018		2018-19	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRE	236	3462	264	3464	280	3430	260	3631	276	4534
POLYMERS	3737	31771	4214	31325	4452	32672	4751	35493	4479	36848
SYNTHETIC RUBBER	578	7589	596	6127	560	6280	608	7418	619	8514
SYNTHETIC DETERGENT INTERMEDIATES	134	1385	218	1773	228	1790	206	1645	227	2104
PERFOR MANCE PLASTICS	395	4964	389	4458	417	4723	583	6210	684	8917
Total	5080	49171	5681	47149	5938	48895	6408	54397	6285	60917

are as follows:

(Source: DGCIS, Kolkata, M/O Commerce and Industry)

Projected Import Data for Basic Major Petrochemicals, QTY in thousand MT and Value in Rs Cr. from 2019-20 up to 2025:

Projected values are based on linear projection method of last five years data.						
Year	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total of Basic Major Petrochemical (quantity in thousand MT)	6819	7132	7446	7760	8073	8387
Total of Basic Major Petrochemical (Value in Rs Cr)	61328	64403	67477	70551	73625	76700

C. Exports of Petrochemicals

3.3 The overall Petrochemicals exports during 2018-19 were to the tune of around Rs. 78,000 crore approximately which is 3.73% of the total National Exports. Out of this, the exports of basic major petrochemicals (Group-wise) during last five years are as below:

EXPORT OF BASIC MAJOR PETROCHEMICALS (Group- wise)										
PRODUCT	[QTY in '000 MT & VAL in Rs. Cr]									
	2014-15		2015-16		2016-2017		2017-2018		2018-19	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRE	887	9173	878	8338	1026	9220	1001	9780	1016	11720
POLYMERS	903	7936	998	7325	912	6674	1188	8918	1934	15584
SYNTHETIC RUBBER	26	345	43	424	38	464	52	546	64	707
SYNTHDETERGENT INTERMEDIATES	28	290	10	78	7	59	1	15	1	15
PERFORMANCE PLASTICS	409	3535	814	5277	973	6365	1051	7473	1080	10188
Total	2254	21279	2743	21442	2956	22782	3293	26731	4095	38214

(Source: DGCI, Kolkata, M/O Commerce and Industry)

There is a gap of about 26% in demand and supply of major petrochemicals. The gap is being bridged through imports.

D. Vision Plan 2024

3.4 Summary of India's Petrochemical trade for FY 2018-19 is given below:

Category	Import		Export		Net Import	
	Qty (KT)	Value (Rs. Cr)	Qty (KT)	Value (Rs. Cr)	Qty. (KT)	Value (Rs. Cr)
Building Blocks	3,380	14,937	4,931	31,667	-1,551	-16,730
Intermediates	5,577	43,382	3,725	23,517	1,852	19,865
End Products	7,320	70,262	2,637	23,161	4,682	47,101
Total	16,277	1,28,581	11,293	78,345	4,984	50,236

3.5 Perusal of above table shows that India's Petrochemical Trade balances for FY (2018-2019) being highly unfavourable as the country is exporting the building blocks and importing intermediates and end products causing an outflow of Rs. 50,236 crore. In this regard, the Committee asked the Department of Chemicals and Petrochemicals to provide information on the steps taken by it to further utilize the production capacity and for cutting down on imports of end products and intermediates. The Department in its written reply stated as follows:-

"Due to open global economy, there is free trade of Petrochemicals which includes building blocks, intermediates and final products, unless and until specifically mentioned trade barriers for individual products. In order to meet domestic demand, investment in the sector for new capacity creation, import substitution and to promote exports with employment generation, Department of Chemicals and Petrochemicals has prepared a Vision 2024 plan which provides under mentioned initiatives:

Initiatives	Vision for 2024
Strengthen 4 PCPIRs	Global manufacturing hubs Full time CEOs & experts Incentives for Investment more than Rs. 10,000 cr. 1 cracker complex in each PCPIR Expected investment – Rs. 8 lac cr. Employment Generation – 34 lacs
Fiscal incentives	Increase in production leading to reduction of Imports by at least 50%
Set up Advisory Forum	Enhanced confidence & Ease of doing business
Ensuring quality	BIS Standards for chemicals and petrochemicals will be made mandatory
Chemicals regulation	Compulsory registration of new chemicals and petrochemicals for monitoring production and trade based on requisite data in line with internationally prevent practices
Better Trade Intelligence (new HS codes)	All chemicals with high trade value will have separate Harmonized System (HS) codes
Skilling & Employment	Approx. 1,00,000 per annum
Technology Support Services to SMEs	Approx. 1,00,000 per annum

3.6 When asked about the objectives of Vision Plan 2024 and the initiatives taken in that regard, the Department in its written reply stated as under:-

Objectives of Vision Plan 2024

To seize the opportunity to establish India as a leading chemicals & petrochemicals manufacturing hub,

- with a thrust on reduction in import dependency
- by attracting investments for manufacturing quality products
- using cutting-edge technologies
- in specified clusters
- with focus on sustainability

To achieve the above objectives, the following initiatives were taken:

- A. Strengthen PCPIRs
- B. Incentives for mega investment
- C. Ensuring quality by formulating new standards and making standards mandatory
- D. Skilling & Employment generation
- E. Technology Support Services to SMEs
- F. Better Trade Intelligence (new HS codes)
- G. Advisory Forum as a permanent platform for interaction with industry

E. Imposition of Anti Dumping Duties

3.7 The Committee requested the Department of Chemicals and Petrochemicals to provide the details of cases of imposition of anti-dumping duties levied on petrochemicals so far alongwith the details of pending cases of requests for imposition of anti-dumping duties. In this regard, the Department stated in its written reply that the provision of imposing anti-dumping duties is being done by an independent quasi-judicial body and working as an arbitrator or tribunal board, generally of a public administrative agency, which has powers and procedures resembling those of a court of law or judge, and which is obliged to objectively determine facts and draw conclusions under Directorate General of Trade Remedies (DGTR).

3.8 Further on being enquired, whether any demands/requests for imposing anti-dumping duty were made by the Department to that body and the present position of those demands/ requests, the Department in its written reply stated as under:-

“ Since, the safeguard duty and anti-dumping duty is being dealt by an independent quasi-judicial body Directorate General of Trade Remedies

(DGTR); therefore, the Department does not intervene, except in making recommendations, wherever felt necessary”

Harmonized System Code(HS Code)

3.9 The Harmonized System is an international nomenclature for the classification of products. It allows participating countries to classify traded goods on a common basis for custom purposes. At the international level, the Harmonized System (HS) for classifying goods is a six-digit code system. ITC HS Code, Indian Trade Clarification based on Harmonized System of Coding was adopted in India for import-export operations. Indian custom uses an eight digit ITC-HS Codes to suit the national trade requirements. The Committee was informed during the oral evidence of the representatives of the Department on 4.12.2019, that the Department of Chemicals and Petrochemicals has proposed new HS codes for products falling under "other" category. In this regard, the Committee enquired whether any action was taken by the Department for notifying new HS codes. In its written reply the Department stated as below:-

“The chemicals and petrochemicals appearing in “others” category need identification to facilitate and monitor international trade, as the non-availability of specified codes in the customs tariff has resulted in huge undesirable EXIM trade under „others” category. Further, the criteria of health, safety & environment including national security along with prevention of unfair trade practices are of prime importance. In this regard based on recommendations of Department of Chemicals & Petrochemicals, 53 HS codes have been notified by Department of Revenue during 2018-19. Further, during 2019-20, new HS codes for 80 chemicals and petrochemicals have been proposed and forwarded to Department of Revenue with a copy to Central Board of Indirect Taxes and Customs (CBIC) for notification”.

3.10 When asked about the response of the Department of Revenue to the above proposal of the Department, the Committee were informed that out of 80 chemicals and petrochemicals, the Department of Revenue notified new HS Codes of 49 chemicals and 4 petrochemicals

G. Rationalization of Customs Duty Structure

3.11 In order to provide adequate protection to the domestic manufacturers where there is sufficient domestic capacity and also the gap between capacity and demand is high, progressive increase in Basic Custom Duty has been proposed by Department of Chemicals and Petrochemicals. The Department informed the Committee that increase in custom duty will help to reduce imports and encourage establishing domestic capacities and sparing for production of downstream chemicals (other than polymers). When asked about the existing

rates of custom duty for different feedstock chemicals and whether any consultations were held with Department of Revenue with regard to rationalization of custom duty structure, the Department in its written reply stated as under:-

"Feedstock: Naphtha and natural gases (methane, ethane, propane, butane etc.) are important feedstock to manufacture chemicals and petrochemicals. (At present basic customs duty on Naphtha is 4% and on Natural gas is 2.5 %). The Department of Chemicals & Petrochemicals (DCPC) has recommended Import duty at 0% on both these feedstock. The above recommendations are based on wide consultation with industry associations. There has been a presentation/ consultation by the Department of Chemicals and Petrochemicals on 06.01.2020 with Department of Revenue for rationalization of custom duty structure."

3.12 on being enquired, whether the Department of Chemicals and Petrochemicals has prepared a long-term perspective plan for a customs tariff structure which induces fresh capacity creation in the country for this sector and if there is any recommendation on reduction of customs duty on imported feed stock, the Department in its written reply furnished the following information:

The Department recommended reduction of customs duty on imported feed stock and increase in customs tariff on products, as a long term planning for new capacity creation. The recommended changes in the Basic Custom Duty(BCD) rate are as follows:

No.	Items (Petrochemical)	Current BCD	Change in BCD recommended
Feedstock (2.5/4% to Nil)			
1	Naphtha	4%	4% to NIL
2	Ethane	2.5%	2.5% to NIL
Building Blocks (0/2.5% to 5%)			
3	Ethylene	2.5%	No Change (2.5%) (To be increased @0.5% annually starting from the third year for five years.)
4	Propylene	2.5%	--do--
5	Butadiene and isoprene	2.5%	--do--
6	Benzene	2.5%	--do--
7	Toluene	2.5%	--do--
8	P-xylene	0%	No Change (0%) (To be increased @ 1% annually every year starting from third year for five years.)
Precursor to Intermediate (2/5% to 7/7.5%)			
9	Styrene	2%	No Change (2%) (To be increased @ 1% annually every year starting from the third year for five years.)

10	Vinyl Chloride Monomer	2%	--do--
11	Propylene Oxide	5%	No Change (5%) (To be increased @ 0.5% annually starting from the third year for five years.)
Polymers and Polyols (7.5/10% to 12.5%)			
12	Ethylene polymers (LDPE, LLDEPE & HDPE)	7.5%	7.5% to 8.5%. To be increased @ 1% annually for five years.
13	Propylene polymers	7.5%	--do--
14	Styrene polymers	7.5%	--do--
15	Poly Vinyl Chloride	10%	10% to 10.5%. To be increased @ 0.5% annually for five years.
16	Acrylic Polymers	7.5%	7.5% to 8%. To be increased @ 0.5% annually for five years
17	Polycarbonates	7.5%	--do--
18	Polyamides	7.5%	--do--
19	Polyether Polyols	7.5%	7.5% to 8.5%. To be increased @ 1% annually for five years
Finished Plastic Articles (10/15% to 20%)			
20	Plastic articles	10%/15%	Current level of import duty is 10% and 15%. To be increased to @ 20%
Petrochemicals items			
21	PSF(Polyester Staple Fibre & PFY (Polyester Filament Yarn)	5%	7.5%
22	Polyethylene Terephthalate (PET For Textiles)	5%	7.5%
23	Polyethylene Terephthalate (PET For Bottles)	5%	10%

3.13 When asked about response of the Department of Revenue on the recommendation of nil import duty on feedstock such as Naphtha and Natural gas (Ethane) the Department in its written reply stated as under:-

“The Department of Chemicals and Petrochemicals has recommended nil import duty on feed-stock such as Naphtha and Natural gas (Ethane) to be cost competitive in the global open economy. The Department of Revenue has not considered all the proposals in Budget 2020-21. However, they communicated vide OM No. 334/7/2019-TRU dated 04/05/2020, that the proposal relating to Custom duty/ tariff rate and legislative changes in Customs and Central Excise were examined in detail including stakeholder's consultation and action as appropriate has been taken on all such references. Accordingly, all the references, so received stand disposed off. They further stated that if the Department wishes to pursue any proposal further, it may be sent afresh with latest information and data”.

3.14. The Department further informed that the Department of Chemicals and Petrochemicals has recommended to increase the import duty on finished goods (Plastics and articles thereof) from 10% and 15% to 20% to promote Make in

India initiative. The Department of Revenue has notified increase of import duty to 25% for some of the finished products like plastic furniture etc.

H. **Free Trade Agreements**

3.15 Regarding Free Trade Agreements (FTAs) signed by India and petrochemicals that are allowed to be imported at nil/concessional rate of customs duty as part of those agreements, the Department of Chemicals and Petrochemicals in its written reply stated as follows:-

”The Trade Agreements came into force during the period 2009-11 including trade negotiations with ASEAN, Japan, Korea and Malaysia. The key impact of these trade agreements, include:

- a. Bilateral trade increased post signing of FTAs. However, Imports from FTA partners into India increased at a higher rate than India's exports to partner countries agreements
- b. India's international trade routed through the preferential route/ FTAs is small with not much growth in exports to FTA nations indicating low utilization rate of trade agreements by India. Complex rules of origin criteria, lack of information on FTAs, higher compliance costs and administrative delays dissuade exporters from using preferential routes. The compliance cost of availing benefits under these FTAs is so high that exporters prefer using the normal route.
- c. Trade deficit in chemical and petrochemical sector with FTA countries also seems to worsen post signing of trade agreements
- d. Liberalizing trade against major exporters and established markets may pose threat to development and investments in domestic industry
- e. Given higher margin of preference (MFN- preferential duty) offered by India under the FTAs, the surge in imports is much higher compared to surge in exports for India.”

3.16 As regards to Department's perspective on the impact of such FTA imports on the domestic petro-chemicals sector, the Department in its written reply has stated as below:-

“As imports are rising, both from FTA and non-FTA partners, India is working with a global strategy to manage this scenario. Effectiveness of tariff is declining and hence, India is developing combination of non-tariff

measures (NTMs), which are WTO compatible. For NTMs, India is working on safety regulations and quality standards.

India has significant advantage in exporting number of products but this has not yet been exploited properly. Hence, rather than making attempt to protect domestic industry only, it is necessary to equip them for global competition. This will help the industry in two ways: with increasing ability to counter imports and able to sail through in international market with rising exports. Developing chemical and petrochemical value chain within the country (through connecting clusters), subsidy for new technology, assisting in accessing new market and help in product diversification will be helpful in improving the situation.”

I. Indigenous Production of Petrochemicals entirely imported presently

3.17 The Committee sought from the Department of Chemicals and Petrochemicals the details of petrochemicals that are entirely imported, the reasons for import and whether any steps have been taken or proposed to be taken for indigenous production of these petrochemicals. To this, the Department stated as under:-

“The Styrene and Polycarbonates are being entirely imported. There is no domestic capacity of styrene and Polycarbonates in the country. To curb imports, for creation of new capacity and to promote investment; custom duty has been proposed to be increased in phased manner as the gestation period for these projects is 3 to 5 years. Further, to be cost competitive in the global open economy, nil import duty on feedstock such as Naphtha and natural gas (ethane) has been recommended by the Department. In order to prevent import of finished goods (plastics and articles thereof) and to promote make in India initiative, import duty has been recommended to be increased from current level of 10% and 15% to 20%.”

3.18 When the Committee asked for reasons for no domestic production capacity for these classes of petrochemicals and the steps which are being taken to manufacture these Petrochemicals in the country, the Department in its written reply has stated as follows:-

“**Styrene** is produced from ethylene and Benzene. Ethylene mainly goes in higher demand products such as PE, PVC, MEG etc. Domestic Styrene demand in India has currently reached considerable volume of ~800 KTPA and domestic producers are exploring options of setting-up of Styrene plants in India. Measures such as enhancement of custom duty on Styrene

& its derivatives need to be considered for encouraging investors for domestic manufacture.

Polycarbonate (PC) resin is produced with the main inputs, Bisphenol- A (BPA) and phosgene. Disposal of by-product sodium chloride is a key barrier for production of Poly-carbonate. Setting up of PC plant involves huge initial investment and access to technology is guarded. During 2018, India imported 145 KTA of Poly-carbonate. Investors are exploring the possibility and viability of setting-up of PC plants in India.”

Chapter IV

Challenges before Petrochemicals Sector and step forward

4.1 Challenges for Indian Petrochemical Industry

The Department of Chemicals and Petrochemicals enumerated the following points challenging Indian Petrochemical Industry in their Power Point Presentation:-

- (i) Non - availability of competitive feedstock like Natural Gas, Naphtha
- (ii) Highly capital intensive
- (iii) High cost of capital in the country
- (iv) Few world - scale capacity plants
- (v) Closely guarded technologies for speciality petrochemical products
- (vi) Primary focus on energy security

4.2 Keeping in view the above challenges of Indian Petrochemical Industry the Department has identified the following strategies to promote growth of Petrochemical Sector:-

- (i) Integration of Refinery and Petrochemical complexes
- (ii) Building world scale plants
- (iii) Utilization of low value feedstock like refinery off-gas, Kerosene, gas oil etc. as
- (iv) petrochemical feedstock
- (v) Rationalization of duties on feedstock recommended
- (vi) Attracting new investments

4.3 The Committee asked whether any concrete steps have been taken during last five years to build world scale plants for the production of Petrochemicals in the country so that the increasing demand can be taken care of. In this regard, the Department of Chemicals and Petrochemicals in its written reply stated as under:-

"To promote investment for building world scale petrochemical plants, the Department has recommended increase in import duty to make petrochemical products globally cost competitive and economically viable"

4.4 Since no specific reply was given by the Department in regard to building World Scale Plants in the country for the production of petrochemicals, the

Committee asked the reasons for the same. In its written reply, the Department of Chemicals and Petrochemicals made the following submission:-

“To promote investment for building world scale petrochemical plants, the Department has recommended increase in import duty to make petrochemical products globally cost competitive and economically viable. The entrepreneurs are setting up units in the private sector, based on techno-economic feasibility, demand and supply scenario and cost of feed-stock/ raw materials. The Department, in association with stakeholders, organizes international seminars cum exhibitions on Chemicals and Petrochemicals industry, which provides platform for the Indian industry and international community for exchange of information on trade, business and technology etc. for the growth of the sector”.

Measures being taken to promote Petrochemical Sector

A. PCPIR Policy

4.5 Department of Chemicals & Petrochemicals is implementing Petroleum, Chemicals and Petrochemicals Investment Regions (PCPIRs) in a cluster approach for promotion of Petroleum, Chemical & Petrochemical Sectors in an integrated & environment friendly manner on a large scale. Under the PCPIR policy, 4 PCPIRs in the States of Andhra Pradesh, Gujarat, Odisha & Tamil Nadu are in the process of being set up. The 4 PCPIRs are expected to attract investment in the downstream sector and generate employment. When the Committee asked about the time by which these PCPIRs are likely to be fully functional and to provide complete information about the progress made in establishment of these PCPIRS, the Department in its written reply has provided following information:

“ Four Petroleum, Chemical and Petrochemical Investment Regions (PCPIRs) are being implemented in the States of Andhra Pradesh (Vishakhapatnam), Gujarat (Dahej), Odisha (Paradeep) and Tamil Nadu (Cuddalore and Nagapattinam) to promote investment and industrial development in these sectors. Once fully established, these four PCPIRs are expected to attract investment of around Rs. 7.63 lakh crore. As per data available from State Governments, investments worth Rs. 2.12 lakh crore approximately have been made / committed in these regions. The four PCPIRs are expected to generate employment for around 33.83 lakh persons. Around 3.50 lakh persons have been employed in direct and indirect activities related to PCPIRs.

4.6 As per the written note furnished by the Department the status of implementation and execution of these projects is as follows:-

Indicator	Gujarat	Andhra Pradesh	Odisha	Tamil Nadu
Location/ Region	Dahej, Bharuch	Vishakhapatnam – Kakinada	Paradeep	Cuddalore- Nagapattinam
Date of Approval	Feb, 2009	Feb, 2009	Dec, 2010	July,2012
Date of MoA	07.01.2010	01.10.2009	03.11.2011	20.02.2014
Total Area(Sq. kms.)	453.00	640.00	284.15	256.83
Processing Area (Sq.kms.)	248.00	270.00	123.00	104.00
Anchor Tenant	ONGC Petro Additions Limited (OPaL)	Yet to be finalized	Indian Oil Corporation Ltd. (IOCL)	TIDCO is awaiting the revival of proposed Anchor Tenant of Nagarjuna Oil Corporation Limited /new project to be set up in this location.
Refinery / Cracker capacity in MMTPA	Cracker: Ethylene: 1.1 Propylene: 0.6	Yet to be finalized	15 (Greenfield refinery).	
Anchor Project Status	Commissioned	Yet to be finalized.	Commissioned in February, 2016.	
Amount of approved infra. projects (Rs. crore)*	NA	18,731.00	13,634.00	13,354.00
Gol share in form of VGF (Rs. crore)	80.50	1206.80	716.00	1143.00 (budgetary support-1500)
Total proposed investments (Rs. crore)*	50,000.00	3,43,000.00	2,77,734.00	92,500.00
Investments made (Rs. Crore)	1,12,082	46,729.38- Committed & 13845.04 – Actual made so far	45,000.00	8,100.00
Projected employment (No.)*	8,00,000	11,98,000	6,48,000	7,37,200
Employment generated (No.)	1,80,000	1,18,675	38,260	13,950
Status of Master Plan notification	Development Plan sanctioned.	Field Studies, village level consultations completed. Once the Anchor unit finalizes location, configuration and capacity of the Cracker Complex etc., Master Plan will be	Preparation of Master Plan is in process.	Will be taken up after formation of PCPIR Management Board.

		finalized.		
Status of EIA	Environmental Clearances & Coastal Region Zone received.	Environmental Clearances, EIA Studies, Collection of Baseline Data etc completed. Once the Master Plan finalized based on location, configuration and capacity of the Cracker Complex the public hearing will be conducted and will be processed for Environmental Clearance.	Tor received from MoEFF&CC. EIA Study is in process.	Will be taken up after formation of PCPIR Management Board.

* At the approval stage of the projects.”

4.7 During evidence, on being asked regarding the criteria being followed to select the regions for PCPIRs, a representative of the Department informed the committee as under:-

“Sir, actually, the PCPIR policy was notified in 2007. One of the most important guiding criteria was that it should be strategically located. The minimum area should be 250 square kilometres and out of that, 40 per cent should be dedicated for processing and remaining 60 percent should be having other ancillary facilities including social infrastructure, housing, education, health facilities etc. Also, it should be strategically located adjacent to a port because these kinds of complexes, which depend heavily on a port activity also as you may have to , import crude oil and you may have to export many products, so they should be strategically located adjacent to a port. We have sanctioned four PCPR so far. It was planned in such a way that it provides the entire ecosystem for upstream to downstream, and all types of processing in the petroleum, chemical and petrochemical segments. So, there should be anchor tenant around whom the entire development can take place so that this anchor tenant will also be providing a centre of development. Once a particular investment in a big one comes up, naturally the surrounding area will also develop. They also will provide some amount of building blocks and feedstock required for the downstream industry to grow and develop. So, these are the criteria based on which, these four PCPARs have been sanctioned so far. They are at Dahej, Paradeep, Vizag, Cuddalore, Nagapattinam.”

4.8 Further on being asked, as to why other coastal regions were not selected for this policy. A representative of the Department informed as under:-

“Actually, it was driven by the State Governments. Depending on the State Government’s proposal, we had really processed those cases and examined the feasibility as per the guidelines laid down in the policy. Then, it was approved. If Maharashtra comes forward, then it will also be notified.”

B. Scheme for Plastic Parks

4.9 The Scheme for setting up of need based Plastic parks for development of strong eco-system along with provision of common facilities through cluster development approach are being set up in Madhya Pradesh(2), Odisha, Assam, Jharkhand & Tamil Nadu. The aim is to consolidate and synergize the capacities of downstream plastic processing industry with the larger objective of contributing to the economy by increasing investment, production and export in the sector and generate employment.

C. Scheme for setting up of Centres of Excellence (CoEs)

4.10 Under CoE, grant-in-aid is provided to select educational and research institutes to improve existing Petrochemical technology and promote development of new applications of polymer and plastic. The focus of the scheme involves modernization and up-gradation of the existing manufacturing processes, improved quality of existing products and makes it safe for environment and human health along with the research and development in the field of Bio-degradable Plastics. Closely guarded technologies for specialty Petrochemical Products is one of the challenges being faced by Indian Petrochemical Industry.

4.11 When asked whether any steps are being taken by the Department for strengthening Research and Development in the Petrochemical Sector the Department in its written reply has stated that Spending on Research and Development (R&D) in the country is very low. In order to encourage R&D activities in the country, consultations with industry associations are being conducted from time to time in the Department.

4.12 In regard to the above submission of the Department, the Committee further enquired, regarding specific steps proposed to be taken to create a strong R&D base in the country apart from merely consulting Industry Associations. To this the Department furnished the following clarification:-

“Research and Development is critical and of paramount importance for the growth and development of Petrochemicals sector. Continued R&D efforts in the part of the industry helps to improve their quality standards, obtain higher yields resulting in reduction in cost of production and to earn

competitive edge in the International Market. The industry would, therefore, have to make large investments in R&D to successfully counter competition from the international Petrochemicals industry. India has a number of scientific institutions and the country's strength lies in its large pool of highly trained scientific manpower.

The Department of Chemicals & Petrochemicals has a scheme for setting up of Centres of Excellence (CoE) for Research and Development in the field of plastics, engineering polymers and specialty plastics. Under the scheme for setting up of Centres of Excellence (CoE), grant-in-aid up to Rs 5 crore each, is being provided to educational and research institutes to improve existing Petrochemical technology and promote development of new applications of polymers & plastics. The Department has established five CoEs so far and three CoEs are under progress. Three new CoEs are also planned to be set up”.

D. Chemical Promotion Development Scheme (CPDS)

4.13 Under Chemical Promotion Development Scheme (CPDS), Promotion and development of Indian chemicals and petrochemicals industry is done by providing grant-in-aid and logo support to Industry Associations for organizing seminars, workshops, conferences, etc.

E. Role of Central Institute of Petrochemicals Engineering & Technology (CIPET)

4.14 Central Institute of Petrochemicals Engineering and Technology (CIPET) has been conducting regular long-term Degree (Graduate & Post Graduate), PhD & Diploma programmes with emphasis on practical training in the field of Plastic Engineering and Technology. CIPET conducts short-term/tailor-made/in-plant training programs in plastics and allied areas in order to impart skill to educated, unemployed youth and to create employment as well as opportunities for self-employment. GoI provides grants to CIPET to strengthen civil and technical infrastructure, research and development capacities, academics and training initiatives. CIPET, through its functional centres across the country, has extended a strong helping hand to industry by undertaking over 84,000 technology support assignments & projects in 2018-19. Taking initiatives under 'Make in India' and 'Indigenization of Technology', developments of new plastics products and technology solutions have been taken up for different industrial sectors and PSUs. An Advanced Polymer Design and Development Research Laboratory (APDDRL) is operational at Bengaluru for R&D in key areas. CIPET has been aggressively moving forward towards circular economy while taking up recycling of plastic waste along with 'Swachh Bharat' scheme.

F. Tariff & Non-Tariff

4.15 The Department recommends appropriate duty structures on feedstock and Petrochemical products, as per domestic capacity/requirement. The countries from where the petrochemical imports have been imposed with anti dumping duties are not allowed duty concession under FTAs. The Department is in the process of making standards mandatory for Chemicals and Petrochemicals and also creating new Harmonized System (HS) codes for identification of products falling under 'Other' category.

G. Attractiveness of India as an investment destination for the petro-chemical sector

4.16 The Committee asked the Department of Chemicals and Petrochemicals to elaborate the steps taken and achievements made by it for attracting Foreign Direct Investment in the Petrochemical Sector during the last five years. In this regard, the Department furnished the following reply:-

'The sector is delicensed and deregulated. 100% FDI is allowed through automatic route in chemicals sector except for a few hazardous chemicals. The FDI equity inflow in the sector increased by 107% to USD 2.2 billion during April 2014-March 2016 as compared to USD 1.08 billion during April 2012-14. The FDI equity inflows in Chemicals (including Pharmaceuticals other than Fertilizers) sector during April – September 2016 is USD 532.48 million'.

4.17 When asked about perceived attractiveness of India as an investment destination for the petro-chemical sector vis-à-vis those countries which are competing for investment and whether the Department has done any gap analysis in terms of incentives which the competing countries provide and India is not providing or is unable to do so the Department in its written reply stated as under:-

"Petrochemicals sector plays a significantly important role in the economic development of the country, by providing various raw materials, inputs and performance enhancers to virtually all sectors of the economy. World class infrastructure including developed land, common effluent treatment facilities along with solid waste disposal and incineration facilities are very important to attract investment in the petrochemical sector in India. Widening the trade deficits in petrochemical sector in India has created a need for setting up petrochemical clusters downstream, adjacent to the refineries, with state-of-art infrastructure to facilitate ease of doing business at one place. The eco-system of entrepreneurship and employment thus created would also meet the rising demand for the petrochemical intermediates and polymer/plastic products. The

Department has also set a vision to contribute about USD 200 billion in the nation becoming US\$ 5 Trillion economy by 2025, and accordingly has taken many initiatives like development of PCPIRs (Petroleum, Chemicals and Petrochemicals Investment Region) which are expected to promote investment and industrial development besides creation of lakhs of jobs in these sectors.

The Department is also regularly organizing international summits like “India Chem”, which provides a platform for international investors and concerned stakeholders to discuss the issues and opportunities. The Chemicals & Petrochemicals industry has got tremendous opportunities for high growth, requiring very high level of investment of around US\$ 300 Billion over next five years and advanced technologies. In view of the recent developments in US-China trade relations, the opportunities got further enhanced and many multinational companies are looking towards India to set up their production facilities. Pandemic Covid19 created a situation where the entire world is aiming to reduce their dependence on China for supply of essential raw materials and key products. This gives an opportunity for India to become a global supplier, particularly of Petrochemicals. As compared to incentives being given by other countries such as Vietnam and China, to attract Foreign Direct Investment (FDI) required measures include grant of faster environmental clearances, single window clearance for statutory/ legal requirements, provision of export incentives and lower cost of capital which need to be further improved in India”.

Observations and Recommendations

Joint Committee to examine Demand and Supply Scenario

1. The Committee note that the gap between demand and capacity to produce major petrochemicals in the country will increase from 1124 Kilo Tonnes per Annum (KTPA) in 2018-19 to 7112 KTPA by 2025. So it is very much essential to look into the Demand and Supply Position of petrochemicals in a holistic manner in the country particularly in view of the prevailing Covid 19 situation and to initiate appropriate measure to meet the growing petrochemicals need of this huge country. In this regard, the Committee note that a few steps have been taken by the Department of Chemicals and Petrochemicals in coordination with the other stake holders in the field. Firstly, a Committee has been constituted jointly by the Ministry of Petroleum and Natural Gas (MoP&NG) and the Department of Chemicals & Petrochemicals (DCPC) with expert members from PSUs and others to examine petrochemicals demand and supply scenario. Secondly, a draft Petrochemicals Perspective plan has been prepared by DCPC in consultation with MoP&NG, Engineers India Limited(EIL), Indian Oil Corporation(IOC) and other stakeholders and thirdly, DCPC has asked EIL to prepare a perspective plan based on the projected Supply & Demand of Petrochemicals with possible Refinery & Petrochemicals complex configurations involving various feed-stock routes and expected investment & return in each configuration. The Committee further note that the Joint Committee's Report and the draft Reports on Perspective Plan are being revisited in view of the global pandemic due to COVID19 which has changed and disrupted the scenario of world

economy. The Committee also note that in view of the recent developments in US-China trade relations, the opportunities got further enhanced and many multinational companies are looking towards India to set up their production facilities. Moreover, Pandemic Covid19 created a situation where the entire world is aiming to reduce their dependence on China for supply of essential raw materials and key products. This gives an opportunity to India to become a global supplier, particularly of Petrochemicals. In this regard, the Committee feel that there should be synergetic approach in handling this very crucial matter of attaining self-sufficiency in meeting the domestic demand for petrochemicals and to become a global leader in the field. The Committee, therefore, recommend that the Joint Committee comprising senior representatives of MoP&NG, DCPC, EIL, Petroleum PSUs and the private sector and the experts in the field should be declared as the nodal entity for examining all aspects relating to 'Demand and Supply of Petrochemicals in the country and to make the country a global supplier of petrochemicals by grabbing the opportunities created due to the present situation in the world. The perspective plans which have already prepared for the sector should be studied by this Committee in the light of the prevailing world economic scenario and a concrete road map for achieving complete self reliance in the field of petrochemicals and to make the country a major hub for production of petrochemicals should be chalked out alongwith a definite time schedule. Based on the road map, necessary steps should be taken to achieve the goal in a time bound manner. The Committee may be apprised of the action taken on the above recommendation within three months.

Setting up of Ethylene Crackers

2. The Committee note that there are eleven Ethylene crackers presently in the country with the combined capacity of 7277 Kilo Tonnes Per Annum (KTPA) and two more Ethylene Crackers are under construction with the capacity of 2200 KTPA. As per the projection made by the Department of Chemicals and Petrochemicals, by the year 2025, four more Crackers are required each with Ethylene capacity of 1500 KTPA at an approximate investment of Rs.1,60,000 Crore. Ethylene is an important building block for producing various intermediary petrochemicals and their derivatives. So, it is very much necessary to have requisite number of Ethylene crackers in the country. In this regard, the Committee recommend that the Department should monitor the two under construction joint venture projects by HPCL-Mittal Energy Limited (HMEL) at Bathinda, Punjab and HPCL-Rajasthan Refinery Limited (HRRL) at Barmer, Rajasthan and render all possible assistance for timely completion and commissioning of these projects. The Committee also note that three more mega projects with the combined Ethylene capacity of about 9600 KTPA at the combined investment of about Rs.3,50,000 Crore are in the pipeline stage. These crackers are proposed to be set at Raigad in Maharashtra, Vadinar in Gujarat and at Balasore in Odisha. In this regard, the Committee expect that the Department of Chemicals and Petrochemicals should play the role of facilitator in getting environmental, legal and other clearances in coordination with the State Governments concerned so as to set up these crackers in a time bound manner. The

Committee may be apprised of the progress made in regard to the undergoing and proposed projects for setting up Ethylene Crackers.

Demand and availability of petrochemicals

3. The Committee note that the demand and supply forecast for 2025 is almost balanced in respect of Polypropylene (PP) and Purified Terephthalic Acid(PTA). However, the demand and supply forecast for 2025 is in deficit in respect of host of other petrochemicals viz. Polyethylene(PE), Poly Vinyl Chloride(PVC), Mono Ethylene Glycol (MEG), elastomers etc. Moreover, Styrene and Polycarbonates are being entirely imported as there is no domestic production capacity for these two petrochemicals in the country. Petrochemicals, whose production capacity is less than the demand, are imported to meet the domestic demand. Since it is necessary that various petrochemicals are produced in the country in requisite quantity so as to meet the domestic demand, the Committee recommend that the Demand and availability of each of the petrochemicals should be studied separately and appropriate steps should be taken to augment their production in the country so as to meet the demand domestically. Wherever necessary, augmentation of customs duty should be considered to safeguard the interests of domestic producers and to discourage the tendency of imports of petrochemicals which are produced in the country. As far as Styrene and Polycarbonates are concerned, domestic producers are exploring options of setting-up of Styrene and Polycarbonate plants in the country. In this regard, the Department should render the necessary assistance as a facilitator to set

up industries to manufacture such petrochemicals which are presently imported wholly or substantially.

Capacity Utilization

4. The Committee note that the percentage of capacity utilization in the production of Basic Major Petrochemicals rose from 79.9% to 87% during the period from 2015-16 to 2018-19. However, none of the Basic Major Petrochemicals has achieved 100% capacity utilization except Synthetic Detergent Intermediates. Capacity utilization for production of Performance Plastics and Synthetic Rubber are particularly less when compared to other petrochemicals. As per the reasons quoted by the Department, factors such as cost of feed stock, scale of production etc. encourage the cheaper imports of petrochemicals. In order to improve capacity utilization of polymers, synthetic rubbers and performance plastics, and to make them globally cost competitive, the Department of Chemicals and Petrochemicals had recommended to Department of Revenue to increase import duty on these products. Some of these recommendations were accepted by the Department of Revenue and some were not. Since it is very much necessary to fully utilize the capacity for the production of various petrochemicals so as to reduce the dependence on imports, the Committee recommend that apart from increasing import duty which the Department may take up again with the Department of Revenue with the fresh proposals, the Department should conduct a study in coordination with the industry associations to find out the exact reasons for non achieving 100% capacity utilization in production of various

petrochemicals and appropriate steps should be taken to assist the manufacturers in attaining 100% capacity utilization.

Setting up of World Scale Plants

5. The Committee note that the Department of Chemicals and Petrochemicals has recommended to increase import duty to make petrochemical products globally cost competitive and economically viable so as to promote investment for building world scale petrochemical plants. In Committee's view, increasing import duty may be one of the factors which may help setting up of World Scale Plants in the country but there are many other factors which are equally essential to attract entrepreneurs to set up world scale plants in the country for the production of Petrochemicals viz. faster and hassle free clearances, lowering of capital cost, incentives for setting up of world scale plants, tax holidays etc. The countries like China, Vietnam, etc. are the competitors in this field and it is necessary to study the incentives being offered by them to attract Foreign Direct Investment in the field of petrochemicals. The Committee, therefore, recommend that the Department of Chemicals and Petrochemicals to study the incentives and the ease of doing business methods viz. grant of faster environmental clearances, single window clearance for statutory/ legal requirements, provision of export incentives, lower cost of capital, tax holidays, etc. being adopted by leading countries to attract entrepreneurs to set up large scale petrochemical plants in their countries and to take concrete steps to attract Foreign Direct Investment

for setting up World Scale Petrochemical Complexes in the country based on the outcome of that study.

Vision 2024 Plan

6. The Committee are concerned to note that the overall Petrochemicals imports during 2018-19 stands at around Rs. 1,28,000 crore approximately, which was 3.56% of the total national imports. The overall Petrochemicals exports during 2018-19 were to the tune of around Rs. 78,000 crore approximately which was 3.73% of the total National Exports. Although percentage of share of import of petrochemicals is less than the export of petrochemicals, there is a trade imbalance in actual value terms which is to the tune of Rs. 50,236 crore for the year 2018-19. In this regard, the Committee note the reply given by the Department that there is free trade of Petrochemicals which includes building blocks, intermediates and final products due to open global economy unless and until specifically mentioned trade barriers for individual products. In order to meet the domestic demand, investment in the sector for new capacity creation, import substitution and to promote exports with employment generation, Department of Chemicals and Petrochemicals has prepared a Vision 2024 Plan. To achieve the objectives of this plan, certain initiatives are being taken by the Department viz. strengthening of PCPIRs, incentives for mega investment, Ensuring quality by formulating new standards and making those standards mandatory, Skilling & Employment generation, technology support services to SMEs, better trade intelligence (new HS codes) and Advisory Forum as a permanent platform for interaction with industry. In this regard, the Committee are of the view that the lofty goals of Vision 2024

plan can be achieved only if the above mentioned initiatives are continued with full vigour and continuous monitoring. Hence, the Committee recommend that yearly targets should be set and concrete steps should be taken to achieve those targets. The progress made should be reviewed at the end of every year so that the objectives of the Vision 2024 plan be achieved within the stipulated period.

Rationalization of Customs Duty Structure

7. The Committee note that the Department of Chemicals and Petrochemicals has recommended reduction of customs duty on imported feedstock and increase in customs tariff on products, as a long term planning for new capacity creation and to provide adequate protection to the domestic manufacturers where there is sufficient domestic capacity and also the gap between capacity and demand is high. The Department informed the Committee that the increase in custom duty will help to reduce imports and encourage establishing domestic capacities and sparing for production of downstream chemicals other than polymers. The Committee note that the Department has proposed reduction of Customs Duty on Naptha from the present 4% to zero and on Natural Gases from the present 2.5% to zero based on the consultations with the industry associations. The Department also recommended to the Department of Revenue to increase the import duty on finished goods (Plastics and articles thereof) from 10% and 15% to 20% to promote Make in India initiative. The Department had also made a presentation to the Department of Revenue on rationalization of customs duty structure. While the Department of Revenue has notified increase of import duty to 25% for

some of the finished products like plastic furniture etc., it has not decreased the customs duty on feedstocks stating the reason that the proposals were examined in detail including stakeholders' consultation and action as appropriate has been taken on all such references. They further requested the Department to send fresh proposal with latest information and data if it wishes to pursue any proposal further. In this regard, the Committee are of the view that the manufacturing of end products should be promoted in the country instead of importing them so that it can create downstream employment in the country. Moreover, the reduction of customs duty on import of feedstocks and increase in custom duty on end-products will help in expanding domestic capacity creation as the Petrochemical industry has huge value addition potential. The Committee, therefore, recommend that the Department of Chemicals and Petrochemicals should prepare and submit a fresh proposal for reduction of customs duty on import of Naphtha and Natural Gas to zero alongwith the other proposals for rationalization of Customs Duty Structure of petrochemicals for the consideration of the Department of Revenue at the earliest. This recommendation of the Committee may also be sent to that Department for its compliance.

Harmonized System (HS) codes

8. The Committee note that the chemicals and petrochemicals appearing in "others" category need identification to facilitate and monitor international trade, as the non-availability of specified codes in the customs tariff has resulted in huge undesirable EXIM trade under "others" category.

In this regard, the Committee were informed that the Department of Chemicals and Petrochemicals has proposed new Harmonized System (HS) codes for products falling under "other" category. Based on the recommendations of the Department, 53 HS codes have been notified by Department of Revenue during 2018-19. Further, during 2019-20, new HS codes for 80 chemicals and petrochemicals were proposed by the Department of Chemicals and Petrochemicals. Out of this, the Department of Revenue notified new HS Codes of 49 chemicals and 4 petrochemicals. Since the classification of petrochemicals are of prime importance from the point of health, safety & environment including national security along with prevention of unfair trade practices, the Committee recommend that the Department may continue this exercise of assigning HS codes for chemicals and petrochemicals which are falling under other category and ensure that all such chemicals and petrochemical products are duly classified to prevent unfair trade practices, etc.

Free Trade Agreements

9. The Committee are concerned to note that the Imports from Free Trade Agreement partners into India increased at a higher rate than India's exports to partner countries and also observe that trade deficit in chemical and petrochemical sector with FTA countries seems to worsen post signing of trade agreements. These Free Trade Agreements were signed with ASEAN, Japan, Korea and Malaysia during the period 2009-11. The Committee note from the submissions made by the Department of Chemicals and Petrochemicals that India's international trade routed

through the preferential route/ FTAs is small with not much growth in exports to FTA nations indicating low utilization rate of trade agreements by India. Complex rules of origin criteria, lack of information on FTAs, higher compliance costs and administrative delays dissuade exporters from using preferential routes. Given higher margin of preference (MFN-preferential duty) offered by India under the FTAs, the surge in imports is much higher compared to surge in exports for India. Since these Free Trade Agreements have caused adverse impact on the petrochemical sector in the country, the Committee recommend that the Government may carry out a study on impact of FTAs signed with various countries on the trade of chemicals and petrochemicals with those countries and should take appropriate steps to safeguard the interests of domestic chemical and petrochemical industry. The Department of Chemicals and Petrochemicals should also take up this matter with the Ministry of Commerce and Industry for the resolution of the same. If necessary, the Government may consider renegotiation of these agreements and due care should be taken while negotiating such Free Trade Agreements in future to protect the domestic industry.

Anti-Dumping Duty

10. The Committee are concerned to note the reply furnished by the Department to the query of the Committee whether any demands/requests for imposing anti-dumping duty were made by the Department to Directorate General of Trade Remedies (DGTR) and the present position of those demands/ requests. In this regard, the Department neither provided the details of recommendations made by it nor the present position of

those demands/requests except the submission that it does not intervene after making recommendations as the safeguard duty and anti-dumping duty is being dealt by DGTR which is an independent quasi-judicial body. The Committee would not like to dispute the judicial status of DGTR but expect that the genuine anti-dumping cases should be disposed of in a time bound manner so as to protect the domestic industry from the undue advantage being enjoyed by foreign players through dumping of goods in the country in the garb of cheap imports. In this regard, the Committee recommend that the Department of Chemicals and Petrochemicals would pursue vigorously all cases filed by it before DGTR for imposition of anti-dumping duties in a time bound manner.

Petroleum, Chemicals and Petrochemicals Investment Regions

11. The Committee note that the Government of India had formulated PCPIR Policy in April 2007 and the four PCPIRs viz. in the States of Andhra Pradesh, Gujarat, Odisha and Tamil Nadu are being established since then in a cluster approach for promotion of Petroleum, Chemical & Petrochemical Sectors in an integrated & environment friendly manner on a large scale. Once fully established, these four PCPIRs are expected to attract investment of around Rs. 7.63 lakh crore. As per data available from State Governments, investments worth Rs. 2.12 lakh crore approximately have been made / committed in these regions. The four PCPIRs are expected to generate employment for around 33.83 lakh persons. Around 3.50 lakh persons have been employed in direct and indirect activities related to PCPIRs. However, in Committees' view, the progress made so far

in establishing these PCPIRs is not upto the mark because thirteen years have already passed but not a single PCPIR has been fully established so far. Anchor Tenents have been appointed and anchor projects have been commissioned for Gujarat and Odhisha PCPIRs but the same are yet to done in respect of Andhra Pradesh and Tamil Nadu PCPIRs. Environment clearance has been obtained only in respect of Gujarat PCPIR. Since such inordinate delays will defeat the very purpose for which these PCPIRs are being established, the Committee strongly recommend that the Department of Chemicals and Petrochemicals should monitor the progress made in establishment of these PCPIRs on monthly basis and the matter should be pursued at the highest level with the concerned State Government particularly with the Governments of Tamil Nadu and Andhra Pradesh where the progress is very slow. The Department should provide the necessary monetary and technical assistance to the State Governments so as to achieve the goal in a time bound manner. Moreover, the Department has set a target to strengthen these PCPIRs under Vision 2024 Plan and the Committee hope that the Department would initiate concrete measures to fully establish all the four PCPIRs in a time bound manner. The progress made in this regard may be intimated to the Committee.

Research and Development in Petrochemical Sector

12. (i) The Committee note that the closely guarded technology for specialty Petrochemical Products is one of the challenges being faced by Indian Petrochemical Industry. The Committee were informed that spending on Research and Development (R&D) in the country is very low. In order to encourage R&D activities in the country, consultations with industry

associations are being conducted from time to time in the Department of Chemicals and Petrochemicals. In this regard, the Committee are of the firm view that Research and Development is critical and of paramount importance for the growth and development of Petrochemicals sector and the same is possible only through the wholehearted and combined initiatives of the Department of Chemicals and Petrochemicals, research institutions, industry associations and the individual industries. R&D efforts in the field of petrochemicals should aim at improving quality standards, obtaining higher yields resulting in reduction in cost of production and to earn competitive edge in the International Market. India has a number of scientific institutions and the country's strength lies in its large pool of highly trained scientific manpower. The Committee, therefore, recommend that the Department of Chemicals and Petrochemicals should motivate and coordinate the efforts of the Research Institutions, Industry Associations and individual industries in creation of cutting edge technologies and specialty products in the field of petrochemicals so as to make the country competitive with the leading countries in the world.

(ii) The Committee note that the Department of Chemicals & Petrochemicals has a scheme for setting up of Centres of Excellence (CoE) for Research and Development in the field of plastics, engineering polymers and specialty plastics. Under this Scheme, grant-in-aid up to Rs 5 crore each, is being provided to educational and research institutes to improve the existing Petrochemical technology and to promote development of new applications of polymers & plastics. The focus of the scheme involves modernization and up-gradation of the existing

manufacturing processes, improved quality of existing products and makes it safe for environment and human health along with the research and development in the field of Bio-degradable Plastics. The Department has established five CoEs so far and three CoEs are under progress. Three new CoEs are also planned to be set up. Since this Government's initiative to promote research in the field of petrochemicals has to be strengthened further, the Committee recommend that the Department should examine whether the Grant-in-Aid of Rs.5 crore is adequate to carry out research in the fields of modernization and upgradation of existing manufacturing processes and improving the quality of existing products. If the amount is inadequate the same should be enhanced suitably. The Committee further recommend that R&D activities in the field should also be promoted in collaboration with premium educational and research institutions of the country such as IITs, CIPET and other Institutes of national importance so that transformative technology and products can be developed which would give the domestic industries a competitive edge in global market.

New Delhi;
12 March, 2021
21 Phalguna, 1942 (Saka)

KANIMOZHI KARUNANIDHI
Chairperson
Standing Committee on
Chemicals and Fertilizers

**MINUTES OF THE SIXTH SITTING OF THE
STANDING COMMITTEE ON CHEMICALS & FERTILIZERS (2019-20)**

The Committee sat on Wednesday, the 04 December, 2019 from 1500 hrs. to 1615 hrs. in Committee Room 'B', Parliament House Annexe, New Delhi.

**KANIMOZHI KARUNANIDHI - CHAIRPERSON
MEMBERS**

LOK SABHA

2. Shri Ramakant Bhargava
3. Shri Prataprao Patil Chikhalikar
4. Shri Satyadev Pachauri
5. Shri Arun Kumar Sagar
6. Shri M. Selvaraj
7. Shri Pradeep Kumar Singh
8. Shri Prabhubhai Nagarbhai Vasava
9. Shri M.K. Vishnu Prasad
10. Dr. Manoj Rajoria

RAJYA SABHA

11. Shri G.C. Chandrashekhar
12. Shri Ahmad Ashfaque Karim

LIST OF WITNESSES

S.No.	Name of the Officer/Officials	Designation
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DEPARTMENT OF CHEMICALS AND PETROCHEMICALS

- | | | |
|----|-------------------------|------------------------|
| 1. | Sh. P. Raghavendra Rao | Secretary (C&PC) |
| 2. | Sh. Samir Kumar Biswas | Joint Secretary (Chem) |
| 3. | Sh. Kashi Nath Jha | Joint Secretary (PC) |
| 4. | Smt. Godhuli Mukherjee | Economic Adviser |
| 5. | Sh. Rajendra Kumar Soni | Director (PC-1) |

MINISTRY OF PETROLEUM AND NATURAL GAS

Shri Sushil T. Williams	DS (Ref)
-------------------------	----------

PSUs/AUTONOMOUS INSTITUTIONS

- | | | |
|----|----------------|-------------------------|
| 1. | Dr. S.K. Nayak | Director General, CIPET |
|----|----------------|-------------------------|

2.	Sh. Illangovan	Principal Director (T), CIPET
3.	Sh S. N. Yadav	Principal Director & Head CIPET:CSTS
4.	Shri Pankaj Misra	Director (Administration), CIPET
5.	Sh. Subodh Kumar	Executive Director (PC, AE &SD), IOCL
6.	Sh. A V Raghunadhan	GM (PCM), IOCL
7.	Sh. Pruthviraj Dash	Director (Finance), BCPL
8.	Sh. Prantik Sharma	Chief Manager (Marketing),BCPL

SECRETARIAT

- | | | | |
|----|----------------------------|---|-------------------------------|
| 1. | Shri Manoj K. Arora | - | Officer on Special Duty (LSS) |
| 2. | Shri Anil Kumar Srivastava | - | Director |
| 3. | Shri C. Kalyanasundaram | - | Additional Director |

2. At the outset, the Hon'ble Chairperson welcomed the Members of the Committee and stated that the sitting has been convened for briefing by the representatives of the Department of Chemicals and Petrochemicals on the subject "Demand and Availability of Petrochemicals including imports and exports".

3. Thereafter, Secretary, Department of Chemicals and Petrochemicals and other Officers of the Department made a power point presentation and briefing to the Committee on the subject. After the briefing, Members of the Committee raised questions on the subject which were answered by the Secretary and other witnesses. The following were the important Points discussed during briefing:-

- (i) Production of Petrochemicals
- (ii) Current and future Demand and supply scenario
- (iii) Import and export of Petrochemicals
- (iv) Petrochemical Cracker Complexes
- (v) Challenges for Indian Petrochemical Industry
- (vi) Strategies and measures being taken to promote Petrochemical sector
- (vii) Vision 2024 and the initiatives to achieve the vision
- (viii) Petroleum, chemicals and Petrochemicals Investment Region

4. The Committee decided to select the subject "Revival of closed and sick Fertilizer Units" for examination during 2019-20 in addition to the subjects already selected by the Committee.

5. The Committee also decided to undertake a study tour to Karnataka, Kerala and Tamil Nadu during January, 2020 in connection with the subjects under examination by the Committee.

The Committee then adjourned.

[A copy of the Verbatim Proceeding of the sitting has been kept.]

**MINUTES OF THE SITTING OF THE
STANDING COMMITTEE ON CHEMICALS & FERTILIZERS**

(2020-21)

The Committee sat on Friday, the 19th February, 2021 from 1015 hrs. to 1030 hrs. in Committee Room No. 3, Extension to Parliament House Annexe Building, New Delhi.

PRESENT

Ms Kanimozhi Karunanidhi- Chairperson

**MEMBERS
LOK SABHA**

2. Shri Deepak Baij
3. Shri Ramesh Chandappa Jigajinagi
4. Shri Satyadev Pachauri
5. Shri Arun Kumar Sagar
6. Shri Pradeep Kumar Singh
7. Er. Bishweswar Tudu
8. Dr. sanjeev Kumar Singari

RAJYA SABHA

9. Shri G. C. Chandrashekhar
10. Shri Jaiprakash Nishad
11. Shri Arun Singh
12. Shri A. D. Singh
13. Shri Vijay Pal Singh Tomar
14. Shri K. Vanlalvena

SECRETARIAT

1. Shri Manoj K. Arora - OSD
2. Shri Nabin Kumar Jha - Director
3. Shri C. Kalyanasundaram - Additional Director

2. At the outset, the Hon'ble Chairperson welcomed the Members of the Committee.

3. The Committee thereafter took up for consideration and adoption the following draft Reports:

- (i) Demand and availability of Petrochemicals including imports and exports;
- (ii) Revival of closed and sick fertilizers units; and
- (iii) Review of Pradhan Mantri Bhartiya Janaushadi Pariyojana (PMBJP)

4. After deliberations the Draft Reports were unanimously adopted by the Committee without any changes/amendments.

5. The Committee authorised the Chairperson to make consequential changes, if any, arising out of the factual verification of the Reports by the Department of Chemicals and Petrochemicals, Department of Fertilizers and Department of Pharmaceuticals and present the same to both the Houses of Parliament.

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The Committee then adjourned.

XXX Matter not related to this Report