

OUTCOME BUDGET

2015-16

**GOVERNMENT OF INDIA
MINISTRY OF CHEMICALS AND FERTILIZERS
DEPARTMENT OF CHEMICALS AND
PETROCHEMICALS**

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EXECUTIVE SUMMARY

The chemical industry is an important part of the growing Indian industry. It includes basic chemicals and its products, petrochemicals, fertilizers, paints, varnishes, gases, soaps, perfumes and toiletries and pharmaceuticals. It is one of the most diversified of all industrial sectors, covering thousands of commercial products.

Petrochemicals, which comprise plastics and a host of other chemicals, are downstream products of hydrocarbons derived from crude oil and natural gas. These hydrocarbons are valuable resources and constitute vital raw materials for industries. The value additions in the petrochemicals chain offer immense possibilities and cater to the need of textiles and clothing, agriculture, packaging, infrastructure, healthcare, furniture, automobiles, information technology, power, electronics and telecommunication, irrigation, drinking water, construction and a host of other of other articles of daily and specialized usage.

There are three PSUs in the chemical sector namely Hindustan Organic Chemicals Ltd. (HOCL), Hindustan Insecticides Ltd. (HIL) and Hindustan Fluorocarbons Limited (HFL), which is a subsidiary of HOCL, and one PSU in the petrochemical sector viz. Brahmaputra Cracker and Polymer Ltd. (BCPL). The autonomous institutes under this Department are Central Institute of Plastics Engineering and Technology (CIPET) and Institute of Pesticides Formulation and Technology (IPFT).

The Department proposes to continue implementation of projects/schemes during 2015-16, envisaged for the 12th Five Year Plan and beyond. Some of them are outlined below:-

I. Petroleum, Chemicals and Petrochemicals Investment Regions (PCPIRs):

The concept of Petroleum, Chemical and Petrochemical Investment Regions (PCPIRs) is a cluster approach to promote the Petroleum, Chemical and Petrochemical sectors in an integrated and environment friendly manner, on a large scale.

At present, PCPIRs are being set up in the four coastal States of Gujarat, Andhra Pradesh, Odisha and Tamil Nadu. PCPIR proposals of Andhra Pradesh and Gujarat were approved in February 2009, while proposals of Odisha and Tamil Nadu were approved in December 2010 and July 2012 respectively. The latest MoA has been signed with the Government of Tamil Nadu on 20th February, 2014. As on 31st December, 2014 investments worth Rs. 1,59443 crore approximately have been made in these PCPIR regions.

II. Assam Gas Cracker Project:

The Assam Gas Cracker Project was initiated in pursuance of the Memorandum of Settlement signed between Central Government, All Assam Students Union (AASU) and All Assam Gana Parishad (AAGP) on 15th August 1985. The Cabinet Committee on Economic Affairs (CCEA), in its meeting held on 18th April, 2006, approved the setting up of the Assam Gas Cracker Project at a project cost of Rs. 5460.61 crore. A joint venture company namely M/s Brahamaputra Cracker & Polymer Limited (BCPL), is implementing the project. Owing to various reasons, the project has witnessed cost and time overruns. The revised cost estimate of Rs. 8920 crore (on 'as built basis') was approved by the CCEA on 16th November, 2011 with revised schedule of mechanical completion by July, 2013 and commissioning by December, 2013.

The overall physical progress, as on 15th December, 2014, was 99% and the cumulative capital expenditure incurred, was Rs. 8,086.79 crore i.e. 90.66%. The Department has released capital subsidy of Rs. 4690 crore to BCPL. Further, capital /feedstock subsidy shall be sought in the Annual Plan 2015-16 subject to approval of Revised Cost Estimate-II by the Government.

The pre-commissioning activities in several units are in progress. All efforts are being made for achieving commissioning in the current financial year. This project is of economic significance for the State of Assam and the North East Region as it is expected to lead to substantial employment and income generation in downstream industries.

iii. **Public Sector Undertakings:**

Hindustan Organic Chemicals Limited

Hindustan Organic Chemicals Limited (HOCL) was incorporated on 12th December 1960 with the objective of setting up manufacturing capacities for chemicals/ intermediates which are required for production of dyes, dye-intermediates, rubber chemicals, pesticides, drugs and pharmaceuticals, laminates, etc. The products manufactured by HOCL include phenol, acetone, formaldehyde, nitrobenzene, aniline, nitro-toluene, nitric acid, di-nitrogen tetra-oxide (N₂O₄) and hydrogen peroxide. The raw materials used by HOCL are benzene, toluene, LPG, methanol, CNG and sulphur, most of which come from petroleum refineries. HOCL is the only manufacturer of liquid rocket propellant N₂O₄ in the country, supplying to ISRO.

HOCL has two units, located at Rasayani (Maharashtra) and Kochi (Kerala). It also has a subsidiary company, viz. Hindustan Fluorocarbons Limited (HFL). The factory is located at Rudraram, District Medak, in Telangana.

Hindustan Fluorocarbons Limited

Hindustan Fluorocarbons Limited (HFL) was incorporated on 14.07.1983 as a subsidiary company of Hindustan Organic Chemicals Limited (HOCL). The company is engaged in the manufacture of Poly Tetra Fluoro Ethylene (PTFE) and Chloro Di Fluoro Methane

(CFM-22). PTFE is extensively used in chemical, mechanical, electrical and electronic industries and has strategic applications in defence and aerospace sectors.

Hindustan Insecticides Limited

Hindustan Insecticides Limited (HIL) was incorporated in March 1954 for manufacture and supply of DDT. In 1957, the company set up a factory at Udyogamandal near Kochi for manufacture of DDT and in 1977 at Rasayani, Maharashtra for manufacture of Malathion, an insecticide used in public health. Today, HIL has three units located at Udyogamandal in Kerala, Rasayani in Maharashtra and at Bathinda in Punjab.

iv. e-Governance:

With a view to increase office automation and enhance transparency, as per requirements of e-Governance, the office Procedure Automation (OPA) System, Comprehensive DDO Package for paybill & GPF, File Tracking System (FTS) and Public Grievances Redress & Monitoring System (PGRAMS) have been implemented in the Department. In compliance with Government of India's orders relating to e-Procurement, all the Tender inviting Notices issued by the Department are being uploaded on the website of the Department.

v. Monitoring:

Close monitoring of the Outcome Budget targets is being done in the Department. Half-yearly review is also undertaken by the Planning Commission.

CHAPTER- I

GOALS, OBJECTIVES AND POLICY STATEMENTS

1.1 Department of Chemicals and Petrochemicals endeavors to:

- I. Formulate and implement policies and programmes for achieving growth and development of the chemicals and petrochemicals sectors in the country; and
- II. Foster the spirit of public-private partnership for the over-all development of the above mentioned sectors of industry.

1.2 The major goals of the Department are:

- I. Development of 4 PCPIRs to promote manufacturing and exports.
- II. Early commissioning of the Assam Gas Cracker Project (AGCP).
- III. Strengthening of Central Institute of Plastic Engineering and Technology (CIPET) so as to achieve its targets of skill development.
- IV. Set up Plastic Parks to promote MSMEs in the sector in a cluster approach.

1.3 In view of the delicensed and deregulated nature of the chemical and petrochemical sectors, public sector investment through Plan schemes is limited. The major Plan scheme being implemented, besides the releases made to PSUs and autonomous institutions, is the Assam Gas Cracker Project.

1.4 The Department has four major divisions viz. Chemicals, Petrochemicals, Planning & Evaluation (P&E) and Statistics & Monitoring (S&M) through which it

implements its schemes and programmes. The Internal Finance (IF) Division is common to all three Departments in the Ministry.

National Policy on Petrochemicals:

1.5 The Petrochemicals sector in India has the potential of capturing large investments to become a major global player. The National Policy on Petrochemicals announced in 2007 aimed to increase investments in the sector, both upstream and downstream, increase the use of petrochemicals in thrust areas, facilitate investment in the emerging areas of the petrochemical sector and achieve environmentally sustainable growth through innovative methods of development of bio-degradable polymers and plastics.

Schemes Benefiting Women/children and SC/ST:

1.6 The Departmental Budget does not contain any component specifically benefiting women, children and/or SC/ST. The department is exempt from earmarking Plan outlays under SCSP (Special Component Sub Plan) and TSP (Tribal Sub Plan). However, the autonomous organizations under the Department undertake programmes benefiting women and SC/ST. Exclusive programmes for the benefit of SC/ST and Women candidates are organized by CIPET through sponsorship by respective State Governments for training professionals in entrepreneurship and skill development. This provides them with the competence to work in the industry at the operating level or start their own tiny or cottage level industry. The programmes are thus helpful in generation of both employment and self-employment. The programmes organized for the benefit of women are focused on developing self-help groups and creating necessary workforce for plastic waste management. A large number of women and SC/ST candidates have benefited from these programmes and this will continue during 2015-16.

CHAPTER– II

FINANCIAL OUTLAYS AND PHYSICAL TARGETS FOR 2015-16

2.1 A statement showing the financial outlays under Plan and Non-Plan provisions of the Budget 2015-16 and the physical targets for the year is at Annexure I.

BE 2015-16 Non-Plan-:

2.2 The BE Non-Plan for the year has been approved at Rs. 67.18 crore which includes revenue budget of Rs. 67.15 crore and capital loans to PSUs of Rs. 0.01 crore each(token provision). The provision under revenue is for Secretariat expenditure of the Department (primarily for IT activities), for the office of Welfare Commissioner for payment of compensation (ex-gratia) to Bhopal Gas victims, and for Institute of Pesticides Formulation Technology (IPFT).

BE 2015-16 PLAN:

2.3 A Gross Budgetary Support of Rs. 188 crore has been approved for the Annual Plan of the Department for the year 2015-16. Highlights of the Plan are given in the following paras:

Public Sector Undertakings:

Hindustan Organic Chemicals Limited

2.4 During 2014-15, a token provision of Rs. 0.01 crore was made for HOCL. A provision of Rs. 17.00 crore has been made for 2015-16 for upgradation of plant and machinery.

Hindustan Fluorocarbons Limited

2.5 HFL has undertaken the development of specialized PTFE, i.e. modified PTFE, and the company proposes to manufacture this product in the existing system with some modifications. At present modified PTFE is being imported, and it has wide market potential owing to its versatile applications. The company has plans to take up the following projects:

**Table No. 1
Plans/Schemes of HFL**

| A | Refurbishment Plans |
|----------|--|
| 1 | Refrigeration System |
| 2 | Furnace with Pyrolysis Coil |
| 3 | Fluid Energy Grinding Mill |
| 4 | TFE Compressor and Vacuum/Jet pump |
| 5 | CFM Compressor & Air Compressor |
| 6 | Instrumentation |
| B | New Schemes/Projects |
| 1 | Hexa fluoro propene (HFP) and Fluorinated Ethylene Propylene (FEP) related investments |
| 2 | New Reactor Set |
| 3 | Debottlenecking of the Monomer Plant |
| 4 | Pilot Plant for Product Development |

2.6 For its refurbishment plan and new initiatives, HFL was allocated Rs 20.50 crore for 2014-15. The above activities are at various stages of completion for which an amount of Rs. 16.80 crore out of the amount of Rs. 20.50 crore provided to HFL during 2014-15 has since been released.

An amount of Rs. 5.00 crore has been provided during 2015-16.

Hindustan Insecticides Limited

2.7 During 2014-15, HIL was allocated Rs. 15.00 crore as budgetary support for release as Plan Loan.

2.8 HIL faces liquidity shortage on account of long procedural delays in payments for DDT by Ministry of Health and Family Welfare. HIL was been allocated a Plan loan of Rs 15.00 crore in 2014- 15 for the Pendimethalin project, which is its priority. Pendimethalin is a herbicide with good export potential and its production will provide HIL a strong technical base with high potential for growth. This amount of Rs. 15.00 crore was released.

During 2015-16 , HIL stands provisionally allocated an amount of Rs. 10.00 crore for enabling of upgradation of plant and machinery for putting up a multi-product plant facility for production of fungicides at Udyogmandal, Kerala .

Autonomous Institutes/Organizations:

Central Institute of Plastics Engineering and Technology (CIPET):

2.9 CIPET is a premier institution devoted to Academic, Technology Support and Research (ATR) activities for the growth of Polymer & allied industries. It is an ISO 9001:2008 QMS, NABL; ISO/IEC 17020 accredited national Institution. CIPET has 23 Centers at 16 locations across the country with its Head Office at Chennai.

2.10 All the centres have up to date infrastructural facilities in the areas of Design, CAD/CAM/CAE, Tooling & Mould Manufacturing, Plastics processing, Testing and Quality control to cater to the needs of polymer & allied industries in the country.

2.11 CIPET's academic programs include Doctoral, Postgraduate, Undergraduate, Diploma, Post Diploma and Certificate Level course as well as Vocational Skill Development training programs in Polymer Science & Technology to fulfill the human resource requirements of polymer and allied industry. During the XI Five Year Plan, CIPET had trained 1,16,638 students through various long term and short term skill development programs. The target for XII Plan is to train around 2,20,000 students.

2.12. The Undergraduate, Postgraduate & Doctoral programs are offered at High Learning Centres in affiliation/collaboration with respective reputed State Universities. In the year 2013 – 14, 11494 students enrolled for the long term programs and in the year 2014 – 15, 12629 students have been admitted, which is around 10% more than the previous year. Apart from the regular long term courses, the institute also offers highly specialized and customized short – term programs in the field of Plastics Engineering & Technology to update and improve the skills competency of technical manpower in the plastics and its allied industries. In the year 2013–14, 28,498 participants were provided training through various Skill Development Training Programs. During the year 2014-15, CIPET is committed to achieve a target of 42900 participants through long-term & short-term training programs. Similarly, during the year 2015-16, CIPET is also committed to achieve the target of 51500 participants through long-term & short-term training programs.

2.13. CIPET also conducts various skill development training programs sponsored by Govt. Departments / agencies such as Ministry of DONER, Ministry of Social Justice & Empowerment, SC/ST Welfare Department, Minorities Department etc. in the area of Plastics Engineering & Technology for the benefits of unemployed / under employed youth of India.

2.14. CIPET renders Technology Support Services in design, tooling, processing, testing and quality assurance both in India and abroad. The biodegradable testing facility of CIPET is first of its kind in the country and works jointly with European Bioplastics & International Biodegradable products Institute.

2.15. With an objective to grow in Research and Development CIPET has established two exclusive R & D wings at Chennai and Bhubaneswar. The Advanced Research School for Technology & Product Simulation - ARSTPS at Chennai focuses on innovative product design for automobile, aerospace, medical and packaging industries, product and tool design conceptualization, e-manufacturing of prototypes, rapid prototyping for lead time reduction, reverse engineering for metal Substitution with aesthetic and ergonomical approach. The Laboratory for Advanced Research in Polymeric Materials (LARPM) at Bhubaneswar concentrates on bio polymers, e-waste recycling, polymer composites & nanocomposites, characterization of blends, alloys, and fuel cells. The main objectives of the R & D wings are to collaborate in R&D projects with the industry, and with Indian and Foreign universities, to develop working prototypes, to find solutions to engineering problems, and to conduct micro-analysis on behavior of materials, structures and mechanical systems.

2.16. CIPET has signed Memoranda of Agreement with several leading international universities for faculty and student exchange programs, bilateral R & D initiatives and collaborative research projects. CIPET has established very good interaction with regional & national plastics associations in India and it is a founder member of Plastindia Foundation.

2.17 In order to fulfill the requirements of skilled manpower for the plastics industry in the country, CIPET has a target to train around 6.20 lakh persons during the period 2011-22, as part of the National Skill Development initiative. In the year 2012-13, 10542 students were enrolled for the long term programs which has increased during 2013-14 to 11,494 students (around 9% growth).

2.18 There was an allocation of Rs. 102.98 crore for CIPET in 2014-15 for its continuing and new Plan Schemes. This allocation will meet the requirements to provide civil and technical infrastructure for expansion of CIPET centres, creation of hostel facilities and to augment intake capacity of existing and new academic and skill

development programmes, enriching CIPET's capabilities to offer technical support services to plastics and allied industry, undertake research and development projects in the area of cutting edge technologies and establishment of Centre for Biopolymer Science and Technology (CBPST) at Kochi to promote environment friendly plastic technologies. The infrastructure so generated will help in achieving the targets set for skill development through long term and short term courses during 2014-15. However the amount has been reduced to Rs.100.85 Crore at RE stage. During 2015-16, CIPET has been allocated an amount of Rs. 92.68 crore(Fin) to continue implementation of the schemes envisaged in the 12th Plan period.

Institute of Pesticide Formulation Technology (IPFT):

2.19 IPFT has remained a "Designated Laboratory" of the OPCW during 2012 – 13 and 2013 – 14. IPFT is also an NABL Accredited Laboratory as per ISO/IEC – 17025 (2005) since 2008. The Institute developed a number of user and environment friendly pesticide formulations and transferred the technology to Indian Agrochemical Industries for commercialization including two technologies to one Turkish Firm (M/s Entasov). The Institute is working on five R & D Projects sanctioned by the DC & PC while grants-in-Aid projects have also been granted by the OPCW, DST and DRDO. IPFT completed 34 Industry Sponsored Projects on Data Generation on Bioefficacy, Phytotoxicity and Residue Analysis for submission to CIB/RC in 2013–14. IPFT signed MoUs with Academic Institutions namely IIT Kanpur, IARI, Tamil Nadu Agricultural University (TNAU) and Sher-e-Kashmir University of Agricultural Sciences and Technology (SKUAST), Jammu for collaborative R & D Work. Non-Disclosure Agreements (NDAs) were signed with Industries such as Indofil, Godrej Agrovet, Nagarjuna, Sulphur Mills and Lamberti Hydrocolloids. IPFT conducted a number of training Courses for various stakeholders from Industries and Academia including three foreign trainees (01 each from Australia, Turkey and Egypt). IPFT has conducted a number of activities for creating awareness amongst the farmers about the safe and judicious use of pesticides. IPFT received FICCI Chemical and Petrochemical Sustainability Award for Best Green product in Chemical Sector during India Chem – 2013 held at Gandhinagar during 24-26

October, 2013. IPFT was also awarded for good work in Rajbhasha during 2011 – 12 at the Hindi Salahkar Samiti meeting held at Bhubaneswar on 17th May, 2013. Director, IPFT has been appointed as Member of the Scientific Board (SAB) of the OPCW for three years w.e.f. January 2014.

2.20 An allocation of Rs. 5.00 crore was made for 2014-15 for IPFT's following projects sanctioned for the 12th Plan:

- (i) Development of User & Environment Friendly Water Dispersible Granule Formulations of Highly Toxic, Broad Spectrum & effective Pesticides to reduce their Toxicity for Continuation of Use and Prevention from Ban.
- (ii) Development of Mass Production Technique and Formulation for Baculoviruses.
- (iii) Management of Termite by Integrated Approach and Indigenous Technologies.
- (iv) Magnetic core-shell nano particles based extraction coupled with Gas/Liquid Chromatography – Tandem Mass Spectrometry for trace level analysis of pesticides.
- (v) Pesticide formulation from Plant Extract and their Bio-efficacy studies.

2.21 During 2015-16 IPFT has been allocated an amount of Rs. 1.00 crore for continuation of the above activities undertaken by it.

Assam Gas Cracker Project:

2.22 The Department of Chemicals & Petrochemicals has released the entire sanctioned amount of Capital Subsidy of Rs. 4690 crore, as follows:

Table No. 2

(Rs. crore)

| Year | Capital Subsidy |
|--------------|------------------------|
| 2007-08 | 37.43 |
| 2008-09 | 100.00 |
| 2009-10 | 316.31 |
| 2010-11 | 808.83 |
| 2011-12 | 875.43 |
| 2012-13 | 1552.00 |
| 2013-14 | 1000.00 |
| Total | 4690.00 |

2.23. The overall physical progress, as on 15th December, 2014, was 99% and the cumulative capital expenditure incurred, was Rs. 8,086.79 crore i.e. 90.66%. The Department has released capital subsidy of Rs. 4690 crore to BCPL.

The pre-commissioning activities are in progress in several units. All efforts are being made for achieving mechanical completion and commissioning at the earliest.

Departmental Schemes:

2.24 During 2015-16, an allocation of Rs. 4.90 crore has been made for the departmental schemes of CPDS, CWC, IT/Secretariat and other schemes of petrochemicals.

Chemical Promotion and Development Scheme (CPDS):

2.25 An allocation of Rs. 1.90 crore has been made for undertaking various promotional activities for chemical and petrochemical industry, viz:

- i) Promotion of chemical industry by organizing **India Chem** and **India Chem Gujarat** events. These events are undertaken in association with FICCI once in two years alternately. During the year 2015-16 the Department would be promoting the India Chem Gujarat along with the State Government of Gujarat and FICCI.

The Department will supplement the efforts of the industry associations for holding both domestic and international seminars/conferences etc. for the promotion and development of chemical as well as petrochemical sector. This will include road shows in countries with developed chemical industry as also those having good market potential for Indian industry. International Buyer-Seller Meet is also envisaged.

- ii) Action will also be taken to promote PCPIRs. Promotional activities for the promotion of chemical/plastic hubs will also be undertaken.

Chemical Weapons Convention (CWC):

2.26 Inspection of chemical plant sites covered under the Convention is routinely conducted by the Organisation for Prohibition of Chemical Weapons (OPCW) to ensure that the activities in scheduled and unscheduled chemicals are in accordance with the provisions of the Convention. India has so far received a total 184 industry inspections as on 28.02.2015.

CWC Help Desks

2.27 The Department has set up 6 Help Desks in PPP mode in association with the Indian Chemical Council (ICC) at places with concentration of chemical industry of relevance to CWC, for facilitating compliance by the chemical industry in its obligation under CWC. These Help Desks have the following locations and coverage:

Table No. 3

| Location | Area covered |
|-----------------|--|
| Hyderabad | Andhra Pradesh, Orissa, Chhattisgarh. |
| Kolkata | West Bengal, Bihar, Jharkhand and North Eastern Region. |
| Delhi | Uttar Pradesh, Himachal Pradesh, Haryana, Punjab, Chandigarh, Uttarakhand and Jammu and Kashmir. |
| Mumbai | Maharashtra, Goa., Rajasthan, Madhya Pradesh |
| Chennai | Tamil Nadu, Kerala and Karnataka. |
| Vadodara | Gujarat. |

The Help Desks undertake the following activities:

- i. Disseminate information on CWC and the obligations of the chemical industry, under the CWC Act.

- ii. Identification of new units, which are potential declarants, through industry surveys and facilitate their filing of declarations.
- iii. Assist the industrial units covered under the Convention in filing declarations as stipulated under the CWC Act.
- iv. Conducting awareness programs. 15 awareness programs have been conducted during 2014-15.

There is an allocation of Rs. 1.00 crore for CWC in 2015-16 for the above activities.

IT/Secretariat:

2.28 Service and official work automation including e-Governance has become necessary in present time which has, in turn, necessitated the procurement of hardware and software. The Department is implementing e-Office Project of Department of Administrative Reforms and Public Grievances. Under this obligation, funds would be required for IT automation. Accordingly, an amount of Rs. 1.00 crore has been allocated

2.29 Funds have been utilized for IT upgradation during 2013-14 and 2014-15 for the following purposes:

- (i) Purchase/replacement of IT Hardware.
- (ii) AMC of computers and other peripherals.
- (iii) Enhancement/modification and AMC of software for electronic submission of Annual Declarations under CWC
- (iv) Filling of infrastructure gap for implementing e-Office MMP as per directions of Department of AR &PG.
- (v) Replacement/modifications in the LAN/Switches etc. for transition from IPv4 to IPv6 addresses for switched internet communications and ensuring new procurement of ICT equipments to be IPv6 compliant.
- (vi) Making the website of the Department GIGW compliant.

During 2015-16 an amount of Rs. 1.00 crore has been allocated.

Ongoing Schemes of Petrochemicals:

(i) Scheme of National Awards for Technology Innovations in Petrochemical and downstream Plastic Processing Industry:

CIPET is entrusted with the work relating to processing of applications, etc. for the Awards given since the implementation of the scheme in 2009-10.

2.30 An outlay of Rs. 1.00 crore has been provisioned for the Awards for the year 2014-15. 290 nominations were received. Based on the recommendations of the 'Prize Award Committee', 16 'Winners' and 14 'Runners up' have been selected for 2014-15. The function to present the awards was held on 21.02.2015 at Bengaluru.

(ii) Setting up Centers of Excellence in Polymer Technology:

2.31 During the 11th Plan period, the following CoEs have been set up:

Table No. 4

| Centre of Excellence (CoE) | Objectives/Components |
|---|--|
| 11th Plan | |
| CoE for Green Transportation Network (GREET) at CIPET, Chennai in collaboration with University of Toronto (UoT), Canada | a) Design and engineering of lightweight and sustainable hybrid green composite auto parts; b) Development of dimensionally and thermally stable green composites; c) Fundamentals of rheology, inter phase, functional components and surface engineering; and d) Performance evaluation, life cycle analysis, recyclability and prototyping. 20 Ph.D students (5 at UoT and 15 at CIPET) are working on the research activities of the centre. |
| CoE for Sustainable Polymer Industry through Research Innovation & Training (CoE-SPIRIT) at National Chemicals Laboratory (NCL), Pune | (i) Research and Scientific Services Program (RSSP) – fundamental research on Reactor-Structure-Property Relationship (RSPR) (this includes reactor modeling, processing simulator and structure development); and (ii) Learning and Sharing Program (LSP). |

2.32 In the 12th Five Year Plan, setting up 3 more Centres of Excellence has been approved at IIT, Delhi, CIPET, Bhubaneswar and IIT, Guwahati respectively as per details given below:

Table No. 5

| Centres of Excellence (CoE) | Objectives/Components |
|---|---|
| 12th Plan | |
| CoE for Advanced Polymeric Materials at IIT, Delhi | (a) Fabrication, characterization of polymer nano-composites and their performance assessment to enable new application development; (b) Synthesis and characterization of polymer based composites and other materials for EMI shielding applications; and (c) Synthesis and characterization of semi-conducting polymers and their filled composites for various electronic applications. |
| CoE on Sustainable Green Materials at CIPET, Bhubaneswar in collaboration with Michigan State University (MSU), USA | Phase I: Bio-resins from vegetable / plant oils (non-edible); Phase II: Bio-based adhesives /coating materials with enhanced curing mechanism from renewable resources; Phase III: Blends and composites from bio-resin / recycled plastics 15 Ph. D students and 1 Post Doctoral are working on the research activities of the centre. |
| CoE for Sustainable Polymers at IIT, Guwahati | To develop cost-effective and scalable technologies for the production of biodegradable polymer based end products using both petrochemical and renewable bio-feedstock. 13 Ph.D students are working on the research activities of the centre. |

An outlay of Rs.6.00 Crore was provided for the scheme in the year 2014-15. Based on the recommendations of the Expert Group, constituted for review the physical and financial performance of these CoEs, an amount of Rs.2.00 Crore each has been released to IIT Guwahati in August, 2014 as the 2nd installment and to CIPET, Bhubneswar in December, 2014 as the 3rd Installment.

(iii) Setting up Plastic Parks:

There was an allocation of Rs. 50.00 crore for this scheme in 2014-15.

2.33 Following the submission of DPR, the proposals from Odisha, Madhya Pradesh and Assam received final approval. The Department has released the first installment of Rs. 8 crore of the Grant-in-Aid each to Madhya Pradesh Plastic Park Development

Corporation Ltd (MPPPDCL), Paradeep Plastic Park Limited (PPPL) and Assam Industrial Development Corporation (AIDC), for setting up plastic parks at Madhya Pradesh (Mandideep), Odisha (Paradeep) and Assam (Tinsukia) respectively in the year 2013-14.

An amount of Rs. 50 crore was provided for release during 2014-15 (14 crore each for the release as 2nd installment to MP, Odisha & Assam, first instalment of 8 crore to Tamil Nadu).

2.34 Status of the three parks is as follows:

- a) **Madhya Pradesh:** Land Acquisition for approach road is under process. Work on the approach road will be taken up during the second half of the contract period of the Package I tender. Evaluation of financial and technical bids for package-I tender amounting to Rs. 25.88 crore to be issued shortly. Online booking of plots commenced and four plots already booked. SPV, with intervention at the highest level in the state government, is resolving issues with the Department of Forest, Government of Madhya Pradesh on physical possession of land.
- b) **Odisha:** Master Planning and Geo Technical survey have been completed by PMC. Notice Inviting Tender (NIT) has been issued for construction of internal roads and site development / grading worth Rs.7.46 crore and Rs. 13.36 crore respectively. Bidding process is underway and the work order is likely to be issued. Tender process for boundary wall has been completed and work order worth Rs. 2.09 crore has already been issued to the contractor. NIT for water supply, drainage and solid waste management works (Rs. 25 crore) to be issued. SPV is finalising detailed designing and cost estimation for power supply, street lightning, telecom/IT infrastructure and landscaping components worth Rs.13.34 crore..

c) Assam: Works pertaining to site development and compound wall worth Rs. 3.32 crore and road network worth Rs. 1.08 crore have already been awarded. Two tender packages of road and drainage infrastructure worth approx Rs. 32 crore are being floated and work orders to the contractors to be issued. Expenditure of Rs. 0.45 crore and Rs. 1.04 crore have already been incurred on administrative and management support & design, engineering and supervision respectively. Assam State Electricity Board (ASEB) has already assured to supply the required power of 20 MW.

All the States have been advised to compress the timelines and aim to complete the Parks by mid-2016.

An amount of Rs. 51.00 crore has been allocated for 2015-16 for the Plastic Park scheme.

CHAPTER III

POLICY INITIATIVES

Petroleum, Chemical Petrochemical Investment Regions (PCPIRs) Policy:

3.1 Government of India formulated the PCPIR policy in April 2007 to give a boost to this sector. This policy was an initiative to cater to the evolving needs of the industry. Such integrated PCPIRs are envisioned to reap the benefits of co-siting, networking and greater efficiencies through use of common infrastructure and support services.

3.2 The policy provides that each PCPIR would have a refinery / petrochemical feedstock company as an Anchor Tenant. Government of India will ensure availability of external physical infrastructure linkages to the PCPIR including connectivity through Railways, Roads, Ports, Airports and Telecom. This infrastructure is created or upgraded, through Public Private Partnership projects to the extent possible. The Central Government also provides necessary funding to make such projects viable, called Viability Gap Funding (VGF), as well as budget support for creation of these linkages.

3.3 The PCPIR wise details of investment are given in the Table below. The four PCPIRs are expected to generate employment for around 33.96 lakh persons. As on 31.12.2014 around 2.23 lakh persons have been employed in direct and indirect activities related to PCPIRs.

Table No. 6
PCPIR Snapshot (as on 31.12.2014)

| Indicator | Gujarat | Andhra Pradesh | Odisha | Tamil Nadu |
|------------------------------|-------------------|------------------------------|----------|----------------------------|
| Location/ Region | Dahej, Bharuch | Vishakhapatnam – Kakinada | Paradeep | Cuddalore- Nagapattinam |
| Total Area (sq. km.) | 453 | 603.58 | 284.15 | 256.83 |
| Processing Area (sq. km.) | 248 | 270 | 123 | 104 |

| Indicator | Gujarat | Andhra Pradesh | Odisha | Tamil Nadu |
|--------------------------------------|---------------------------------------|--|------------------------------------|---------------------------------------|
| Anchor Tenant | ONGC Petroleum addition Limited | Hindustan Petroleum Corporation Ltd. (HPCL) | Indian Oil Corporation Ltd. (IOCL) | Nagarjuna Oil Corporation Ltd. (NOCL) |
| Refinery / Cracker capacity in MMTPA | Cracker: Ethylene: 1.1 Propylene: 0.6 | 9.3 to 15 (expansion of existing refinery) 15 (greenfield) | 15 (greenfield refinery) | 12 (refinery) |
| Proposed Investment (Rs. crore)* | 50,000 | 3,43,000 | 2,77,734 | 92,160 |
| Investment made (Rs. crore) | 69,621 | 37,010 | 45,000 | 7,812 |
| Projected employment (number)* | 8,00,000 | 11,98,000 | 6,48,000 | 7,50,000 |
| Employment generated (number) | 78,000 | 93,500 | 38,000 | 13,950 |

*at approval stage of the Projects.

National Policy on Petrochemicals:

3.4 An amount of Rs. 57.50 crore was allocated for 'Other New Schemes of Petrochemicals' during the year 2014-15, as summarized below:

**Table No. 7
Other New Schemes of Petrochemicals**

(Rs. crore)

| S. No. | Scheme | Allocation BE 2014-15 | RE 2014-15 | BE 2015-16 |
|--------|--|-----------------------|------------|------------|
| 1. | Scheme on National Awards for Technology Innovations in Petrochemical and downstream Plastic Processing Industry | 1.00 | 0.85 | 1.00 |
| 2. | Setting up of Centers of Excellence in Polymer Technology | 6.00 | 6.00 | 2.00 |
| 3. | Setting up Plastic Parks | 50.00 | 22.00 | 55.00 |
| 4. | Programme Manager Fee | 0.50 | 0.19 | 0.41 |
| 5. | Total | 57.50 | 29.04 | 58.41 |

CHAPTER IV

REVIEW OF PAST PERFORMANCE

4.1 Schemes of the Department are broadly categorized into three groups viz. (i) Assistance to Public Sector Undertakings for their technological upgradation and product diversification projects; (ii) Assistance to autonomous academic and research institutions viz. CIPET and IPFT for skill development and research activities; (iii) Departmental promotional/awareness schemes of Chemical Weapons Convention (CWC); Chemical Promotion and Development Scheme (CPDS), IT/Secretariat etc. Establishment of Assam Gas Cracker Project at Lepetkata in the Dibrugarh district of Assam is an important scheme being implemented by the Department since 2007-08.

4.2 Scheme-wise review and achievements during the 2013-14 are as follows:

Status of Implementation of PCPIRs as on 31.12.2014

Gujarat PCPIR:

- Draft Development Plan / Master Plan has been sanctioned by the State Government in 2012 and at present 2 Town Planning (TP) schemes are under implementation.
- A PCPIR Regional Development Authority was constituted under the Special Industrial Regions Act.
- The Gujarat Infrastructure Development Corporation (GIDC) has spent Rs. 10,994 crore for provision of infrastructure in the PCPIR.
- Additional expenditure of Rs. 12,000 crore by State Government is under way on infrastructure development like road, ports, water supply etc.
- Dahej-Bharuch State Highway to be connected to Delhi-Mumbai national Highway and National Expressway. Extension of Ahmedabad–Vadodara National Expressway to Mumbai is also proposed.

- Rail connectivity and cargo transportation is available with Delhi-Mumbai Dedicated Freight Corridor (DFC).
- ONGC Petro additions Ltd. (OPaL), the Anchor Tenant, is setting up a dual feed cracker complex (naphtha to be supplied from ONGC and C2 / C3 to be extracted from imported LNG) at Dahej SEZ with a production capacity of 1.1 million ton / annum (MMTPA) ethylene and 0.6 MMTPA of propylene, along with the matching downstream polymer capacities (polyethylene and polypropylene). The total proposed investment is Rs. 21,396 crore. The overall progress of the OPaL's project as of 31st December, 2014 was around 93% and the project is scheduled for commissioning by June 2015.
- EIA process is at advanced stage as per final Terms of Reference approved by Expert Appraisal Committee (EAC) of MoEF. It is expected to be completed by end of 2014-15.
- An independent evaluation of the implementation of Gujarat PCPIR has been carried out in order to review the progress of these projects and an action plan has been prepared.

Andhra Pradesh PCPIR:

- Detailed Master Planning has been published in August 2013 and the objections received were being addressed.
- EPTRI has completed EMP and EIA study and submitted draft EIA to VK-PCPIR SDA on 22.10.2014 and the same was submitted to AP Pollution Control Board on 03.11.2014. Public hearing is to be conducted.
- AP PCPIR covers 6 existing SEZs. The units have already made investments of Rs. 34,336 crore.
- Rs. 1850 crore have been invested on infrastructure development.
- In 2009 Government of India had approved financial support (Viability Gap Funding or VGF) of Rs. 1206.80 crore for infrastructure projects in PPP mode, which is being revised based on the latest assessments of project requirements. The State

Government has initiated the work on preparation of Detailed Project Reports (DPRs) for approval of Government of India on revised funding requirements.

- Hindustan Petroleum Corporation Limited (HPCL), the Anchor Tenant, is in process of expansion of existing refinery from 9.3 MMTPA to 15 MMTPA. In order to set up a greenfield refinery cum petrochemical complex of 15 MMPTA capacity, efforts are being made to identify partners/ investors with HPCL.
- A LNG terminal is proposed near Gangavaram port by Petronet and one at Kakinada port by GAIL and Shell.
- Road, rail link, water supply, effluent treatment and marine outfall are under study.

Odisha PCPIR:

- A Special Purpose Vehicle named the Paradeep Investment Region Development Ltd. (PIRDL) has been formed to implement the project.
- Master Plan is under preparation.
- Preparation of Detailed Project Report (DPR) is underway for development of road infrastructure, and will be finalized after Master Plan.
- Anchor Tenant viz. Indian Oil Corporation Limited (IOCL) has invested Rs. 32,018 crore (including contract awarded and committed) to set up 15 MMTPA refinery and a Polypropylene Unit. The refinery project is expected to be commissioning by the end of June, 2015.
- A 1320 MW thermal power plant by SPI Ports (P) Ltd is approved by High Level Clearing Authority (HLCA). Surat – Paradeep Gas Transmission Pipeline, an inter-State Gas transmission pipeline, is being implemented by GAIL and LNG terminal by IOCL.
- IDCO is in discussion with Environmental Protection Training and Research Institute (EPTRI), Hyderabad, for conducting Environmental Impact Assessment (EIA) and preparation of Environmental Management Plan..
- IDCO is developing a Plastic Park at Paradeep under the Plastic Parks scheme of the Department. Final approval of Government of India has been conveyed, and first installment of Rs. 8.00 crore released.

- Bidding process is in progress for contracting out Solid Waste Treatment & Disposal functions.

Tamil Nadu PCPIR:

- MoA has been signed on 20th February, 2014. State Government has taken up the activities of notification of PCPIR formation of the PCPIR Management Board. Thereafter Master Planning and EIA activities will be taken up.
- The Anchor Tenant, Nagarjuna Oil Corporation Limited (NOCL), has already invested Rs. 7,812 crore in its refinery project.
- The date of commissioning of the first phase of the project is now extended, mostly due to financial constraints. The capacity of the project is proposed to be increased from 6 MMTPA (Million Metric Tonnes Per Annum) to 12 MMTPA.
- A product jetty for evacuation of petroleum fuels and a Single Point Mooring system for receiving crude are under construction and 51% overall progress has been achieved.

Public Sector Undertakings:

4.3 **Hindustan Organic Chemicals Limited (HOCL):** The rehabilitation proposal in respect of HOCL was approved by the Government and implemented during 2006-07. The outlay for rehabilitation was Rs. 250 crore. HOCL earned profits during 2006-07 and 2007-08 but suffered a loss during 2008-09 and 2009-10 but posted profit in 2010-11. From 2011-12 onwards, the company has been incurring continuous losses, and had an accumulated loss of Rs. 705.69 crore as on 31.03.2014. HOCL was not provided any plan loan in 2013-14.

4.4 **Hindustan Insecticides Limited (HIL):** The revival proposal of HIL was also approved by the Government in July 2006 by waiver of loans, writing off outstanding interest and conversion of loans into equity. After implementation of the revival package,

HIL has been continuously earning profits for the last 8 years. HIL made a profit of Rs. 3.06 crore in 2009-10, Rs. 1.58 crore in 2010-11, Rs. 1.60 crore in 2011-12, Rs. 2.92 crore in 2012-13 and Rs.1.84 crore in 2013-14. HIL was not provided any Plan loan in 2013-14.

4.5 Hindustan Fluorocarbons Limited (HFL): Rehabilitation package for HFL, under the operating agency M/s IDBI, was approved by BIFR on 03.12.2007 and its implementation is completed. After implementation of the rehabilitation package, the company made profit of Rs. 3.06 crore in 2009-10, Rs. 2.23 crore in 2010-11, Rs. 2.52 crore in 2011-12, Rs. 94.88 lakh in 2012-13 and a loss of Rs. 24.82 crore in 2013-14. HFL was not provided any Plan loan in 2013-14.

Autonomous Institutes:

Central Institute of Plastics Engineering and Technology (CIPET):

4.6 10,542 students were enrolled for the long term programmes in the year 2012-13, which has increased to 11,494 students in 2013-14. CIPET has a target to train around 6.20 lakh persons during 2011-22, as part of the National Skill Development initiative. During 2013-14, 39,992 students have been enrolled by the CIPET against a target of 39,000 students.

Institute of Pesticide Formulation Technology (IPFT):

4.7 IPFT generated a revenue of Rs. 1.04 crore from the industry sponsored projects and testing of pesticides samples during 2013-14.

Departmental Schemes:

Chemical Promotion and Development Scheme (CPDS):

4.8 There was an allocation of Rs. 4.3 crore for these activities. and an amount of Rs. 3.40 crore was spent by way of financial support for conducting seminars, conferences,

workshops, training, studies and exhibitions on various aspects of chemical and petrochemical sectors till 28.02.2015 in the year 2014-15.

Chemical Weapons Convention (CWC):

4.9 There was an allocation of Rs. 1.20 crore for this scheme during 2014-15 . During the calendar year 2014, a total of 25 number of industry inspections were hosted successfully by DCPC. Also 15 awareness programmes on compliance of regulations of CWC were held during 2014-15 at various locations across the country.

IT/Secretariat:

4.10 In the Budget estimates 2013-14, there was a provision of Rs. 0.70 crore for implementation of IT Plan. The allocated amount has been fully utilized. Various hardware and software were procured for implementation of the IT Plan. E-Office has also been implemented in the Department.

Other New schemes of Petrochemicals

4.11 For implementing the policy measures envisaged in the National Policy on Petrochemicals, many feasibility studies were undertaken in various areas in petrochemical sector. Based on the recommendations of the feasibility studies, Government formulated three schemes viz. (i) National Awards for Technology Innovation in various fields of Petrochemicals and downstream Plastic Processing Industry; (ii) Setting up Centres of Excellence (CoEs) in the field of Petrochemicals; and (iii) Setting up Plastic Parks; which are in the process of implementation.

i. National Awards for Technology Innovation :

4.12 National awards given so far are as follows:

**Table No. 8
Numbers of National Awards**

| Sl. No. | Year | Winners | Runners up |
|----------------|-------------|----------------|-------------------|
| 1 | 2010-11 | 09 | NIL |
| 2 | 2011-12 | 15 | 10 |
| 3 | 2012-13 | 11 | 08 |
| 4 | 2013-14 | 17 | 06 |
| 5 | 2014-15 | 16 | 14 |

ii. Centres of Excellence :

4.13 An Expert Group to review the physical and financial performance of the selected CoEs, as in the previous years, was constituted. The review of the progress of CoEs being set up at CIPET, Bhubaneswar and IIT Delhi was undertaken during December, 2013- January, 2014. Based on the review and recommendations of the Expert Group, the 2nd installment amounting to Rs. 2 crore each has been released to IIT, Delhi on 20.02.2014 and CIPET, Bhubaneswar on 31.01.2014.

iii. Plastic Parks :

4.14 The Scheme Steering Committee (SSC) had earlier granted 'in principle' approval to the 4 proposals from Tamil Nadu, Madhya Pradesh, Assam and Odisha. In view of the delays in preparation of Detailed Project Reports (DPR) and consequent delay in final approval, the funds earmarked for 2012-13 could not be utilized and timeline for submission of DPR for final approval was extended.

4.15 Following the submission of DPR, the proposals from Odisha, Madhya Pradesh and Assam received final approval. The Department released the first installment of Rs. 8 crore of the Grant-in-Aid each to Madhya Pradesh Plastic Park Development Corporation Ltd (MPPPDCL), Paradeep Plastic Park Limited (PPPL) and Assam Industrial Development Corporation (AIDC), for setting up plastic parks at Madhya Pradesh (Mandideep), Odisha (Paradeep) and Assam (Tinsukia) in the year 2013-14.

4.16 A statement showing Plan targets and achievements during 2013-14 and 2014-15 may be seen at Annexure II.

CHAPTER V

FINANCIAL REVIEW

5.1 The scheme wise outlays and expenditure for 2013-14 (expenditure), 2014-15 (BE, RE and expenditure) and 2015-16 (BE) are given in the Table below:

Table No. 9

(Rs. crore)

| Sl. No. | Name of the Scheme | 2013-14 | 2014-15 | | | 2015-16 |
|------------|---|----------------|---------------|---------------|----------------------|---------------|
| | | Exp. | BE | RE | Exp. upto 28.02.2015 | BE |
| I | Project Based Support to PSUs | 0.00 | 35.51 | 35.51 | 31.80 | 32.00 |
| 1.1 | Hindustan Organic Chemicals Ltd. (HOCL) | 0.00 | 0.01 | 0.01 | 0.00 | 17.00 |
| 1.2 | Hindustan Insecticides Ltd. (HIL) | 0.00 | 15.00 | 15.00 | 15.00 | 10.00 |
| 1.3 | Hindustan Fluorocarbons Ltd | 0.00 | 20.50 | 20.50 | 16.80 | 5.00 |
| II | Project based Support to Autonomous Bodies | 144.30 | 107.98 | 102.54 | 85.20 | 93.68 |
| 2.1 | Central Institute of Plastics Engineering & Technology(CIPET) | 140.96 | 102.98 | 100.85 | 83.52 | 92.68 |
| 2.2 | Institute of Pesticides Formulation Technology (IPFT) | 4.34 | 5.00 | 1.69 | 1.68 | 1.00 |
| III | Other Ongoing Schemes | 1012.79 | 63.51 | 34.95 | 9.25 | 62.32 |
| 3.1 | Assam Gas Cracker Project (AGCP) | 976.96 | 0.01 | 0.01 | 0.00 | 0.01 |
| 3.2 | Chemical Promotion & Development Scheme(CPDS) | 2.83 | 4.30 | 4.00 | 3.32 | 1.90 |
| 3.3 | Chemical Weapons Convention (CWC) | 0.96 | 1.20 | 1.20 | 0.86 | 1.00 |
| 3.4 | IT/Sectt. | 0.70 | 0.50 | 0.70 | 0.48 | 1.00 |
| 3.5 | Other New Schemes of Petrochemicals | 31.34 | 57.50 | 29.04 | 4.59 | 58.41 |
| | Total | 1158.09 | 207.00 | 173.00 | 126.25 | 188.00 |

+ Includes mandatory provision for development of NE Region

CHAPTER VI

PUBLIC SECTOR UNDERTAKINGS AND AUTONOMOUS INSTITUTIONS

Public Sector Undertakings:

6.1 This Department has three Public Sector Undertakings in the chemical sector viz. Hindustan Organic Chemicals Ltd. (HOCL), Hindustan Fluorocarbons Limited (HFL), a subsidiary of HOCL, and Hindustan Insecticides Ltd. (HIL) and one in petrochemical sector viz. Brahmaputra Cracker and Polymer Limited (BCPL) which is responsible for executing the Assam Gas Cracker Project.

Hindustan Organic Chemicals Limited (HOCL)

6.2 The Kochi Unit of HOCL has been achieving almost high capacity utilization throughout due to the measures taken for continuous supply of raw materials through pipeline network established between BPCL-Kochi and HOCL Plant, which has helped the company to streamline the production performance without any interruption.

6.3 HOCL has been making efforts to reduce the cost of production and generate revenue. Further, in order to put HOCL back on a sustained growth path, the possibility of utilization of vacant land available at Rasayani is being explored through various options like leasing out to other government companies, merger and/ or joint venture etc.

6.4 The physical and financial performance of the Company during the last five years has been as follows:

Table No. 10
Performance of HOCL

(Rs. crore)

| Year | Sales /Turnover | Net Profit / Loss |
|---------|-----------------|-------------------|
| 2009-10 | 520.71 | (-) 83.07 |
| 2010-11 | 738.04 | (+) 25.71 |
| 2011-12 | 606.36 | (-) 78.07 |
| 2012-13 | 624.19 | (-) 137.99 |
| 2013-14 | 237.20 | (-) 176.85 |

Hindustan Fluorocarbons Limited

6.5 The company is under BIFR. The Rehabilitation package under the operating agency M/s IDBI was approved by BIFR on 03.12.2007 and implementation has been completed. The company has diversified into profitable business of fluoro specialty chemicals and has been successfully selling them. The company has developed TFE-Ether for the first time in India. The quality of all products of the company continues to be well accepted by customers.

6.6 The physical and financial performance of the Company over the last five years has been as follows:

Table No. 11
Performance of HFL

(Rs. crore)

| Year | Turn Over | Net Profit |
|---------|-----------|------------|
| 2009-10 | 20.23 | 3.06 |
| 2010-11 | 33.32 | 2.23 |
| 2011-12 | 50.33 | 2.52 |
| 2012-13 | 44.48 | 0.95 |
| 2013-14 | 31.34 | (-) 24.82 |

Hindustan Insecticides Limited

6.7 HIL diversified into agro-chemicals in the late seventies to ensure supply of quality pesticides at reasonable prices to the agriculture sector. To further consolidate its position, one new thrust area recently identified is the seed business. Ministry of Agriculture, Government of India, has given recognition to HIL as a nodal agency for production and marketing of certified seeds for crops and vegetables. The groundwork has already been done to transform HIL into a one-stop-shop for the farmer i.e. providing two critical agricultural inputs - seeds and pesticide. The performance of the company over the last 5 years has been as follows:

Table No. 12
Performance of HIL

(Rs. crore)

| Year | Sales Turnover | Net Profit |
|---------|----------------|------------|
| 2009-10 | 243.88 | 3.06 |
| 2010-11 | 271.04 | 1.58 |
| 2011-12 | 279.82 | 1.60 |
| 2012-13 | 301.11 | 2.92 |
| 2013-14 | 330.35* | 1.84 |

Autonomous Institutions/Organisations:

Central Institute of Plastics Engineering & Technology (CIPET):

6.8 CIPET's objectives are training of manpower in different disciplines of plastics engineering and technology, provision of technical support/consultancy services to the plastic and allied industries and research. The institute also undertakes State Government sponsored training programmes in specific areas for the benefit of SC/ST candidates, women entrepreneurs and rural small scale entrepreneurs. CIPET conducts 12 different long term training programs viz. Diploma, Post Diploma, Post Graduate

Diploma, Undergraduate, Post Graduate and Ph.D. During the 11th Five Year Plan, CIPET trained 116,638 students through various long term and short term skill development programmes. The target for 12th Five Year Plan is to train around 2.2 lakh students.

Institute of Pesticides Formulation Technology (IPFT):

6.9 The Institute is engaged in the development of formulation of environment friendly pesticides and plays a catalytic role in the growth of pesticides industry. An amount of Rs. 5.00 crore has been allocated to the Institute for 2014-15 for meeting the requirement of funds for upgradation of existing assets and provision of new infrastructure under capital support, completion of ongoing projects and taking up new projects for technology development of new generation formulations as also bioscience and analytical projects.

Annual Plan (2015-16)

Name of the Ministry/ Department :Ministry of Chemicals & Fertilizers/Department of Chemicals & Petrochemicals

Statement of Outlays & Outcomes/Targets

| | | | | | | | | (Rs. crore) |
|--------|--------------------------------------|--|---------------------|----------|------|--------------|-----------|-------------|
| Sl.No. | Name of Scheme/ Outcome Programme | Objective/ | Annual Plan 2015-16 | | | Quantifiable | Process/ | Remarks |
| | | | | | | Deliverables | Timelines | |
| | | | GBS | Non Plan | IEBR | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| A | Project Based Support to PSUs | | 32.00 | | | | | |
| | HOCL | Plant & Machinery upgradation of Chemical PSUs | 17.00 | | | | | |
| | HIL | Plant & Machinery upgradation of Chemical PSUs | 10.00 | | | | | |
| | HFL | Plant & Machinery upgradation of Chemical PSUs | 5.00 | | | | | |

| B Assistance to Autonomous Institutions | | | | | | | | |
|--|---|---|-------|---|---|--|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | CIPET | | 92.68 | | | | | |
| | Establishment of VTC at Bhopal (Madhya Pradesh) | To offer specialised Academic Programmes in the field of Plastic Engineering & Technology in order to provide qualified Human Resources to plastics & allied Industries, besides providing Technology Support services to the Industries and for Indigenous Research. | | | | 1. Target enrollment of students for Long Term Courses for 2015-16 (13,743 students) against Actuals for 2014-15 (12,629 students) 2. Target for Short Term Courses for 2015-16 (38,500 participants) against Actual for 2014-15 (30,500 participants) 3. Utilization of funds -Procurement of Machineries / Equipments and Construction of buildings and other Deliverables | As the new schemes are to be approved for XII Five Year Plan (2012-17) on a total scheme basis, the proportionate part of the scheme is to be implemented during the Budget Year 2015-16 i.e 1 year (One year). | No risk factor is normally envisaged in implementing the schemes provided the required funds are made available to CIPET. |
| | Establishment of HLC/VTC at Hyderabad (Telangana) | | | | | | | |
| | Establishment of VTC at Vijayawada (Andhra Pradesh) | | | | | | | |
| | Establishment of VTC at Baddi (Himachal Pradesh) | | | | | | | |
| | Research & Development in emerging areas | | | | | | | |
| | Creation of civil and technical infrastructure for expansion of CIPET Centres | | | | | | | |

| | | | | | | | | |
|---|---|---|------|--|--|---|------------|--|
| | Creation of Hostel Facilities to augment increase in intake capacity of the Existing & New Academic Programs. | | | | | | | |
| | Enriching technical Infrastructure facilities & capabilities to meet industry needs. | | | | | | | |
| 2 | IPFT | Promote advancement of pesticide formulation technology | 1.00 | | | To provide infrastructure in terms of new equipments in the labs to strengthen IPFT in developing advanced pesticides formulations. | Continuous | Upgradation of existing equipment along with addition of new equipment after following due process for justification and evaluation. |

| C Departmental Schemes | | | | | | | | |
|------------------------|------|--|------|---|---|--|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | CPDS | Measures for promoting Indian Chemical Industry | 1.90 | | | (i) India Chem Gujarat - 2015 (ii) Speciality Chemicals Conclave (iii) Other Chemical and Petrochemical events/workshops (iv) construction chemicals (v) green chemistry, (vii) Rotterdam Convention (vi) Stockholm Convention (vii) Chemical Safety and Security Rating viii)Health, Safety, Security and Environment. | | |
| 2 | CWC | Compliance of CWC Convention by Indian Chemical Industry | 1.00 | | | 15 Awareness Workshops on CWC and continuation of six CWC Help Desks. | During the year 2015-16, 20 awareness programmes have been planned to be held at various locations across the country. The CWC Help Desks established by Indian Chemical Council in PPP mode at various locations are being supported by Govt. of India. | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|-----------------|--|------|---|---|--|--------------------|---|
| 3 | IT/ Secretariat | Computerization activities and for upgradation of existing IT facilities in the Department | 1.00 | | | Plan outlay is for replacement of old model computers, purchase of computer consumables, website to be made GIGW compliant, replacement of old obsolete LAN. | Ongoing activities | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|------|--|------|---|---|---|---|--|
| 4 | AGCP | To produce 2,20,000 TPA each of Ethylene & LLDPE/HDPE and 60,000 TPA polypropylene at a total revised project cost of Rs.8920 cr with the revised target for commissioning in December 2013. (The project cost and commissioning schedule have been proposed to be revised). | 0.01 | | | The commissioning of project would lead to investments in setting up of downstream plastic processing industries and give rise to substantial employment in the region. | In the year 2015-16, all post mechanical completion work would be completed, culminating in commissioning of the project. | The entire presently approved capital subsidy of Rs.4690 crore has been released to BCPL till 2013-14. However, BCPL has proposed revision in the project cost from Rs. 8920 crore. The requirement of capital and feedstock subsidy for AGCP, subsequent to recommendation of PIB and approval of CCEA shall be projected for funding in the supplementary grant 2015-16. |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|--|--|-------|---|---|--|---|---|
| 5 | New Schemes of Petro-chemicals | | 58.41 | | | | | |
| | Scheme of National Awards for Technology Innovations in Petrochemical and downstream Plastic Processing Industry | Incentivizing meritorious innovations and institutions in various fields of petrochemicals and downstream plastic processing industry. | | | | To select meritorious innovations and inventions in the 8 categories relating to polymer materials/products, processing, machinery, recycling/waste management and research in the related fields and giving them due recognition and thus motivating them for enhancing R&D initiative. | The applications for the awards scheme shall be called for and after selection of organisations/ institutions/individuals, the Awards shall be given for the year. CIPET, entrusted with all the work relating to processing of applications, shall be provided with the earmarked funds. | |

| | | | | | | | |
|--|--|--|--|--|---|--|--|
| | Setting up Centers of Excellence in Polymer Technology | Improving the existing petrochemical technology and research in the country and to promote development of new applications of Polymers and Plastics. | | | Monitoring of the progress of the selected institutions for setting up of COEs under the 12th Plan and release of funds. Further, progress of NCL Pune and CIPET, Chennai will also be monitored. | Based on the recommendations of the Expert Group constituted to review the physical and financial performance of these CoEs, an amount of Rs.2 crore each has been released to IIT Guwahati in August, 2014 as the 2nd installment and to CIPET, Bhubaneswar in December, 2014 as the 3rd installment. 3rd Installemt of Rs. 2.00 crore will be released to IIT Delhi after the review by Expert Panel during 2014-15. 3rd installment of Rs.2.00 crore to IIT Guwahati will be released in 2015-16. | |
|--|--|--|--|--|---|--|--|

| | | | | | | | |
|--|---|---|--|--|--|--|--|
| | <p>Setting up dedicated Plastic Parks</p> | <p>Setting up need based Plastic Parks, and ecosystems with requisite state of the art infrastructure and enabling common facilities to assists the sectors move up the value chain and contribute to the economy more effectively.</p> | | | <p>Rs. 14 cr x 3 = Rs. 42 cr 2nd / 3rd installment for plastic parks at MP, Odisha and Assam</p> <p>Rs. 8 cr x 2 = Rs. 16 cr 1st installment for plastic parks at TN & new plastic park *as against requirement of Rs. 58 crore, an amount of Rs. 55 crore has been allocated at the present. Based on pace of implementation, the requirement of additional fund shall be projected in supplementary grant 2015-16.</p> | <p>It has been proposed to establish 10 Plastic Parks during the 12th and 13th five year plan period. The proposed budget for the 12th and 13th Five Year Plan is Rs. 400 crore (i.e. Rs. 40 crore each dedicated plastic park). Accordingly, the requirement of Grant in Aid was that of Rs. 88 crore for 2015-16.</p> <p>Based on the assessment of Detailed Project Report (DPR), the Department shall accord final approval for setting up of 4th plastic park in Tamil Nadu. The implementation of setting up on Plastic Parks at Madhya Pradesh, Assam and Odisha will be monitored vis-à-vis identified milestones. Based on the progress achieved and utilization of funds, the 2nd/3rd installment of Grant in aid will be released to Madhya Pradesh, Assam and Odisha.</p> <p>Subsequent to approval to establishment of additional 6 plastic parks, preliminary proposals from the state governments shall be sought and examined. Based on submission of DPR and final approval by Scheme Steering Committee (SSC), it is proposed to take up implementation on one additional plastic park with release of 1st installment of Rs.8 crore in 2015-16.</p> | <p>The Standing Finance Committee (SFC) has recommended setting up of 10 plastic parks including current four plastic parks and six additional parks for implementation during 12th and 13th plan period. The competent authority has approved the proposal.</p> |
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PLAN TARGETS AND ACHIEVEMENTS - 2013-14 & 2014-15

(Rs. crore)

| Schemes / Programmes | 2013-14 Exp. | 2014-15 BE | 2014-15 RE | Targeted Outcomes | Achievement |
|------------------------------------|--------------|------------|------------|---|---|
| 1. Support to Existing PSUs | | | | | |
| HOCL | 0.00 | 0.01 | 0.01 | No funds were allocated to HOCL for 2014-15. | Nil |
| HIL | 0.00 | 15.00 | 15.00 | Rs. 4 crore has been provided to HIL and the company has planned to put up a facility for manufacturing Glyphosate (Tech), a broad-spectrum systemic herbicide which is used to kill weeds, by retrofitting its Endosulfan plant at Kochi unit. The company also plans to manufacture high purity Dicofol at Kochi unit in its existing plant. Dicofol is a miticide that is very effective against red spider mite. At Bathinda unit, the company proposes to put up a suspension concentrate (SC) Formulation Plant as Buprofezin (T) plant has been commissioned. At the Rasayani unit, there is a plan to replace the existing Induced Draft Cooling Tower, which is not in good condition, with a new one of same capacity having multiple cell arrangement so that it can be operated based on the load, to economise on the running cost. Rs. 11 crore has also been provided by the Department to the company which plans to manufacture Pendimethalin, 0 | HIL will be able to diversify its products and make profits |
| HFL | 0.00 | 20.50 | 20.50 | HFL has undertaken the development of specialized PTFE, i.e. modified PTFE, and a plan loan of Rs. 3.60 crore has been provided for this purpose by the Department to the company which plans to manufacture this product in the existing system with some modifications. Rs. 13.20 crore has already been provided for refurbishment and HFP and FEP related projects by the Department to the company for implementing its schemes. These will help HFL to turn around and earn profits in the near future. | This will help HFL to make profits and turn around. |

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| 2. Central Institute of Plastic Engineering and Technology | 140.96 | 102.98 | 100.86 | Training and Research in the field of plastics technology. | A total number of 12629 students were enrolled in its long term courses during 2014-15. CIPET is committed for training to 42900 participants through long-term and short-term training programmes. Work on creation of requisite civil infrastructure as well as on acquiring computer hardware/software, equipments/instruments etc., for its teaching and research work continued as planned. |
| 3. Institute of Pesticides Formulation Technology | 4.34 | 5.00 | 1.68 | Promote advancement of pesticides formulation technology. | IPFT has remained a "Designated Laboratory" of the OPCW during 2012 – 13 and 2013 – 14. IPFT is also an NABL Accredited Laboratory as per ISO/IEC – 17025 (2005) since 2008. The Institute developed a number of User and Environment friendly pesticide formulations and transferred the technology to Indian Agrochemical Industries for commercialization including two technologies to one Turkish Firm (M/s Entasov). The Institute is working on Five R & D Projects sanctioned by the DC & PC while grants-in-Aid projects have also been granted by the OPCW, DST and DRDO. IPFT completed 34 Industry Sponsored Projects on Data Generation on Bioefficacy, Phytotoxicity and Residue Analysis for submission to CIB/RC in 2013–14. IPFT signed MoUs with Academic Institutions namely IIT Kanpur, IARI, Tamil Nadu Agricultural University (TNAU) and Sher-e-Kashmir University of Agricultural Sciences and Technology (SKUAST), Jammu for collaborative R & D Work. Non-Disclosure Agreements (NDAs) were signed with Industries such as Indofil, Godrej Agrovet, Nagarjuna, Sulphur Mills and Lamberti Hydrocolloids. IPFT conducted a number of |

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| | | | | | <p>training Courses for various stakeholders from Industries and Academia including three foreign trainees (01 each from Australia, Turkey and Egypt). IPFT has conducted a number of activities for creating awareness amongst the farmers about the safe and judicious use of pesticides. IPFT received FICCI Chemical and Petrochemical Sustainability Award for Best Green product in Chemical Sector during India Chem – 2013 held at Gandhinagar during 24-26 October, 2013. IPFT was also awarded for good work in Rajbhasha during 2011 – 12 at the Hindi Salahkar Samiti meeting held at Bhubaneswar on 17th May, 2013. Director, IPFT has been appointed as Member of the Scientific Board (SAB) of the OPCW for three years w.e.f. January 2014.</p> |
| 4. Assam Gas Cracker Project | 976.96 | 0.01 | 0.01 | Setting up a Petrochemical complex at Lepetkata, Dibrugarh (Assam). | <p>The Government of India's contribution to the project, as per revised cost estimates, is in the form of capital subsidy of Rs.4690 crore against project cost of Rs. 8920 cr. As on 15.01.2015, the project has achieved overall progress of 99.3% and construction progress of 98.2%. An amount of Rs.8177.00 crore has been spent on the project with financial progress of 91.67%. The total financial commitment of Rs.9175.00 crore has been made for the project.</p> |
| 5. Chemical Promotion & Development Scheme (CPDS) | 2.86 | 4.30 | 4.00 | Promotional activities, exhibition, seminars, research and development etc. | <p>Financial support was provided for conducting seminars, conferences, workshops, training, studies and exhibitions on various aspects of chemical and petrochemical sectors</p> |

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| 6. Chemical Weapons Convention(CWC) | 0.96 | 1.20 | 1.20 | Awareness creation through organization of seminars and publicity | India has received 181 inspections till 31.12.2014. Help Desks in PPP mode in association with Indian Chemical Council (ICC) have been set up at Vadodara, Mumbai, Chennai, Hyderabad, Kolkata and New Delhi for facilitating compliance by the chemical industry towards its obligations under CWC. To facilitate compliance by the industry and have efficient monitoring mechanism, a project of online submission of declarations by industry covered by the Convention has been implemented through NIC. Annual Declaration of Anticipated Activities (ADAA) -2015 was filed by 05-09-2014 and the second declaration namely Annual Declaration of Past Activities for 2014 has been complied and sent on-line on 25.02.2015. |
| 7. IT/Secretariat | 0.70 | 0.50 | 0.70 | Building computer infrastructure, Internet connectivity upgradation, LAN Expansion, Development of Web Enabled Application System as well as Office Automation System | Old computers were replaced with new model computers. Computer consumables & miscellaneous items, laptop, printers were provided in the Department. LAN expansion was also made during the year. |
| 8. Other new schemes of petrochemicals | 31.34 | 57.50 | 29.04 | To implement the three schemes namely (i) National Awards for Technology Innovation in various fields of Petrochemicals and downstream Plastic Processing Industry; (ii) Setting up Centres of Excellence (CoEs) in the field of Petrochemicals; and (iii) Setting up Plastic Parks. | For 2014-15, 290 nominations were received by CIPET. Based on the recommendations of the 'Prize Award Committee', 16 'Winners' and 14 'Runners up' have been selected for 2014-15. The function to present the awards was held on 21.02.2015 at Bengaluru. |

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| | | | | | <p>An outlay of Rs. 6 crore was provided for the scheme in the year 2014-15. Based on the recommendations of the Expert Group, constituted to review the physical and financial performance of these CoEs, an amount of Rs.2 crore each has been released to IIT Guwahati in August, 2014 as the 2nd installment and to CIPET, Bhubaneswar in December, 2014 as the 3rd installment.</p> <p>Following the submission of DPR, the proposals from Odisha, Madhya Pradesh and Assam have received final approval. The Department has released the first installment of Rs. 8 crore of the Grant-in-Aid each to Madhya Pradesh Plastic Park Development Corporation Ltd (MPPPDCL), Paradeep Plastic Park Limited (PPPL) and Assam Industrial Development Corporation (AIDC), for setting up of plastic parks at Madhya Pradesh(Mandideep), Odisha (Paradeep) and Assam (Tinsukia)in the year 2013-14.</p> |
| 9. Provision for NE | * | * | * | Development of NE region | Development of NE region. |
| Total | 1158.12 | 207.00 | 173.00 | | |

*Already included in Assam Gas Cracker Project