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Executive Summary

The Department proposes to undertake significant projects/schemes during 2013-14, keeping in view the ambitious overall economic scenario envisaged during the XII Five Year Plan and beyond. Some of them are briefly outlined below:-

Assam Gas Cracker Project:

The Assam Gas Cracker Project was initiated in pursuance of the Memorandum of Settlement signed between Central Government and All Assam Students Union (AASU) and All Assam Gana Parishad (AAGP) on 15th August 1985. 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 (fixed cost). A joint venture company namely M/s. Brahmaputra Cracker & Polymer Limited (BCPL), incorporated on 8th January 2007 is implementing the project.

However, owing to various reasons, the project has witnessed time and cost overruns. The Government of India, Cabinet Committee on Economic Affairs considered the revised cost proposal for the Assam Gas Cracker Project on 16.11.2011 and approved the revised cost estimate of Rs. 8920 crore (on "as built basis") which would be funded by capital subsidy of Rs 4690 crore and debt and equity for Rs 2961 crore and Rs 1269 crore respectively. The project schedule has also been revised with mechanical completion by July, 2013 and commissioning by December, 2013.

The overall progress of the Project, as on 15.02.2013, is 89.1% as against the scheduled target of 95.9%.

Petroleum, Chemicals and Petrochemicals Investment Regions (PCPIRs):

The PCPIR Policy as approved by the Cabinet Committee on Economic Affairs was published in the Gazette of India on 4th April 2007. The PCPIR Policy promotes adoption of a holistic approach to infrastructure development with a view to promote petroleum, chemical and petrochemical sectors in an integrated and environment friendly manner. The internal infrastructure of the PCPIR will be built and managed by a Developer, or a group of Developers, while Government of India will support the creation of external linkages; the State Governments will take up planning of the area and ensure that all physical infrastructure and utilities linkages under its jurisdiction are provided.

Since February 2009, Government of India has approved the setting up of PCPIRs in Dahej in Gujarat, Paradeep in Odisha, Vishakhapatnam – Kakinada region in Andhra Pradesh and Cuddalore – Nagapattinam districts of Tamil Nadu. Memoranda of Agreement have been signed with all the State Governments (except Tamil Nadu, which is presently under consideration of the State Government) duly outlining the respective commitments and milestones with timelines for implementation. These PCPIRs are in varying stages of implementation and the actual progress is being monitored by a High Level Monitoring Committee chaired by Secretary (C&PC). The PCPIRs have been actively showcased and promoted by both the State Governments as well as the Central Government through road shows, exhibitions, seminars, conferences etc.

Once fully established, these PCPIRs are expected to attract Rs. 7,62,894 crore of investment. Till date investments worth approximately Rs. 1,80,000 crore have been made in these regions. Of the total infrastructure worth Rs. 53,468.70 crore expected to be created in the PCPIRs, Government of India's contribution would be Rs. 4, 646.30 crore. The PCPIRs are projected to generate employment for approximately 33.96 lakh people

Public Sector Undertakings:

The Department has 3 PSUs under its administrative control-two in the Chemical sector namely Hindustan Organic Chemicals Ltd. (HOCL) and Hindustan Insecticides Ltd. (HIL) and one in Petrochemicals sector namely Brahmaputra Cracker and Polymer Limited (BCPL) responsible for implementing Assam Gas Cracker Project.

Hindustan Organic Chemicals Limited

Hindustan Organic Chemicals Limited (HOCL) was incorporated on 12^{th} December 1960; for 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 objective behind setting up of HOCL has been achieved to a large extent as over the years, more than 500 units based on HOCL's products have been set up all over the country which have not only helped in achieving self sufficiency but have also entered the international market by exporting chemicals, dyes and drugs over the last many years. 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 propellant N₂O₄ in the country, supplying it to ISRO for its launching of satellites.

HOCL made a profit in the year 2007-08 and 2010-11 but due to global meltdown incurred a loss in 2008-09, 2009-10 and 2011-12. HOCL has been making efforts to reduce the cost of production. At Rasayani, for producing Aniline, feedstock Naphtha has been replaced by CNG. Similarly, at Kochi, fuel LSFO is being replaced by RLNG by mid 2013, which will bring down the cost of production of Phenol and Acetone. The company is also debottlenecking the production capacity of Hydrogen Peroxide and N_2O_4 . 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 options like merger and/or JV with RCF, BPCL, JNPT etc.

Hindustan Insecticides Limited

Hindustan Insecticides Limited (HIL) was incorporated in March 1954 for manufacturing and supply of DDT for the malaria eradication programme (NMEP), presently known as National Vector Borne Disease Control Programme (NVBDCP), launched by the Government of India. In 1957, the company set up their second factory at Udyogamandal, near Cochin for manufacture of DDT. The company set up a plant at Rasayani, Maharashtra in 1977 for manufacture of Malathion, an insecticide used in public health. Today HIL has three manufacturing units located at Udyogamandal in Kerala, Rasayani in Maharashtra and at Bathinda in Punjab. All the manufacturing units of the company are ISO certified and comply with the requirements of International Standards of ISO 9001:2000, ISO 14001:2004 and ISO 18001:2007. The Corporate Office is ISO 9001 certified.

HIL has played a pivotal role on public health front by keeping dreaded diseases like Malaria, Kala Azar, Dengue, Japanese Encephalitis etc at bay with the manufacture and supply of DDT. DDT is even today the most effective tool to fight such diseases. DDT, which accounts for almost 47-48% of turnover, is supplied strictly to the National Vector Borne Disease Control Programme of the Government of India. The Company has now emerged as a leading supplier of DDT to the Globe. UNIDO is buying DDT from HIL for supplying to Zimbabwe. HIL also supplied DDT to South Africa and Namibia during 2011-12.

HIL diversified into agro-chemicals in the late seventies to ensure supply of quality pesticides at reasonable prices to the farming community. The agro chemicals are sold through a network of 7 Regional Sales Offices located at Delhi, Ahmedabad, Coimbatore, Hyderabad, Kolkata, Nagpur and Bangalore. The Company operates in public health and crop protection segments to improve the rural health and agricultural productivity that is helpful in bringing prosperity to rural India.

The company faced a major challenge with a ban on Endosulfan by the Hon'ble Supreme Court of India on 14th May, 2011. This product accounted for approximately 20% of annual Sales Turnover. Despite the ban on Endosulfan, the Company increased the turnover in 2011-12 to Rs. 279.82 crore, against Rs.271.04 crore in 2010-11 and the turnover achieved is highest since its inception. HIL has been making profits continuously since last five years.

National Policy on Petrochemicals:

The Petrochemicals sector in India has the potential of capturing massive investments and growth to become a major global player. The Government approved the National Policy of Petrochemicals on 12.04.2007. The National Policy on Petrochemicals aims to:

- Increase investments in the sector both upstream and downstream
- Increase the domestic demand and per capita consumption of plastics and synthetic fibres and to increase the use of petrochemicals in thrust areas;
- Increase the competitiveness, polymer absorption capacity and value addition in the domestic downstream plastic processing industry through modernization, research and development measures and freeing it from structural constraints;
- Facilitate investment in the emerging areas of the petrochemical sector and achieve environmentally sustainable growth through innovative methods of plastic waste management, recycling and development of bio-, photodegradable polymers and plastics.
- Promote Research and Development in Petrochemicals and promote Human Resource Development.

Based on the feasibility studies undertaken in various related areas in petrochemical sector, Government has since formulated three schemes viz. (i) National Awards for Technology Innovation in various fields of Petrochemicals and downstream Plastic Processing Industry; (ii) Setting up of the Centres of Excellence (CoE) in the field of Petrochemicals; and (iii) Setting up of Plastic Parks; which are in the process of implementation. National Awards for technology innovations for 2010-11 and 2011-12 were awarded in November, 2011 and March, 2012 respectively. Awards for 2012-13 are also in the process of being finalized. Regarding Centres of Excellence, the Expert panel to review the progress of existing CoEs for the year 2012-13 has been reconstituted and review of existing CoEs is presently going on. Simultaneously, the Department has also called for applications for setting up new CoEs in XII Plan from various pioneer academic and research institutions in the petrochemical sector. These applications shall be examined as per scheme guidelines, for selection of CoEs for the XII Plan.

For setting up of plastic parks, the Scheme Steering Committee (SSC), in its meeting held on 24.02.2012, considered the preliminary proposals from Assam, MP, Tamil Nadu, Gujarat, Orissa, West Bengal and Punjab and decided to grant inprinciple approval to the 4 proposals from Tamil Nadu, Madhya Pradesh, Assam and Orissa on the clear understanding that the first 2 projects that submit the DPR, complete in all respect, will be treated as those approved in the XI Plan Period and the other 2 will be considered for final approval only in the XII Plan period, as per the prevailing terms and conditions. However, taking into consideration the preparedness and bottlenecks faced in the preparation of DPRs, SSC in its meeting held on 19.10.2012 decided to extend the prescribed time limit for submission of DPR for final approval by six months. To review the status of preparedness of DPRs, next meeting of the SSC is scheduled for March, 2013.

Monitoring:

Two pronged monitoring is being carried out of the Outcome Budget proposals. Monitoring on a quarterly basis is being carried out at the level of the Department and a half-yearly review is undertaken by the Planning Commission. Also, with a view to increase the 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 the 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.

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 Department is entrusted with the responsibilities of planning, development and regulations of the chemicals and petrochemicals industry sectors. Allocation of Business Rules has mandated the matters concerning the following to be dealt with by the Department:

- a. Insecticides excluding the administration of The Insecticides Act, 1968 (46 of 1968);
- b. Molasses;
- c. Alcohol Industrial and Potable from the molasses route;
- d. Dyestuffs and dye intermediates;
- e. All organic and inorganic chemicals, not specifically allotted to any other Ministry or Department;
- f. Planning, development and control of, and assistance to, all industries dealt with by the Department;
- g. Bhopal Gas Leak Disaster-Special Laws relating thereto;
- h. Petrochemicals;
- i. Industries relating to production of non-cellulose synthetic fibres (Nylons, Polyesters, Acrylic etc);
- j. Synthetic rubber; and
- k. Plastics including fabrications of plastic and moulded goods.

1.3 The Department has two functional divisions viz. the Chemical Division and the Petrochemical Division, dealing with respective subject matters. There are two PSUs in chemical sector namely Hindustan Organic Chemicals Ltd. (HOCL) & Hindustan Insecticide Ltd. (HIL) and one in petrochemical sector namely Brahmaputra Cracker and Polymer Limited (BCPL). The Department also accords financial grants to two autonomous institutes namely Central Institute of Plastic Engineering and Technology (CIPET) and Institute of Pesticides Formulation and Technology (IPFT).

1.4 Rs. 1757 crore were allocated as the plan outlay during 2012-13 (reduced to Rs. 1637 crore at RE stage) for various schemes of the Department. For the annual plan 2013-14, an amount of Rs. 1200 crore has been approved by the Planning Commission as plan outlay.

1.5 Broad Scheme-wise details/justifications for the Annual Plan 2013-14 outlays are as follows:-

I. Su	pport of Existing	PSUs
1	HOCL	Rs. 10.00 crore represents the amount of Plan Loan
1	HOCL	proposed for HOCL. This amount is for following
		projects:-
		a) Waste Heat Recovery Turbine at Kochi Unit.
		b) Hydrogen Plant Relocation from Rasayani to Kochi Unit
		c) 22 KV Switchboard and Relays Replacement at
		Rasayani Unit.
		d) Upgradation of Instrumentation in NBIII Plant at
		Rasayani Unit.
2	HIL	For HIL, no outlay is proposed for 2013-14.
II. Su	upport to Autonor	nous Bodies
3	CIPET	CIPET is an autonomous Institute under the Department.
		Its prime objectives include training of manpower in
		different disciplines of Plastics Engineering; Technology
		and Technical support to industry. Rs. 140.96 crore is the
		allocation for 2013-14 for CIPET for its ongoing and new
		projects like establishment of Centre for Bio-Polymer
		Science and Technology (CBPST) –Kochi; 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 and new Academic Programmes
		and enriching technical infrastructure facilities &
		capabilities to meet industry needs.
4	IPFT	The Institute is engaged in the development of
		Formulations of environment friendly pesticides and plays
		a catalytic role for growth of Pesticides Industry. An
		allocation of Rs. 4.34 crore in 2013-14 has been made for
		meeting requirement of funds for upgradation of existing
		assets and provision of new infrastructure under Capital
		support, completion of ongoing projects and taking up
		various new projects for technology development of new
		generation formulation as also bioscience and analytical
		projects.
III. (Dther ongoing sch	
5	Assam Gas	As part of Assam Accord, Assam Gas Cracker Project is
	Cracker Project	being established in the Dibrugarh District of Assam at a
		total cost of Rs. 5460.61 crore. The unit, when operational,
		is expected to generate substantial employment-direct as
		well as indirect. A Capital subsidy of Rs. 2138 crore was
		originally envisages to be provided by the Central
		Government during the 5 years of project implementation,
		starting from 2007. However, the project cost and the
		commissioning schedule has since been revised to Rs 8920
		crore and December, 2013 respectively. An amount of Rs.
		1000 crore has been allocated in 2013-14 towards Capital
		Subsidy for the Project.
6	CPDS	Includes holding/supporting promotional activities such as
		India Chem events, sector specific events such as India
		Chem Gujarat 2013, promoting safety, health and
		management of chemicals and petrochemicals in their
		manufacture, consumption and disposal, promoting matters
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		related to setting up of PCPIRs; undertaking investment
		promotion activities; holding of seminars, conferences,
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		conducting studies to facilitate growth of these sectors.
		Government has also initiated steps towards preparation of
		chemical inventory of India to ensure protection of human
		health and environment. An amount of Rs. 3.00 crore has
		been allocated in 2013-14 for these activities.
7	CWC	India is one of the signatories to the Chemical Weapons
		Convention. An amount of Rs. 1.50 crore has been
		allocated in 2013-14 for compliance assistance, raising
		awareness through press publicity, holding workshops and
		operating Help-Desks in PPP mode in association with
		Indian Chemical Council at Vadodara, Navi Mumbai,
		Chennai, Hyderabad, Kolkata and Delhi.
8	IT/Secretariat	For providing IT/Secretariat services, an amount of Rs.
		0.70 crore has been allotted in the 2013-14 BE.
9	Other New	National Policy on Petrochemicals enjoins various
	Schemes of	steps/activities to be initiated/implemented by the
	Petrochemicals	Department. For implementing these policy measures,
		feasibility studies were undertaken in various related areas
		in petrochemical sector. Based on the recommendations of
		the feasibility studies, Government formulated the three
		schemes viz. (i) National Awards for Technology
		Innovation in various fields of Petrochemicals and
		downstream Plastic Processing Industry; (ii) Setting up of
		the Centres of Excellence (CoE) in the field of
		Petrochemicals; and (iii) Setting up of Plastic Parks; which
		are in the process of implementation. Accordingly, an
		amount of Rs. 39.50 crore has been allocated in 2013-14
		for these activities, including provision of Rs. 0.50 crore
		for the new scheme (proposed to be initiated in XII plan)
		namely the awareness programmes through CIPET and
		industry associations.
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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. However, the autonomous organizations under the control of the Department are engaged in programmes benefiting women and SC/ST. For instance, 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 terms of entrepreneurship and skill development by providing a hands-on experience. This provides them with the competence to work in the industry at the operating level or start their own tiny or cottage level industries for their livelihood. Thus, 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 the same will continue during the year 2013-14 also.

CHAPTER-II

FINANCIAL OUTLAYS AND PHYSICAL TARGETS FOR 2013-14

2.1 A statement showing the financial outlays under Plan and Non-Plan provisions of the Budget 2013-14 and the physical targets for the year, in brief, may be seen at Annexure I.

BE 2013-14 Non-Plan:

2.2 The BE Non-Plan for the year has been approved at Rs. 143.01 crore which includes revenue budget of Rs. 142.98 crore and Capital Loans to PSUs of Rs. 0.03 crore. The provision under revenue is towards Secretariat expenditure of the Department and that of Welfare Commissioner, Bhopal Gas and Institute of Pesticides Formulation Technology (IPFT). The Capital Loans to PSUs include token provision of Rs. 0.01 crore for Petrofil Cooperative Ltd. (PCL)'s Liquidator's Non-Plan expenditure and a token provision of Rs. 0.01 each for HIL and HOCL.

BE 2013-14 PLAN:

2.3 The Annual Plan of the Department of Chemicals and Petrochemicals for the year 2013-14 has been approved with a total outlay of Rs. 2756.48 crore - consisting of Gross Budgetary Support of Rs. 1200 crore and internal & extra budgetary resources of Rs. 1556.48 crore to be raised by Brahamputra Cracker & Polymers Ltd. (BCPL) as part of implementation of the Assam Gas Cracker Project. The highlights of the Plan are given in the succeeding paras.

<u>Public Sector Undertakings:</u>

2.4 A total outlay of Rs. 10.00 crore has been proposed as Plan Loan in Budget Estimates (BE) for chemical PSUs during 2013-14.

Hindustan Organic Chemicals Limited (HOCL)

2.5 Hindustan Organic Chemicals Limited (HOCL) was incorporated on 12^{th} December 1960; for setting up manufacturing capacities for chemicals/ intermediates which are required for production of dyes, dye-intermediates, rubber chemicals, pesticides, drugs and pharmaceuticals, laminates, etc. More than 500 units based on HOCL's products have been set up all over the country which have not only helped in achieving self sufficiency but have also entered the international market by exporting chemicals, dyes and drugs over the last many years. 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 propellant N₂O₄ in the country, supplying it to ISRO for its launching of satellites.

2.6 HOCL made a profit in the year 2007-08 and 2010-11 but due to global meltdown incurred a loss in 2008-09, 2009-10 and 2011-12. HOCL has been making efforts to reduce the cost of production. At Rasayani, for producing Aniline, feedstock Naphtha has been replaced by CNG. Similarly, at Kochi, fuel LSFO is being replaced by RLNG by mid 2013, which will bring down the cost of production of Phenol and Acetone. The company is also debottlenecking the production capacity of Hydrogen

Peroxide and N_2O_4 . 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 options like merger and/or JV with RCF, BPCL, JNPT etc.

2.7 During 2013-14, a sum of Rs.10 crore has been projected for HOCL for following activities:-

- a) Waste Heat Recovery Turbine at Kochi Unit.
- b) Hydrogen Plant Relocation from Rasayani to Kochi Unit
- c) 22 KV Switchboard and Relays Replacement at Rasayani Unit.
- d) Upgradation of Instrumentation in NBIII Plant at Rasayani Unit

Hindustan Insecticides Limited

2.8 Hindustan Insecticides Limited (HIL) was incorporated in March 1954 for manufacturing and supply of DDT for the malaria eradication programme (NMEP), presently known as National Vector Borne Disease Control Programme (NVBDCP), launched by the Government of India. In 1957, the company set up their second factory at Udyogamandal, near Cochin for manufacture of DDT. HIL has played a pivotal role on public health front by keeping the dreaded diseases like Malaria, Kala Azar, Dengue, Japanese Encephalitis etc at bay with the manufacture and supply of DDT. DDT is even today the most effective tool to fight such diseases. DDT, which accounts for almost 47-48% of turnover, is supplied strictly to the National Vector Borne Disease Control Programme of the Government of India. The Company has now emerged as a leading supplier of DDT to the Globe. UNIDO is buying DDT from HIL for supplying to Zimbabwe. HIL also supplied DDT to South Africa and Namibia during 2011-12.

2.9 HIL diversified into agro-chemicals in the late seventies to ensure supply of quality pesticides at reasonable prices to the farming community. The agro chemicals are sold through a network of 7 Regional Sales Offices located at Delhi, Ahmadabad, Coimbatore, Hyderabad, Kolkata, Nagpur and Bangalore. The Company operates in public health and crop protection segments to improve the rural health and agricultural productivity that is helpful in bringing prosperity to rural India.

2.10 The company faced a major challenge with a ban on Endosulfan by the Hon'ble Supreme Court of India on 14th May, 2011 that accounted for approximately 20% of annual Sales Turnover. The company is continuously making profits since last five years. Despite the ban on Endosulfan, the Company increased the turnover in 2011-12 to Rs.279.82 crore, against Rs.271.04 crore in 2010-11 and the turnover achieved is highest since its inception. HIL has been making profits continuously since last five years.

Autonomous Institutes/Organizations:

<u>Central Institute of Plastics Engineering and Technology (CIPET):</u>

2.11 CIPET is an ISO 9001:2008 QMS, ISO/IEC 17025, ISO/IEC 17020 accredited premier national Institution fully devoted to Academic, Technology Support Services and Research & Development (ATR) activities in all the areas of Polymer Science & Technology for the growth of plastics & its allied industries of the country. CIPET operates at 22 locations spread across the country which includes 16 centres at Ahmedabad, Amritsar, Aurangabad, Bhopal, Bhubaneswar, Chennai, Guwahati,

Hyderabad, Hajipur, Haldia, Jaipur, Imphal, Kochi, Lucknow, Mysore and Panipat and 3 Specialized centres viz., Advanced Tooling & Plastics Product Development Centre (ATPDC) at Madurai, Advanced Plastics Processing Technology Centre (APPTC) at Balasore and Plastics Waste Management Centre (PWMC) at Guwahati; 2 exclusive R&D Wings viz., Advanced Research School for Technology & Product Simulation (ARSTPS) at Chennai and Laboratory for Advanced Research in Polymeric Materials (LARPM) at Bhubaneswar have also been established. All the CIPET centres have 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 plastics and allied industries in the country.

2.12 To provide qualified human resources to the industry, CIPET offers a blend of specialised academic programmes in the field of Polymer Science & Technology viz., Doctoral, Post Graduate, Undergraduate, Post Graduate Diploma, Post Diploma or Diploma Programs. To upgrade the skill & technical competency of personnel employed in the plastics industry, CIPET offers a wide range of short-duration, skill-cum-technology up-gradation programmes at all centers.

2.13 Every year, CIPET trains more than 10,000 students in long-term and 23,000 participants in short-term programmes with hands-on experience on the most modern sophisticated facilities in design, CAD/CAM, tool room, processing, testing & quality control. With a strong alumni base of 50,000 professionals across the world, "CIPET" is indeed a recognized qualifying brand for supervisory and managerial manpower for the plastics and its allied industries.

2.14 CIPET renders Technology Support Services in design, tooling, processing, and testing & 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 Envisioned to be a Global R&D Hub, 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 & student exchange programmes, 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 Through the funding support from the administrative Ministry, OPEC, UNIDO and World Bank, CIPET is constantly / upgrading its civil and technical infrastructure facilities & capabilities aimed at continual process improvement,

enhancing the knowledge and competency level of employees and providing improved services to the valued customers.

2.18 Objectives of various schemes of CIPET are as follows:

A: Ongoing Schemes

A.1 Setting up of Centre for Bio-Polymer Science and Technology (CBPST) - Kochi:

- To develop Bio-polymer professionals to meet the growing demand of plastics industries.
- To upgrade the skills and technical knowledge of industrial personnel through advanced training programmes on Bio-polymers / Bio-plastics.
- To offer Quality control and standardization services in the areas of Bio-polymers materials and products.
- To train testing and quality control personnel in different testing protocols on Biodegradability (ISO, ASTM, EN, BIS etc.)
- To undertake Material Development and Characterization of Biopolymers and Biomaterials.
- To promote Application development of Bio based plastics, Blends and Hybrid Polymers.
- To develop Nanotechnology based Biopolymers.
- A.2 Research & Development in Emerging Areas:
 - Creation of core Research & Development set-up specifically related to automotive parts optimization structural design, linear, non-linear, contact analysis and Noise Vibration & Harshness (NVH) simulation, wear simulations, fatigue analysis of polymer/ composite automotive parts.
 - Establishment of technology for development of polymer implant materials for Orthopaedic applications (Knee, Hip and shoulder parts) as well as create core facilities for bio-tribology simulator, biomechanics software, reverse engineering facilities for Orthopaedic product developments.
 - Value addition of "Waste to Wealth": Creation of expertise & stateof-art facility for R&D in the area recycling of plastics from WEEE.
 - Synthesis & Characterization of Biodegradable materials for tissue engineering, scaffolds, and biosensor based applications.

- Enrich International interaction with Foreign Universities and R&D laboratories through student / faculty exchange programmes, collaborative research projects and hosting International Conferences to provide knowledge sharing on a global platform.
- Enhance library facilities by Upgradation of Information & documentation cell for continuous access of scientific journals, patents, research articles e-books and other databases available world-wide; for the Research Scholars & Scientists to keep updated with the technical advancements taking place globally.
- Propagate new ideas and innovations globally to encourage academic industry tie-up and generation of human resources to cater to the needs of the society.
- A.3 Creation of Civil and Technical Infrastructure for expansion of CIPET Centres:
 - In line with the increased intake of Diploma, Post Diploma & Postgraduate Diploma students at 4 states viz., Gujarat, Orissa, Tamil Nadu & Uttar Pradesh exclusive lab facilities, class rooms, faculty rooms, students interaction room, seminar hall etc. needs to be created in accordance with the revised syllabus as well as to meet the stipulated norms of AICTE, wherein exclusive separate set of civil infrastructure is mandatory for conducting the diploma programmes.
 - To enhance the academic ambience of diploma courses at par with elite institutions.
 - With the enhanced facilities / modern amenities, the student enrolment is also expected to increase manifold.
 - The enhanced facilities would be helpful in standardization of delivery mechanism, leading to higher brand value for courses.
- B <u>New Schemes:</u>
- B.1 Creation of Hostel Facilities to augment increase in intake capacity of the Existing & New Academic Programs:
 - To create residential accommodation on priority basis at four states where High Learning Centres are located viz. Gujarat, Odisha, Tamil Nadu & Uttar Pradesh and six states where other learning centres are located viz., Andhra Pradesh, Haryana, Maharastra, Manipur, Rajasthan & West Bengal so as to accommodate a minimum 80% of boys and 100% girls who are pursuing the long-term academic programmes of CIPET.
 - The proposal has been included in the XII Five Year Plan for the period 2012-17 and the cost of the project would be met out by Government of India to the tune of Rs.169.32 crore.

- In order to meet the increased demand of manpower by the industry anticipated during the end of XII plan by the year 2016-17, it is inevitable to create the infrastructure for increasing the pass out of the institute, which would in turn cater the need of plastics industry.
- B.2 Enriching Technical Infrastructure facilities & capabilities to meet industry needs:
 - To impart Technical skill up-gradation training (Vocational Training) to the personnel/executives from plastic industries on all technological aspects i.e. tooling, design & CAD, Plastics Processing etc. through short-duration training courses, modular / tailor-made courses.
 - To promote employability of unemployed/ under employed youth through Vocational training in the entire gamut of Polymer Science & Technology.
 - To enhance the skill-cum-technical competency of the faculty through participation in Seminars / Conferences / Exhibitions (both National & International), ISO and Advanced Training programmes in the areas of design & mould development, CAD/CAM/CAE, plastics processing, testing & quality control and plastics waste management etc.
 - To establish a Plastics Testing Laboratory at Madurai to meet the testing and consultancy needs of Plastics & Allied Industries in southern part of Tamil Nadu.

2.19 Deliverables (Physical/Financial) against the objectives/purpose of the different sub-schemes of CIPET during 2013-14, for which an outlay of Rs. 140.96 crore has been made, as well as targeted enrolment in its various long term courses are detailed below:

A) <u>O</u>	ngoing Schemes:		n Rs lakh)	
S1.	Particulars	Budget Allocated (Rs. lakh)	Utilization	Deliverables
A.1	Establishment of Centre for Bio- Polymer Science and Technology(CBPST) -Kochi	345.00	To procure machinery / equipment for Chemicals Synthesis laboratory, Biodegradable laboratory, Characterization laboratory, library books – Rs. 70 lakh. To procure machinery / equipment for Biomaterials processing – Rs. 19 lakh. To establish Prototype Product Development Centre – Rs. 16 lakh. To construct 2500 Sq.mtr. Academic block building and 1500 Sq.mtr. residential accommodation at Kochi – Rs. 105 lakh. To meet recurring expenditure – Rs. 135 lakh. - Rs. 345 lakh.	 Enrollment of around 20 PG and 12 Ph.D. students during the First year of the establishment of "Centre for Bio-polymer Science and Technology". The students will pursue their programmes in the exclusive areas of Bio- Polymer Science and Technology. Promote application of Biopolymer in all the key sectors of Indian economy. Provides hands on practical training in the fields of Rheology, Extrusion, Injection moulding, mechanical properties of polymers, crystallization, viscometry, testing of biodegradability, basic product design & manufacturing concept. Development of cost effective formulations of bioplastics materials, blends and alloys. At the end of XII Five Year Plan 240, PG and Doctoral programme students, 550 Short Term Courses participants are expected to be trained and benefited.
	Sub-total (A.1)		Rs. 345 lakh.	

S1.	Particulars	Budget Allocated (Rs. lakh)	Utilization	Deliverables
A.2	Research & Development in Emerging Areas	350.00	To procure equipment / machineries for R&D Units – Rs. 163 lakh. To engage Research Scholars viz., JRF, SRF, Research Associates, Pool Scientist, Project Assistants etc. – Rs. 107 lakh. To procure Consumables & Raw Materials, Calibration of Equipments, NABL Accreditation, Inter laboratory testing & characterization, Participation in Proficiency Testing & Uncertainty in measurements for traceability of research data, test results, etc. – Rs. 32 lakh. Filing & Renewal of Patents, Subscription of e-Journals and e- Books, Publication of Text Books, Attending International Conference, Travelling Expenses for Research group, Faculty exchange programmes, etc. – Rs. 48 lakh.	 Generation of innovative formulations from WEEE to develop high end applications or reuse in printer housings, camera casing, and battery boxes automobile interiors etc. Mixed E-plastics constituting of PP, PC, PVC, Nylons ABS/HIPS obtained shall be a new product of stable morphology which can be validated for different products. Thermosets which are not inherently recyclable, can be grinded into finer particle size and used as filler in improving the properties of recycled plastics Using biodegradable polymers reinforced with suitable nanomaterials for application in sensors and scaffolds for tissue engineering. Light weight, high performance automotive polymer parts. Technology to produce wearless polymer orthopedic implants. Enlighten the students with the applications of latest Technologies in the field of Polymer Science and Technology making their course job/entrepreneurship oriented. Establish International interaction with Industries, academic institutions especially related to ortho-medical implants to acquire the needs of future polymer implants. Expected increase in output of ARSTPS and LARPM from actual 70 during 2011-12 to 100 during 2013-14.
	Sub-total (A.2)		Rs. 350 lakh.	

S1.	Particulars	Budget Allocated (Rs. lakh)	Utilization	Deliverables
A.3	Creation of Civil and Technical Infrastructure for expansion of CIPET Centres	925.00	To construct exclusive Physics, Chemistry, Electronics, Computer labs, class rooms, faculty rooms, students interaction hall, seminar hall for Diploma, Post Diploma, Postgraduate Diploma students at four States viz., Gujarat, Odisha, Tamil Nadu & Uttar Pradesh – Rs. 925 lakh.	 2500 Diploma/Post Diploma/Postgraduate Diploma students at these four HLC Centres will be benefited with the creation of exclusive lab facilities, class rooms, seminar halls, students interaction hall etc. where Undergraduate and Postgraduate programmes are being pursued in parallel. Creation of exclusive facilities will enhance the quality of training and academic ambience for conducting the diploma programmes. This will also fulfill the mandatory requirement of AICTE which stipulates exclusive campus / set up for Diploma programmes. The HLC's would set a facelift with enriched academic ambience. By virtue of this proposal, each of these Centres will have a minimum constructed area of 3340 Sq. Mtr. each to fulfill the above requirements by the end of XII Five Year Plan.
	Sub-total (A.3)		Rs. 925 lakh.	

B) <u>New Schemes:</u>

S1.	Particulars	Budget Allocated (Rs. lakh)	Utilization	Deliverables
B.1	Creation of Hostel Facilities to augment increase in intake capacity of the Existing & New Academic Programs.	10382.00	To construct 47375 sq.mtr of Boys Hostel (3790 boys) for CIPET Centres – Rs. 8695 lakh. To construct 9200 sq.mtr of Girls Hostel (736 girls) for CIPET Centres – Rs. 1687 lakh. - Rs.10382 lakh.	 Enhanced Residential facilities to boys (80%) and girl students (100%) by the end of XII Five year Plan. The total students benefitted will be 7,384 comprising 6184 boys and 1200 girls. Increased employability by promoting the quality of training enhanced facilities and capability. Enhanced and Efficient services through R&D by utilization of additional civil infrastructure facilities.
	Sub-total (B.1)		Rs. 10382 lakh.	

S1.	Particulars	Budget Allocated (Rs. lakh)	Utilization	Deliverables
B.2	Enriching Technical Infrastructure facilities & capabilities to meet industry needs.	2094.00	 To procure equipment / machineries for conducting skill development programmes at CIPET in the areas of: Plastics Processing – Rs. 756 lakh. Tool Room – Rs. 418 lakh. Design & CAD/CAM/CAE – Rs. 172 lakh. To engage contract manpower for STC/Vocational Training Programme– Rs. 223 lakh. To construct pre-fabricated shed for Vocational training programme – Rs. 254 lakh. To undertake Faculty Development Programme – Rs. 203 lakh. To set up plastics testing laboratory at Madurai– Rs. 68 lakh. 	 As envisaged from 2011-12 to 2021-22 around 3,94,581 participants are expected to be trained through skill development programmes at CIPET Centres spread across 20 locations. The Technical competency, capability of faculty will be enriched, through Faculty Development training programmes. More and more un-employed/under-employed youths are expected to participate in skill development vocational training programme at CIPET. Around 30000 participants per annum will be benefitted through short skill development programmes will widen their technical knowledge in the latest technologies adopted by the industries. Fulfills the enhanced job requirements of plastic and allied industries in the globalized environment.
	Sub-total (B.2)		Rs. 2094 lakh.	
	Grand Total	(A+B)	Rs. 14096 lakh.	

		М.7	TECH	[Μ	I.E				B.TE	ECH								M.Sc	Bio										PMD	
CENTRE	PE	/PT		ymer otech	CAD	/CAM		PE	/PT			Mfg.	Engg.		N	1.Sc.	.,Tec	h	Poly Scie	mer		-PPT		DPMT			DPT			ith	TOTAL
	Ι	II	Ι	II	Ι	II	Ι	II	III	IV	Ι	II	III	IV	Ι	II	III	IV	Ι	II	Ι	II	Ι	II	III	Ι	II	III	Ι	II	
Ahmedabad	18	4	-	-	-	-	60	37	54	74	60	30	57	24	-	-	-	-	-	-	90	58	90	90	87	90	87	86	-	-	1096
Amritsar	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	-	-	-	-	-	90	69	90	84	95	90	85	71	-	-	674
Bhopal	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	90	100	90	84	100	90	95	112	60	12	833
Bhubaneswar	18	15	18	10	-	-	60	54	67	67	60	57	65	66	25	15	25	18	-	-	1	1	-	-	-	1	-	-	-	-	640
Bhubaneswar - II	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	90	92	92	-	-	-	-	-	274
Balasore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	89	-	-	-	90	81	77	-	-	427
Chennai	18	18	-	-	18	17	60	52	70	71	60	54	68	53	-	-	-	-	-	-	90	59	90	74	57	-	-	-	-	-	929
Guwahati	-	-	-	1	-	-	I	-	1	-	-	-	-	-	-	-	-	-	-	-	90	46	90	80	97	90	90	91	-	-	674
Hyderabad	-	-	-	1	-	-	I	-	1	-	-	-	-	-	-	-	-	-	-	-	90	69	90	80	31	90	79	45	-	-	574
Haldia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	57	90	73	89	90	90	88	-	-	667
Hajipur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	91	90	74	80	90	80	77	-	-	672
Imphal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	21	-	-	-	90	56	60	-	-	317
Lucknow	18	15	-	-	-	-	60	52	60	47	60	55	55	56	-	-	-	-	-	-	90	92	90	90	78	90	90	84	-	-	1182
Mysore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	48	90	64	60	90	51	61	-	-	554
Panipat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	88	90	98	109	90	89	89	-	-	743
Jaipur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	89	90	88	91	90	87	82	-	-	707
Aurangabad	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	80	90	90	89	90	93	75	-	-	697
Madurai	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	59	59	-	-	-	60	44	312
Kochi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	-	-	-	-	-	-	-	-	-	-	40
Total	72	52	18	10	18	17	240	195	251	259	240	196	245	199	25	15	25	18	20	20	1350	1056	1350	1220	1214	1260	1153	1098	120	56	12012

LONG TERM COURSE - NO. OF STUDENTS TO BE ENROLLED/PASSING OUT IN THE YEAR 2013-14 (TARGET)

Short-Term Courses:

2.20 Besides, a total number of 1750 Short-Term courses with 26023 participants are proposed to be organised during the year 2013-14 as per the details given below:

S.No	Course Details	Courses	Participants
1	Regular Short Term Courses	1110	10663
2	Inplant Training Programmes	35	1045
3	Tailor Made Courses	110	1550
4	Sponsored Programmes	495	12765
	Total	1750	26023

Institute of Pesticide Formulation Technology (IPFT):

2.21 Institute of Pesticide Formulation Technology (IPFT) was established in May, 1991 under the Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers as an autonomous institution. IPFT has established a healthy rapport with the pesticides industries and has been able to successfully transfer technology for safer, efficient and environment friendly formulations. IPFT consists of three major Divisions and a Pilot plant. The Institute carries out both in-house and external projects.

2.22 The main objectives of the Institute of Pesticide Formulation Technology as given in the Memorandum of Association of the Society are:

- i. Development and production of state-of-the-art user and environment friendly pesticide formulation technology.
- ii. Promotion of efficient application technologies suiting the existing requirements of the newer formulations.
- iii. Information dissemination of safe manufacturing practices, quality assurances, raw material specification and sources.
- iv. Analytical and consultancy services.
- v. Fostering the improvement in the qualification and usefulness of pesticide scientists working in the agrochemical area.
- vi. Continuing education through specialized training for pesticide personnel.

2.23 The Institute is engaged in the development of formulations of environment friendly pesticides and plays a catalytic role for growth of Pesticides Industry. An amount of Rs. 4.34 crore has been allocated to the Institute for 2013-14 BE (plan) for meeting requirement of funds for upgradation of existing assets and provision of new infrastructure under Capital support, completion of ongoing projects and taking up various new projects for technology development of new generation formulation as also bioscience and analytical projects.

Assam Gas Cracker Project:

2.24 The Assam Gas Cracker Project was initiated in pursuance of the Memorandum of Settlement signed between Central Government and All Assam Students Union (AASU) and All Assam Gana Parishad (AAGP) on 15th August 1985. 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 (fixed cost). A joint venture company namely M/s. Brahmaputra Cracker & Polymer Limited (BCPL), incorporated on 8th January 2007 is implementing the project.

2.25 However, owing to various reasons, the project has witnessed time and cost overruns. The Government of India, Cabinet Committee on Economic Affairs considered the revised cost proposal for the Assam Gas Cracker Project on 16.11.2011 and approved the revised cost estimate of Rs. 8920 crore (on "as built basis") which would be funded by capital subsidy of Rs 4690 crore and debt and equity for Rs 2961 crore and Rs 1269 crore respectively. The project schedule has also been revised with mechanical completion by July, 2013 and commissioning by December, 2013.

2.26 The Cabinet Committee on Economic Affairs has approved:

(i) Revised cost estimates (RCE) of Rs. 8920 crore (on "as built basis") for setting up of Assam Gas Cracker Project by BCPL along with the following assumptions:

- a) 10 per cent IRR;
- b) Debt-equity ratio -2.33:1;
- c) polymer price Rs. 67,709 / MT (weighted average);
- d) price of natural gas Rs.4,100 / TSCM;
- e) price of naphtha Rs. 35, 474 / TSCM;
- f) pro rata infusion of equity and capital subsidy before drawdown of debt.
- (ii) Funding pattern:
 - a) Capital Subsidy Rs. 4690.00 crore
 - b) Debt Rs. 2961.00 crore
 - c) Equity Rs. 1269.00 crore

In case the planned loans do not materialize, the same would be picked up as additional equity by the Promoters.

- (iii) Revised project schedule with mechanical completion by July, 2013 and commissioning by December, 2013.
- (iv) The CCEA has also directed that the implementation of the project to be monitored closely to ensure adherence to the stipulated time line.

2.27. The comparison of the original cost funding structure vis-à-vis the revised cost estimates is as follows:-

		(Rs crore)
Particulars	As approved by the CCEA	Revised Cost Estimates
	originally (April 2006)	(16.11.2011)
Project Cost	5460.61	8920.00
Capital Subsidy	2138	4690
Equity	1041	1269
Debt	2083	2961
Debt-Equity Ratio	2:1	2.33:1

2.28. Capital Subsidy released by Department of Chemicals and Petrochemicals so far is as under:

2007-08	-	Rs. 37.43 Crore
2008-09	-	Rs. 100.00 Crore
2009-10	-	Rs. 316.31 Crore
2010-11	-	Rs. 808.83 Crore
2011-12	-	Rs. 875.43 Crore
2012-13	-	Rs. 1552.00 Crore
		Total: Rs. 3690.00 Crore

2.29. Keeping in view the CCEA's stipulation for pro rata infusion of equity & capital subsidy before draw down of debt, inadequate allocation at the RE stage in year 2011-12 and the scheduled mechanical completion of project by July, 2013, Planning Commission was requested to provide the entire balance Capital Subsidy due of Rs. 2552 crore in the Annual Plan of 2012-13 towards capital subsidy to BCPL. However, Planning Commission allocated only Rs. 1552 crore for the year 2012-13. The balance capital subsidy of Rs. 1000 crore has been provided in 2013-14 (BE).

2.30. When completed, the Assam Gas Cracker Project is expected to lead to substantial employment generation, as a result of investments in downstream plastic processing industries and allied activities. The project is considered to be of crucial significance for the state of Assam and North-Eastern region.

Departmental Schemes:

2.31 An amount of Rs. 44.70 crore has been allocated in the 2013-14 for Departmental schemes of CPDS, CWC, IT/Secretariat and other schemes of petrochemicals.

Chemical Promotion and Development Scheme (CPDS):

2.32 For 2013-14, the allocation under this scheme is Rs. 3.00 crore for undertaking various promotional activities for chemical and petrochemical industry.

- 2.33 The following activities are planned during 2013-14:
 - i) Promotion of chemical industry by organizing India Chem events. These events are undertaken in association with FICCI once in two years. So far, seven such events have been undertaken and the next event will be in October, 2014. Similarly, India-Chem Gujarat, an event which also takes place once in two years focusing on specialty chemicals segment will take place in 2013 for which preparatory work has already commenced. Similarly, an event for the plastic industry is planned to be held in 2013. Actions for international promotion of these events will have to be undertaken. The Department shall also undertake to supplement the efforts of the industry associations for holding both domestic and international seminars/conferences etc. for the promotion and development of chemicals as well as petrochemicals. This will include road shows in various countries with developed chemical industry as also those having good market potential for Indian industry. International Buyer-Seller Meet is also envisaged to be organized.
 - ii) Action will also be taken to promote PCPIR policy. Promotional activities for the promotion of chemical/plastic hubs will also be considered.

- iii) It is also proposed to undertake various activities such as holding/organizing conferences/seminars/workshops/studies/awareness campaigns etc. for the promotion of chemical and petrochemical sectors as also for promoting awareness about various International Conventions such as Prior Informed Consent procedure under Rotterdam Convention and obligations under EU policy of Registration, Evaluation and Authorization of Chemicals (REACH) etc. Delegations will be sent and also delegations invited for facilitating these activities for which expenditure on travel etc. would be required to be incurred.
- iv) Government has also initiated steps towards preparation of chemical inventory of India to ensure protection of human health and environment. While maintaining competitiveness and innovative capability of chemical industry, it is imperative for India to have a comprehensive analysis for the necessity of chemical legislation on the lines of REACH of European Union and other chemical management legislations adopted by other countries like China, Canada, Japan, Malaysia etc. Preparation of inventory of chemicals produced, traded and consumed in India is an important step in that direction for which action has been initiated by the Department in association with CHEMEXCIL, an industry association.

Chemical Weapons Convention (CWC):

2.34 CWC is a universal non-discriminatory, multilateral, Disarmament Treaty, which bans the development, production, acquisition, transfer, use and stockpiling of all chemical weapons. India is a party to this Treaty. It has 188 Nation States as its members as on 18.02.2011. India has a well developed chemical industry relevant to the Convention. The Department is also administrative Department for Chemical Weapons Convention Act 2000 which is in force in the country. In terms of the allocation of work in relation to this CWC activity, the Department of Chemicals & Petrochemicals is responsible for chemical industry matters and more specifically, preparation of declarations, facilitation of inspections by OPCW teams as also creating awareness in the industry about its obligations under the Convention.

2.35 For 2013-14, an amount of Rs. 1.50 crore has been allocated for the following planned activities:

- (i) Creating awareness about the obligations under the Convention by organizing twelve (12) to fifteen (15) awareness generation programmes in different parts of the country having concentration of chemical industry relevant to the Convention. The same also includes undertaking publicity activities through industry journals and other media besides preparation of technical literature for distribution.
- (ii) In view of the limited manpower resources available with the Department and the fact that the chemical industry relevant to the CWC is scattered all over the country, compliance/assistance programme through PPP mode has been undertaken by setting up CWC Help Desks. Six such Help-Desks are operational at Vadodara, Navi Mumbai, Hyderabad, Chennai, Kolkata and Delhi. The activities of all these Help Desks will be continued. These have geographical coverage as detailed below:-

Location	Area to be covered		
Hyderabad	Andhra Pradesh, Orissa and Chhattisgarh.		
Kolkata	Bihar, Jharkhand, West Bengal and North Eastern Region		
Delhi	Uttar Pradesh, Himachal Pradesh, Haryana, Punjab, Chandigarh, Uttaranchal and J&K.		
Mumbai	Maharashtra, Goa, Rajasthan, Madhya Pradesh etc.		
Chennai	Tamil Nadu, Karnataka and Kerala		
Vadodara	Gujarat		

2.36 Further, consequent to coming into effect of CWC (Amendment) Act, 2012 from 23.11.2012, corresponding rules for registration under Section 18 of the CWC Act, 2000 are being framed. As a result, the chemical industry and others concerned covered by the Act will have to get registered with the Department. This will lead to large volume of work as there will be large number of companies seeking registration. This will also require constant updation of the data. All this would require setting up of a CWC Cell with dedicated manpower. Further, as part of obligations under the Convention and for facilitating international inspections conducting by OPCW and awareness programmes for ensuring compliance with provisions of CWC Act, a large number of visits will have to be undertaken and the expenditure on same will have to be borne.

IT/Secretariat:

2.37 I.T. revolution has changed the working style world over. The benefits of IT are required to be tapped in Government offices also to increase the operational efficiency and ease of data retrievability. Most of the correspondences are now being done through E-Mail. Data storage, file keeping and file movement, billing and inventory as well as the typing work is being done through computers.

2.38 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. Department of Chemicals & Petrochemicals is implementing e-Office Mission Mode Project of Department of Administrative Reforms and Public Grievances Under this obligation, funds would be required during the coming financial years for IT automation. Accordingly, an amount of Rs. 0.70 crore has been allocated under IT/Secretariat for 2013-14.

Other New Schemes of Petrochemicals:

2.39 In pursuance of National Policy of Petrochemicals, 2007, Government formulated three schemes viz. (i) National Awards for Technology Innovation in various fields of Petrochemicals and downstream Plastic Processing Industry; (ii) Setting up of the Centres of Excellence (CoEs) in the field of Petrochemicals; and (iii) Setting up of Plastic Parks which are in the process of implementation. Their planned activities during 2013-14 are:

(i) <u>Scheme on National Awards for Technology Innovations in Petrochemical and</u> <u>downstream Plastic Processing Industry:</u> This scheme aims to incentivise meritorious innovations and institutions in various fields of petrochemicals and downstream plastic processing industry though selection of meritorious innovations and invention in the 8 categories relating to polymer materials/products, processing, machinery, re-cycling/waste management and research in the related fields and giving them due recognition and thus motivating them for enhancing R&D initiatives. The applications for the awards scheme shall be called for and after selection of organisations/ institutions, the Awards shall be given for the relevant year. CIPET, entrusted with all the work relating to processing of applications, shall be provided with the earmarked funds.

- (ii) Setting up of Centers of Excellence in Polymer Technology: This scheme is aimed at improving the existing petrochemical technology and research in the country and to promote development of new applications of Polymers & Plastics and monitoring of the progress of the selected institutions for setting up of CoEs under the XII Plan and release of funds. Further, progress of NCL Pune and CIPET, Chennai will also be monitored. Funds shall be released to 3 new CoEs selected for implementation in XII Plan subject to review of activities by the designated Expert Panel. The requisite funds have been sought based on requirements of Rs.2 crore each for 3 CoEs taken up in XII Plan. The Expert Panel will also review the progress of NCL, Pune and CIPET, Chennai.
- (iii) <u>Setting up of dedicated Plastic Park:</u> Setting up of need based Plastic Parks, and ecosystems with requisite state of the art infrastructure and enabling common facilities to assist the sectors move up the value chain and contribute to the economy more effectively is the mandate of this sub-scheme. Final approval of 4 plastic parks, appointment of Programme Manager for plastic parks for the XII Plan and Monitoring progress of implementation of setting up on Plastic Park shall be the programme for 2013-14. Based on the assessment of Detailed Project Reports (DPRs), the Department proposes to accord final approval for setting up of 4 plastic parks in Tamil Nadu, Madhya Pradesh, Assam and Odisha. In addition, action for appointment of Programme Manager for the additional 2 Plastic parks in the XII Plan period would be taken.

NEW SCHEMES under National Policy on Petrochemicals

Awareness Programmes through CIPET / Industry associations through Promotional CDs/Media campaign, Seminars, participation in Exhibition, Feasibility Studies:

2.40 Plastics per se are inert. However, its non-biodegradable properties are attracting environmental concerns. Plastic waste management is necessary to sustain the growth of the plastic processing industry. The indiscriminate littering of plastic carry bags and other packaging materials are major concerns and induce negative image/publicity for the entire plastic products. The systematic collection and segregation of the plastic materials and organized recycling with appropriate technology are required to be promoted in public domain so as to bring out positive aspects of plastic. The Department proposes to launch media campaign/hold seminars aimed at countering myths about plastic products as also spreading the best practices on segregation at source, collection mechanism and recycling of plastics and technology options. The payments due to the consultants hired for feasibility studies undertaken to formulate and implement Schemes under National Policy on Petrochemicals as also to Programme Manager for implementation of Plastic Park scheme would also be provided.

CHAPTER III

REFORM MEASURES AND POLICY INITIATIVES

Petroleum, Chemical Petrochemical Investment Regions (PCPIRs) Policy:

3.1 The Petroleum, Chemical and Petrochemical Investment Region Policy seeks to ensure the adoption of a holistic approach to promote the Petroleum, Chemical and Petrochemicals sectors in an integrated and environmental friendly manner on a large scale. Such integrated PCPIRs would reap the benefits of co-siting, networking and greater efficiency through use of common infrastructure and support services.

3.2 The Petroleum, Chemical and Petrochemical Investment Region (PCPIR) is a specifically delineated investment region having an area of about 250 sq kms (with minimum 40% of the designated area earmarked for processing activities). This region will be a combination of production projects, public utilities, logistics, environmental protection, residential areas and administrative services.

3.3 The Cabinet Committee on Economic Affairs (CCEA), in its meeting held on 8th March 2007 approved the Policy Resolution for setting up of PCPIRs. As per the Petroleum, Chemical and Petrochemical Investment Region Policy, Government of India is to ensure availability of external physical infrastructure linkages to the PCPIR including Rail, Road (National Highways), Ports, Airports and Telecom in a time bound manner. This infrastructure will be created/upgraded through Public Private Partnerships to the extent possible and the Central Government will provide necessary viability gap funding (VGF) through existing schemes.

3.4 A Committee headed by Secretary (C&PC) has been constituted to monitor the progress of implementation of the approved PCPIRs.

3.5 The status of implementation of the PCPIRs is as follows:

Andhra Pradesh PCPIR:

- Memorandum of Agreement signed with Government of India in October, 2009.
- Notification of the PCPIR is completed.
- Feasibility Study for the rail line linking APSEZ to Gangavaram Port has been completed by RITES. RITES is being requested to submit DPR.
- In respect six laning of Vishakhapatnam Rajahmundry (NH 5), for the work from Annandapuram to Anakapalli via Vishakhapatnam, work has been entrusted to M/s Transtroy Consortium Pvt. Ltd. Agreement was entered between NHAI and the Consortium in April 2012.
- For 4 laning of NH 214, consultant's report has been examined. Work is expected to commence by March, 2013.
- DPR for phase I of Expressway from Gangavaram to Kakinada is stated to be in final stages of approval. The process is held up owing to pending land issue with Vishakhapatnam steel plant. Alignment of Phase II of the project is being finalized. Draft Report by the Consultant is expected by September 2013.

- Acquisition of additional 4.14 sq.km of the processing land and filing of requisition for acquisition of additional 35.19 sq.kms.
- M/s LEA Associates, South Asia Pvt. Ltd, Consultants have furnished the Draft Master Plan, which is being considered by the Special Development Authority and APIIC.
- Constitution of a Special Development Authority to function as Management Board
- Based on the Terms of Reference approved by Ministry of Environment & Forests (MoEF), EPTRI had completed study for two seasons and the final report is expected to be submitted to MoEF by April, 2013.

Gujarat PCPIR:

- Memorandum of Agreement signed with Government of India in Jan'10.
- The PCPIR has been notified under the Special Investment Region (SIR) Act, 2009.
- The final EIA report has been submitted by NEERI on 05.10.2012.
- The procedure of public hearing is in progress.
- A 90 MLD marine Effluent Pipeline with deep sea diffuser facility at a cost of Rs. 180 crore already set up by GIDC.
- MoU signed with Hitachi for development of Smart Community and Ecofriendly Township in PCPIR on 30.04.2010.
- Work of providing basic infrastructure such as roads, water and power supply network, effluent collection network, streetlights, storm water drainage, etc. for Dahej I & II has been completed while the work in respect of Dahej-III estate is in progress.
- Gujarat Infrastructure Development Corporation (GIDC) has spent Rs. 1722 crore for provision of infrastructure in the PCPIR. Investment in provision of infrastructure by all agencies including GIDC is more than Rs. 6,899 crore. Additional expenditure of Rs. 1500 crore by GIDC is under way in water supply and development of roads.
- Construction of Water Supply Network is in place.

Odisha PCPIR:

- Memorandum of Agreement signed with the State Government.
- Special Purpose Vehicle called the Paradeep Investment Region Development Ltd has been formed.
- A water availability study for the PCPIR is being conducted through WAPCOS.
- A 1320 MW thermal power plant by SPI Ports (P) Ltd is being set up.
- Surat–Paradeep Gas Transmission Pipeline an inter-state Gas transmission pipeline is being implemented by GAIL.
- A JV agreement with Industrial Development Corporation of Odisha (IDCO) proposed by GAIL for development of gas based infrastructure in the State is under active consideration of the state Government. IOCL has also signed an MoU with Dhamra Port Company for a 5 MMTPA LNG Terminal.

Tamil Nadu PCPIR:

- The proposal has been approved by the CCEA.
- The State Government of Tamil Nadu has thereafter been requested to sign a Memorandum of Agreement (MoA) with the Union Government before proceeding further. The response of the State Government is still awaited.
- The Anchor Tenant viz., Nagarjuna Oil Corporation Ltd. has invested Rs. 6090 crore in its refinery expansion project.
- A product jetty for evacuation of petroleum fuels and a Single Point Mooring System for receiving crude are under construction.

3.6 The Department of Chemicals and Petrochemicals has actively showcased and promoted the PCPIRs in collaboration with the State Governments and industry associations through various investors meets, exhibitions, seminars and conferences.

Petrochemicals:

3.7 The Government approved the National Policy on Petrochemicals on 12.4.2007. The National Policy on Petrochemicals aims to:

- (i) increase investments in the sector (both upstream and downstream) and capture a slice of the resurgent Asian demand in polymers and downstream processing through additions in capacity and production by ensuring availability of raw materials at internationally competitive prices, creating quality infrastructure and other facilitation to ensure value addition and increase exports;
- (ii) increase the domestic demand and per capita consumption of plastics and synthetic fibres from the present level of 4 Kgs and 1.6 Kgs, increase the competitiveness, polymer absorption capacity and value addition in the domestic downstream plastic processing industry through modernization, research and development measures and freeing it from structural constraints;
- (iii) facilitating investment in the emerging areas of petrochemicals;
- (iv) achieve environmentally sustainable growth in the petrochemical sector through innovative methods of plastic waste management, recycling and development of bio-, photo-degradable polymers and plastics; and
- (v) promote Research and Development in Petrochemicals and promote Human Resource Development.

3.8 The petrochemical sector is delicensed and deregulated. The role of the Department is that of a facilitator. For implementing policy measures, many feasibility studies have been undertaken in various areas in the petrochemical sector, based on which the Department of Chemicals and Petrochemicals was to formulate necessary schemes. Following schemes are being implemented, as per provisions of National Policy for Petrochemicals:

- Schemes of National Awards for Technology Innovations in Petrochemicals and downstream Plastic Processing Industry.
- Setting up of Centres of Excellence in the field of Updating products for new uses, innovative product technology and product design changes, improvements in the production process to make it more efficient, recycling process technology, innovative collection, segregation, cleaning and

development of recycled products, Development of biopolymers and biodegradable polymers etc.

- Setting up of dedicated Plastic Parks to promote a cluster approach in the areas of development of plastic applications and plastic recycling.
- Promotion of Plastic Waste Management.

3.9 The proposals/schemes are being implemented as per the present guidelines. An amount of Rs. 39.50 crore has been approved by the Planning Commission towards 'Other New Schemes of Petrochemicals' during the year 2013-14.

CHAPTER IV

REVIEW OF PAST PERFORMANCE

4.1 Keeping in view the promotional, facilitatory and regulatory role of the Department in development of chemical & petrochemical sector, the public sector investment proposed through plan schemes is quite limited. 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 of CIPET and IPFT for research and purchase of research equipments (iii) Departmental promotional/awareness schemes of Chemical Weapons Convention (CWC); Chemical Promotion and Development Scheme (CPDS), IT/Secretariat etc. Another vital scheme being implemented by the Department from 2007-08 onwards is the establishment of Assam Gas Cracker Project at Lepetkata in the Dibrugarh district of Assam.

4.2 Schemewise broad achievements during the 2012-13 are described in brief in the paras that follow.

Public Sector Undertakings:

4.3 The rehabilitation proposal in respect of HOCL was approved by the Government and implemented during 2006-07. Additional outlay for rehabilitation was Rs. 250 crore. HOCL earned profits during 2006-07 and, 2007-08, suffered a loss during 2008-09, 2009-10 and 2011-12 due to global meltdown and again posted profit in 2010-11.

4.4 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 packages, HIL is continuously earning profits. HIL made a profit of Rs.5.66 crore in 2006-07, Rs.6.52 crore in 2007-08, Rs.2.71 crore in 2008-09, Rs.3.06 crore in 2009-10, Rs.1.58 crore in 2010-11 and Rs.1.60 crore in 2011-12.

Hindustan Organic Chemicals Limited (HOCL):

4.5 HOCL had been allocated budgetary support of Rs. 26 crore in 2012-13 which was subsequently reduce to Rs. 24.63 crore in RE. HOCL submitted a proposal for renewal and replacement of machinery and technology upgradation amounting to Rs. 17.60 crore for following schemes:-

- i. NOX Blower for Nitric acid plant refurbishment
- ii. Air Compressor and Refrigeration compressor of nitric acid plant replacement.
- iii. Methanol Vaporizer at Formaldehyde plant
- iv. Raw Material storage tanks at Rasayani unit
- v. Conversion from Low Sulphur Furnace Oil (LSFO) to RLNG in hot oil unit, steam boiler plant and Captive Power Plant (CPP) at Kochi unit

4.6 The requested amount was released to HOCL for these activities which are under implementation. Proposal for release of the rest of the outlay of Rs 7.10 crore is also under consideration presently.

Hindustan Insecticides Limited (HIL):

4.7 During 2012-13, HIL was allocated budgetary support of Rs. 14 crore, amount of Rs. 4.10 crore for investment in enhancing the capacity of existing Mancozeb Plant at Udyogmandal was approved. Accordingly, the budget allocation has been reduced to Rs. 4.10 crore in RE for 2012-13.

Autonomous Institutes:

Central Institute of Plastics Engineering and Technology (CIPET):

4.8 CIPET's prime objectives are training of manpower in different disciplines of Plastics Engineering and Technology and provision of technical support/consultancy services to the plastics and allied industries on various technological aspects.

Long Term Courses:

- 4.9 The long-term courses offered by the Institute are as follows:
 - i. Diploma in Plastics Technology (DPT) -3 Yrs.
 - ii. Post Diploma in Plastics Technology (PD-PT) (Integrated Programme) -4Yrs.
 - iii. Diploma in Plastics Mould Technology (DPMT) -3 Yrs.
 - iv. Post Diploma in Plastics Mould Technology (PD-PMT) Integrated Programme)-4 Yrs.
 - v. Post Diploma in Machine Maintenance (PD-MM) 1 Yrs.
 - vi. Post Graduate Diploma in Plastics Processing and Testing (PGD-PPT) - 1¹/₂ Yrs.
 - vii. Post Graduate Diploma in Plastics Engineering (PGD-PE) -1 Yr.
 - viii. * B. Tech (Plastics Technology/ Engineering) 4Yrs.
 - ix. * M. Tech (Plastics Technology/Engineering) -2 Yrs.

(* In affiliation with local University)

4.10 10542 participants are expected to be trained by CIPET in its graduate and higher level long-term teaching programmes in 2012-13.

Short-Term Courses:

4.11 A total number of 1575 Short-Term courses with 24850 participants are proposed to be organised during the year 2012-13 as per the details given below:

S.No	Course Details	Upto Marc	Upto March'13	
		Courses	Participants	
1	Regular Short Term Courses	1010	9540	
2	Inplant Training Programmes	30	995	
3	Tailor Made Courses	105	950	
4	Sponsored Programmes	430	13365	
	Total	1575	24850	

Institute of Pesticide Formulation Technology (IPFT):

4.12 IPFT has executed various sponsored projects in 2012-13. Many sponsored projects for bio-efficacy and phytotoxicity studies are under progress for Pesticide industries. These projects are being executed in Bio-Science division. The Formulation Division, in addition to the sponsored projects, is also providing consultancy services to pesticide industries. Analytical Division has analysed pesticide samples received from industries under NABL.

- 4.13 Following were the main achievements of the Institute during 2012-13:
- (i) Continuation of Designation of IPFT by the OPCW (Proficiency Test)

In 2011 – 12, the lab participated in the 29th Proficiency Test held by OPCW in April, 2011 and performed well (Grade 'A') and obtained the "Designation" by the OPCW for the year 2011 - 12. IPFT also participated in 31^{st} OPCW Proficiency Test held in April 2012, and its "Designation" Status has been continued for 2012 - 13 also. This is an international recognition and IPFT continues to be a member of the Elite club of the few "OPCW Designated Labs" world over.

(ii) Continuation of NABL Accreditation of IPFT

IPFT continues to be an accredited laboratory by National Accreditation Board for Testing & Calibration Laboratories (NABL) as per ISO - 17025 (2005) for the analysis of Pesticides and CWC related chemicals. The Desktop Audit of the Lab was held in October, 2011.

(iii) Continuation of BIS Recognition/Certification of IPFT

IPFT was successful in getting BIS Recognition/Certification in June, 2011 which has continued during the year 2012 - 13 also.

(iv) Establishment of IPFT Library

IPFT established a Library in the year 2011 - 12 and has become a member of NISCAIR in 2012 - 13. Under the CAPS scheme of NISCAIR, IPFT is subscribing to 30 Journals related to the R&D mandate of IPFT.

(v) Signing of MoU with IIT Kanpur

MoU has been signed between IPFT and IIT Kanpur for undertaking a collaborative research programme on "Measurement of Pesticide residues in Air after Pesticide Application".

(vi) Signing of MoU with National Research Centre on Camel (NRCC), Bikaner

MoU has been signed between IPFT and National Research Centre on Camel (NRCC) for undertaking a collaborative project titled "Phero-Chemical Analysis of Pesticides in the urine of Dromedary Camels".

(vii) Development of Mosquito Repellent Cream Formulation

A cream formulations using Citronella oil with eco-friendly and skin-friendly surfactants, stabilizers and preservatives has been developed as mosquito repellent. The physico-chemical, repellent and toxicological (skin irritation) studies of the formulation have been completed. The effectiveness of the cream is equivalent to the commercially available cream (Patent Filed).

(viii) Revenue Generation

IPFT has undertaken 26 new projects and generated revenue from the industry sponsored projects and testing of pesticide samples during 2012-13. The revenue generated in the year 2011-12 was Rs. 78.73 lakh while the revenue generated in 2012-13 (up to December 2012) is Rs. 32.48 lakh.

Departmental Schemes:

Assam Gas Cracker Project:

4.14 The Assam Gas Cracker Project was initiated in pursuance of the Memorandum of Settlement signed between Central Government and All Assam Students Union (AASU) and All Assam Gana Parishad (AAGP) on 15th August 1985. 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 (fixed cost). A joint venture company namely M/s. Brahmaputra Cracker & Polymer Limited (BCPL), incorporated on 8th January 2007 is implementing the project.

4.15 However, owing to various reasons, the project has witnessed time and cost overruns. The Government of India, Cabinet Committee on Economic Affairs considered the revised cost proposal for the Assam Gas Cracker Project on 16.11.2011 and approved the revised cost estimate of Rs. 8920 crore (on "as built basis") which would be funded by capital subsidy of Rs 4690 crore and debt and equity for Rs 2961 crore and Rs 1269 crore respectively. The project schedule has also been revised with mechanical completion by July, 2013 and commissioning by December, 2013.

4.16 Keeping in view the CCEA's stipulation for pro rata infusion of equity & capital subsidy before draw down of debt, inadequate allocation at the RE stage in year 2011-12 and the scheduled mechanical completion of project by July, 2013, Planning Commission was requested to provide the entire balance Capital Subsidy due of Rs. 2552 crore in the Annual Plan of 2012-13 to BCPL. It was emphasized that shortage of funds at that crucial juncture would definitely have implications in terms of further time overrun and the consequent cost overrun. However, as against the proposed requirement of Rs. 2552 crore, Planning Commission allocated only Rs. 1552 crore for the year 2012-13 resulting in a deficit of Rs. 1000 crore. The Department has released the entire budget outlay of Rs. 1552 crore to BCPL towards capital subsidy.

4.17 The cumulative physical progress as on 15.02.2013 is 89.1% as against the scheduled target of 95.9%. The major activities going on are:-

- Major part of Civil and structural work is in advanced stage of completion. Mechanical and piping works are going on at Process Plants, Utilities and Offsite areas.
- Electrical panel erection is going on in substations. Instrumentation jobs also started at Process Plants

Chemical Promotion and Development Scheme (CPDS):

4.18 This scheme is for undertaking promotional activities for the chemical and petrochemical industry. During 2012-13(RE) there was an allocation of Rs. 2.00 crore for these activities. Financial support was provided for conducting seminars, conferences, workshops, training, studies and exhibitions on various aspects of chemical and petrochemical sectors.

Chemical Weapons Convention (CWC):

4.19 CWC is a universal non-discriminatory, multilateral, Disarmament Treaty, which bans the development, production, acquisition, transfer, use and stockpiling of all chemical weapons. India is a signatory to this Treaty. The Department is also administering Chemical Weapons Convention Act, 2000 which has been promulgated by India to implement the convention.

4.20 Declarations and Verification are two important aspects of the Convention. Each State Party is required to make annual declarations of the production, import and export of scheduled chemicals. Also declarations in respect of a relatively large number of Other Chemical Production Facilities (also called OCPF) manufacturing Discrete Organic Chemicals (DOCs) are required to be made. Department of Chemicals & Petrochemicals is tasked with preparation of declarations, facilitation of international inspections by OPCW teams as well as creating awareness in the industry about its obligations under the Convention. India has been making declarations within the prescribed time frame.

4.21 Inspections are routinely conducted by the OPCW to ensure that the activities in scheduled chemicals are in accordance with the provisions of the Convention. India has so far received one hundred thirty two (132) inspections up to 15th February, 2013. This includes 21 such successfully hosted inspections during the calendar year 2012. The escort officers were deputed to the industrial units for facilitating advance preparation for hosting inspections as also for its actual undertaking. The Department has also set up six Help Desks in PPP mode in association with Indian Chemical Council (ICC), at Vadodara, Mumbai, Chennai, Hyderabad, Kolkata and New Delhi for facilitating compliance by the chemical industry to its obligations under CWC. These Help Desks helped to organize programmes to create awareness about provisions of CWC and assisted in identification of declarable chemical industry units. These also assisted in filing declarations and facilitating compliance by the Indian Chemical industry to its obligations under the CWC. During this year, a total of 6 such workshops were conducted throughout the country till 15th February, 2013 and six more are scheduled to be held by 31.03.2013. 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. First such declaration namely Annual Declaration of Anticipated Activities for 2013 has been submitted successfully in June, 2012 through this on-line system. The second declaration namely Annual Declaration of Past Activities for 2012 is also being compiled and will be sent on-line by 31.03.2013.

IT/Secretariat:

4.22 In the Budget estimates 2012-13, there was a budget provision of Rs. 0.30 crore for implementation of IT Plan. Various hardware and Software were procured for implementation of the IT Plan in the Department. E-Office has also been implemented in the Department. Payment of vendors' bills, online submission of contingency bills and online payment status has also been implemented by the Department. The Department has been provided with Local Area Network (LAN) Facility with Internet Network on fibre cable backbone up to L2 Switch Level. All the Tenders Inviting Notices issued by the Department are being uploaded on the Website of the Department in Implementation of e-Procurement. Projects like on-line flow of data for Chemicals & Petrochemicals and on-line filing of CWC returns by declarants have been developed by NIC for the Department

4.23 The Department Website is also operational and is being regularly updated. Internet portal for the Department is operational to provide various information to employees like monthly pay-slips, income tax etc. A web-based application is also operational for intra-department document sharing.

Other New schemes of Petrochemicals

4.24 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 of the Centres of Excellence (CoEs) in the field of Petrochemicals; and (iii) Setting up of Plastic Parks; which are in the process of implementation. Their current status is as follows:

I. National award for Technology Innovation - The scheme aims at incentivizing meritorious innovations and institutions in various fields of Petrochemicals and downstream Plastics processing industry. Central Institute of Plastic Engineering Technology (CIPET) was entrusted with the task of seeking and short-listing the nominations for the scheme. The 1st National award function was held on 28.11.2011 wherein. 9 organizations/individuals were selected for the Awards in 6 areas for the year 2010-11. The 2nd National award function was held on 26.03.2012 wherein 15 Nominations were selected for the National Awards for Technology Innovation 2011-12 and 10 nominations were selected as 'Runners up'. The scheme has been approved for continuation in the XII Five Year Plan (2012-17) with Plan support of Rs. 3.15 crore at the rate of Rs. 63 lakh per year during XII Plan.

For the 3rd National Awards for 2012-13, 306 nominations were received for the eight categories and three subcategories of the scheme. The Expert Committee scrutinized the 306 nominations and recommended 32 nominations for further technical evaluation. Subsequently, Expert Panels evaluated the selected nominations and awarded marks as per the duly approved guidelines and norms. The Prize Award Committee has recommended 11 nominations as 'Winners' and 14 nominations have been

recommended for runner up/commendation prizes for the National Awards for Technology Innovation 2012-13, for approval of competent authority.

- II. Setting up of Centre of Excellence The scheme aims at improving the existing petrochemical technology and research in the country and to promote development of new applications of Polymers & Plastics. In the year 2010-11, CIPET and National Chemical Laboratory, Pune were identified for setting up of Centres of Excellence. An amount of Rs. 2 crore each was released in the year 2010-11. Department constituted an Expert Panel in September, 2011 to review the performance of selected CoEs. The Expert Panel appreciated the efforts made by the team at NCL, Pune and CIPET, Chennai and felt that the progress of the project has been good and as per specified time frame. The Panel also recommended to proceed with the next phase of work. Based on the above recommendations of the Expert panel, the second installment amounting to Rs. 2 crore was released to CIPET, Chennai in Jan, 2012 and NCL Pune in Feb, 2012. The scheme has been approved for continuation in the XII Five Year Plan (2012-17) with Plan support of Rs. 22.00 crore during the XII Plan. The Expert panel to review the progress of existing CoEs for the year 2012-13 has been reconstituted and review of CoEs is presently going on. Simultaneously, the Department has also called for applications for setting up new CoEs in XII Plan from various pioneer academic and research institutions in the petrochemical sector. These applications shall be examined as per scheme guidelines, for selection of 3 CoEs for XII Plan.
- **III.** Setting up of Plastic Park The Scheme aims at setting up of need based Plastic Parks, and ecosystems with requisite state of the art infrastructure and enabling common facilities to assists the sector move up the value chain and contribute to the economy more effectively. The Programme Manager for implementation of the Scheme was appointed. The operational guidelines for implementations of the scheme were firmed up. A meeting of the Scheme Steering Committee (SSC) was held under the Chairmanship of Secretary on 24th Feb, 2012 to consider the preliminary proposals from Assam, MP, Tamil Nadu, Gujarat, Orissa, West Bengal and Punjab. It was decided to grant in-principle approval to the 4 proposals from Tamil Nadu, Madhya Pradesh, Assam and Orissa on the clear understanding that the first 2 projects that submit the DPR, complete in all respect, will be treated as those approved in the XI Plan Period and the other 2 will be considered for final approval only in the XII Plan period, as per the prevailing terms and However taking into consideration the preparedness and conditions. bottlenecks faced in the preparation of DPRs, the scheme Steering Committee in its meeting held on 19.10.2012 decided to extend the prescribed time limit for submission of DPR for final approval by six months. SSC also decided that the State Government or its agencies/ undertakings must have at least 10 percent equity stake in the SPV equity structure and that it is not necessary that the SPV should have some kind of "private" sector participation. It was also decided that the percentage of share to "user enterprises" may be identified in DPR and kept as "unallocated" (subject to a maximum of 20% of the total authorized capital), which may be given to user enterprises after formal approval of the proposal and identification of user enterprises. It was also emphasized that formal registration of an SPV as a company is a pre-requisite before according final approval. In addition, the allocated land for setting up of the

proposed plastic park must be in possession of the SPV. The next meeting of SSC is scheduled for March, 2013 to review the status of preparedness of DPRs by all state agencies.

4.25 A statement showing Plan targets and achievements during 2011-12 and 2012-13 may be seen at Annexure II.

CHAPTER V

FINANCIAL REVIEW

5.1 The scheme wise outlays by way of Gross Budgetary support in respect of 2011-12 (actuals), 2012-13 (BE), 2012-13 (RE) and 2013-14 (BE) are given below:

Total	927.18	1757.00	1637.00	1200.00
5. Other New Schemes of Petrochemicals	4.61	36.20	8.63	39.50
4. IT/Secretariat	0.35	0.30	0.30	0.70
3. Chemical Weapons Convention (CWC)	0.74	1.50	1.00	1.50
Scheme (CPDS)	1.50	10.00	2.00	2.00
2. Chemical Promotion & Development	1.36	10.00	2.00	3.00
1. Assam Gas Cracker Project+	875.44	1552.00	1552.00	1000.00
III. Other ongoing schemes				
Technology (IPFT)				
2. Institute of Pesticides Formulations	0.89	7.00	4.34	4.34
and Technology (CIPET)				
1. Central Institute of Plastic Engineering	43.79	110.00	40.00	140.96
Bodies				
II. Project Based Support to Autonomous				
I. Project Based Support to PSUs	0.00	40.00	28.73	10.00
Schemes/Programmes	(actual)	(BE)	(RE)	(BE)
Sahamaa/Dragrammag	2011-12	2012-13	2012-13	2013-14
			((Rs. crore)

+ Includes mandatory provision for development of NE Region

CHAPTER VI

PUBLIC SECTOR UNDERTAKINGS AND AUTONOMOUS INSTITUTIONS

Public Sector Undertakings:

6.1 This Department has two Public Sector Undertakings in the chemical sector viz. Hindustan Organic Chemicals Ltd. (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. First two PSUs had been set up/acquired in 60s and 70s during controlled and centrally planned development of the economy. These PSUs were loss making for a variety of reasons including increased competition and were declared sick and referred to BIFR.

6.2 Revival of these two sick chemicals PSUs was considered necessary as these PSUs supply the raw material to the much needed chemical and pharmaceutical Industry and also help the Government in implementing health oriented schemes like National Vector Borne Disease Control Programme of the Government of India etc., apart from providing insecticides and chemicals to the farmers in the agricultural sector at affordable prices. The rehabilitation proposal in respect of HOCL was approved and implemented during 2006-07. The revival proposal of HIL was also approved by the Government. After implementation of the revival packages, HIL has earned profit during 2006-07, 2007-08, 2008-09, 2009-10, 2010-11 and 2011-12 while HOCL earned profit during 2006-07, 2007-08, 2010-11 but due to global meltdown suffered a loss during 2008-09, 2009-10 and 2011-12. HIL and HOCL have come out of BIFR in September, 2007 and May, 2008 respectively.

Autonomous Institutions/Organisations:

<u>Central Institute of Plastics Engineering & Technology (CIPET):</u>

6.3 CIPET's prime objectives are training of manpower in different disciplines of Plastics Engineering and Technology and provision of technical support/consultancy services to the plastic and allied industries on various technological aspects. A total number of 12012 students are targeted to be enrolled in various Long-Term Courses during 2013-14, which includes the students of running batches also; besides 26023 participants in 1750 short term courses. 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.

Institute of Pesticides Formulation Technology (IPFT):

6.4 The Institute is engaged in the development of formulations of environment friendly pesticides and plays a catalytic role in the growth of Pesticides Industry. An amount of Rs. 4.34 crore has been allocated to the Institute for 2013-14 (plan) for meeting requirement of funds for upgradation of existing assets and provision of new infrastructure under Capital support, completion of ongoing projects and taking up various new projects for technology development of new generation formulation as also bioscience and analytical projects.

Statement of outlays and outcomes/targets (2013-14)

				State	ement of	outlays and outcomes/targets (2013-14)	(Rs. crore)	
S.No.	Name of the Scheme and Programmes	Objective and Outcomes	Annual plan 2013-14			Quantifiable and Deliverables	Process/ timeliness	Remarks
	Trogrammes		GBS	Non-plan	IEBR			9
1	2	3	4	5	6	7	8	,
A	Project Based Support to	Technological upgradation	10.00	0.02		No outlay proposed for HIL in 2013-14.		
A	PSUs	Technological upgradation and product diversification by PSUs				A sum of Rs. 10.00 crore has been earmarked for HOCL for a) Waste Heat Recovery Turbine at Kochi Unit; b) Hydrogen Plant Relocation from Rasayani to Kochi Unit; c) 22 KV Switchboard and Relays Replacement at Rasayani Unit and d) Upgradation of Instrumentation in NB III Plant at Rasayani Unit	March 2014	
	Petrofil Cooperative Ltd.			0.01		Liquidator's Non-Plan expenditure		
	Assistance to Autonomous Ins	stitutions						
В	Assistance to Autonomous mis							
	OIDET		140.96	5				
1	CIPET EXTENSION OF EXISTING		110.70					
	SCHEME:					_	Year Plan (2012-17) on a total scheme basis, the	No risk factor is normally envisaged in implementing the schemes provided the required funds are made available to CIPET
	Establishment of Centre for Bio-Polymer Science and Technology(CBPST) -Kochi	To offer specialised Academic Programmes in the field of Plastic				1. Target enrollment of students for Long Ter		
	Research & Development in emerging areas	Engineering &				Courses for 2013-14 (12,012 students).		
	Creation of Civil and technical infrastructure for expansion of CIPET Centres	Technology in order to provide qualified Human Resources to plastics &				2. Target for Short Term Courses for 2013-14 with 26,023 participants.		
	NEW SCHEMES:	allied Industries, besides				_	implemented during the	CIFET
	Creation of Hostel Facilities to augment increase in intake capacity of the Existing & New Academic Programs.	providing Technology Support services to the Industries and Indigenous				3. Procurement of Machineries / Equipments and Construction of buildings.	Budget Year 2013-14 i.e. 1 year (One year)	
	Enriching Technical Infrastructure facilities & capabilities to meet industry needs.	Research.						
			12	4 3.1	5			
2	IPFT	Promote advancement of pesticide formulation technology	4.3	4 3.1				
		Capital Support	3.4	2		To provide infrastructure requirement in terms on new equipments in the labs to strengthen IPFT in developing advanced pesticides formulations.	f Continuous	Upgradation of existing equipment alon with addition of new equipment after following due process for justification an evaluation.

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-			2	4	5	6	7	8	. 9
	.1	2	3 XII Plan Projects	0.85	5		Taking up various projects for Technology development of new generation formulation and other projects & programmes.	March 2014	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; Development of Mass Production Techniques and Formulation for Baculoviruses; management of Termite by Integrated Approach and Indigenous Technologies: Manpower for OPCW Project; Magnetic core-shell nanoparticles based extraction coupled with Gas / Liquid Chromatography- Tandem Mass Spectrometry for trace level analysis of pesticides; Pesticide formulation from Plant Extract and their Bio-efficacy studies.
			Carry Over of XI Plan Projects	0.07			To complete various formulation, bio-science projects & analytical projects taken up in XI Plan period and require funds / time for logical conclusion and achievement of stated objectives.	Continuous	Formulation development for Pre-and- harvest pest management; pesticide formulation from basil and turmeric oil and mycoherbicides for weeds in Kharif crop.
ł	С	Departmental Schemes							
• •	1	Assam Gas Cracker Project	To produce 2, 20,000 TPA each of Ethylene & LLDPE/HDPE and 60,000 TPA Pollypropyle at a total revised project cost of Rs.8920 cr with the revised targeted commissioning in December 2013.	1000.00	0.01	1556.48	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.	be the commissioned by December 2013. In the year 2013-14, all major work / activities / facilities, including civil and structural work, mechanical and piping work for the	in the form of capital subsidy of Rs.4690 cr against project cost of Rs. 8920 cr. During 2007-08 to 2012-13. Rs.3690 cr were released. In view of business plan of BCPL, revised
	2	CPDS	Promotion of chemical industry by organizing	3.00			For organizing events like India Chem 2013, India Chem Gujarat, similar events for plastic.	Ongoing activities	
			India Chem events Technology Upgradation Fund for Indian Chemical sector				Upgradation of technology in the Indian Chemicals industry, to meet the world standard for improved performance in the global competitive environment.	Ongoing activities	

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		Inventorisation of chemicals				Registration of substances; Preparation of a National Inventory; Restrictions on hazardous substances; Banning of certain substances: Detailed classification and labelling criteria and Transport classification.	Ongoing activities	
3	CWC	Creating awareness about the obligations under the Convention by undertaking awareness generation programs in different parts of the country, preparation of technical literature for distribution: setting up/maintaining CWC Help Desks; activities related and pursuant to the Registration Procedures	1.50	0.01		i) To Host successfully OPCW Inspections; ii) To hold CWC awareness raising programmes for chemical industry iii) Timely submission of Annual Declarations of Anticipated activities(ADAA) and Annual Declaration of Past Activities (ADPA) and iv) Setting up operation of CWC Help Desks.	Ongoing activities	
4	IT/Secretariat	Computerization activities and for upgradation of existing IT facilities in the Department	0.70	13.22		Plan outlay is for replacement of old model computers, purchase of computer consumables, replacement of old obsolete LAN. Non-plan is mainly for salary and OE.	Ongoing activities	
5	Other New Schemes of Petrochemicals		39.50	8				
	Petrochemical and downstream Plastic Processing Industry	innovations and institutions	1,00			To select meritorious innovations and invention in the 8 categories relating to polymer materials/products, processing, machinery, re- cycling/waste management and research in the related fields and giving them due recognition and thus motivating them for enhancing R&D initiative.	awards scheme shall be called for and after selection of organisations/ institutions, the Awards shall be given for the	
	Excellence in Polymer Technology	Improving the existing petrochemical technology and research in the country and to promote development of new applications of Polymers & Plastics.	6.00			Pune and CIPET, Chennai will also be monitored.	Funds shall be released to 3 new COEs selected for implementation in 12 th Plan subject to review of activities by the designated Expert Panel. The requisite funds have been sought based on requirements of Rs.2 crore each for 3 COEs taken up in 12 th Plan. The Expert Panel will also review the progress of NCL, Pune and CIPET, Chennai.	

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2		Setting up of need based Plastic Parks, and ecosystems with requisite state of the art infrastructure and enabling common facilities to assist the sectors move up the value chain and contribute to the economy more effectively.	32.00			setting up on Flastic Fark	Detailed Project Reports	
	Manager Fee		0.50			To take up awareness programmes for promotion of plastic waste handling, recycling etc. through media and school awareness, seminars, exhibitions. In addition, due payments to consultants for feasibility studies under the National Policy on Petrochemicals as also to Programme Manager for implementation of Plastic Park scheme would be made.	/seminars aimed at countering myths about plastic products. To make due payments to Consultant(s) for implementation of Plastic	
6	Bhopal Gas Leak Disaster			126.59			Non-plan expenditure is towards Secretariat expenditure of the Welfare Commissioner, Bhopal Gas.	
	Total		1200.00	143.01	1556.48			

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Annexure -II

PLAN TARGETS AND ACHIEVEMENTS - 2011-12 & 2012-13

(Rs. crore)

Schemes/ Programmes	2011-12 Actual	2012-13 BE	2012-13 RE	Targeted Outcome	Achievement
1. Support to Exist	ting PSUs				
HOCL	00	26.00	24.63	 Renewal and replacement of machinery and technology upgradation for following schemes:- NOX Blower for Nitric acid plant refurbishment. Air Compressor and Refrigeration compressor of nitric acid plant replacement. Methanol Vaporizer at Formaldehyde plant. iv. Raw Material storage tanks at Rasayani unit. v. Conversion from Low Sulphur Furnace Oil (LSFO) to RLNG in hot oil unit, steam boiler plant and Captive Power Plant (CPP) at Kochi unit. 	An amount of Rs. 17.60 crore has been released so far and the same is under implementation.
HIL	00	14.00	4.10	Investment in enhancing the capacity of existing Mancozeb Plant at Udyogmandal.	An amount of Rs. 4.10 crore has been released so far and the same is under implementation.
2. Central Institute of Plastic Engineering and Technology	43.79	110.00	40.00	Training and Research in the field of plastic technology.	A total number of 10542 students are enrolled in its long term courses and 24850 in short term courses in 2012-13. 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	0.89	7.00	4.34	Promote advancement of pesticide	Participated in the 29 th Proficiency Test held by

Pesticides Formulations Technology 4. Assam Gas Cracker Project	875.44	1552.00	1552.00	formulation technology. Setting up of a petrochemical complex at Lepetkata, Dibrugarh (Assam).	 OPCW in April, 2011 and performed well (Grade 'A') and obtained the "Designation" by the OPCW. Also participated in 31st OPCW Proficiency Test held in April 2012, and its "Designation" Status has been continued for 2012 – 13. Continues to be an NABL accredited laboratory. Successful in getting BIS Recognition/Certification in June, 2011. Set up a library in the year 2011-12 and became a member of NISCAIR in 2012–13. Signed MOUs with IIT Kanpur and NRCC, Bikaner for collaborative projects. Developed Mosquito Repellent Cream Formulation using Citronella oil with eco-friendly and skin-friendly surfactants, stabilizers and preservatives. Generated revenue in the year 2011-12 was Rs. 78.73 lakh while in 2012-13 (up to December 2012), it was Rs. 32.48 lakh. The Government of India's contribution to the project, as per revised cost estimates is in the form of capital subsidy of Rs.4690 cr against project cost of Rs. 8920 cr. During 2007-08 to 2011-12, capital subsidy of Rs.2138 cr was released. The Department has released the entire budget outlay of Rs 1552 to BCPL for 2012-13. Cumulative physical progress as on 15.1.2013 is 87.8% as against the scheduled target of 94.2%. The major activities going on are:- Major part of Civil and structural work is in advanced stage of completion. Mechanical and piping works are going on at Process Plants, Utilities and Offsite areas. Electrical panel erection is going on in substations. Instrumentation jobs also started at Process Plants.
5. Chemical Promotion & Development Scheme (CPDS)	1.36	10.00	2.00	Promotional activities, exhibition, seminars, research and development etc.	Financial support was provided for conducting seminars, conferences, workshops, training, studies and exhibitions on various aspects of chemical and petrochemical sectors

6. Chemical Weapons Convention(CWC)	0.74	1.50	1.00	Awareness creation through organization of seminars and publicity	India has so far received one hundred thirty two (132) inspections up to 15 th February, 2013, including 21 hosted during the calendar year 2012. Help Desks in PPP mode in association with Indian Chemical Council (ICC) has been set up at Vadodara, Navi Mumbai, Chennai, Hyderabad, Kolkata and New Delhi for facilitating compliance by the chemical industry to its obligations under CWC. A total of 6 workshops conducted till 15 th February, 2013 and six more scheduled by 31.03.2013. 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. First such declaration of Anticipated Activities for 2013 in June, 2012 through this on-line system and the second declaration namely Annual Declaration of Past Activities for 2012 is being compiled to be sent on-line by 31.03.2013.
7. IT/Secretariat	0.35	0.30	0.30	Building computer infrastructure, Internet connectivity upgradation, LAN Expansion, Development of Web Enabled Application System as well as Office Automation System	Old computers replaced with new model computers, purchased 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	4.61	36.20	8.63	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 of the Centres of Excellence (CoEs) in the field of Petrochemicals; and (iii) Setting up of Plastic Parks, in terms of National Policy on Petrochemicals.	The 1 st National award for Technology Innovation National award function was held on 28.11.2011 wherein, 9 organizations/individuals were selected for the Awards in the 6 areas for the year 2010-11. The 2 nd National award function was held on 26.03.2012 wherein 15 Nominations were selected for 2011-12 and 10 nominations were selected as 'Runners up'. For 3 rd National Awards for 2012-13, 306 nominations received for eight categories. The Prize Award Committee has recommended 11 nominations as 'Winners' and 14 nominations have been recommended for runner up/commendation

					prizes.
					CIPET, Chennai and National Chemical Laboratory,
					Pune were identified for setting up of Centres of
					Excellence in 2010-11. Expert Panel in September,
					2011 to review the performance of selected CoEs
					constituted. Based on the above recommendations of
					the Expert panel, the second installment released to CIPET, Chennai in January, 2012 and NCL Pune in
					Feb, 2012. The Expert panel to review the progress of
					existing CoEs for the year 2012-13 reconstituted and
					review of CoEs is presently going on.
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					The Programme Manager for implementation of the
					Scheme "Setting up of Plastic Park" appointed. The
					operational guidelines for implementations of the
					scheme firmed up. 4 Proposals from Tamil Nadu,
					Madhya Pradesh, Assam and Orissa granted in-
					principle approval on the clear understanding that the
					first 2 projects that submit the DPR, complete in all respect, will be treated as those approved in the XI
					Plan Period and the other 2 will be considered for
					final approval only in the XII Plan period. However
					taking into consideration the preparedness and
					bottlenecks faced in the preparation of DPRs, the
					prescribed time limit for submission of DPR for final
					approval extended by six months.
9 Provision for NE	+	+	+	Development of NE region	
Total	927.18	1757.00	1637.00		

+ Already included in Assam Gas Cracker Project