

MINISTRY OF SCIENCE AND TECHNOLOGY**DEMAND NO. 84****Department of Scientific and Industrial Research**

A. The Budget allocations, net of recoveries, are given below:

		<i>(In crores of Rupees)</i>								
Major Head	Budget 2007-2008			Revised 2007-2008			Budget 2008-2009			
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total	
Revenue	1069.90	832.00	1901.90	1059.70	838.00	1897.70	1193.40	878.00	2071.40	
Capital	0.10	...	0.10	0.30	...	0.30	6.60	...	6.60	
Total	1070.00	832.00	1902.00	1060.00	838.00	1898.00	1200.00	878.00	2078.00	
1. Secretariat - Economic Services	3451	...	5.79	5.79	...	4.50	4.50	...	5.00	5.00
Other Scientific Research										
<i>Assistance to Council of Scientific & Industrial Research</i>										
2. Administration	3425	25.00	250.00	275.00	20.00	260.00	280.00	25.00	272.00	297.00
3. National Laboratories	3425	864.00	445.81	1309.81	858.00	445.50	1303.50	960.00	471.00	1431.00
4. Scientists' Pool	3425	...	5.40	5.40	...	3.00	3.00	...	4.00	4.00
5. Research Schemes, Scholarships and Fellowships	3425	60.00	125.00	185.00	60.00	125.00	185.00	75.00	126.00	201.00
6. Intellectual Property & Technology Management	3425	30.00	...	30.00	36.20	...	36.20	34.00	...	34.00
7. New Millenium Indian Technology Leadership Initiative	3425	55.00	...	55.00	55.00	...	55.00	60.00	...	60.00
8. Institute of Translational Research	3425	1.00	...	1.00	1.00	...	1.00	1.00	...	1.00
Total Assistance to CSIR		1035.00	826.21	1861.21	1030.20	833.50	1863.70	1155.00	873.00	2028.00
9. <i>Assistance to Other Scientific Bodies</i>										
9.01 Support for R&D Schemes to Central Electronics Limited	3425	3.00	...	3.00	3.00	...	3.00	1.00	...	1.00
9.02 National Research Development Corporation	3425	8.00	...	8.00	8.00	...	8.00	10.00	...	10.00
<i>Total</i>		<i>11.00</i>	<i>...</i>	<i>11.00</i>	<i>11.00</i>	<i>...</i>	<i>11.00</i>	<i>11.00</i>	<i>...</i>	<i>11.00</i>
10. Technology Promotion, Development and Utilisation Programme (including Consultancy Development Centre)	3425	23.90	...	23.90	18.50	...	18.50	27.40	...	27.40
	5425	0.10	...	0.10	0.30	...	0.30	0.60	...	0.60
<i>Total</i>		<i>24.00</i>	<i>...</i>	<i>24.00</i>	<i>18.80</i>	<i>...</i>	<i>18.80</i>	<i>28.00</i>	<i>...</i>	<i>28.00</i>
11. <i>Investment in Public Enterprises</i>										
11.01 Central Electronics Ltd.	4859	...	...	...	...	...	...	2.00	...	2.00
	6859	...	...	...	...	...	...	2.00	...	2.00
<i>Total</i>		<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>4.00</i>	<i>...</i>	<i>4.00</i>
12. DSIR Building and Infrastructure	4059	...	...	...	...	...	...	2.00	...	2.00
Grand Total		1070.00	832.00	1902.00	1060.00	838.00	1898.00	1200.00	878.00	2078.00
B. Investment in Public Enterprises	Head of Dev	Budget Support	IEBR	Total	Budget Support	IEBR	Total	Budget Support	IEBR	Total
1. Central Electronics Ltd.	12859	...	...	...	...	...	...	4.00	...	4.00
Total		...	...	...	...	...	...	4.00	...	4.00
C. Plan Outlay										
1. Other Scientific Research	13425	1070.00	...	1070.00	1060.00	...	1060.00	1196.00	...	1196.00
2. Telecommunication and Electronics Industries	12859	...	...	...	...	...	...	4.00	...	4.00
Total		1070.00	...	1070.00	1060.00	...	1060.00	1200.00	...	1200.00

1. Secretariat-Economic Services: Provides for Secretariat expenditure.

2. Administration

The Council of Scientific & Industrial Research (CSIR) Headquarters is the nerve centre of the organization and catalyses and facilitates the laboratories by establishing, equipping and realizing excellence in R&D, promoting brand equity, financial self-sufficiency, global competitiveness and disseminating organizational learning. The various functional units/divisions located in CSIR Headquarters provide the R&D Management support to the national laboratories through the Scheme. It is the link between the laboratories, the government, the Parliament and international agencies. It provides support to the laboratories for human resources development, international scientific collaboration, publicity and public relations, performance appraisal, scientific audit, etc.

3. National Laboratories

The National Laboratory scheme is operated through 38 National Laboratories and 39 field Centres. During the Eleventh Five Year Plan the research programmes/projects/activities of the National Laboratories have been categorized into sixteen major socio-economic sectors viz Aerospace Science & Engineering; Agro, Food Processing & Nutrition Technology; Biology & Biotechnology; Chemical Science & Technology; Earth System Science; Ecology & Environment; Energy : Resources & Technology; Electronics, Photonics & Instrumentation; Engineering Materials, Mining/Minerals & Manufacturing Technology; Pharmaceutical, Healthcare & Drugs; Housing, Road & Construction; Information Technology, Resources & Products; Leather; Meteorology; Rural Development; weaker section SC/ST and North East; and Water Resources & Technology.

CSIR's Eleventh Plan approach would focus on "technology led rapid inclusive growth". The proposed projects/programmes are more specifically addressed as (i) Supra-Institutional Projects; (ii) Network Projects; (iii) Inter-agency project and (iv) National Facility. The project, inter alia, encompass establishment of capabilities in the newer Science and Technology (S&T) areas, generation of technological know-how and strategic options over a wide spectrum of science & technology, human resource development, etc. Besides, core competencies of its establishments in basic and applied research would be enhanced.

4. Scientists' Pool

The objective is to promote and foster the upgradation of the stock of qualified, highly specialized scientists/engineers and technologists in Research and Development (R&D) in all disciplines of Science and Technology (S&T) in the country.

5. Research Schemes, Scholarships and Fellowships (National S&T Human Resource Development)

This scheme focuses on promotion and fostering the upgradation of the stock of qualified, highly specialized scientists/engineers and technologists in R&D in all disciplines of S&T in the country, and evolving an integrated approach for the national human resource development for S&T by encouraging and promoting research in the universities and institutions of higher learning and supporting organisations to hold symposia/seminars and conferences for promotion of scientific temper. To promote science amongst youngsters, various programmes and activities

would continue to be supported through a Team India partnership, which involves participation from eminent scientists and experts from academia, in-house industrial R&D units etc. In order to promote interest, excitement and excellence in science education at school and undergraduate levels, each CSIR laboratory would adopt one school and one college in its sphere of influence. The laboratory would provide its facilities for project work and experimentation as well as carrying out student guidance and motivational programmes.

CSIR has established fellowships in trans-disciplinary areas to support researchers to face up to the challenges of the future rather than be confined to areas where there are limited opportunities and challenges. CSIR also inculcates a spirit of entrepreneurship in the research scholars to establish their own R&D enterprise through appropriate motivation, skills development and venture financing.

6. Intellectual Property & Technology Management

The objective of the scheme is to enhance the volume and value of Intellectual Property (IP) generated by CSIR and to share the best innovation and technology management practices organizationally and with the Indian S&T community at large. The volume of Intellectual Property Right (IPR) secured by CSIR has greatly increased over the time. The major task, however, is to realize adequate and appreciable value from the IPR.

Necessary skills and knowledge base in the area of IPR in CSIR are being refurbished, particularly in some still unresolved issues such as 'traditional knowledge', 'genomic sequences', 'copyright on the Net', etc. It is proposed to advise the policymakers appropriately on the new development and changes proposed in international IPR arena.

7. New Millennium Indian Technology Leadership Initiative (NMITLI)

NMITLI scheme envisages to catalyze innovation centered scientific and technological developments as a vehicle to attain for Indian economy a global leadership position in selected niche areas in a 'Team India' partnership. During the Tenth Plan, NMITLI has created a brand image and is viewed today as a benchmark of Public Private Partnership (PPP) schemes which is being emulated by various other Government Departments. Newer approaches of innovation development need would be evolved and experimented. Following are a few of the proposed concepts to enlarge under NMITLI during the Eleventh Plan.

- * Pre and post NMITLI
- * Funding with industry (50:50 Initiative)
- * Co-financing with Venture Capital Funds
- * Long term sustained efforts in selected areas (NMITLI innovation centres)
- * Acquisition of early stage relevant knowledge / IP for portfolio building.

8. Institute of Translational Research

CSIR will be initiating a new scheme on setting up of new Institute of Translational Research. Biological/clinical research is increasingly becoming interdisciplinary. At the same time, translational research/stem cell research etc need focused attention of scientists from different fields. A new institute is proposed to be created during the Eleventh Plan which is

dedicated to carry out such work *in mission mode*. The proposed institute would aim at:

- * Application of knowledge of modern biology into clinical care.
- * Systematic collection and analysis of large amounts of clinical data.
- * Development of ways and means of Personalized medicine.
- * Development of specific stem cell populations to treat a variety of illnesses such as Parkinson's disease, type I diabetes, retinal degeneration, myocardial infarction, spinal cord damage, multiple sclerosis and many others.
- * Molecular diagnosis: Development of new diagnostic markers/tools/methods and providing the services of the same and genetic counselling.
- * Training would be a major component to generate adequate manpower for the country to set up more such Institutes and to excel in this field.

Successful completion of these studies will fulfill our mission of changing disease management from its current status as an art, to more of a science.

9. Assistance to Other Scientific Bodies

9.01 Support for R&D Schemes to Central Electronics Limited:

Central Electronics Ltd. (CEL) is one the PSUs of DSIR which can claim to have mostly depended on home-grown technologies all these years of its existence and continues to be committed towards carrying this approach. It has to its credit of having developed a number of products/processes for the first time in the country either through its own R&D efforts or in close association with premier National and International laboratories, R&D institutions and Defence Laboratories.

CEL is engaged in the frontier areas of Solar Photovoltaics, Railway Electronic Signalling & Safety equipment & strategic electronics for critical Defence applications. The company has modern infrastructure and a well implemented quality system to manufacture quality products to international standards in the above areas with ISO 9001:2000 certification, backed-up by a strong core group of dedicated, highly motivated and well qualified R&D engineers and scientists with each business group, committed to the company's mission of achieving market leadership through excellence in technology & manufacture in Solar Energy, Systems and Strategic Electronics.

9.02 National Research Development Corporation (NRDC): (Shown under other Schemes for BE 2007-08)

NRDC was established as a company, under Section 25 of the Companies Act to commercialize the Research and Development results of publicly funded R&D institutions as well

as to promote the growth of indigenous technology. Its main objectives are:

- * Developing pro-active eco-system of innovation and knowledge transfer.
- * Developing digital knowledge base.
- * Honing physical network of linkages and alliances.
- * Developing early stage linkages between the Research Institute & Industry through the Knowledge Management System.

Supporting each alliance with market intelligence, direction for research and development and, if necessary, external funding.

10. Technology Promotion, Development and Utilization Programmes (including Consultancy Development Centre) (TPDU)

TPDU Programmes would endeavour to encourage industry to increase their share in country's R&D expenditure, support a larger cross section of small and medium industrial units to develop state-of-the art globally competitive technologies of high commercial potential, catalyze faster commercialization of lab-scale R&D, enhance the share of technology intensive exports, strengthen industrial consultancy & technology management capabilities and establish user friendly information network to facilitate scientific & industrial research in the country. The specific components of the scheme are:

- * Industrial R&D Promotion Programme.
- * Technology Development and Demonstration Programme.
- * Technopreneur Promotion Programme.
- * Technology Management Programme.
- * International Technology Transfer Programme.
- * Consultancy Promotion Programme.
- * Technology Information Facilitation Programme.
- * Technology Development & Utilization Programme for Women.

Consultancy Development Centre (CDC)

The Consultancy Development Centre (CDC) was set up as a registered society in January 1986, and is functioning from its office at India Habitat Centre Complex since May 1994. The CDC was approved as Autonomous institution of DSIR in December 2004. Over the years CDC has concentrated mainly on development of human resources, providing computerized data/information services, and strengthening of technological and managerial consultancy capabilities including promoting consultancy exports. The main objective of the Scheme is to strengthen and promote industrial consultancy services and capabilities for domestic use and export requirements.

12. DSIR plans to have an independent building as well as its own administrative infrastructure to take care of the increasing activities and responsibilities of the Department.