

වාර්ෂික වාර්තාව வருடாந்த அறிக்கை Annual Report



2010



ශ්‍රී ලංකා ජාතික ඉංජිනේරු පර්යේෂණ සහ සංවර්ධන මධ්‍යස්ථානය
இலங்கைத் தேசிய பொறியியல் ஆராய்ச்சி அபிவிருத்தி நிலையம்



NATIONAL ENGINEERING RESEARCH & DEVELOPMENT CENTRE OF SRI LANKA

**NATIONAL ENGINEERING RESEARCH AND DEVELOPMENT CENTRE OF SRI
LANKA**

ACKNOWLEDGEMENT

The management expresses and places on record its appreciation to the Ministry of Technology and Research, foreign governments, and funding agencies for providing facilities for training and for the financial assistance provided for the research activities. The Chairman and Board of Directors of the Centre thank all its employees for the cooperation and assistance extended by them in the activities of the Centre.



D R Pullaperuma
Chairman
NERD CENTRE OF SRI LANKA

C O N T E N T S

Title	Page No.
01. Acts and Legislation & Corporate Governance Vision Mission Objectives	04
02. Board of Management and Organizational Structure	05 - 06
03. Chairman Message	07 - 08
04. Top Management and Executive Staff	09 - 12
05. Human Resources	13 - 20
06. Performance Highlights of the Year 2010	21 - 31
07. Corporate Social Responsibility	32 - 34
08. Accounting Policies	35 - 45
09. Cash flow Statement for the year ended 31 December 2010	46
10. Statement of financial position as at 31 December 2010	47 - 49
11. Report of the Auditor General on the Financial Statement of the National Engineering Research & Development Centre of Sri Lanka for the year ended 31 December 2010.	50 - 57
12. Observations of the Board of Directors for the Report of the Auditor General on the Financial Statement of the National Engineering Research & Development Centre for Sri Lanka for the year ended 31 December 2010.	58 - 65

01. Acts ,Legislation & Corporate Governance

National Engineering Research And Development Centre of Sri Lanka (NERDC) was established in 1974 in accordance with the provisions of the State Industrial Corporations Act No. 49 of 1957 and now it is functioning under the purview of the Ministry of Technology and Research. NERDC is one of the premier Institute established under the aforesaid Act. with the primary objective of promoting and facilitating the Development of Domestic Engineering and Technological Research Industry. The Centre is instituted at Industrial Estate, Ekala, Ja-Ela

V I S I O N

"To be a Centre of Excellence, in Engineering Research and Development Centre in the S E Asia and to be able to make substantial contributions towards the sustainable economic and social development of the people of Sri Lanka through engineering interventions."

M I S S I O N

"To develop, acquire, adapt & transfer engineering technologies that would help in the production and sustainable utilization of human and material resources by engaging in R&D activities that would have a direct impact on the economic development of Sri Lanka and on the improvement of the living standard of the people."

Objectives

- To provide for an institutional mechanism needed for the progressive development of indigenous technology by encouraging, recognizing and developing innovative and creative talent in Sri Lanka.
- To provide facilities to co-ordinate the technological, engineering and research capabilities of various public and private sector industries and institutions in a productive manner through co-operative endeavour.
- To ensure by adoption and adaptation the choice of technologies that would be consistent with the country's resource endowments and national planning objectives.
- To examine direct and indirect mechanism of technology transfer and offer counsel to appropriate government and private institutions in Sri Lanka, when required to do so.
- To promote the optimal exploitation of the country's human and material resources, particularly labor and raw material resources by promoting the growth of suitable technology.
- To design, manufacture, and test prototype machinery, pilot plants as demanded by Industrial, commercial and other end users in an economical manner.
- To provide for continuous monitoring of technological data and documentation relating to engineering designs and research through the co-operation of international and national agencies.
- To offer sustained consultancy services to public and private sector enterprise and undertake research and promote training activities to broaden the base of the country's engineering and industrial design and research capabilities.
- To make provision for purpose connected with engineering, research and development related to matters aforesaid.

02. Board of Directors and Organization Structure

Chairman

Eng. D R Pullaperuma
No.03, Alubogahawatte, Anderson Road, Dehiwala

General Manager /Chief Executive Officer

Eng. G B Wimalaratne (up to 18.07.2010)
Actg. General Manager

Director General/Chief Executive Officer

Eng. D D A Namal (From 19.07.2010)

Other Board Members

Eng. Parakrama Jaysinghe
4/6A, Prathibimbarama Road, Kalubowila, Dehiwala

Prof. (Mrs.) S A Dileeka Dias (Up to March)
No.72/6D, Chakkindarama Road, Mt. Lavinia

Dr. A M Mubarak
No.410/2, Baudhaloka Mawatha, Colombo 07

Mr. T S Jinasena (Up to March)
57, Lake Crescent, Colombo 02

Eng. H A D U G Gunasekera
L/3/2, 117 Watta, Elvitigala Mawatha, Colombo 08

Ms. J C Weligamage (Up to March)
B/1/1/3, Simondale Flats, Gangarama Road, Wewala, Piliyandala

Dr. Rohan Munasinghe (From August)
No.94/1, Bandaragama Road, Batuwandara, Madapatha

Eng. G S J Dissanayake (From August)
No.915/1, Peradeniya Road, Kandy

Mr. Chandana Wickramasooriya (From August)
10/1, NJV Cooray Mawatha, Rajagiriya

OFFICE

Industrial Estate
Ekala
Ja-Ela

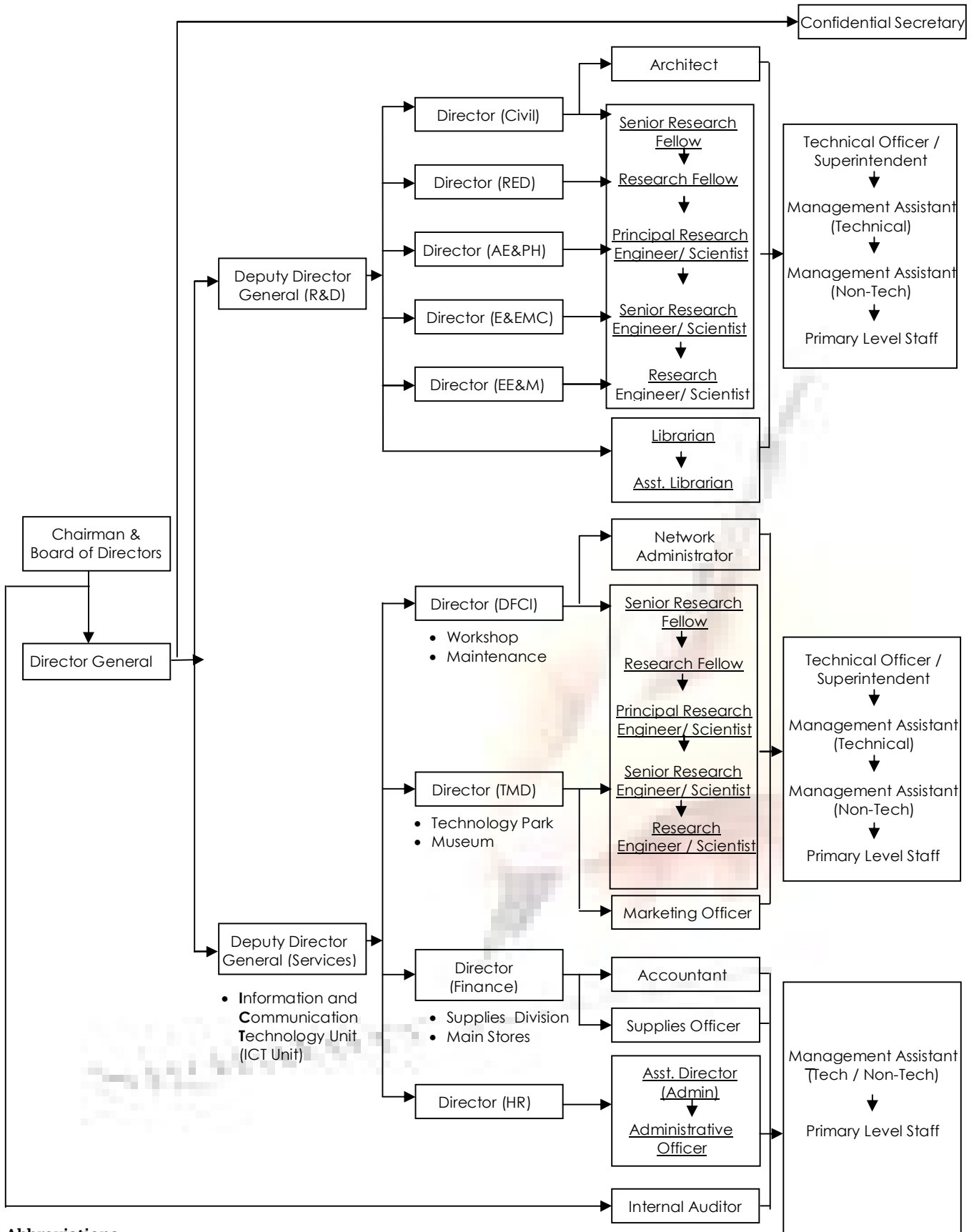
BANKERS

Bank of Ceylon, Ja-Ela
Bank of Ceylon, Corporate Branch
People's Bank, Ja-Ela

AUDITOR

Auditor General

National Engineering Research and Development Centre of Sri Lanka Organization Structure



Abbreviations

- R&D - Research & Development
- RED - Renewable Energy Department
- AE&PHT - Agriculture Engineering & Post Harvest Technology
- E&EMC - Energy & Environmental Management Centre
- EE&M - Electrical, Electronics & Mechatronic
- DF&CI - Design Fabrication & Consultancy for Industries
- TMD - Techno Marketing Department
- HR - Human Resources

03. Chairman's Message



During 2010, the Centre has increased its net income significantly through the Technology Transfers when compared to 2009. In fact, it has doubled. The Centre also managed to introduce several procedures bringing in discipline towards procurement and project expenditure, realizing the numerous queries received from the Auditor General on delays in achieving targets. The Centre has already reaped the benefits of this exercise, as we have been able to utilize much of the capital grants received from the Treasury. The utilization percentage increase in 2010 compared to 2009 had been 187%.

The Management of the Centre had been able to obtain the approval of the Department of Management Services for its organization structure and its Cadre after a long drawn process with the Salaries and Cadre Committee in February 2010. The process was instrumental in compiling a document for the Scheme of Recruitments and Promotions for all employee categories at NERDC. Thus, the Centre is now in the process of recruiting the most needed employee categories to the Centre while training its workforce to achieve vocational skills needed by the SoR for their promotions, which would certainly benefit the Centre in delivering the outcomes. This in fact is reflected by an increase of training costs in 2010. However, the Centre has not been able to recruit and retain the Research Engineers and Senior Research Engineers to the vacant positions as the market rate for engineering Graduate with a bachelor's degree of 4 years and possessing a 1st or 2nd class upper is very much more than that had been approved and published in the Scheme of Recruitment.



Although, the implementation of restructuring under DMS 30 was effected in 2010, the expenditure on personnel emoluments had gone down by 5% reflecting the retiring workforce of the Centre, an issue, which has to be addressed considering the imbalance of the aging human resources at the Centre.

During the year, the Centre had been able to design and fabricate 20ft. long 4ft. wide pedestrian bridges both with the Ferro-cement and with pre-stressed-concrete technologies as safe alternatives to the Village "Edanda". This is a long felt need to the remote villages and during the year, two of these bridges on pilot basis had been constructed and had offered to the communities in Kegalle and Moneragala Divisional Secretariats for field trials.

A project was launched at the request of the Milk Board to automate the milk pale washing process. Although, the prototype developed for the purpose was highly valued by the users, milk collecting vendors and the milk farmers alike, the need was not recognized by the new Management and efforts put in by our staff has gone waste. This emphasizes the need to have a proper "Need Assessment" in place for R&D Institutions such as NERDC Centre to deliver what is expected by the public.

The Centre has engaged continuously in developing renewable energy technologies to induce the industry users to carry out the fuel switching from fossil fuel to that of renewable energy, especially to biomass. Further, considering the situation that over 50% of energy consumption in Sri Lanka is through bio-mass, the Centre developed more and more efficient biomass cook stoves for the domestic sector and for small entrepreneurs such as those engaged with the "Kithul" Industry. The Centre continues to assist the small and medium enterprise in solving their major environmental concerns, complying to the National Environmental Standards.

The NERD Centre being the only organization identified for testing of Lamps and the Automobile Batteries to be imported for Sri Lanka in complying with the relevant standards carried out this national service during 2010, to maintain the quality of all such imported electrical items into the country.

The Centre continues its efforts to disseminate the products; it has developed to the public and the industry through the license process. However, we have seen a decline in the licensees' registration process reflecting the deterioration of the general economic climate within the country. The Department of Techno Marketing is carrying out a study to address the specific shortcomings on the existing Technology Transfer Process, in order to mitigate such adverse situations, which would result in delivering the research and development outcomes to the public.

The NERD Centre continues to be the focal point for Asia Pacific Centre for Technology Transfer and has helped the country in disseminating Regional Technology Transfers to Sri Lanka.

The NERD Centre has seen the retirement of Eng. G B Wimalaratne, former General Manager of the Centre during July 2010 and the appointment of Eng. D D Ananda Namal as the Director General of the Centre thereafter in complying with the New Organization Structure and its Staffing Positions. The Centre also managed to fill the vacancies of the two Deputy Director General positions, Technical Director Positions and the post of Internal Auditor all through internal promotions. Also Centre was able to fill the Director (HR) position externally. The leadership given to the Centre by the retired General Manager and the new Director General is very much commendable and it had been a pleasure working with them. I also wish to thank the management and the other Staff for their efforts in helping to maintain the NERDC position as the Premier Engineering Research and Development Organization in the country.

NERD Centre of Sri Lanka



Eng. D R Pullaperuma
Chairman

04. Top Management and Executive Staff

CHAIRMAN

Eng. D R Pullaperuma - MBA (Utility Management-Ireland), B.Sc.Eng.,C.Eng.,FIEE(SL)

GENERAL MANAGER (ACTING)

Eng. G.B.Wimalaratne - C.Eng., MIE(SL), N.D.T - upto 18.07.2010

DIRECTOR GENERAL

Eng.D.D.A. Namal - M.Eng .(Energy Technology), B.Sc.Eng. (Hons), C.Eng. MIE(SL)-from 19.07.2010

DEPUTY GENERAL MANAGER (PROJECTS)

Eng. G.B.Wimalaratne - C.Eng., MIE(SL), N.D.T - upto 18.07.2010

DEPUTY DIRECTOR GENERAL (RESEARCH & DEVELOPMENT)

Eng. G.K.K.A De Silva - M.Sc (Building Technology), B.Sc.Eng., C.Eng, MIE(SL) - from 19.07.2010

DEPUTY GENERAL MANAGER (SERVICES)

Eng. D.D.A. Namal - M.Eng .(Energy Technology), .Sc.Eng. (Hons), C.Eng. MIE(SL) - upto 18.07.2010

DEPUTY DIRECTOR GENERAL (SERVICES)

Mr. A.H.Piyasiri - M.Sc(Management of Technology), B.Sc Eng.(Hons) - from 14.10.2010

EXECUTIVE STAFF IN DEPARTMENT WISE

Energy & Environmental Management Centre (E&EMC)	Head, Energy & Environmental Management	
	Mr. J.A.A.D.Jayasuriya	M.Eng., B.Sc Eng
	Research Fellow	
	Mr. J.A.A.D.Jayasuriya	M.Eng., B.Sc Eng
	Principal Research Engineer	
	Eng. K.T.Jayasinghe	M.Eng., B.Sc Eng.
	Research Engineers	
	Ms. N.P.T. Perera	B.Sc.(Eng)
	Mr. L.L. Lalith Kumara	M Sc (Eng) ,B.Sc.(Eng)
	Senior Research Scientist	
Mrs. P.M.G. Pathiraja	MSc (Environmental Science & Technology) BSc.(Special) From 18.10.2010	
Research Scientist		
Mrs. P.M.G. Pathiraja	MSc (Environmental Science & Technology) BSc.(Special) Up to 17.10.2010	

<p style="text-align: center;">Civil Engineering Department</p>	<p>Head , Civil Engineering Eng. G.K.K.A De Silva M.Sc (Building Technology), B.Sc.Eng., C.Eng, MIE(SL) Up to 18.07.2010</p> <p>Acting Director Eng. Mrs. J.A.C.Chrishanthi B.Sc.Eng. C Eng.MIE(SL) From 14.10.2010</p> <p>Principal Research Engineers Eng. G.S.S.K.Jayasinghe M.Sc (Construction).B.Sc. Eng., AMIE(SL) Up to 14.10.2010 Eng. Mrs. J.A.C.Chrishanthi B.Sc.Eng. C Eng.MIE(SL) Up to 13.10.2010 Eng. W.P.R.D.Weerasinghe N.D.T., CEI Part I, IESL Part I Eng. W.W.P.K.Perera B.Sc Eng.(Hons), M.Eng.(Struct),C.Eng. MIE(SL)]</p> <p>Research Engineers Ms. N B B Udawatta B.Sc.Eng.(Hons) - upto .24.06.2010 Miss. J.K.U. Gayani B.Sc.Eng - upto 19.07.2010 Mrs. H.T.R. Dammika B.Sc.Eng - upto 05.09.2010</p> <p>Architects Mr. C. A.Upul Dalpathado B.Sc (BE) Hons, MSc (Arch), AIA(SL),</p>
	<p style="text-align: center;">Renewable Energy Department (RED)</p>
<p style="text-align: center;">Agriculture Engineering & Post Harvest Technology Department (AE&PHT)</p>	<p>Head, Agriculture & Post Harvest Technology Dr. T.B. Adhikarinayake PhD, MEng, M.Sc, MI AgrE, MIE(SL), C.Eng.</p> <p>Senior Research Fellow Dr. T.B. Adhikarinayake PhD, MEng, M.Sc, MI AgrE, MIE(SL), C.Eng. From 14,10,2010</p> <p>Principal Research Engineers Mrs. Y.M.M.K. Ranathunga N.D.T. Eng. W.K.R.Peiris M.Phil, MA(Buddhist studies), B.Sc Eng., C.Eng., MIE(SL) Eng. K.Y.H.D.Shantha B.Sc Eng.</p> <p>Research Engineers Ms. K U C Perera B.Sc.(Eng.) Mr. J.C. Rajaguru M Sc (Eng.),B.Sc Eng.</p>

Electrical & Electronics Mechatronic Department (EE&M)	Actg. Head, Electrical & Electronics Engineering	
	Eng. Mrs. N.G.D. Edirisinghe	M Eng., C.Eng., MIE(SL)
	Research Fellow	
	Eng. Mrs. N.G.D. Edirisinghe	M Eng., C.Eng., MIE(SL)
	Research Engineers	
	Miss A.V.A.S. Vithanage	B.Sc.Eng Up to 16.01.2010

Design Fabrication & Consultancy for Industry Department (DF&CI)	Head, Design Fabrication & Consultancy to Industry	
	Mr. A.A.S.P.Jayasinghe	B.Sc Eng.(Hons) Up to 06.12.2010
	Director	
	Mr. A.A.S.P.Jayasinghe	B.Sc Eng.(Hons) From 07.12.2010
	Principal Research Engineers	
	Eng. H.M.L.U.Herath	B.Sc Eng.
	Eng. A.R.C.Salgado	B.Sc Eng.
	Research Engineers	
	Mr. H.P.H.K. Karunasekara	EC(UK) PART I & II
	Mr. L K D C A Karunaratne	B.Sc.(Eng.)
	Ms. U T G N S K Wijesinghe	B.Sc.(Eng.) Up to 10.11.2010

Techno Marketing Department (TMD)	Head, Techno Marketing	
	Eng. M.V.S.A.K. Perera	PG.Dip., IESL Part I & II, C.Eng., MIE(SL)
	Research Fellow	
	Eng. M.V.S.A.K. Perera	PG.Dip., IESL Part I & II, C.Eng., MIE(SL)
	Eng. M.A.M. Fernando	PG.Dip.(Energy) IESL Part I & II, C.Eng., MIE(SL)
	Principal Research Engineer	
	Mr. D.V. Wimalasena	N.D.T., Diploma in Marketing - (S.L)
	Marketing Officer	
	Mr. S. Wijesooriya	B.Sc (Agriculture) Special


Technology Park	OIC	
	Mr. A.H.Piyasiri	M.Sc (Management of Technology), B.Sc Eng.(Hons) Up to 13.10.2010
	Research Engineers	
	Mr. W.R.Sovis	N.D.T., C.E.I. Part 1

Finance Department	Finance Manager Mrs. D.V.S. Perera	ICMA Professional Part II, IPFA, ICEA
	Accountant Mr. J.M.R.S. Jayasinghe	BSc.(Bus.Adm.) (Special), ICASL Professional Part I
Internal Audit	Internal Auditor Mr. P.B. Susantha	HNDA ,Chartered Licentiate Part I & II From 10.08.2010
Administration Department	Director (Human Resources) Mrs. J.P.A.D.S.I. Jayasekera	MPM, BSc,Dip in Personnel Mgmt, Dip. in Advanced English From 10.09.2010
	Assistant Director (Administration) Mr. K. G. N. Ratnayake	B.Com (Special) Degree
Supplies Department	Supplies Officer Mr. R.H.A. Jeewananda	B.Sc (Physical Science)
Library	Librarian Mrs. Thusharika Dewagiri	Lib (Special) Degree, ASLLA

Other Staff as at 31.12.2010

Junior Manager	-	03
Management Assistant (Technical)	-	21
Management Assistant (Non -Technical)	-	45
Primary Level (PL1,PL2, PL3)	-	160
Total Staff	-	269

05. Human Resources

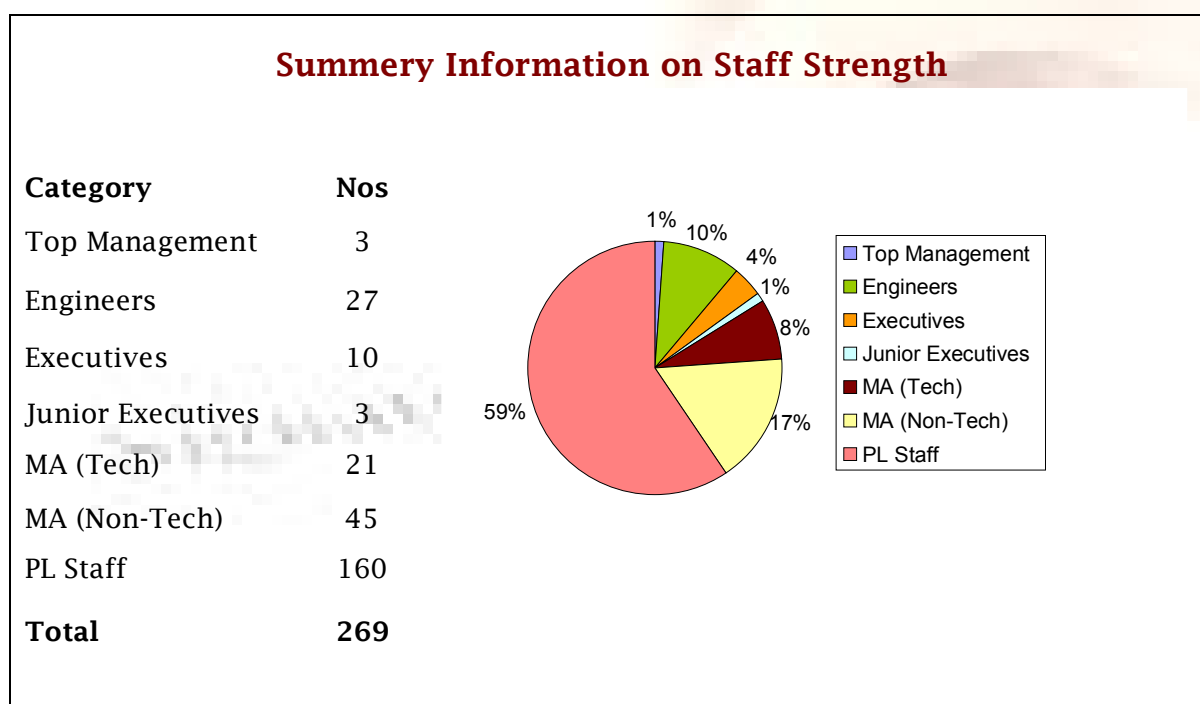
 Human Resources (HR) is the most effective tool and important resource of any organization because of its liveliness and its essentiality. In other words without the Human Resource, the other resources cannot be effectively utilized or managed in an organization.

The permanent HR cadre of the Centre constitutes 269 employees and this includes Engineers numbering 30 comprising the Top Management, Other Executives being 10, Junior Executives 03, Technical Staff 21, Management Assistants 45, PL Staff the majority is 160.

With the implementation of Department of Management Services (DMS) Circular No.

30 of 22 September 2006 the existing scheme of Recruitment and Promotions had to be changed. Accordingly NERDC had prepared the new Scheme of Recruitment and obtained DMS approval and it came in to operation w.e.f. 06 July 2010. Staff of the Centre had been absorbed into the new system under the above restructuring process. Several designations were changed, with the introduction of the new system along with respective salary codes and designations. The Centre being an Institution falling under the Public Enterprises Department, the above process was a significant event during the year in the HR Management area.

The summery information on permanent cadre of the Centre is as follows;



Following new recruitments have been made internally and externally in the Centre during the year 2010.

Name	Designation	Department	Date
01. Eng. D D A Namal	Director General	D G Office	19/07/2010
02. Eng. G K K A De Silva	Deputy Director General (R&D)	D D G Office	19/07/2010
03. Mr. P B Susantha	Internal Auditor	Internal Audit	10/08/2010
04. Mrs. J P A D S I Jaysekera	Director (HR)	Administration	10/09/2010
05. Mr. A H Piyasiri	Deputy Director General (Services)	D D G Office	14/10/2010
06. Mrs. J A C Chrishanthi	Actg. Director (Civil Eng. Dept.)	Civil Engineering	14/10/2010
07. Mrs. P M G Pathiraja	Senior Research Scientist	E & E M C Dept.	18/10/2010
08. Mr. A A S P Jayasinghe	Director Technical (DF & CI)	DF & CI Dept.	07/12/2010
09. Mr. N K Edirisinge	Director Technical (RED)	R.E.D.	07/12/2010

Following Staff Members had retired from the Centre service in the year 2010 after reaching the age of retirement.

Name	Designation	Department	Date of Retirement
01 Mr. K A Somapala	Welder Fitter	AE&PHT	14/01/2010
02 Mr. U D Chandradasa	Fitter	AE&PHT	13/02/2010
03 Eng. G B Wimalaratne	Actg. General Manger	-	18/03/2010
04 Mr. H D Mettananda	Cashier	Accounts	02/05/2010
05 Mr. L D Premaratne	General Clerk	AE&PHT	07/07/2010
06 Mr. O R D P Jayasinghe	K.K.S.	TMD	29/07/2010
07 Mr. B S Dharmaratne	Stores Attendant	Main Stores	31/08/2010

5.1 Capacity Building/ Skill Development Programmes



Two presentations organized by the NERDC discussed topics related to Research & Development (R&D) for the benefit of the Engineers and Research Staff.

They being Presentation on **“Innovations and Patents”** by Eng. D M Punchibanda of the Renewable Energy Department on

17.02.2010 and the presentation on **“Experience on Potential Improvements of Tobacco Curing Process View of Energy Aspects”** by Eng. K T Jayasinghe of Energy & Environment Management Centre on 03.11.2010. The facts that emerged through these two presentations were very valid in today’s context of Research & Development.

5.2 Staff Training/ Skill Development Programmes

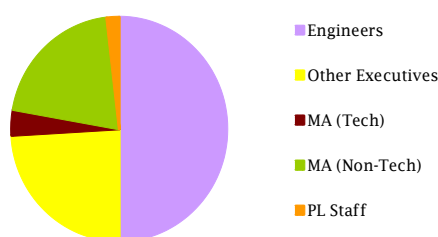
NERDC always provides training opportunities for her staff to enhance their knowledge and skills in order to equip them with the present day needs and to obtain optimal service out of them.

In the year 2010 Centre has provided fifty four (54) local training opportunities to its staff members at a cost of four hundred four thousand and ninety one Sri Lankan Rupees (SLR. 404,091.00).

Whilst providing such local training opportunities NERDC has also given 6 staff members’ foreign training under Scholarships/Fellowship/ short term Training Programmes to gain international exposure to develop their knowledge and skills. Such knowledge and skills is bound to inject new working styles and methodologies, which could be applicable to most of our systems . .

Local Training Opportunities Provided for NERDC Staff in 2010

Staff Category	Nos.
Engineers	27
Other Executives	13
MA (Tech)	2
MA (Non-Tech)	11
PL Staff	1
Total	54



Local Training & Skilled Development Programmes - 2010

Name	Designation	Department	Programme	Duration	Training Institute	Course Fee
01 Mr. L L L Kumara	Mechanical Engineer	E&EMC	Course on Management Development for Engineers	12 Saturdays (From 10/04/2010)	Institute of Engineers Sri Lanka (IESL)	Rs. 25,000.00
02 Mr. S Palliyaguruge	Mechanical Engineer	RED	Course on Management Development for Engineers	13 Saturdays (From 10 April 2010)	Institute of Engineers Sri Lanka (IESL)	Rs. 24,000.00
03 Mr. J M R S Jayasinghe	Accountant	Accounts	Seminar on "BID Evaluation"	One day (21 January 2010)	Institute for Construction Training and Development (ICTAD)	Rs. 3,800.00
04 Mr. W W P K Perera	Civil Engineer	Civil Engineering	Certificate Course in Contract & Procurement Management	24 Saturdays (From 01 January 2010)	Institute for Construction Training and Development (ICTAD)	Rs. 40,000.00
05 Mr. W W P K Perera	Civil Engineer	Civil Engineering	Half a CPD Course on Code of Ethics	One day (15 February 2010)	Institute of Engineers Sri Lanka (IESL)	Rs. 1,000.00
06 Ms. D V S Perera	Finance Manager	Accounts	Seminar on Introduction of the Sri Lanka Public Sector Accounting Standards (SLPSAS) Published in 2009	One day (12 February 2010)	Institute of Public Finance & Development Accountancy	Rs. 3,000.00
07 Mr. J M R S Jayasinghe	Accountant	Accounts	Seminar on Introduction of the Sri Lanka Public Sector Accounting Standards (SLPSAS) Published in 2010	One day (12 February 2010)	Institute of Public Finance & Development Accountancy	Rs. 3,000.00
08 Ms. U T G N S K Wijesinghe	Mechanical Engineer	DF&CI	Programmable Logic Controller Course (PLC) - 2010	5 weekends (From 06 March 2010)	Arthur C Clarke Institute for Modern Technologies	Rs. 13,000.00
09 Ms. J K U Gayani	Civil Engineer	Civil Engineering	Training Programme on "Design Construction and Testing of Piles"	04 days (23, 24 Feb. & 2, 3 Mar. 2010)	University of Moratuwa	Rs. 14,000.00
10 Ms. D S C Wanniarachchi	Management Assistant	Administration	Payment of Overtime & Travelling Claims	One day (02 March 2010)	Institution of Government Account & Finance	Rs. 2,500.00
11 Ms. W Dinusha Tharangi	Management Assistant	Administration	Payment of Overtime & Travelling Claims	One day (02 March 2010)	Institution of Government Account & Finance	Rs. 2,500.00

Name	Designation	Department	Programme	Duration	Training Institute	Course Fee
12 Mr. L L L Kumara	Mechanical Engineer	E&EMC	Seminar on Energy Management Systems in Buildings	One day (31 March 2010)	Institute for Construction Training and Development (ICTAD)	Rs. 4,500.00
13 Mr. J A A D Jayasuriya	Head of E&EMC	E&EMC	Training of Trainers Programme on Air Quality Measurements and Modeling	04 days (16-19 March 2010)	University of Moratuwa	Rs. 5,000.00
14 Mr. N K Edirisinghe	Chemical Engineer	RED	Human Resources Development Through Proper Disciplinary Management	Two Days (23 & 24 April 2010)	Centre for Studies in Disciplinary Management	Rs. 6,300.00
15 Mr. M A M Fernando	Mechanical Engineer	TMD	Human Resources Development Through Proper Disciplinary Management	Two Days (27 & 28 Feb 2010)	Centre for Studies in Disciplinary Management	Rs. 6,300.00
16 Mr. J M R S Jayasinghe	Accountant	Finance	Human Resources Development Through Proper Disciplinary Management	Two Days (23 & 24 April 2010)	Centre for Studies in Disciplinary Management	Rs. 6,300.00
17 Mr. D V S Perera	Finance Manager	Finance	"Financial Reporting in Compliance with Accounting Standards"	One day (15 May 2010)	Skilled Development Fund Ltd.	Rs. 3,500.00
18 Mr. K G N Rathnayake	Assistant Director	Administration	Workshop on Corporate Social Responsibility	One day (10 May 2010)	EEPEX Project - Workshop Industrial Technology Institute	Free of charge
19 Mr. J A A D Jayasuriya	Head of E&EMC	E&EMC	Workshop on Energy Efficiency	One day (10 May 2010)	EEPEX Project - Workshop Industrial Technology Institute	Free of charge
20 Mr. N K Edirisinghe	Chemical Engineer	RED	Workshop on Utilization of Biomass	One day (13 May 2010)	EEPEX Project - Workshop Industrial Technology Institute	Free of charge
21 Mr. W K R Peiris	Mechanical Engineer	AE&PHT	Workshop on Selection and Use of 2 Wheel Tractors	One day (20 May 2010)	Agricultural Machinery Manufacturers & Supplies Association of Sri Lanka	Rs. 3,000.00
22 Ms. J K U Gayani	Civil Engineer	Civil Engineering	Nanotechnology Application to the Construction Industry	One day (24 June 2010)	Institute for Construction Training and Development (ICTAD)	Rs. 2,950.00
23 Mr. H P Hemantha Kumara	Workshop Engineer	DF&CI	Workshop on "Know Your Pump" for Better Performance	Two Days (9 & 10 June 2010)	Construction Equipment Training Centre	Rs. 7,500.00
24 Mr. J A A D Jayasuriya	Head of E&EMC	E&EMC	Training on ISO/IEC 17025:2500 and Accreditation of Testing Laboratories	Two Days (16 & 17 Sep 2010)	Sri Lanka Accreditation Board	Rs. 7,000.00
25 Ms. K U C Perera	Chemical Engineer	AE&PHT	Training on ISO/IEC 17025:2500 and Accreditation of Testing Laboratories	Two Days (16 & 17 Sep 2010)	Sri Lanka Accreditation Board	Rs. 7,000.00

Name	Designation	Department	Programme	Duration	Training Institute	Course Fee
26 Ms. R M D S Gunaratne	Chemical Engineer	RED	Training on ISO/IEC 17025:2500 and Accreditation of Testing Laboratories	Two Days (16 & 17 Sep 2010)	Sri Lanka Accreditation Board	Rs. 7,000.00
27 Mr. A A D P Antony	Pipe Fitter	Administration	Maintenance of Plumbing and Drainage Systems	One day (03 July 2010)	Institute of Industrial Techno Management	Rs. 4,037.60
28 Ms. O L C F Perera	Management Assistant	Administration	Workshop "Super Secretary"	One day (09 July 2010)	Institute of Industrial Techno Management	Rs. 5,652.64
29 Ms. H A N Padmini	Management Assistant	Supplies	Certificate in Human Resources Management	Three months (Sundays)	Human Resources Management Institute	Rs. 16,800.00
30 Mr. J A A D Jayasuriya	Head of E&EMC	E&EMC	Invitation to Participate at South Asia Regional Workshop on Biogas Technology & Applications	Two Days (27 & 28 July 2010)	Energy Forum, Kirulapane	Free of charge
31 Mr. P D R Damayanthi	Management Assistant	TMD	Clerical Staff Development Programme	One day (22 July 2010)	Institute of Industrial Techno Management	Rs. 4,037.60
32 Mr. J A A D Jayasuriya	Head of E&EMC	E&EMC	Cleaner Production Construction Training Programme	07 days (August 2010)	National Cleaner Production Centre	Rs. 25,000.00
33 Ms. R K Waidyasekara	Administrative Officer	Administration	Office Management	02 Days (29 & 30 July 2010)	National Institute of Labour Studies	Rs. 3,700.00
34 Mr. R H A Jeewananda	Asst. Supplies Officer	Supplies	Workshop on Selection and Employment of Consultants	02 Days (19 & 20 Aug. 2010)	Institute of Engineers Sri Lanka (IESL)	Rs. 5,500.00
35 Mr. B P Susantha Kumara	Internal Auditor	Internal Auditor	LS 303 - Diploma in English for Professionals (DEP) (Level 1)	10 days (From 29 August 2010)	Sri Lanka Institute of Development Administration	Rs. 9,000.00
36 Mr. M A S Bandara	Supervisor	E&E	Programmable Logic Controllers for Beginners - Hardware & Programming - A4 - Day Intensive Hands - on PLC Training Workshop	04 Sundays (From October 2010)	Institute of Industrial Techno Management	Rs. 10,959.20
37 Mr. M D Devaraja	Management Assistant	T.Park	Foundation Course in Human Resource Management	10 Mondays (From 20 September 2010)	National Institute of Business Management	Rs. 15,000.00
38 Mr. W W P K Perera	Civil Engineer	Civil Engineering	Seminar on Taxation and Duties Applicable to Construction Industries	One day (29 September 2010)	Institute of Engineers Sri Lanka (IESL)	Rs. 1,000.00
39 Mr. A R C Salgado	Mechanical Engineer	DF&CI	Seminar on the in "Post Conflict Development Strategies for Sri Lanka"	One day (23 October 2010)	Institute of Engineers Sri Lanka (IESL)	Free of charge

Name	Designation	Department	Programme	Duration	Training Institute	Course Fee
40 Mr. A H Piyasiri	Mechanical Engineer	Head of RED	Human Resources Development Through Proper Disciplinary Management	Two days (29&30 Oct. 2010)	Centre for Studies in Disciplinary Management	Rs. 6,500.00
41 Mr. S Wijesuriya	Marketing Officer	TMD	Human Resources Development Through Proper Disciplinary Management	Two days (29&30 Oct. 2010)	Centre for Studies in Disciplinary Management	Rs. 6,500.00
42 Mr. K G N Rathnayake	Assistant Director	Administration	Workshop on Performance Appraisal Systems	Three days (02-04 Nov. 2010)	Sri Lanka Institute of Development Administration	Rs. 5,000.00
43 Eng.(Mrs.) J A C Chrisanthi	Actg. Director (Civil)	Civil Engineering	Human Resources Development Through Proper Disciplinary Management	02 Days (10 & 11 December 2010)	Centre for Studies in Disciplinary Management	Rs. 6,750.00
44 Eng. G K K A De Silva	Deputy Director General (R&D)	DDGs' Office	international Conference on Sustainable Built Environment and Workshop	13-14 December 2010	University of Peradeniya	Rs. 15,000.00
45 Mrs. P M G Pathiraja	Senior Research Scientist	E&EMC	Training Programme on Patent Drafting	13 - 17 December 2010	National Intellectual Property Office of Sri Lanka	Free of charge
46 Mr. L L L Kumara	Senior Research Scientist	E&EMC	Training Programme on Patent Drafting	13 - 17 December 2010	National Intellectual Property Office of Sri Lanka	Free of charge
47 Mr. W P R D Weerasinghe	Principal Research Engineer	Civil Engineering	Short Course on Elevators	16 - 17 December 2010	Construction Equipment Training Centre	Rs. 9,400.00
48 Mr. K Y H D Shantha	Principal Research Engineer	AE&PHT	Short Course on Elevators	16 - 17 December 2010	Construction Equipment Training Centre	Rs. 9,400.00
49 Mrs. A A R S Athurugiriya	Management Assistant	DF&CI	Training Programme on Office Management	One Day (10 December 2010)	Institute of Industrial Techno Management	Rs. 4,037.60
50 Mrs. A Anusha Lakmali	Management Assistant	Administration	Training Programme on Office Management	One Day (10 December 2010)	Institute of Industrial Techno Management	Rs. 4,037.60
51 Mrs. W Dinusha Tharangi	Management Assistant	Administration	Training Programme on Office Management	One Day (10 December 2010)	Institute of Industrial Techno Management	Rs. 4,037.60

Foreign Scholarships/Seminars/Training-Programmes/Workshops - 2010

	Name of the officer	Post	Name of the programme	Period	Country	Sponsoring Institutions
01	Dr. T B Adhikarinayake	Mechanical Engineer HD/AE&PHT	WIPO High Level Forum on the Global Intellectual property (IP) Infrastructure for Promotion of Innovation	01 - 02 March 2010	Japan	World Intellectual Property Organization (WIPO)
02	Mr. K Y H D Shantha	Mechanical Engineer	Aspiring Leaders of Research Technology Organization Program	31 May - 04 June 2010	Malaysia	SIRIM Berhad, Malaysian Technical Cooperation Programme (MTCP)
03	Eng. M A M Fernando	Mechanical Engineer	International Advanced Training Course on Intellectual Property Rights (IPR) for NAM and Other Developing Countries	12 - 17 July 2010	India	Centre for Science and Technology of Non-Aligned and Other Developing Countries (NAM S&T)
04	Mr. A H Piyasiri	Mechanical Engineer HD/ RED	Consultative Meeting on Regional Cooperation for Establishing and Institutional Cooperation Mechanism to Promote renewable Energy in Asia and Pacific	07 & 08 October 2010	Thailand	Asian and Pacific Centre for Transfer of Technology (APCTT)
05	Eng. D R Pullaperuma	Chairman	Sixth Meeting of the Technical Committee and Asia-Pacific Forum on NIS	22 - 25 November 2010	Indonesia	Asian and Pacific Centre for Transfer of Technology (APCTT)
06	Eng. D R Pullaperuma	Chairman	Sixth Session of the Governing Council of the Asian and Pacific Centre for Transfer of Technology (APCTT)	13 December 2010	Thailand	Asian and Pacific Centre for Transfer of Technology (APCTT)

06. Performance Highlights of the Year 2010



As a premier Engineering Research and Development Organization in Sri-Lanka, National Engineering Research and Development Centre (NERDC) has involved in innovative activities in different ways to upgrade the socio-economic situation of the country based on “Mahinda Chinthanaya” and the Government development program. Outcome of these activities have been contributed largely to create employment opportunities, optimize local resources, minimize usage of foreign resources, add value to local resources with a view to aligning ourselves to the development of Sri Lanka and its economic situation by providing our technology inputs in the following areas.

- Housing
- Energy
- Environment
- Agriculture
- Renewable energy
- Industrial developments
- Water

In addition, the NERDC developed technologies are disseminated to the public through contractors, business men and up-coming entrepreneurs, who have the right to transfer such technologies through licensing agreements and through draughtsman in case of cost effective, housing technologies.

Housing

The NERDC has developed number of cost effective technologies for building construction and those technologies provide solutions to critical issues in building construction industry. These solutions have mainly focused on high price of construction material, the depleting resources such as sand and timber. Our technologies have also provided solutions to diminishing skilled labour and for upcoming entrepreneurs.

Construction of Vidatha buildings using NERD Cost Effective Building Techniques, 20’ Foot bridges as a replacement of traditional Edanda are some of the achievements in the year 2010.

Energy

The Centre is engaged in designing improved energy efficient systems and energy recovery systems for industries, commercial establishments and government institutions with a view to reducing energy costs, environmental degradation, improving productivity and utilization of resources in a sustainable manner.

Environments

Engineering solutions have been introduced for the key environmental issues such as solid waste management and industrial waste management for both small and large scale industries. The Tailor made environmental designs have been provided for the issues of noise control, emission control and wastewater treatment after assessing its effects through related measurements.

Renewable Energy

The Centre has engaged in developing number of alternative technologies to improve the efficiency and to reduce energy cost through the adaptation of such renewable energy options.

The more prominent ones being bio mass energy applications that would replace processes fuelled by conventional energy resources such as electricity and imported fossil fuel. One of the main areas we have focused has been the tea industry. We have also provided solutions for processing of export agricultural products and indigenous food products.

Industrial Developments

Introduction of the state of the Art technologies such as CNC machines to

the NERDC manufacturing division has contributed large for assisting Small Medium Enterprise (SME) sector in the Die and Mould industry of Sri Lanka.

Development of this sector is very important for the local manufactures to obtain advanced technology and knowledge in order to compete with imported products.

Agriculture and Post Harvesting

The NERD Centre has focused in finding engineering solutions to the current issues in the agriculture, post harvest and food processing sectors by designing and development of new machineries and processes. The country has to introduce new technologies and

machinery to this important sector considering the emphasis placed on the food sector, the world over. Our research contributions have provided effective solutions

for labour shortage, and for improving productivity and quality.

Water and Wastewater

The Centre has recently introduced a Cost Effective Water Filter made with ferrocement and filled with sand based filter materials. For the industrial sector the Centre has contributed by giving the concerned industries, effective wastewater treatment solutions.

The main roles played by the NERDC during year 2010 can be summarized as follows;

1. Research and Development Projects
2. Construction / Installation of Pilots Projects
3. Building Construction and Engineering Consultancy Services
4. Environmental, Energy Management Services and Laboratory Testing Services
5. Conducting Public Awareness / Training Programmes and Technology Transfer Activities

6.1 Research and Development Projects

Following R & D projects were carried out during year 2010.

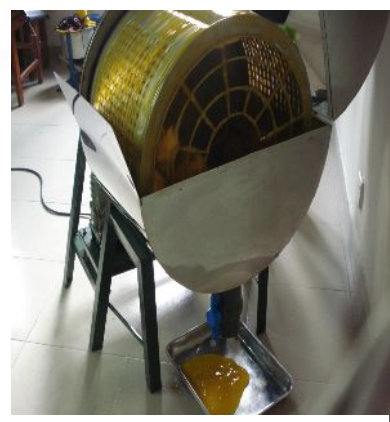
6.1.1 Development of Machine for Palmyra Juice Extraction

Objective

To develop a machine to extract juice from the Palmyra fruits with high efficiency.

Benefits

Palmyra is a seasonal crop. Presently the extracti Palmyrah Juice (extracting juice) is done by manually the process consumes much labour and time. Manual process is not so efficient during the cropping seasons. The newly developed machine will help to extract the Palmyra juice in an efficient manner and minimising wastage.



Palmyra Juice Extractor

6.1.2 Seed Oil Extraction Unit

Objective

To develop a machine to extract the oil from oil bearing seeds.

Benefits

This machine will increase the efficiency of the extracting processes and minimise the wastage, good solution for extracting of oil from Mee seeds.



Palmyra Juice Extractor

6.1.3 Universal Vegetable Slicer

Objective

To develop machines for slicing of vegetable and fruits

Benefits This machine will help to increase the efficiency of the vegetable and fruit processing industries providing economical advantages to the people who involved in the industry.



Universal Vegetable Slicer

6.1.4 Efficient Banana Handling System

Objective

To introduce efficient cost effective mechanism for banana transport to minimise banana wastage during the transportations.

Benefits

Cushion cover has been developed to protect the banana and this cover can be repeatedly use for several times. Minimise the wastage during the transportations from farm outlets to the market.



Banana Cover

6.1.5 Power Weeder for Low Land Paddy Field

Objective

To develop machine to remove weeds from paddy cultivations.

Benefits

Weeding process in paddy cultivations consume more labour and sufficient labour are not available. The machine has capacity to remove the weeds in paddy cultivations in efficient manner saving both labour and cost.



Preliminary Model of Power Weeder

6.1.6 Development of Cost Effective Water Filter

Objective

To provide safe drinking water for the people living in Ja-Ela and Ekala suburb areas.



Distribution of Sand Filters among villagers



Filtering of water

Special features of the water filter

- Cost effective
- Can be made at domestic level
- Less maintenance
- Simple Technology
- Creating employment opportunities
- Value added to local resources

6.1.7 Development of Cost Effective Dryer

Objective

To develop cost effective dryer for small scale and medium scale industries.

Benefits

Energy savings Operate with biomass energy, Suitable for processing of export agricultural products and High efficiency.



Biomass dryer

6.1.8 Scaling up of Chipped Fuel Wood Control Feeding System for Tea Drying Industry

Objective

Presently timber logs are used for tea drying processes and consumption of firewood quantity are very high. In order to save firewood's and to develop technology for feeding system.



Suitable wood chips purchased from outside



Screw Feeder to Feed wood

6.1.9 Fuel Switching from Diesel to Fuel Wood Chips in Tea Drying Industry

Objective

To convert diesel fired hot air generation system to fuel wood firing system. That is to introduce fuel wood chips burning system in place of diesel burning system for tea drying industry.



Controlling Panel of the System

Benefits

Technology will replace diesel oil with fire woods and create employments opportunities in rural areas based on supplying of fire woods.

- Save foreign currency
- Create employment opportunities
- Save biomass resource

6.2 Construction / Installation of Pilots Projects

Few pilots projects have been completed with the technologies introduced by the NERDC during the year 2010 in different areas of the country.

6.2.1 Construction of Foot Bridges

Two Nos. of foot bridges have been constructed as a pilot project at Meerigama providing services to more than 25 Nos. of families based on the findings of the development of foot bridges project completed in 2009. Monitoring of the foot bridges is in progress under normal operation in order to identify problems for further developments



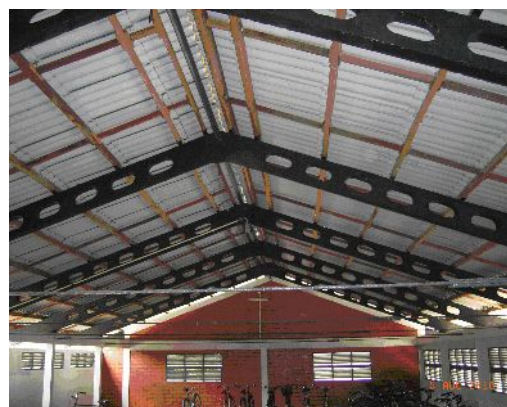
Construction of 02 Nos. of Foot Bridges at Meeriaama

Advantages

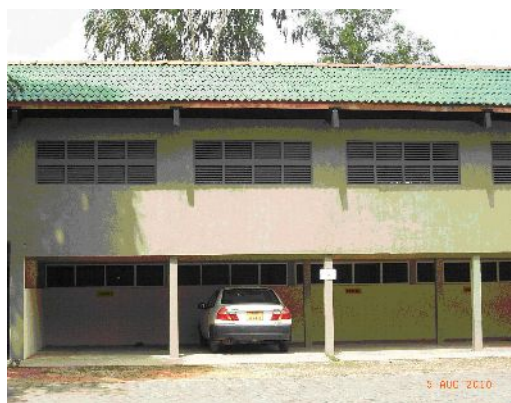
- Ideal solutions to replace an un safe "Edanda" in rural areas
- Affordable technologies for ordinary people
- Cost effective and repairs can be handled by the villages

6.2.2 Roof Covering with Cement/Sand Tile

The NERDC has introduced new roof tile made with cement sand tile instead of Calicut tile or asbestos sheet. These tiles can be made at cottage level as an industry. Tiles are made with cement and sand using simple machine. In order to investigate the behavior of the tile 120' x 60' roof was constructed using these tiles.



Roof covered with newly developed tile



Roof the garage building

Special features of the tiles

Covering area 4.8 Sq.ft/tile

Thickness 0.25"

To cover 100 Sq. ft area, 850 no/of tiles are required.



Manufacturing of Tiles

6.2.3 Application of Bio-mass Stove for Industry

Twenty number of stove have been made for the Industrial Technology Institute, Vidatha Centers and Ministry of Rural Industries. This is very good application to the industries like processing of Kithul sap and cooking purposes in hotel, canteen, etc.

6.2.4 Fabrication of Palmyra Juice Extraction Machine

Six numbers of machines have been fabricated and given to the Palmyra Development Board to evaluate the machine.

6.2.5 Construction of Ten Number of Water Filter.

Ten number of cost effective water filters were made and have been distributed among the villagers who do not have facilities for safe drinking water. Presently evaluation of conditions of the filters are in progressing

6.3 Building Constructions and Engineering Consultancy Services

Consultancy services have been provided in deferent areas such as building construction, energy and environment and agriculture. Mainly these services based on the technologies developed by the Center through the research and development during past years. Also, consultancy services have been provided based on the technologies which are not available at the other organization

6.3.1 Consultancy Services for Construction of Vidatha Centers.

The NERDC has provided all architectural and structural drawings, estimates and site supervisions for construction of Vidahtha buildings based on the cost effective technologies through out the country. This will help to popularize the cost effective technologies through out the country through the vidatha programmes. Consultancy services have been provided for the following vidatha buildings. Kuruvita, Thupane, Sevenagala, Galaenbindunawewa, Madampe and Tellipaleli

6.3.2 Consultancy Services to the Industry



Kuruvita Vidatha Resource Centre

The NERDC has provided consultancy services to the industries in different areas such as energy audits, waste water treatments, and pollution control. These consultancy services covered the energy auditing, laboratory testing, designing, boiler tuning and flue gas analysis. These services are provided for 200 numbers of industries including large, medium and small scale industries.

6.3.3 Consultancy Services with Advanced Technologies

Specially these services have been provided for manufacturing of moulds and dies required for the industry. Our services covered the repairing of moulds, modifications of the existing moulds, product designing and draft designing etc.

6.3.4 Consultancy Product Testing & Industrial Services

Consultancy has been provided for different areas in the electrical and electronics fields. We have offered consultancy services for industries, importers of electrical and electronic items, small and medium level local manufacturers, government institutions, general public.

- Consultancy for electrical installation of buildings
- Consultancy for industrial control system
- Instrument calibrations
- Consultancy for CFL importers and manufacturers
- Consultancy for battery importers

6.3.5 Construction of Stores Complex-Vijaya Kumaranathunga Hospital

Consultancy services has been provided to construct three storied building for Wijaya Kumaranatunga Hospital.



**Stores Complex
Vijaya Kumaranathunga Hospital at Seeduwa**

6.4 Environmental, Energy Management Services and Laboratory Testing Services

NERDC undertakes Energy Audits, Industrial Process Monitoring Services, and Environmental Testing to facilitate industries, Government institutions & communities and thereby generates fair amount of finance to bridge the recurrent expenditure. Submission of environmental protection license is mandatory by the industries and companies under the Central Environmental Authority regulations. NERDC is one of the premier institution coming under the purview of the Ministry of Technology and Research serving as a

registered consultant for laboratory testing on environmental management such as Noise, Air Quality and Wastewater. Many number of Environmental Problem Solving Designs and Consultancy Designs, Consultancy for Wastewater/Effluent Treatment Plants, Laboratory Testing and Energy Audits have been carried out in the Year 2010. Several leading companies and government institutions are among those clients who have obtained these services.

Apart from that, following laboratory testing, have been carried out by the Centre.

- ❖ Civil Engineering laboratory testing - 160
- ❖ Energy & Environmental laboratory testing - 260
- ❖ Micro Hydro Turbine testing by Department of Renewable Energy - 10

6.5 Conducting Public Awareness / Training Programmes and Technology Transfer Activities

Number of training programmes , awareness programmes , demonstrations activities have been carried out during the year 2010, in order to popularize the technologies and to train people on the newly developed technologies. As a result number of self employment opportunities have been created though out the country specially in rural areas.

6.5.1. Training Program on Cost Effective Construction Technology- Paranthan Killinotchchi District

As an assistance to the government rehabilitation programmes in Northern area, the NERDC conducted two weeks on site training programmes on cost effective technologies for building construction, in order to provide the affordable houses for people in Killinotchchi district with the assistance of North East Housing Reconstruction programme

Both theoretical and practical sessions have been carried out at the Paranthan for 30 number of masons in the areas including governments and private sectors.



Cost Effective construction technology – Kilinochchi

This programme covered the following key areas which has addressed to the issues in the building construction industry

- Manufacturing of Cement Soil Blocks
- Ferrocement Applications
- Concrete Door and Window frames
- Ferrocement Septic Tanks
- Pre-cast/ Ferrocement Rafters
- Spiral Staircase
- Slip-form Wall Construction
- Manufacturing of Micro Concrete Tiles
- Roof Construction Technology

6.5.2. Training Program on Cleaner Production and Energy Saving

Above training program had been conducted at the NERD Centre and 22 Nos. of participants participated.

6.5.3 Round Table Discussion to Ensure Smooth Advancement of Biogas Technology in Sri Lanka

The above discussion coordinated by E&EC at the NERDC on 10th December 2010. Eminent scientists involved in this background, biogas project practitioners and promoters participated for this event along with representatives of Ministry of Technology and Research, Central Environmental Authority, Sustainable Energy Authority, Mahaweli Authority. Current drawbacks and issues related with existing technologies for disposal of solid organic waste were identified; possible remedial methods were discussed and a draft report was prepared.



6.5.4 Technology Transfer Activities

Number of training programs have been carried out during the year 2010 in order to popularize technologies through out the country.

Title of program	No. of Programs	Number of participants
Cost effective construction technology for houses (4 day)	04	45
Manufacture of Pre-cast building components (2 day)	04	50
Manufacture of compressed cement/soil blocks (1 day)	10	230

6.5.5 Newspaper Articles

17 Nos. of newspaper articles based on NERDC developed technologies have been published in newspapers in three languages.

4 Nos. of TV and Radio programs were conducted on NERDC developed technologies during the year.



07. Corporate Social Responsibility

7.1 Services Offered for the Community



While providing practical solutions to the numerous engineering problems in the domestic construction industry, environmental related issues, energy associated problems and many others in the public sector organizations, SMEs, & individuals, NERDC extends its service to the community through various programs and activities such as in-house and outside Training programs, island-wide exhibitions, and awareness campaigns & contributions through Vidatha Centres. Vidatha Centres had been established with the objective of bringing the “Technology to the Village” Some of such programs conducted by NERDC have been mentioned under “Performance Highlights of the Year 2010”

➤ Technology Park

NERDC Technology Park was established in 1999 to celebrate 25th anniversary of NERDC Centre and it was ceremonially opened on 14th August 1999 by then Honorable Minister of Science and Technology. The total area covered by the Technology Park is 4.5 acres.



It was established with the objective of disseminating technologies and know-how developed by NERDC to the next generations so as to popularize their applications and thereby to achieve conservation for the next future generations.

Currently, the NERDC Technology Park exhibits consist of relevant technological products, processes, projects which have been designed and developed by Engineers and Scientists of NERDC Centre since 1974. These tasks have been performed through various activities in the Technology Park such as conducting lectures, seminars, displaying exhibits, demonstrations where sufficient background knowledge and information on procedures and underlying principles are also been given. A large No. of school children, teachers, university undergraduates, students of technical colleges & private institutions, individual persons and groups visit the Technology Park daily

7.2 Welfare Association of NERDC

Welfare Association of the NERDC has more than 30 year's history. The office bearers are appointed by its members annually and it seeks guidance and patronage of the management of the NERDC where appropriate.

It organizes several annual events i.e. annual welfare trips, year five scholarship award ceremony, annual sport meet, blood donation campaign are some of the major events organized by the welfare society. Welfare library service, funeral service and felicitation ceremonies for those who retire from the service, canteen service are the major activities carried out by the welfare association for the benefit of its members. Those extra activities carried out beyond normal routine duties would bring staff and non staff members together creating a healthier working environment at the workplace. For some of the funeral assistance it provides at most difficult times in their lives is not worthy to mention here.

In the year 2010, following activities and functions have been organized by the NERDC welfare association.

- Blood donation campaign from NERD employees organized in commemoration of the late Dr. A.N.S. Kulasinghe on 26.02.2010
- Awards Ceremony for children of those who passed Year 5 Scholarships Examination on 30.02.2010
- Distribution of dry food among the flood affected people on 25.05.2010
- Annual Welfare Trip to Jaffna for three days from 3-5 September 2010 for NERD employees and their family members
- Participation of the Elle Tournament organized by the Sri Lanka Elle Association in memory of late Mr. D.A. Rajapaksha on 23-25.09.2010 at Trincomalee.



7.3 Religious Associations

Two religious Societies have been established in the NERDC namely, Buddhist Society and Catholic Society. Several activities and programmes were organized by these two societies with the objective of mental and spiritual well being of the NERDC staff members. One prominent feature of these two societies is that every employee is a member of either the Buddhist Society or the Catholic Society voluntarily.

Following events have been organized by the two societies in the year 2010.

7.3.1 Buddhist Society activities

- Organized a Pirith Chanting Ceremony on 1st of January 2010
- Organized a “Bana Pinkama” in commemoration of late Vidyajyothi Dr.A N S Kulasinghe, one of the founder Chairman of this Centre held on 16 February 2010
- Granting of financial assistance to ‘Sri Sombuddhaloka Bikshuni Monastery’ at Ekala, in May 2010.
- Religious observances in “Atasill Campaign” on 26th May 2010
- Distribution of meals for Jayawardhana Children’s Home at Weligampitiya, Ja-Ela on 09.11.2010.
- Over night Pirith Chanting Ceremony organized on 03rd December 2010.



7.3.2 Catholic Society activities

- Presentation on “Building of Life towards positive attitudes”. By Rev. Father Terrance Kithsiri on 16 March 2010
- Annual Christmas Mass together with donation of dry food for ‘Nisansala Children’s Home’ at Raddolugama, Seeduwa. organized on 21 December 2010.



08. Accounting Policies

01. General Accounting Policies

General

The balance sheet as at 31.12.2010 and the related Financial Statements have been prepared on the historical cost convention, in accordance with generally accepted Accounting principles applied on a consistent basis in conformity with the Sri Lanka Accounting Standards.

02. Assets and Basis of Valuation

- Fixed Assets

Funds for acquisition of Fixed Assets are provided by the General Treasury. In determining the gross carrying amount of assets we have considered, the delivered to site value inclusive of FOB, CIF clearing transport & other local charges incurred for bringing to the condition at present. Assets are depreciated on method at the following rates on straight line method.

	%
Buildings	2.5
Officer Equipments	15
Tools	15
Computers	33.33
Vehicles	15
Furniture & Fittings	10
Plant & machinery& Lab Equipment	15
Library Books	05
Infrastructures	2.5

* Funds for acquisition of fixed assets are provided mainly by the General Treasury.

According to the board Meeting No.1-2011 dated 21/01/2011, item No. 3.2 board had granted the approval to re value the buildings & infrastructures. This revaluation was done as at 31.12.2007.

Revaluation of buildings and infrastructures have been completed as per SLAS 18 and adjustments have been done as follows.

(Figures in Rs.)

Assets	Total Cost as at 31.12.2007	Accum.Dep.as at 31.12.2007	W.D.V As at 31.12.2007	Re valued amount as at 31.12.2007	Re valuation reserve-surplus/(Deficit)
Building	115,023,782.51	58,342,821.54	56,680,960.97	170,047,067.00	113,366,106.03
Infrastructure	31,589,689.91	16,580,924.17	15,008,765.74	250,000,000.00	234,991,234.26
Total	146,613,472.42	74,923,745.71	71,689,726.71	420,047,067.00	348,357,340.29

As a result re-valuation reserve of Rs.348,357,340.29 has being generate.

* Patents and Trade Marks obtained by the Centre is shown in the Balance Sheet separately under Patents and Trade Marks.

03. Inventories

Basis of valuation

Stock of raw material - At cost or net realizable value which ever is lower using FIFO costing method

Finished goods & Work in progress - Work in progress on civil projects are valued after considering the direct material, direct labour and 100% overhead charge

04. Research & Development

Accounting Policy for Research & Development mainly funded by the Treasury.

Income received from outside clients is setoff against the expenditure.

When costing the research projects direct material, labour & overheads has been considered.

05. **Construction contracts**

- Construction contracts are undertaken for public sector as an effective tool to popularize the NERD developed technologies to the public.
- Contribution/deficit of such a construction project is worked out after completion of the project subject to certification of bills.
- W.I.P on construction contracts is indicated at cost after charging staff salaries and overheads.

06. **Retirement Benefits**

Retirement benefits to employees are provided according to the laid down statutory requirements. Institute's contribution for provident fund and employees' Trust Fund is 15% and 3% respectively. Gratuity provision is made according to the Gratuity Act No.12 of 1983 to employees from year one of service in the Centre. This provision is funded by the Treasury. Provision is calculated as follows

(Basic Salary plus cost of living) x $\frac{1}{2}$ x Completed No of Years.

07. **Temporary call deposits**

Funds received for the ICAMS project is invested in State Institutions Temporary Surplus Trust Fund maintained at Bank of Ceylon.

Advances received from the customers are secured in the form of temporary call deposits with the bank, until such time it is used for the purpose. Interest earned is shown under other income.

08. **Government Grant**

Government grant for recurrent & capital has been identified separately. Recurrent grant is the major income source & credited to the income & expenditure statement while grant for capital expenditure is taken to accumulated fund with due adjustment for depreciation components of fixed assets capital grant received from the Government are shown as differed income under non current liability.

09 . **Statement of Income & Expenditure**

Income & expenditure prepared in accrual basis.

Revenue

Major source of revenue is Recurrent Grant by the treasury.

Other Income

Other income is comprised with net income of Technology transfer projects which are completed, Interest income on call deposits, Liquidity damages, Bond income, Interest on loans, Non refundable deposits, Registration of Suppliers, Sundry income, Damaged Stock disposal income, Gain on disposal of assets and overhead recovery based on accrual concept.

Differed income

Differed income is ascertained from the depreciation asset purchase out of government funds.

Expenditure

Expenses are recognized in the income statement on the basis of a direct association between the cost incurred and the earning of the specific items of income where appropriate. All expenditure incurred in running of the Centre and depreciation of the property, plant & equipment has been charged to income in arriving the income over expenditure. Maintenance cost is considered after including Direct Labour & Overhead.

10. **Trade & other Receivables**

Debtors and other recoverable are stated at the value estimated to be realized net of provisions for bad & doubtful receivables. Debts over 5 year are provided at 100% an other debts are provided at 5% of it's value. Further specific debts which cannot be collected are written off if evidence are available.

11. Provisions

Provisions are recognized as when the Centre has a present obligation (Legal or constructive) as a result of a past event, where it is probable that an outflow of resources embodying economic benefits will be required to settled the obligation and a reliable estimate can be made of the amount of the obligation.

12. Creditors

Trade creditors are recognized at the time of receiving goods to the Centre.

NATIONAL ENGINEERING RESEARCH & DEVELOPMENT CENTRE OF SRI LANKA

Notes to the accounts as at 31 December 2010

Figures in
iRs.

1. PROVISION FOR BAD DEBTS

<u>Customer</u>	<u>Debtors amount</u>	<u>Provision for Bad debts</u>	<u>Rate applied</u>
100% Bad debts has been provide with under stated customers			
Accessories Net Work Pvt. Ltd	215,625.00	215,625.00	100%
Hiriyala	4,301,468.12	4,301,468.12	100%
Pathadumbara Pradeshiya Saba	221,513.00	221,513.00	100%
Plantation Human Development Trust	214,810.00	214,810.00	100%
University Of Sri Jayewardenepura	214,121.54	214,121.54	100%
M.J.N.K Egodawela	6,824.33	6,824.33	100%
North -East Hou.Rec.Pro.(Nehrp)	100,000.00	100,000.00	100%
5% Bad debts has been provide with under stated customers			
iriyala	828,792.25	41,439.61	5%
Department Of Agrarian Dev.	157,061.85	7,853.09	5%
Institute Of Post Harvest Technology	65,251.00	3,262.55	5%
Municipal Conncil Dehiwala	11,500.00	575.00	5%
Milco (Private) Ltd	3,600.00	180.00	5%
Ministry Of Technology & Research	611,041.11	30,552.06	5%
North Colombo Teaching Hospital	282,522.65	14,126.13	5%
National Water Supply & Drainage Board	185,183.10	9,259.16	5%
Pelwatte Dairy Industries (Pvt) Ltd	371,152.65	18,557.63	5%
Sri Lasnka Ayuvedic Drug Corporation	536,907.20	26,845.36	5%
No Bad debts has been provide with under stated customers			
Pending Workorder -2010	1,273,937.20	-	0%
State Engineering Corporation-Ekala	1,031,677.50	-	0%

2 Prior year adjustments as at 31/12/2010

Reason	Effect to Statement of Financial Performance	Effect to Statement of Financial Position												
<p>2.1 N/TMD/TT/160/2009</p> <p>Training program on saw dust operated bakery oven Although the project has been closed in year 2009 manufactured bakery oven is not handed over to stores.</p>	(68,010.00)	Increase in stocks by Rs. 68,010.00												
<p>2.2 Maintenance of Building</p> <p>In the year 2009 Aluminum Roller door was fixed to Civil dept. had later it was found that this door was not to the correct specification .there for instead of the original value of Rs. 93,423.00 , Rs 76,437.00 was paid by the centre.</p>	(16,986.00)	Accumulated fund brought forward for the year 2009 will be increased by Rs.16,986.00 and creditors amount will be reduced by Rs 16,986/=												
<p>2.3 N/R/TT/101/2009</p> <p>Construction of Bio gas digesters-4 nos.</p> <p>Credit invoice No 9CIN055 issued on16.10.2009 to Dasi Villa Coconut estate was cancelled on 17.6.2010 due to incorrect information given by the department to invoiced in year 2009.</p>	575.00	Accumulated fund brought forward for the year 2009 will be reduced by Rs.575.00 and debtors amount will be reduced by Rs 575/-												
<table border="0" style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">2009</th> <th style="text-align: center;">2010</th> </tr> </thead> <tbody> <tr> <td>Income</td> <td style="text-align: right;">124,200.00</td> <td style="text-align: right;">123,625.00</td> </tr> <tr> <td>Expenditure</td> <td style="text-align: right;"><u>169,877.89</u></td> <td style="text-align: right;"><u>169,877.89</u></td> </tr> <tr> <td>Net Income</td> <td style="text-align: right;"><u>(45,677.89)</u></td> <td style="text-align: right;"><u>(46,252.89)</u></td> </tr> </tbody> </table>		2009	2010	Income	124,200.00	123,625.00	Expenditure	<u>169,877.89</u>	<u>169,877.89</u>	Net Income	<u>(45,677.89)</u>	<u>(46,252.89)</u>		
	2009	2010												
Income	124,200.00	123,625.00												
Expenditure	<u>169,877.89</u>	<u>169,877.89</u>												
Net Income	<u>(45,677.89)</u>	<u>(46,252.89)</u>												
<p>2.4 Ground Rent for the Year 2009</p> <p>Ground rent payable for Industrial Development Board for the year 2009. Rent , Rates & Taxes Account in 2009 accounts 207,605.87 this balance should reflect as 2,111,605.87</p>	1,700,000.00	Accumulated fund brought forward for the year 2009 will be reduced by Rs.1,700,000.00 and accrued expenses will increase by Rs 1,700,000.00												
<p>2.5 Interest on temporary call Deposits</p> <p>Interest re deposited on call deposits for the year 2009 has not been accounted in Year 2009</p> <p>Interest on Deposit/Customers Account in 2009 accounts 6,001,502.89 , this balance should read as 7,330,509.34</p>	(1,329,006.45)	Accumulated fund brought forward for the year 2009 will be increased by Rs.1,329,006.45 and call deposit amount will be increase by same figure.												
<p>2.6 Other Operating Expenses-Library Expenses</p> <p>Repair Charges for a Toshiba Photocopier has been debited in year 2006 instead of debiting the creditors account.</p>	(3,992.18)	Accumulated fund brought forward from previous years will be increased by Rs 3992.18 and creditors figure will be reduced by the same amount.												

2.7 RED/COM/33/07 Consultancy on preparation of project proposals & reports															
Client	Advance Paid	(400,000.00)													
Baduwatta D C Mills (PVT) Ltd	50,000		Accumulated fund brought forward from previous years will be reduced by Rs 400,000.00 and customer advance account will be reduced by Rs 400,000												
Dunagaha Coconut Producers Company	150,000														
Louwagoda D C Mills	200,000														
<p>The consultancy services on above projects were carried out at the initial stage of the projects with the above client, due to non availability of sufficient amount of coconuts at the testing stage. There fore the management had decided to take advances received as an income.</p>															
2.8 TMD /TT/48/2010 300 Nos DVD on cement soil block program was prepared under the instruction of MOST. In the year 2009 documents were forwarded to the ministry for reimbursement. Later it was decided by the ministry to beare the cost by NERDC.		555,467.57	Debtors balance in 2009 will get reduced and stock balance will get increased by Rs.555,467.57												
2.9 N /TMD/POP/36/2009 Training Programm, Handing over necessary equipments, Vidatha Centre opening, Participation of Vidatha exhibition& Awareness & Demonstration program's		(25,861.28)	Accumulated fund brought forward for the year 2009 will be increased by Rs. 25,861.28 and debtors balance will increase by Rs 25,861.28												
<p>Cost recovery on exhibition held on 12/12/2009, had been reimbursed in year 2010.</p>															
2.10 CVL//TT/167/09			Accumulated fund brought forward for the year 2009 will be increased by Rs. 705 and debtors balance will												
Lab Testing Services In the year 2009 accounts were under provided by Rs 705/-		(705.00)	increase by Rs 705.00												
	<table border="0"> <tr> <td></td> <td>2009</td> <td>2010</td> </tr> <tr> <td>Income</td> <td>543,776.96</td> <td>544,481.96</td> </tr> <tr> <td>Expenditure</td> <td>311,780.85</td> <td>311,780.85</td> </tr> <tr> <td>Net Income</td> <td>231,996.11</td> <td>232,701.11</td> </tr> </table>		2009	2010	Income	543,776.96	544,481.96	Expenditure	311,780.85	311,780.85	Net Income	231,996.11	232,701.11		
	2009	2010													
Income	543,776.96	544,481.96													
Expenditure	311,780.85	311,780.85													
Net Income	231,996.11	232,701.11													
2.11 Refund of research grant under grant. No SIDA/99/EP/01 to National Science Foundation This project was completed on 31/12/2003 .Excess balance is refunded.		39,554.00	Accumulated fund brought forward from previous years will be reduced by Rs 39,554.00.												
2.12 TMD/TT/35/09 Popularization of Cement Soil block Raw material amounting to Rs 40,000.00 which was in the form of raw material is transferred to cost in 2009 but remaining raw material cost is brought forward to DFCI/TT/71/2010		(40,000.00)	Accumulated fund brought forward for the year 2009 will be increased by RS 40,000.00.												
2.13 Refundable Tender deposit over 5 year According to the board paper No 147, Decision No. 6.02 of the board meeting No 7-2010 held on 30/11/2010 board has granted permission to write back the creditors over 5 yrs.		(458,931.10)	Creditor figure will be reduced by Rs 458,931.10												
Year	Amount Rs														
2002	196,726.55														
2003	52,116.00														
2004	205,088.55														
2005	5,000.00														

<p>2.14 RED/COM/08 Minor Commercial Projects According to the board paper No 136, Decision No.4.10 of the board meeting No 7-2010 held on 30/11/2010 board has granted permission to write off the balance outstanding of Rs. 5,750.00 in Balapitiya Pra Saba .</p>	5,750.00	Debtors figure will be reduced by Rs.5,750.00 and brought forward accumulated fund																
<p>2.15 Un settle advances According to the board paper No 146, Decision No.6.01 of the board meeting No 7-2010 held on 30/11/2010 board has granted permission to write off the balance outstanding o in following advances</p> <table border="0"> <tr><td>Travelling Advance</td><td>500.00</td></tr> <tr><td>Festival Advance</td><td>9,600.00</td></tr> <tr><td>Vehicle Loan</td><td>2,974.61</td></tr> <tr><td>Book advance</td><td>2,600.00</td></tr> <tr><td>Vesak advance</td><td>6,800.00</td></tr> <tr><td>Salary Advance</td><td>1,250.00</td></tr> <tr><td>Special salary advance</td><td>5,750.00</td></tr> </table>	Travelling Advance	500.00	Festival Advance	9,600.00	Vehicle Loan	2,974.61	Book advance	2,600.00	Vesak advance	6,800.00	Salary Advance	1,250.00	Special salary advance	5,750.00	29,474.61	Accumulated fund brought forward from previous years will be reduced by Rs 5,750.00 and the debtors figure will be reduced by Rs 5,750.00 Loan given to employees will be reduced by Rs 29,4474.61		
Travelling Advance	500.00																	
Festival Advance	9,600.00																	
Vehicle Loan	2,974.61																	
Book advance	2,600.00																	
Vesak advance	6,800.00																	
Salary Advance	1,250.00																	
Special salary advance	5,750.00																	
<p>2.16 Un settle customer advances According to the board paper No 143, Decision No.5.71 of the board meeting No 7-2010 held on 30/11/2010 board has granted permission to write off the balance outstanding o in following advances.</p> <table border="0"> <thead> <tr><th>Year</th><th>Amount Rs.</th></tr> </thead> <tbody> <tr><td>1997</td><td>10,000.00</td></tr> <tr><td>1999</td><td>5,000.00</td></tr> <tr><td>2000</td><td>55,000.00</td></tr> <tr><td>2001</td><td>28,352.84</td></tr> <tr><td>2002</td><td>69,235.90</td></tr> <tr><td>2003</td><td>86,200.00</td></tr> <tr><td>2004</td><td>24,300.00</td></tr> </tbody> </table>	Year	Amount Rs.	1997	10,000.00	1999	5,000.00	2000	55,000.00	2001	28,352.84	2002	69,235.90	2003	86,200.00	2004	24,300.00	(278,088.74)	Customer advances payable will be decrease by Rs 278,088.74
Year	Amount Rs.																	
1997	10,000.00																	
1999	5,000.00																	
2000	55,000.00																	
2001	28,352.84																	
2002	69,235.90																	
2003	86,200.00																	
2004	24,300.00																	
<p>2.17 RED /TT/96/2004 Commissioning of Pusellawa Crematorium</p> <p>In the year 2006 this project was closed</p> <table border="0"> <thead> <tr><th></th><th>2006</th><th>2011</th></tr> </thead> <tbody> <tr><td>Income</td><td>1,796,189.08</td><td>1,796,189.08</td></tr> <tr><td>Expenditure</td><td>1,393,524.51</td><td>1,453,618.83</td></tr> <tr><td>Net income</td><td>402,664.57</td><td>342,570.25</td></tr> </tbody> </table>		2006	2011	Income	1,796,189.08	1,796,189.08	Expenditure	1,393,524.51	1,453,618.83	Net income	402,664.57	342,570.25	60,094.32	Decrease in WIP				
	2006	2011																
Income	1,796,189.08	1,796,189.08																
Expenditure	1,393,524.51	1,453,618.83																
Net income	402,664.57	342,570.25																
<p>RED/TT/89/09 has been charged with the cost of Rs 60,094.32 where as it should be charge to RED/TT/96/2004</p> <p>-</p> <p>2.18 cement Soil block As the cement soil block project will not be financed by the ministry cost of annual charges paid is charged to popularization</p>	12,448.00	Debtors will be reduced by 12,488																

<p>2.19 Re valuation of Buildings and Infrastructure</p> <p>According to the board paper No ,item No ,board meeting No held on 20/01/2011 had approve the revaluation of Buildings and Infrastructure</p> <p>According to the board paper No149, item No 3.2 ,board meeting No held on 20/01/2011,board had decided to change the building depreciation rate from 10% to 2.5% Following adjustments were made</p> <p>2.19 a Over provision in accumulated depreciation in 2009 24,226,137.12 2.19 c Over provision in accumulated depreciation before 2009 21,946,067.55 2.19c Un identified buildings 2,363,280.60 2.19d Building revaluation refer page</p>		24,226,137.12
<p>2.20 Under provision in differed income account Differed income was calculated from the assts purchase from other sources of funds received. It has being identified that method should be change to obtain the differed income based on the assets purchase from Government grant. Accordingly this has been adjusted as follows</p>	(151,949,987.76)	
	Balance b/f before 1/1/2009	Profit b/f for the year 2009
<p>Balance b/f</p> <p>2.1</p> <p>2.2</p> <p>2.3</p> <p>2.4</p> <p>2.5</p> <p>2.6</p> <p>2.7</p> <p>2.8</p> <p>2.9</p> <p>2.10</p> <p>2.11</p> <p>2.12</p> <p>2.13</p> <p>2.14</p> <p>2.15</p> <p>2.16</p>	<p>(191,735,355.03)</p> <p></p> <p></p> <p></p> <p></p> <p>3,992.18</p> <p>400,000.00</p> <p></p> <p></p> <p>(39,554.00)</p> <p></p> <p>458,931.10</p> <p>(5,750.00)</p> <p>(29,474.61)</p> <p>278,088.74</p>	<p>(21,662,746.60)</p> <p>68,010.00</p> <p>16,986.00</p> <p>(575.00)</p> <p>(1,700,000.00)</p> <p>1,329,006.45</p> <p></p> <p>(555,467.57)</p> <p>25,861.28</p> <p>705.00</p> <p></p> <p>40,000.00</p> <p></p> <p></p> <p></p>

2.17	(60,094.32)	
2.18		(12,448.00)
2.19 a	(2,363,280.60)	
2.19 b		(24,226,137.12)
2.19 c	(21,946,067.55)	
2.20	123,552,899.91	28,397,087.85
Balance brought forward after the adjustments	(91,485,664.18)	(18,279,717.71)

3.Provision for Non moving & Damage stock

In the year of 2010 non moving stocks have been reduced by Rs 284,807.43

4. Cash equivalent not available for the use of Centre

Call deposit certificate No C/33734579-507908 is kept against bank guarantee issued by Bank of Ceylo Ja-ela ,for a amount of Rs 75,000/ I favour of Toyota Lanka Pvt Ltd

09. Cash flow Statement for the year ended 31 December 2010

	Figurs in Rs	
	<u>2010</u>	<u>2009</u>
Net cash flows from operating activities	(3,902,793.73)	(20,333,740.15)
Surplus/ (deficit) from ordinary activities		
Non- cash movements		
Depreciation	70,052,617.34	43,634,359.75
Increase in provision for bad debts	(169,328.92)	150,112.78
Increase/(decrease) in payables	(6,761,954.80)	(5,527,742.20)
Increase /(decrease) in borrowings	(16,543,021.63)	(7,618,635.95)
Increase/(decrease) in relating to employee costs	540,274.50	1,043,993.88
Gains/(losses) on sale of property, plant and equipment	1,394.24	
Increase/(decrease) in other current assets	1,709,431.64	3,662,886.22
Increase/(decrease) in receivables	(6,791,103.75)	(3,859,111.15)
Net cash flows from operating activities	<u>38,135,514.89</u>	<u>11,152,123.18</u>
CASH FLOW FROM INVESTMENT ACTIVITIES		
Purchase of plant & equipment	(30,591,198.57)	(24,636,997.21)
Proceeds from sales of equipment	(4,375.00)	
Net cash flows from investment activities	<u>(30,595,573.57)</u>	<u>(24,636,997.21)</u>
CASH FLOW FROM FINANCING ACTIVITIES		
Capital grant	3,007,562.21	11,940,000.00
Net cash flow from financing activities	<u>3,007,562.21</u>	<u>11,940,000.00</u>
Net increase/(decrease) in cash & cash equivalents	10,547,503.53	(1,544,874.03)
Cash & cash equivalent at beginning of the period	69,016,321.78	70,561,195.81
Cash & cash equivalent at end of the period	<u>79,563,825.31</u>	<u>69,016,321.78</u>

10. Statement of the financial Position as at December 31, 2010

	NOTE	2010	Re Stated 2009
ASSETS			
Current Assets			
Cash and cash equivalents	1	79,563,825.31	69,016,321.78
Trade & Other Receivables	2	69,262,337.09	62,301,904.42
Inventories / Stocks	3	12,772,034.40	14,651,465.54
Pre -Payments	4	305,657.29	135,657.79
		161,903,854.09	146,105,349.53
Non -Current Assets			
Property Plant & Equipment	5	436,642,453.75	483,651,796.22
Other Financial Assets	6	66,451,159.79	58,900,255.33
		503,093,613.54	542,552,051.55
Total Assets		664,997,467.63	688,657,401.08
LIABILITIES			
Current Liabilities			
Payables	7	15,347,166.70	20,984,806.70
Accrued Expenses	8	10,163,571.76	11,287,886.56
		25,510,738.46	32,272,693.26
Non -Current Liabilities			
Deferred Income	9	155,857,527.46	172,400,549.09
Provision for gratuity	10	56,883,940.25	56,343,665.75
		212,741,467.71	228,744,214.84
Total Liabilities		238,252,206.17	261,016,908.10
Total Net Assets		426,745,261.46	427,640,492.98
NET ASSETS/EQUITY			
Accumulated Fund	11	426,745,261.46	427,640,492.98
Total Net Assets/Equity		426,745,261.46	427,640,492.98



.....
D R Pullaperuma
Chairman



.....
D V S Perera
Finance Manager

NATIONAL ENGINEERING RESEARCH & DEVELOPMENT CENTRE OF SRI LANKA

STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED DECEMBER 31, 2010

Values in Rs.

	Schedule No.	Values in Rs.	
		31/12/2010	Re stated 31/12/2009
Revenue			
Recurrent Grant	1	137,642,000.00	136,515,000.00
Differed Income	2	47,843,459.42	36,015,723.80
Other Income	3	23,919,640.58	30,975,041.45
Total Revenue		209,405,100.00	203,505,765.25
Expenses			
Personnel Emoluments	4	95,025,718.78	97,730,010.74
Travelling & Subsistence	5	419,229.63	559,025.10
Supplies & Consumables used	6	8,802,230.81	7,489,401.08
Maintenance	7	9,624,668.14	7,769,444.40
Contractual Services	8	13,808,572.14	14,288,415.98
Research & Development Expenses	9	13,920,753.65	20,338,805.71
Depreciation	10	70,052,617.34	67,860,496.87
Other Operating Expenses	11	1,487,146.99	5,667,090.43
Finance Cost	12	166,956.25	82,792.65
Total Expenses		213,307,893.73	221,785,482.96
Surplus/(deficit) for the period		(3,902,793.73)	(18,279,717.71)

NATIONAL ENGINEERING RESEARCH & DEVELOPMENT CENTRE OF SRI LANKA

11 . STATEMENT OF CHANGES IN NET ASSETS/EQUITY AS AT 31 ST DECEMBER 2010

Figurs in Rs.

	Capital Introduced	Government Contributed Capital	Capital from Other sources	Revaluation surplus	Accumulated Surplus /(Deficit)	Total Net Assets/Equity	Re Stated Balance as at 31.12.2009
Balance as at December 31, 2008 b/f	1,000,000.00	56,123,444.71	119,985,089.87	348,357,340.29	(91,485,664.18)	433,980,210.69	418,858,138.68
Received for the year 2009		11,940,000.00				11,940,000.00	33,437,000.00
Total recognise Performances for the Year					(18,279,717.71)	(18,279,717.71)	(18,314,927.99)
Re Stated Balance as at December 31, 2009 c/f	1,000,000.00	68,063,444.71	119,985,089.87	348,357,340.29	(109,765,381.89)	427,640,492.98	433,980,210.69
Capital Grant Received for the year 2010		3,007,562.21				3,007,562.21	11,940,000.00
Total recognise Performances for the Year					(3,902,793.73)	(3,902,793.73)	(18,279,717.71)
Balance as at December 31, 2010c/f	1,000,000.00	71,071,006.92	119,985,089.87	348,357,340.29	(113,668,175.62)	426,745,261.46	427,640,492.98



විගණකාධිපති දෙපාර්තමේන්තුව
கணக்காய்வாளர் தலைமை அறிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT



මගේ අංකය
எனது இல
My No. }

EL/F/NERD/FA/2010

ඔබේ අංකය
உமது இல
Your No. }

දිනය
திகதி
Date } 05 August 2011

The Chairman
Sri Lanka National Engineering Research and Development Centre

Report of the Auditor General on the Financial Statements of the Sri Lanka National Engineering Research and Development Centre for the year ended 31 December 2010 in terms of Section 14 (2) (c) of the Finance Act, No. 38 of 1971

The audit of Financial Statements of the Sri Lanka National Engineering Research and Development Centre for the year ended 31 December 2010 was carried out under my direction in pursuance of provisions in Article 154 (1) of the Constitution of the Democratic Socialist Republic of Sri Lanka read in conjunction with Section 13(1) of the Finance Act, No. 38 of 1971 and Sub-section (1) of Section 2, of the State Industrial Corporations Act, No. 49 of 1957 and the Notification Published in the Gazette Extraordinary No.124/6 dated 14 August 1974. My comments and observations which I consider should be published with the annual report of the Centre in terms of Section 14(2)(c) of the Finance Act appear in this report. The Auditor General's report in terms of Section 13(7)(a) of the Finance Act was issued to the Chairman of the Centre on 12 May 2011.

1:2 Responsibility of the Management for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Sri Lanka Accounting Standards. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatements, whether due to fraud or error, selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

නිදහස් චතුරශ්‍රය,
கොழை 07, சி லங்கா

දුරකථනය
தொலைபேசி
Telephone. } 2691151

சுதந்திர சதுக்கம்,
கொழும்பு 07, இலங்கை

ලැක්ෂ් අංකය
பக்ஸ் இல
Fax No. } 2697451

INDEPENDENCE SQUARE,
COLOMBO 07, SRI LANKA

ඉලෙක්ට්‍රොනික් තැපැල්
#- மெயில்
E-mail. } oaggov@sltnet.lk

1:3 Scope of Audit and Basis of Opinion

My responsibility is to express an opinion on these financial statements based on my audit. Audit opinion, comments and findings in this report are based on a review of the financial statements presented to audit and substantive tests of samples of transactions. The scope and extent of such review and tests were such as to enable as wide an audit coverage as possible within the limitations of staff, other resources and time available to me. The audit was carried out in accordance with Sri Lanka Auditing Standards to obtain reasonable assurance as to whether the financial statements are free from material misstatements. The audit includes the examination on a test basis of evidence supporting the amounts and disclosures in financial statements and assessment of accounting policies used and significant estimates made by the management in the preparation of financial statements as well as evaluating their overall presentation. I have obtained sufficient information and explanations which to the best of my knowledge and belief were necessary for the purpose of my audit. I therefore believe that my audit provides a reasonable basis for my opinion. Sub-sections (3) and (4) of the Section 13 of the Finance Act, No. 38 of 1971 give discretionary powers to the Auditor General to determine the scope and extent of the audit.

2. Financial Statements

2:1 Opinion

So far as appears from my examination and to the best of information and according to the explanations given to me, I am of opinion that the Sri Lanka National Engineering Research and Development Centre had maintained proper accounting records for the year ended 31 December 2010 and except for the effects on the financial statements of the matters referred to in paragraph 2:2 of this report, the financial statements have been prepared in accordance with Sri Lanka Accounting Standards and give a true and fair view of the state of affairs of the Sri Lanka National Engineering Research and Development Centre as at 31 December 2010 and the financial results of its operations and cash flows for the year then ended.

2:2 Comments on Financial Statements

2:2:1 Non-compliance with Sri Lanka Accounting Standards (SLAS)

The following non-compliance were observed.

Sri Lanka Accounting Standards

Non-compliance

(a) 09

Even though fixed deposits with maturity period exceeding 03 months should be shown as investments, fixed deposits of Rs. 623,500 and the interest of Rs.24,487 thereon reinvested had been shown under the cash and cash equipments.

(b) 12

According to a Court decision delivered after the balance sheet date Centre had to pay a sum of Rs.589,406. Nevertheless the disclosure and adjustment in that connection had not been made.

(c) 16

Even though provision of Rs.56,883,940 had been made for the payment of employees' gratuity, that amount had not been invested.

(d) 36

The information on two cases filed against the Centre by 02 employees had not been disclosed in the financial statements.

2:2:2 Accounting Deficiencies

The following observations are made.

(a) An understatement of Rs.339,155 had been made in the computation of the provision for employees' gratuity.

(b) Stock shortage amounting to Rs. 15,549 had not been brought to account.

2:2:3 Accounts Receivable and Payable

The following observations are made

- (a)(i) Out of the trade debtors and other balances receivable amounting to Rs.10,632,988, balances amounting to Rs.5,560,695 had been older than 05 years while the balances old between 03-05 years and 01-03 years amounted to Rs.215,013 and Rs.397,572 respectively. Action had not been taken for the recovery of those balances.
- (ii) The trade creditors balance of Rs.2,881,029 included balances amounting to Rs.296,099 older than 04 years while the balances old between 02-04 years and 01-02 years amounted to Rs.26,117 and Rs.234,093 respectively. Action had not been taken to settle those balances.
- (b) The Clients advances as at the balance sheet date amounting to Rs.7,359,827 included balances older than 04 years amounting to Rs.539,673 and the balances old between 02-04 years and 01-02 years amounted to Rs.458,195 and Rs.274,981 respectively remained without being settled.
- (c) The Value Added Tax amounting to Rs.25,387,601, that could be obtained as a reimbursement from the Department of Inland Revenue remained over a long period without being recovered.
- (d) An over payment of Rs. 145,915 made due to an erroneous salary conversion had not been recovered even up to the end of the year under review.
- (e) The debtors balance of Rs.10,084,581 and the creditors balance of Rs.2,826,437 shown in the Financial Statements had not been confirmed by the parties concerned. As such those could not be satisfactorily vouched or accepted in audit.

2:2:4 Non-compliance with Laws, Rules, Regulations and Management Decisions

The following non-compliances were observed during the course of audit.

Reference to Laws, Rules, Regulations and Management Decisions.	Non-compliance
(a) Sections 14 of the Finance Act, No.38 of 1971	The Annual Reports for the years 2008 and 2009 had not been tabled in the Parliament.
(b) <u>Financial Regulations of the Government of Sri Lanka</u> Financial Regulation 271(2)(b)	Even though unpaid salaries should be credited to the surcharge account, or revenue or any other specified account after the elapse of 14 days, action in terms of the Financial Regulation had not been taken in connection with the unpaid salaries amounting to Rs.63,956.

3. Financial and Operating Review

3:1 Financial Review

3:1:1 Financial Results

According to the Financial Statements presented, the working of the Centre for the year ended 31 December 2010 had resulted in a deficit of Rs.3,902,794 as compared with the corresponding deficit of Rs.18,279,718 for the preceding year. The improvement of Rs.14,376,924 in the year under review as compared with the preceding year had been due to the increase in the total income by a sum of Rs.6 million and the decrease of research and development expenses by Rs.6 million and operating expenses by Rs.4 million.

3:2 Operating Review

3:2:1 Physical Performance

The following observations are made.

- (a) The total number of technical equipment introduced from the year 1983 to the year under review had been 43 and out of that the patents had been renewed only in respect of 18 equipment.
- (b) Forty three technical equipment designed during 17 years had been introduced to 897 small scale industrialists during that period and only 82 of those industrialists had renewed the licensees during the year under review.
- (c) Information on the researches of the Centre for 05 years is given below.

	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
Expected Researches	28	28	23	23	24
Researches Completed	14	08	08	15	18
Researches abandoned	02	06	03	03	-
Researches Results Published	03	07	08	03	05
Researches in Use	07	07	05	09	04

- (d) Instances of failure to achieve the targeted objectives of the Action Plan for the year under review are given below.

	<u>Target</u>	<u>Actual Performance</u>
i.	Issue of 15 Licenses	No licenses issued
ii.	Establishment of 04 Vidatha Centers	Only 02 Centers had been established
iii.	Discussions with external parties	Two discussions had been held

3.2.2 Management Inefficiencies

The following observations are made.

- (a) According to the Project Agreement on the Project on use of firewood instead of diesel for Tea Drying Machine, the direct expenses involved in the commissioning and testing stage should be borne at equal percentages with the company concerned. Nevertheless, the total cost of the Project amounting to Rs.5,063,200 had been borne by the Sri Lanka National Engineering Research and Development Centre. The Project had not been completed on the due date and action had not been taken to secure the patent rights or to acquire the technology.

- (b) Fourteen researches costing 1,974,893 had been abandoned during the past 05 years.
- (c) Project No.RED/RES/114/07 commenced in the year 2007 had been abandoned as the Engineer of the Project had proceeded abroad. The sum of Rs.267,,217 had been spent for that up to now.
- (d) The work on the 100 kilowatt electricity generation system worked on dendro-gas was scheduled for completion in the year 2002 and the expenditure incurred thereon by the end of the year under review amounted to Rs.22,106,616 and it had not been possible to achieve the objective of the Project up to date. Even though a sum of Rs.8,955,343 had been spent from the year 2004 to connect the electricity Generated by that to the national grid it had not been done.

3.2.3 Operating Inefficiencies

The following observations are made.

<u>Project</u>	<u>Observation</u>
(i) Dendro Project	The sum of Rs.2,660,000 received for the Project on 29 December 2003 had been returned to the Ministry on 16 September 2010 without being used over a period of 07 years.
(ii) ICAMS Project	The sum of Rs.2,639,232 received in the year 2003 for the implementation of the Project had been retained in the Bank Current Account and invested in fixed deposits in the year under review.
(iii) Supply of 10 kilowatts of Electricity	This Project scheduled for completion in the year 2006 had not been completed even by 06 June 2011 despite spending a sum of Rs.4,535,228 thereon.
(iv) Project for working of a two stroke Three Wheeler by an electric motor	This Project scheduled for completion in the year 2007 had not been completed even by 06 June 2011 despite spending a sum of Rs.1,221,364 thereon.

3.2.4 Idle and Underutilized Assets

The following observations are made.

- (i) Out of the total stock, non-moving stocks valued at Rs.3,973,122 (28 per cent) remained in the stores over a period exceeding 06 years.
- (ii) Furniture valued at Rs.69,720 purchased for a sales stall and goods valued at Rs.61,579 purchased for different divisions had been idling in the stores.

3.2.5 Identified Losses

The cost of 17 Projects completed in the year under review had exceeded the technology transfer income there from. Thus resulting in a loss of Rs.1,525,279.

3.2.6 Corporate Plan

The Corporate Plan for the years 2009 to 2011 prepared by the Centre had not been prepared in accordance with the provisions of Section 5.1.2 of the Public Enterprises Circular No.PED/12 of 02 June 2003.

3.2.7 Meetings of the Audit and Management Committees

According to Sections 7.4.1 and 7.4.2 of the Public Enterprises Circular No.PED/12 of 02 June 2003, the Audit and Management Committees should meet at least 04 times in a year. Nevertheless, only one meeting had been held in the year under review.

4. Systems and Controls

Deficiencies in system and controls observed during the course of audit were brought to the notice of the Chairman of the Centre from time to time. Special attention is needed in respect of the following areas of control.

- (a) Project Costing and Management
- (b) Stock Control
- (c) Debtors and Creditors Control
- (d) Purchases
- (e) Stores Control

H.A.S. Samaraweera
Acting Auditor General

12 Observations of the Members of Board of Directors for the Report of the Auditor General on the Financial Statements of the National Engineering Research and Development Centre of Sri Lanka for the Year ended 31 December 2010 in terms of Section 14 (2) (c) of the Finance Act, No.38 of 1971.

Headings and sub-headings mentioned in this are referred to the letter of Auditor General dated 05/08/2011.

2.2 Comments on Financial Statements

2.2.1 Non-compliance with Sri Lanka Accounting Standards (SLAS)

The following non-compliances were observed.

(S.L.A.S) Non-compliances

- (a) 09 Even though, fixed deposits with maturity period exceeding 03 months should be shown as investments, fixed deposits of Rs.623,500 and the interest of Rs.24,487 thereon reinvested had been shown under the cash and cash equivalent.

As these funds are required for the day-to-day activities, these funds are deposited in temporary call deposit accounts. However, as per your observations arrangements will be made to invest after obtaining the Treasury approval. Accordingly, it will be shown as a deposit in the balance sheet of the year 2011.

- (b) 12 According to a Court decision delivered after the balance sheet date, Centre had to pay a sum of Rs.589,406. Nevertheless, the disclosure and adjustment in that connection had not been made.

We agree with the omission stated and arrangements will be made to prevent such omissions in the future.

- (c) 16 Even though, provision of Rs.56,883,940 had been made for the payment of employees' gratuity, that amount had not been invested.

We receive funds from the Treasury to pay gratuity, as and when required. Although, a provision was made, there were no funds to invest.

- (d) 36 The information on two cases filed against the Centre by 02 employees had not been disclosed in the financial statements.

We agree with the omission stated and arrangements will be made to disclose in the future.

2.2.2 Accounting Deficiencies

The following observations are made.

- (a) An understatement of Rs.339,155 had been made in the computation of the provision for employees' gratuity.

We agree with the comment. This correction has already been made.

- (b) Stock shortage amounting to Rs.15,549 had not been brought to account.
The statement is incorrect. This provision has been made.

2.2.3 Accounts Receivable and Payable

The following observations are made.

- (a) i. Out of the trade debtors and the other balances receivable amounting to Rs.10,632,988 balances amounting to Rs.5,560,695 had been older than 05 years while the balances old between 03-05 years and 01-03 years amounted to Rs.215,013 and Rs.397,572 respectively. Action had not been taken for the recovery of those balances.

It is true that these balances are receivable. This was too verified and questioned last year. In the year 2011, we have collected further Rs. 3,368,261. Arrangements would be made to collect the balance amount.

- ii. The trade creditors balance of Rs.2,881,029 included balances amounting to Rs.296,099 older than 04 years while the balances old between 02-04 years and 01-02 years amounted to Rs.26,117 and Rs.234,093 respectively. Action had not been taken to settle those balances.

Out of the total creditors' balance of Rs.2,881,029/=-, a sum of Rs.296,099 has been overdue for more than 04 years from that a sum of Rs.293,848/=- which has been overdue for more than 05 years has been taken as the income of the Centre as per the decision of the Members of BoDs. A sum of Rs.26,117/- is ageing between years 2 - 4 to be paid as and when it would be claimed. The amount of Rs.234,093/=-, which is ageing between years 1 and 2 will be paid to Messrs. S P Muttiah and Sons, immediately after resolving of disputes between the NERDC and them.

- (b) The clients advances as at the balance sheet date amounting to Rs.7,359,827 included balances older than 04 years amounting to Rs.539,673 and the balances old between 02-04 years and 01-02 years amounted to Rs.458,195 and Rs.274,981 respectively remained without being settled.

A mechanism has been taken now itself to further reduce the balance in customer advances. Up to now, Rs.169,643.40 worth of customer advances have been settled. Due to this new mechanism, the balance in customer advances would not be increased.

- (c) The value added tax amounting to Rs.25,387,601 that could be obtained as a reimbursement from the Department of Inland Revenue remained over a long period without being recovered.

Although, we have taken steps to recover this outstanding due, the authorities of Department of Inland Revenue have not taken any actions, yet. Also, after obtaining a decision from the Members of BoDs., arrangements would be made to inform this to the Dept. of Public Enterprises.

- (d) An over payment of Rs.145,915 make due to an erroneous salary conversion had not been recovered even up to the end of the year under review.

This salary was paid to the employees within a period of forty months. Therefore, Management has worked out a scheme in the year 2009 in which maximum recovery period of this overpayment of salaries is five years.

- (e) The debtors' balance of Rs.10,084,581 and the creditors' balance of Rs.2,826,437 shown in the Financial Statements had not been confirmed by the parties concerned. As such, those could not be satisfactorily vouched or accepted in audit.

Although, the letters were sent by us related to confirmation of the balances, they have not been confirmed. About 90% of debtors' balances are due from Government Sector Organizations. Arrangements have been made to settle the creditors' balances in the year 2011.

2.2.4 Non-compliance with Laws, Rules, Regulations and Management Decisions

The following non-compliances were observed during the course of audit.

<u>Reference to Laws, Rules, Regulations and Management Decisions</u>	<u>Non-compliances</u>
(a) Sections in 14 of the Financial Act, No.38 of 1971	Annual Reports for the years 2008 and 2009 had not been tabled in the Parliament. <i>We have forwarded these two reports to the Ministry of Technology and Research.</i>
(b) <u>Financial Regulations of the Government of Sri Lanka</u> Financial Regulation 271(2)(b)	Even though unpaid salaries should be credited to the surcharge account, or revenue or any other specified account after the elapse of 14 days, action in terms of the Financial Regulation had not been taken in connection with the unpaid salaries amounting to Rs.63,956. <i>We agree with this comment and measures are taken to comply with the FR 271 (2)(b) in the future.</i>

3.2 Operational Review

3.2.1 Physical Performance

The following observations were made.

- (a) The total number of technical equipment introduced from the year 1983 to the year under review had been 43 and out of that the patents had been renewed only in respect of 18 equipment.

Renewal of Patents Procedure of NERDC is to renew only required technologies. As there is a demand for 18 technologies, at present, these patents are being processed.

- (b) Forty three technical equipment designed during 17 years had been introduced to 897 small scale industrialists during that period and only 82 of those industrialists had renewed the licenses during the year under review.

897 licensees have been appointed since 1983. Out of these licensees, 164 licensees were appointed during the years 2005 - 2010. Accordingly, renewed licenses during this period are given below.

2005 - 73 Nos.	2006 - 65 Nos.
2007 - 65 Nos.	2008 - 105 Nos.
2009 - 114 Nos.	2010 - 68 Nos.

Long ago, some of the technical instruments introduced by the NERDC are presently outdated and some of the instruments are not produced by the licensees. Costs of instruments are higher compared with the similar imported developed instruments. As demand for these instruments gradually is decreased, the renewals of licenses are also decreased.

- (c) Information on the researches of the Centre for 05 years is given below.

	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
Expected researches	28	28	23	23	24
Researches completed	14	08	08	15	18
Researches abandoned	02	06	03	03	-
Research results published	03	07	08	03	05
Research in use	07	07	05	09	04

We agree with the statistics given here. However, it is true that the Engineers assigned for the projects, had left the Centre and as such some projects had to be stopped on the way. Also we agree that during the period of research are being carried out, if identified that results are no use, and then the research will be dropped.

As we are following a systematic way to publish the results, sometimes, there were incidents where within the same year, if the NERDC was unable to complete them, that they would be published in the following year.

- (d) Instances of failure to achieve the targeted objectives of the Action Plan for the year under review are given below.

Targets

Achievements

i. Issue of 15 licenses

No licenses issued

Arrangements have been made to grant 15 licenses. However, any new licenses had not been granted in the year 2010. Reason was regularization of the criteria for granting licenses.

ii. Establishment of 04 Vidatha Centres

Only 02 Centres had been established.

While, our Centre does not establish any "Vidatha Centres", but they are undertaken by the Ministry of Technology and Research.

iii. Discussions with external parties'

Two discussions had been held.

It is not necessary to have a separate item. Discussions are arranged with the outside parties for every research work.

3.2.2 Management Inefficiencies

The following observations are made.

- (a) According to the Project Agreement on the Project on use of firewood instead of diesel for Tea Drying Machine, the direct expenses involved in the commissioning and testing stage should be borne at equal percentages with the company concerned. Nevertheless, the total cost of the Project amounting to Rs.5,063,200 had been borne by National Engineering Research and Development Centre of Sri Lanka. The Project had not been completed on the due date and action had not been taken to secure the patent rights or to acquire the technology.

According to the project agreement between Greenfield Company and the Centre, only direct expenditure incurred on commissioning and testing should be in equal percentages by both parties. We accept the project was not completed on the due date. We are seeking possibility of obtaining the patent right.

However, arrangements have been made to transfer this technology to Tea Industry by conducting an awareness programme to industrialists with the assistance of Ministry of Technology and Research.

- (b) Fourteen researches costing Rs.1,974,893 had been abandoned during the past 05 years.

It is true that the engineers assigned for research work, had left the Centre, and as such some research work had to be stopped. We agree that during the period of research if they are found that they are not necessary to proceed, the NERDC accepts that they would be given up.

- (c) Project No.RED/RES/114/07 commenced in the year 2007 had been abandoned as the Engineer of the Project had proceeded abroad. The sum of Rs.267,217 had been spent for that up to now.

This is a project in Wind Energy. The Engineer in charge of this project went abroad to follow a Post Graduate Degree on 03rd December 2007, handing over the project to another engineer. Unfortunately this engineer also left the Centre in the year 2009 and there was no suitable resource personnel available to continue the project therefore project became temporary standstill.

- (d) The work on the 100 kilowatt electricity generation system worked on dendro-gas was scheduled for completion in the year 2002 and the expenditure incurred thereon by the end of the year under review amounted to Rs.22,106,616 and it had not been possible to achieve the objective of the Project up to date. Even though a sum of Rs.8,955,343 had been spent from the year 2004 to connect the electricity generated by that to the national grid it had not been done.

Although, it was to be completed in the year 2002, and even at the end of review year, the cost incurred for a sum of Rs.22,106,616/=-, the targets have not been achieved.

According to the agreement, operation for 500h could not be completed during the warranty period before the rehabilitation of machine. After completing 500 h operation, the unexpected technical problems encountered and the engine was inactive. Even though, it was repaired by the Engineers as per the instructions given by the Supplier of the machine, it was not successful due to difficulties of purchasing necessary spare parts from the supplier. Also, the wood recommended by the supplier was not used, and the proposed electricity system had not been installed in the place recommended, as such this project became inactive.

3.2.3 Operating Inefficiencies

The following observations are made.

Project

Observation

- (i). Dendro Project

The sum of Rs.2,660,000 received for the Project on 29 December 2003 had been returned to the Ministry on 16 September 2010 without being used over a period of 07 years.

We agree with the comment.

- (ii). ICAMS Project

The sum of Rs.2,639,232 received in the year 2003 for the implementation of the Project had been retained in the Bank Current Account and invested in fixed deposits in the year review.

We agree with the comment.

(iii). Supply of 10kilowatts of Electricity This Project scheduled for completion in the year 2006 had not been completed even by 06 June 2011 despite spending a sum of Rs.4,535,228 thereon.

While carrying out this project, a long period was taken to go ahead by overcoming technical problems that arose, and a Wood Gasifire was manufactured and further developed to obtain electricity using wood gas for which a number of researches were carried out. Many variations were done in the system, to combust wood gas inside an engine enabling to get required standards in the wood gas.

Although, this project was suitable and carried out for conservation of energy in Sri Lanka, and to develop technology on "dendro power" but the final conclusion was that although electricity could be produced using wood gas, it was difficult to maintain standards continuously with dendro power for the "Internal Combustion Engine" and the continuous maintenance of the Wood Gasification system.

Expert knowledge obtained from this project to be used further on biomass in the future.

(iv). Project for working of a two stroke Three Wheeler by an electric motor

This Project scheduled for completion in the year 2007 had not been completed even by 06 June 2011 despite spending a sum of Rs.1,221,364 thereon.

There are several matters to incomplete this project yet.

- 1. Here, completion of the controller device should be done by University of Moratuwa, and due to a delay in agreeing the Memorandum of Understanding with them, there had been an uncertainty of work.*
- 2. Due to this, this project has not been extended.*
- 3. This has been submitted to the Members of BoDs. to check whether this project would be carried out further or not and if it carries out, to prepare the Memorandum of Understanding.*

3.2.4 Idle and Underutilized Assets

The following observations are made.

- (i) Out of the total stock, non-moving stocks valued at Rs.3,973,122 (28 per cent) remained in the Stores over a period exceeding 06 years.

As our Institution is R&D Organization, as a policy, we keep non-moving stocks for a period of 10 years in the Stores.

- (ii) Furniture valued at Rs.69,720 purchased for a Sales Stall and goods valued at Rs.61,579 purchased for different divisions had been idling in the Stores.

As the Sale Centre had been under construction, these goods were kept inactive at the Stores.

3.2.5 Identified Losses

The cost of 17 Projects completed in the year under review had exceeded the technology transfer income there from. Thus, resulting in a loss of Rs.1,525,279.

Accordingly, the cost has increased due to inclusive of additional labour and the overhead. As such to avoid this in the future, arrangements have been made to include sub-activities under the main activities of the projects to verify required labour, correctly.

3.2.6 Corporate Plan

The Corporate Plan for the years 2009 to 2011 prepared by the Centre had not been prepared in accordance with the provision of section 5.1.2 of the Public Enterprises Circular No.PED/12 of 02 June 2003.

We agree with the comment and accordingly, action is being taken to re-draft the new corporate plan.

3.2.7 Meetings of the Audit and Management Committees

According to Sections 7.4.1 and 7.4.2 of the Public Enterprises Circular No.PED/12 of 02 June 2003, the Audit and Management Committees should meet at least 04 times in a year. Nevertheless, only one meeting had been held in the year under review.

While there were 02 Audit Committee (AC) Meetings held during the year 2010, and the AC Meeting held in November, 2010 was handed over to the Auditor General's Department for the purpose of auditing.

4. Systems and Controls

Deficiencies in system and controls observed during the course of audit were brought to the notice of the Chairman of the Centre from time to time. Special attention is needed in respect of the following areas of control.

- (a) Project Costing and Management

Action Plan - 2011 for the assigned projects (inclusive of expenditure and timeframes) had been prepared with the relevant officials, and which was submitted to the Ministry and, necessary steps would be taken to review the progress (financial & physical) accordingly.

(b) Stock Control

As the NERD Centre is engaged in research activities generally, stocks are not disposed for the period of 05 years and their timeframes are changed according to the necessities. However, further attention is drawn on the stock control.

(c) Debtors and Creditors Control

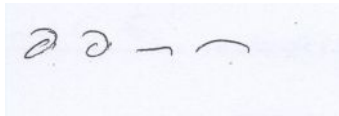
Control on credit for products and services have been established.

(d) Purchases

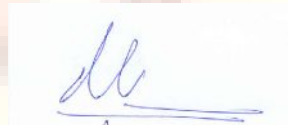
As many purchases are implemented by Technical Committees and the Tender Committees, we believe that these are done in correct order. However, as the Members of the Technical Committees are changed, we further trust that these are done according to the correct order.

(e) Stores Control

Arrangements would be made further to update the controlling of stores activities.



*Eng. D D Ananda Namal
Director General*



*Eng. D R Pullaperuma
Chairman*