

**ANNUAL REPORT 2006-07**

**Agency for Non-conventional Energy and Rural Technology  
(ANERT, Kerala)**



**ANERT, PB No 1094, Kesavadasapuram, Pattom PO,  
Thiruvananthapuram -695 004**



## **Introduction**

The financial year 2006-07 was a period in which ANERT had made earnest efforts to improve the work culture and revitalize the activities. Although these efforts had resulted in perceptible positive vibrations in the organisation in term of achievement as well as personnel involvement, the need for consistency in top level management and strict measures to check lethargies and failures cannot be over looked.

As on 31<sup>st</sup> March 2007, the expenditure incurred by ANERT for executing programmes under the Budget provision for 2006-07 (with a total state plan of Rs 10 crores under the two heads 2810-60-800-96 and 2810-60-800-98) is Rs 4.4 crores. Even though this figure is less than 50% of the target, it may be noted that ANERT's Budget for the financial year 2006-2007 was finalised and approved on 30<sup>th</sup> August 2006 only, by the 4<sup>th</sup> meeting of the GB and it took yet another month to position top level functionaries and to set up working groups of implementation team. So the actual time received for implementation was only six months. Hence compared to the expenditure of Rs 1.4 crores and Rs 3.35 crores incurred by ANERT during the last two financial years (2004-05 and 2005-06 respectively), the result of the efforts made this year are not discouraging.

A brief round up of the activities and achievements of 2006-07 is reported below.



## **Wind Energy Programme**

The data collection at the two wind monitoring stations – Pasavadigumbe of Kasargode district and Pushpagiri of Idukki district – is completed. Installation of two new wind monitoring stations, sanctioned by MNRE (under 2005-06 scheme) at locations Chatayangulay of Palakkad and Talapoya of Wayanad are in progress.

The much-awaited Ramakkalmedu Wind Farm project has not recorded significant progress, which was beyond our control. But initial procedure for establishing Wind Farms in private sector has made perceptible improvement. However smaller projects envisaged installing Wind Battery Chargers and Wind Mill Pumps were stand still.



## Bio Energy Programme

Bio Energy programme is one area where substantial work has progressed this year. Our targets were to achieve 500 m<sup>3</sup> plant capacities of institutional biogas plants for thermal application and 250 m<sup>3</sup> plant capacities for electrical application with financial incentives @ Rs.3000/m<sup>3</sup> and Rs.5000/m<sup>3</sup> respectively. However applications for 105 m<sup>3</sup> biogas plants were only received for electrical mode. Hence the remaining quantity was re-allotted to applicants for thermal mode. Thus the final targets are 645 m<sup>3</sup> biogas plants for thermal application and 105 m<sup>3</sup> plant capacities of biogas plants for electrical application. The installation work of these plants is in progress. List of selected beneficiaries for Institutional Biogas Plant Thermal Mode and Electrical mode are as follows:

### List of selected beneficiaries for Institutional Biogas Plant (Electrical Mode)

Sl. No	District	Name & Address of beneficiary	Capacity
1.	Thiruvananthapuram	Vrindavan Dairy Farms Chullimanoor (P.O),Nedumangad	25 m <sup>3</sup>
2.	Kottayam	Kaduthodil Slaughter House Kollappally, Markara, Anthinad P.O	25 m <sup>3</sup>
3.	Kottayam	Jesus Fisheries, Kaduthodil Buildings, Kollappally, Anthinad	25 m <sup>3</sup>
4.	Palakkad	Little Tree Trading Centre Maithri, Urkulam, Govindapuram	15 m <sup>3</sup>
5.	Palakkad	Steelmax Rolling Mills (P) Ltd Petronet Road, Wise Park Kanjikode, Palakkad	15 m <sup>3</sup>
		<b>TOTAL</b>	<b>105 m<sup>3</sup></b>

**List of selected beneficiaries for Institutional Biogas Plant (Thermal Mode)**

<b>Sl. No</b>	<b>District</b>	<b>Name &amp; Address of beneficiary</b>	<b>Capacity</b>
1	Thiruvananthapuram	Sri.Balaji Agency Kamaleswaram, Manacaud P.O	15 m <sup>3</sup>
2.	Thiruvananthapuram	St.Jacob Church, Valiyapally, Pulluvila P.O.	20 m <sup>3</sup>
3.	Thiruvananthapuram	St.Joseph Caussion Convent Vettuthura, Channakara	15 m <sup>3</sup>
4.	Thiruvananthapuram	Harvest Mission English Medium School, Pongodu	15 m <sup>3</sup>
5.	Thiruvananthapuram	Travancore Titanium Products Ltd, Kochuveli.P.O.	25 m <sup>3</sup>
6.	Thiruvananthapuram	Dist Development Officer for Scheduled Cast, Post Metric Girls Hostel Complex, Poochadivila	15 m <sup>3</sup>
7.	Thiruvananthapuram	KSEB, Pattom	15 m <sup>3</sup>
8.	Pathanamthitta	Lifeline Super Speciality for Mother and Child, Adoor	35 m <sup>3</sup>
9.	Pathanamthitta	Fellowship Mission Hospital.	15 m <sup>3</sup>
10.	Alappuzha	SHG Hospital Green Hardens, Cherthala	20 m <sup>3</sup>
11.	Alappuzha	Dr.Michael Francis, M.J.K.M.E.R.C	15 m <sup>3</sup>
12.	Kottayam	SNV Sadanam, Sastri Road Chellozhukom Lane, Opp.Municipality Park	15 m <sup>3</sup>
13.	Idukki	S.H Hospital, Mailacompu P.O .	35 m <sup>3</sup>
14.	Ernakulam	Sidhi Sadan Lourdes College of Nursing, Cochin.	20 m <sup>3</sup>
15.	Ernakulam	Dr.R.Raghavan, South Palace, Putheyadam.	15 m <sup>3</sup>

16.	Ernakulam	Grandama's Food Products, Jacob Tower, Muvattupuzha	15 m <sup>3</sup>
17.	Ernakulam	Cochin Shipyard	15 m <sup>3</sup>
18.	Ernakulam	Samaritan Hospital Kizhakkambalam	15 m <sup>3</sup>
19.	Ernakulam	A.P Varkey Mission Hospital Ernakulam	15 m <sup>3</sup>
20.	Ernakulam	Sreedhareyam Ayurvedic Hospital	25 m <sup>3</sup>
21.	Ernakulam	Amrita Inst. of Medical Science & Research Centre	35 m <sup>3</sup>
22.	Ernakulam	PVS Memorial Hospital Ltd, Kaloor	20 m <sup>3</sup>
23	Thrissur	Jubilee Mission Medical College and Research Institute	35 m <sup>3</sup>
24.	Thrissur	Vidyarathnam Ayurveda College Hospital	203 m <sup>3</sup>
25.	Palakkad	Vattayil Sehion Retreat Centre, Thavalam	20 m <sup>3</sup>
26.	Palakkad	Malabar Cements Ltd. Walayar	153 m <sup>3</sup>
27.	Malappuram	MES College of Engineering Kuttipuram	35 m <sup>3</sup>
28.	Kozhikode	Markazu Saquafathu Sunniyya.	35 m <sup>3</sup>
29.	Kozhikode	Uniroyal Marine Exports Ltd, Calicut	20 m <sup>3</sup>
30.	Kozhikode	MIMS, Govindapuram	35 m <sup>3</sup>
		<b>Total</b>	<b>645 m<sup>3</sup></b>

ANERT also targeted to install 300m<sup>3</sup> capacity biogas plants in various Govt. Hospitals. For this 12 hospitals in various districts were selected. Work orders were issued for constructing biogas plants in these 12 hospitals and work is in progress. List of hospitals is detailed below

Sl. No	District	Site Name	Capacity	Name of the bidder	Status
1.	Thiruvananthapuram	Taluk hospital Neyyatinkara	30 m <sup>3</sup>	Andhyodaya, Angamali	yet to start
2	Kollam	Govt.Victoria Hospital , Kollam	15 m <sup>3</sup>	Andhyodaya Angamali	site clearing completed
3.	Kollam	Govt.District Hospital , Kollam	15 m <sup>3</sup>	Andhyodaya Angamali	site clearing completed
4.	Alappuzha	Taluk hospital Haripad	15 m <sup>3</sup>	Andhyodaya Angamali	Bowl concrete completed
5.	Alappuzha	Taluk hospital, Mavelikkara	20 m <sup>3</sup>	Andhyodaya Angamali	vertical wall construction in progress
6.	Idukki	Community Health Centre Nedumkandam	15 m <sup>3</sup>	Sajith Varma	site cleared and pit excavated
7.	Ernakulam	Ladies Hostel Ayurveda Medical College EKM	15 m <sup>3</sup>	Sajith Varma	Dome construction in progress
8.	Ernakulam	Govt.Hospital ,Perumbavoor	20 m <sup>3</sup>	Andhyodaya Angamali	site cleared and pit excavated
9.	Thrissur	Taluk Hospital Wadakkancheri	15 m <sup>3</sup>	Aldo Thomas	yet to start
10	Kozhikode	Medical College Hospital	35 m <sup>3</sup>	Aldo Thomas	site cleared and pit excavated
11	Kozhikode	Taluk Hospital Quilandy	25 m <sup>3</sup>	Aldo Thomas	vertical wall construction in progress
12	Kasaragod	District Hospital ,Kanhagad	20 m <sup>3</sup>	Anil Kumar	site cleared and pit excavated
		<b>Total</b>	<b>240 m<sup>3</sup></b>		

ANERT also targeted to install 300 m<sup>3</sup> capacity biogas plants in various Local Self Government Institutions (LSGIs). 15 LSGIs were selected and tenders invited for construction of plants. But on scrutiny of the tenders, it was observed that most of the submitted tenders were not complete and the rest not competitive. Hence it was decided to re-tender those 15 plants.

Steps were taken to conduct inspection by a team of officials from ANERT at sites where biogas plants are installed under previous years schemes. Eligible subsidy will be released only to those institutions where plants are working satisfactorily.

Request was received from the District Collector, Thiruvananthapuram to construct a biogas plant at Navodaya Vidyalaya, Thiruvananthapuram under MPLAD scheme. Hence it is proposed to invite tenders from our empanelled contractors for the construction of the same, by meeting the expenditure from our budget provided for biogas plants in hospitals/schools. The expenditure will be recouped from MPLAD fund after completion of the project.

Under the scheme for installation of biomass gasifier/high efficiency direct combustion demonstration system in PSUs, proposal with DPR was received from Kerala Ceramics, Kundara, only. The proposal is to replace costly fossil fuel (SKO/Diesel) used in their hot air generator with cheaper and locally available bio mass – the empty palm fruit bunches which are disposed by Oil Palm India Ltd., as their process waste. The total cost of the project is estimated as Rs.77.45 lakhs (cost of equipment and installation – Rs.62.45 lakhs and civil works - Rs.15 lakhs) and is expected to pay back within 6 to 8 months (without considering any cost escalation of fuels). The proposal to provide about 90% of the total equipment cost, rounded off to Rs.56 lakhs as financial support from ANERT is placed before Govt for approval. This project, once commissioned could be a model project for fossil fuel substitution in industries.



### **Solar Photovoltaic Programmes**

Under this scheme it has been envisaged to distribute 7,000 solar lanterns free of cost to SC/ST and weaker sections giving priority for houses having students studying in the 10th, 11th & 12th standards and solar modules at subsidised rates for unelectrified houses. Administrative approval from the Government has been sought for the purchase of solar lantern. Government as per letter no 661/PS2/09/PD dated 25.04.07 informed that it is unable to accord sanction during the period 2006-07 and requested to take up the proposal afresh during the financial year after providing the required fund. Accordingly, fund has been provided for undertaking this scheme under spill over programmes, in the Budget 2007-2008.

Purchase process (tendering) has been done for the items like Solar Home Power Pack of 150 Watts and 300 Watts (100nos), Solar Power Pack for fishermen (100nos), Solar TV Power Pack (15nos) and SPV Demonstration Kit (100nos). But none of the samples passed the test conducted at ANERT lab. ANERT is planning to take up the programme also as a spill over project during the period 2007-08.



## **Solar Thermal Energy Programmes**

Solar Thermal Energy Programme (STEP) for the year envisaged implementation of eight schemes.

1. Demonstration programme for paraboloid type solar cookers for domestic cooking and community cooking.
2. Installation of steam generators using scheffler reflectors in PSUs/Co-operatives for demonstration.
3. Demonstration of solar driers/air heaters to be taken up with reputed Research Institutions.
4. Demonstration of solar driers for fisheries/agriculture and small industries sectors.
5. Incentive scheme for 100 LPD domestic solar water heating systems (SWHS)
6. Scheme for the installation of SWHS in Primary Health Centres (PHCs) and Community Health Centres (CHCs).
7. Scheme for the installation of SWHS in Taluk/District/Medical College hospitals.
8. Promotional programmes – Organisation of the business meet.

The scheme for demonstration of paraboloid type solar cookers for domestic cooking and community cooking envisaged distribution of 100 Nos of solar cookers for domestic cooking (SK-14 cooker), solar cookers for community cooking (Scheffler Type cooker), This scheme could not be implemented since no supplier was qualified in the tender process. ANERT is planning to take up the scheme as a spill over programme during 2007-08.

Scheme for installation of steam generators in PSUs/Co-operatives and the scheme for the demonstration of solar driers/ air heaters with the participation of Research Institutions could not be materialised due to the limitations of time.

A project for installation of a solar drier with 284 sq.m flat plate collector area has been submitted by M/s. Eastern Mattresses (P) Ltd., Thodupuzha, Idukki is under consideration for sanctioning financial assistance under our demonstration scheme for solar driers.

Under the scheme for popularising domestic (100LPD) solar water heating systems with financial incentive, an amount of Rs. 13.5 lakhs has been released to the district offices for payment of incentive to beneficiaries. So far incentives for 246 DSWHS has been disbursed from district level IREP offices, after inspection.

Under the scheme for installation of 300 LPD solar water heating systems (SWHS) in Primary Health Centres and Community Health Centres and higher capacity solar water heating systems (500 LPD, 1000 LPD, 1500 LPD) for Taluk/District/Medical College hospitals, ANERT received applications for 60 units of 300 LPD SWHS and for a total capacity of 14500LPD SWHS for hospitals. Work order has been issued to M/s ABR Solar Agencies,



Meenangady, Wayanad and the installation of SWHS is in progress in various districts.

**List of Hospitals/ Community/ Primary Health Centers for installation of  
300 LPD Solar Water Heating Systems**

<b>Sl. No.</b>	<b>District</b>	<b>Name &amp; Address</b>
1	Kollam	Community Health Centre, Trikkadavoor, Perinad – PO.
2	“	Primary Health Centre, Kundara PO
3	“	Primary Health Centre, Paripally PO
4	“	Govt. Hospital Neendakara, Puthenthura PO
5	“	Community Health Centre, Anchal, Kollam
6	“	Govt. Ayurveda Hospital, Poruvazhy, Sasthamcotta.
7	Pathanamthitta	Govt. Ayurveda Hospital, Kadampanad, Parakkode.
8	“	Govt. Ayurveda Hospital, Angadicakal North PO, Kodumon.
9	“	Govt. Ayurveda Hospital, Omalloor, Elanthoor.
10	“	Community Health Centre, Perunad, Ranni.
11	“	Primary Health Centre, Kadampanad.
12	Alappuzha	Community Health Centre, Muhamma, Kanjikuzhy.
13	“	Community Health Centre, Trikkunnapuzha, Haripad.
14	“	Govt. Hospital, Chambakulam.
15	“	Govt. Ayurveda Hospital, Cherthala.
16	“	Govt. Ayurveda Hospital, Mararikulam, Kanjikuzhy.
17	Kottayam	Community Health Centre, Erumeli, Kanjirapally.
18	“	Primary Health Centre, Kumarakom.
19	“	Community Health Centre, Karukachal, Madapally.
20	“	Community Health Centre, Paika.
21	“	Primary Health Centre, Mundakunnu PO, Kalakunnam.
22	“	Taluk Ayurveda Hospital.
23	Idukki	Primary Health Centre, Karimannoor, Elamdesam.
24	“	Community Health Centre, Nedumkandam.
25	“	District Ayurveda Hospital, Paraimavu, Vazhathope.
26	Thrissur	Rama Varma District Ayurveda Hospital.

27	“	Primary Health Centre, Panjal, Killimangalam PO.
28	“	Primary Health Centre, Kaippamangalam, Koorikuzhi P.O.
29	Palakkad	Community Health Centre, Nenmara
30	“	Community Health Centre, Koduvayoor
31	“	Community Health Centre, Alathoor
32	“	Community Health Centre, Kuzhalmannam
33	“	Govt. Hospital, Chittoor
34	“	Primary Health Centre, Puthuperiyaram
35	“	District Ayurveda Hospital.
36	“	Govt. Ayurveda Hospital, Mannarkkad
37	“	Community Health Centre, Koppam
38	“	Govt. District Homeo Hospital, Kalpathy
39	“	Community Health Centre, Kadampazhipuram
40	“	Primary Health Centre, Kongadu
41	Malappuram	Primary Health Centre, Vettom.
42	“	Primary Health Centre, Nannampra, Vallikunnu, Thirurangadi.
43	“	Community Health Centre, Parathur, Tirur
44	“	Community Health Centre, Neduwa
45	“	Community Health Centre, Edappal
46	Kozhikkode	Community Health Centre, Vorkattery
47	“	Community Health Centre, Balussery
48	“	Govt. District Homeo Hospital.
49	“	Govt. Taluk Homeo Hospital, Quilandy
50	“	Vadakara Taluk Homeo Hospital, Kuningadu
51	“	Valayam Primary Health Centre, Valayam
52	Wayanad	Public Health Centre, Prounnannoor
53	Kannur	Community Health Centre, Pinarayi
54	“	Community Health Centre, Mayyil
55	“	Taluk Ayurveda Hospital, Thaliparamba
56	“	Govt. Hospital, Payyannur
57	Kasaragod	Community Health Centre, Kumbala
58	“	Govt. Ayurveda Hospital, Cheemeni
59	“	Community Health Centre, Baadiakka
60	“	Primary Health Centre, Chittarikkal

### Solar Water Heating Systems for Taluk/District Hospitals

Sl. No.	District	Name of Hospital	Capacity
1	Thiruvananthapuram	Govt. Hospital, Parassala.	500 LPD
2	Kollam	Govt. Victoria Hospital	1000 LPD
3	Alappuzha	District Ayurveda Hospital,	500 LPD
4	Kottayam	Taluk Hospital, Vaikom.	500 LPD
5	Kottayam	Dist. Ayurveda Hospital.	500 LPD
6	Kottayam	Govt. Taluk Hospital, Changanassery	500 LPD
7	Ernakulam	Govt. Ayurveda Medical College, Trippunithura.	1500 LPD
8	Ernakulam	Taluk Head Qrs. Hospital, Aluva.	500 LPD
9	Malappuram	Taluk Hospital, Tirur.	500 LPD
10	Malappuram	Taluk Hospital, Thirurangadi.	500 LPF
11	Malappuram	Taluk Hospital, Nilambur.	500 LPD
12	Malappuram	Taluk Hospital, Ponnani.	500 LPD
13	Malappuram	Govt. Ayurveda Hospital, Ponnani.	500 LPD
14	Malappuram	Taluk Hospital, Perithalmanna.	500 LPD
15	Kozhikkode	Institute of Maternal and Child Health Medical College.	1500LPD
16	Kozhikkode	District Hospital, Kahnangadu	1000 LPD
17	Kannur	District Hospital.	1000 LPD
18	Kannur	District Ayurveda Hospital.	1000 LPD
19	Wayanad	District Hospital, Mananthvady.	1000 LPD
20	Wayanad	Govt. Taluk Hospital, Sulthan Bathery.	500 LPD
		<b>TOTAL</b>	<b>14,500 LPD</b>

Under the provision for organising Promotional Programmes, one day workshop on "Solar Thermal Energy in Industrial and Commercial Establishments" was organised in association with the Kerala State Productivity Council, Kalamassery on 21.2.2006. About 70 participants from various sectors like food processing industries, pharmaceuticals, chemical industries, hospitals, hotels, fish processing industries, rubber industries etc attended the programme.



## Micro Hydel Power Programmes

A comprehensive programme for conducting pre-feasibility study for all potential Pico/Micro Hydel Schemes in Kannur District is initiated based on a proposal from the District Office, Kannur. A temporary project office was set up for this project in Kannur district at Alacode Grama Panchayath located nearer to proposed sites. The programme co-ordinator has submitted the proposal for renovation and upgradation of a Micro Hydel Project at Pathenpara in Kannur district. The proposal is being evaluated.

A request for financial assistance for renovation and upgradation of Micro Hydel Project at Mamalakkandam Urulikuzhi in Kuttampuzha Grama Panchayath has been received from the LSGI concerned. This proposal is also being evaluated.

Project officer, District Office Malappuram has forwarded the proposal for installation of five Micro Hydel Projects in the district. The locations are as follows.

- (a) Plakkalchola S.T Colony, Kidakkekallu, Chaliyar Panchayat.
- (b) Konbankolly, Mayupally thazhe, Chaliyar Panchayat (Near Adianpara)
- (c) Velamthode, Near Mukkam
- (d) Veenekode, Tribal Colony
- (e) Puchakooly, Plantation Corporation of Kerala

These are under consideration for implementation in the coming years.



## Improved Chulha Programme

The summary of achievement under this programme is given below.

District Office	Domestic Chulha		Community Chulha	
	SC/ST	Gen/BPL	Anganwadi	Schools
Kasaragod	503	252	63	8
Kannur	457	1438	54	83
Wayanad	904	592	5	25
Kozhikode	1125	1295	115	87
Malappuram	471	831	12	28

Palakkad	2819	368	9	7
Thrissur	435	672	2	8
Ernakulam	198	800	-	20
Idukki	132	229	11	19
Alappuzha	333	1314	-	23
Kottayam	55	219	-	4
Pathanamthitta	67	163	1	23
Kollam	1654	442	22	16
Thiruvananthapuram	1650	517	20	8
<b>TOTAL</b>	<b>10803</b>	<b>9132</b>	<b>314</b>	<b>359</b>
<b>TARGET</b>	<b>25000</b>	<b>10000</b>	<b>1000</b>	<b>1000</b>

During the midcourse evaluations held at ANERT Head Quarters it has been pointed out by many Project Engineers that there are enquiries for general category chulha more than target allocation, while the demands for community chulha in Schools/Institutions is very low as many of such institutions had switched over to LPG. It is also reported that there is a felt need for presenting a range of improved chulha models before the beneficiaries including less space consuming or portable chulha models suitable for low income group especially tribal communities as well as more aesthetically appealing improved chulha models suitable for upper middle class rural households. Introducing new improved chulha models is to be a target for coming years.



## Research and Development

The budget document of 2006-07 depicted a number of research projects for implementation during the year. R&D on charging of VRLA battery, Low harmonic electronic fan regulator, performance enhancement of SPV -Wind Hybrid system, comparison of wind velocity measurement methods, High rate solar distillation unit, Bio-diesel from various sources, Gasification of coir pith and Preparation of Solar Radiation Atlas were among them. But none of them took off. The only expenditures incurred under R&D subhead are the sponsorship provided for various energy related programmes, purchase of computer gadgets and other miscellaneous expenses, which amount to about 0.5% utilisation of the allotment. The real cause of ailment of this sector of activity needs to be reviewed in detail. Even in this negative scenario it worth

mentioning that a proposal submitted by one of the Scientists for research on solar powered LED lighting unit has got approval and financial support of 8 Lakhs from the Solar Energy Centre of MNRE. This project is included in the budget 2007-08 and serious effort are being taken to ensure its timely completion and settlement with MNRE.

The scheme for supporting projects works in the area of Renewable Energy or Energy Conservation taken up by students, as a part of their curriculum towards their degree / diploma and higher degree / diploma courses was continued this year also. The list of projects selected this are given below-

**List of Student Projects selected for financial support**

<b>Sl no</b>	<b>Project Title</b>	<b>Institution</b>
1	Alternate substrates for ethanol production for motor blending	Sahrdaya college of engineering & technology
2	Coupled Biocatalyst Reactor for Bio Treatment of Waste Water and Conservation of Energy	Sahrdaya college of engineering & technology
3	Electrical controller for hybrid vehicle	College of Engg. Thiruvananthapuram
4	Hybrid Vehicle construction	College of Engg. Thiruvananthapuram
5	Effect of Biodiesel Blend on the Performance of Diesel engine	TKM College of Engg.
6	Hot water supply us parabolic collector	SJCET, Palai
7	Solar tracking system with priority charger	Mary matha college of engg. & technology



**Renewable Energy and Rural Technology Centre (RERTC), Palakkad**

The establishment of Renewable Energy and Rural Technology Centre at Palakkad is an achievement of ANERT during the year 2006-07. It started functioning on 3rd November 2006. However the organisation is yet to formulate a solid focus, programme and structure for the Centre even after six months of its functioning.

So far RERTC had conducted a number of training programmes in the area of Improved Chulhas. 374 persons have completed training for the construction of Improved Chulhas. The different levels of trainings were

Trainers Training Programme (29 trainees), Refresher Training Programme (250 trainees) and Fresh Training Programme (95 trainees).

The Centre has also conducted training programmes on construction, repair and maintenance of domestic type biogas plants for 30 participants in three batches covering all districts of Kerala. First batch having ten persons completed training at Vivekananda Kendra, Kannyakumari. The other two batches of training were held at RERTC itself.

The centre also conducted one training programme on repair and maintenance of SPV devices. 9 persons were trained in the first batch and it is proposed to conduct one more batch of training with 21 persons (totalling 30 persons). Each batch is given a training of 10 days duration in which 4 days are for fieldwork. The fieldwork of first batch was at Parambikulam and the team repaired 150 SPV installations in five different colonies as part of their training.

The task of procuring land for RERTC is in progress.



### **Information Dissemination and Publicity Programmes**

Participation in various exhibitions, conducting demonstration of mobile exhibition unit, bringing out brochures, releasing advertisements on programmes, establishing Akshaya Urja shops in line with MNRE scheme, conducting and supporting awareness creation activities and conducting state wide publicity campaign under the MNRE programme of Rajiv Gandhi Akshay Urja Diwas were the programmes envisaged under this scheme.

Accordingly participation in 13 exhibitions was held with 100% MNRE assistance and had participated in other 13 exhibitions with state funds. Two information booklets [one on Renewable Energy and the other on Energy Conservation] were published and 3 major advertisements were released in leading dailies. Preparation and broadcasting of one advertisement on improved chulha through AIR is under consideration. A proposal to provide display advertisements on Improved Chulha highlighting its health aspects on the hospital kiosks (the computerised counter for birth and death certificate distribution) in various Government Hospitals is awaiting approval from Power Department. Five Akshaya Urja shops were started in private sector (in the districts Kollam, Kottayam, Thrissur, Palakkad and Malappuram), as sanctioned by MNRE and two more are in processing. 49 days long mobile exhibition was held with Mobile Renewable Energy Demonstration Unit (MREDU), which could have been its double but the vehicle was under repair for a long spell of time. Moreover non-availability of a regular hand for demonstration and upkeep of MREDU is affecting its effective utilisation.

One and a half month long Publicity Campaign was held in all districts in connection with the MNRE scheme (with 100% CFA) of Rajiv Gandhi Akshaya Urja Diwas 2006. The programme had been inaugurated at a function held at Palakkad on 19<sup>th</sup> August 2006 and its Valedictory function was held at Thiruvananthapuram on 2<sup>nd</sup> October 2006.

Apart from the above ANERT also took lead role in organising the MNRE review meeting of South Indian States, Orientation workshop on "Remote Village Electrification" with MNRE and a media workshop at IMG with World Institute of Sustainable Energy.



### **Total Energy Security Mission:**

The activities of the Total Energy Security Mission, the Flag Ship Project in Energy sector constituted by State Planning Board for the 11th Plan Programme of Kerala, have progressed much and the formal launch of the Mission is scheduled for 5<sup>th</sup> June 2007.

The objectives of the Mission include inter alia the following:

1. Achieve cent percent household electrification in the state with a minimum electrical energy availability of one unit per household per day.
2. Provide at least the energy equivalent of eight cylinders of liquid petroleum gas to every household annually for cooking.
3. Ensure sufficient energy availability for all rural entrepreneurs and community institutions.
4. Initiate demand side management, energy conservation and promote use of non-conventional energy to achieve the above on a sustainable basis.

A state level Mission Committee consisting of members of the State Planning Board, Principal Secretaries for Power, Local Self Government and Planning, Directors of Agency for Non-Conventional Energy and Rural Technology (ANERT) and Energy Management Centre (EMC) has been formed for providing directions to this Mission activities. The Mission is championed by ANERT and EMC, two leading agencies working on energy in the state along with the Kerala State Electricity Board. The greatest strength of the Total Energy Security Mission is the grass root level linkages that the Mission has achieved by virtue of its partnership with the local governments in the state.

As per the GO (Rt) No:69/ 2007/PD dated 26.03.2007, Government has constituted the Mission Group for implementation of programmes in the Non-conventional Energy Sector, and directed ANERT to provide the office set up and logistics for the Mission. Accordingly a TES Mission secretariat is being constituted and started functioning at ANERT. The Mission activities are envisaged to revitalise the functions of ANERT.





## **FINANCIAL REPORT**

not received