



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

**ANNUAL ACTIVITY REPORT
2008-09**

ANERT, PB No 1094, Kesavadasapuram, Pattom PO,
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From Director's Desk

ANERT being an organisation striving to shake away the weaknesses of the past, had a very active year of functioning in 2008-09.

Understanding the past and inculcating strength from its lessons to face the present and to move on to the future, with clear focus on long-term targets, is not a very easy task. Year 2008-09 had been such a period of struggle and reorganisation for ANERT.

Activities of the year had more or less been in the past style of work, but had the difference of having a focus for a different future for ANERT.

The year had witnessed the most important decision of the Government, whereby a Committee had been constituted, vide G.O.(Rt) No.94/08/PD dated 16.4.2008, to study programmes and potential of the renewable energy sector of the State and to recommend for restructuring the programmes of the State Government in the Non Conventional Energy Sector, in the light of the winding up of the Integrated Rural Energy Programme (IREP), the integration of Total Energy Security Mission (TESM) with Agency for Non-Conventional Energy and Rural Technology (ANERT) and the restructuring of the activities of the Agency for Non-Conventional Energy and Rural Technology. The committee is expected to put up its proposals to the Government soon.

The organisational restructuring is expected to revamp the programmes of ANERT, so as to reorient it, to function hand in hand with the Local Self Government Institutions (LSGI) towards a local specific need and potential based renewable energy development programme.

Programmes and Achievements of 2008-09

Wind Energy Programme

Technical and administrative clearances had been accorded for establishing wind farms under private participation, for a capacity of 1.8MW in Agali, Palakkad, thereby enhancing the total capacity of wind farms coming up in the State to 30.6 MW. However Activities for establishing the 5 MW wind farm at Ramakkalmedu, Idukki district as joint project of KSEB and ANERT is still pending with KSEB, for want of sufficient bidders responding to the tenders floated for the work. Hence ANERT had requested KSEB to return the deposit fund, which could be reinvested for some other projects suitable for the State.

Bio Energy Programme

Bio Energy Development is identified as a major area of activity being taken up jointly with Local Self Government Institutions (LSGI). Site investigations for these projects are ongoing as part of the Total Energy Security Mission project. Last year Bio Energy Division of ANERT had initiated steps to take up technical consultancy and implementation support service for installation of Bio Gas Plants at 10% consultancy charges. Two projects were taken up as part of this programme, a 25m³ Biogas plant at CUSAT and a 15m³ Biogas Plant at FACT. The Biogas Plant at CUSAT was commissioned in September and work order is placed for installation of the plant at FACT. ANERT had also taken up the implementation of the 35 m³ Biogas plant for processing market waste jointly with Kallara Grama Panchayat, Thiruvananthapuram, this was also tendered and work awarded.



Solar Photovoltaic Programmes

ANERT had obtained Central Financial Assistance under the Remote Village Electrification Programme of MNRE for the solar electrification of 4204 remote households spread in five districts of Kerala. The first instalment central assistance (ie, 70% of total CFA) amounting to Rs 335.96 Lakhs had already received and the share of participating LSGIs is also obtained as deposit funds under TESM project. Successful completion of this project shall be a good background for ANERT to take up electrification of other remote un-electrified habitations of the State also, so that the programme shall support the achievement of the long cherished dream of cent per cent household electrification in the State. The implementation of the programme shall be in the coming financial year following a detailed pre-installation survey of beneficiary locations.

The New Centre at Palakkad

ANERT had obtained administrative sanction for the purchase of 10.7456 hectares of land in Palakkad district for construction of building and other required facilities for the Renewable Energy and Rural Technology Centre. The purchase of land will be completed soon. ANERT envisages establishing various Renewable energy Labs and test facilities at this new location and to build up the institution as a Centre of Excellence in the field of Renewable Energy studies. The detailed project proposal for establishing the Centre of Excellence is being formulated.

Information Dissemination and Publicity Programmes

ANERT had participated in 10 exhibitions of regional importance demonstrating various renewable energy devices. ANERT had also organised one seminar on Biomass Energy in the title “Switching from a Hydrocarbon to a Carbohydrate Economy” jointly with Society of Energy Engineers and Managers (SEEM) and Kerala State Productivity Council (KSPC). Apart from this ANERT had also co-sponsored two Seminars viz., “National Seminar on Energy Conservation and Management” organised by NSS College of Engineering, Palakkad and the “Seminar on Solar Energy” organised by St. Theresa’s College, Ernakulam. Part from these various programmes like competitions for school and college students, exhibitions, awareness programmes, public meetings etc were organised in all districts of the State with as part of the centrally supported Rajiv Gandhi Akshay Urja Diwas Publicity campaign 2008.

Total Energy Security Mission project

The Total Energy Security Mission (TESM), the Flag Ship Project in Energy sector constituted by State Planning Board for the 11th Plan Programme of Kerala, has presently advanced much in its activities. As directed in the GO (Rt) No:69/ 2007/PD dated 26.03.2007, ANERT is providing the office support and other logistics for the Mission. Since the IREP scheme of MNRE is discontinued by the end of 10th plan, all the project staff who were under IREP are presently engaged in the TESH programme implementation. The activities under the TESH programme are being managed as per the decisions of the Mission Group – the apex body of TESH constituted by Government and the programme implementation details are discussed and finalised in the Mission Secretariat / Corporate Planning Division meetings of the TES Mission.

303 Local Self Government Institutions (including all 14 District Panchayats) are participating in the programme presently. These LSGIs had remitted an amount of Rs1748.5 Lakhs to ANERT as deposit funds for the implementation of TESH project. Around 115 new Local Government Institutions are expected to join the second phase shortly. The programmes envisaged to be implemented jointly with District Panchayats includes installation of various Renewable Energy and Energy Conservation projects, comprising of Biomass Gasifiers, Biogas Plants, Improved Domestic and Community Chulhas and Solar Cookers. ANERT has set apart Rs 910.00 Lakhs for these joint projects. Applications were called for these projects and after proper scrutiny a detailed preliminary inspection of these sites were conducted with the support of the experts from M/s World Institute for Sustainable Energy (WISE), Pune who was selected and engaged as consultant for the projects. A priority list of sites is prepared based on these site studies and detailed study for the most promising sites is to be taken up. It is envisaged to start implementation of these projects on obtaining the final consent and approval from the concerned LSGIs. It is also envisaged to use the e-tendering facilities for these projects as tendering is being done in other Government organisations like Civil Supplies, KWA and KSUDP. Expressions of Interest were collected by open notification from the manufacturers and promoters of improved portable domestic stoves. The stove models submitted by the vendors were evaluated by an internal team of Engineers and as per their instructions the samples were forwarded to the TERI Lab for testing and certification. The test results had qualified only two of the models as improved stoves.



As per the directions of the Government, steps are also initiated for engaging one Technical Assistant each for every Block Panchayats, Municipalities, Corporations and District Panchayats and entrusted Energy Management Centre (EMC) for selecting suitable candidates from among the Diploma holders in Electrical/ Electronics through campus interviews. Accordingly EMC had prepared district wise list of candidates selected through campus interviews and the District Panchayats carried out the selection interviews. Appointment letters were given to the candidates from the final rank list prepared by the district Panchayats and scrutinised by EMC and altogether 123 persons had joined. As per the directions of the Government TESM is organising detailed training for these Technical Assistants. First phase training comprising of a common orientation, computer application training and training of field survey for power line mapping was completed by 7th January and presently the TAs are divided into 9 groups and are undergoing field training in the various programmes of the Mission being taken up jointly with LSGIs.

As decided by the Mission Group, steps were also initiated to select and position six young professionals with excellent track record as Interns for one year to gear up the technical and research support for the Mission. The selection process of these personnel was entrusted with the Kerala State Productivity Council who had provided the final rank list of candidates selected through a written test and interview. Steps for inducting these personnel to the programme are in progress.

TESM has been provided with a State Plan fund of Rs 200.00 Lakhs in 2007-08 and Rs. 500.00 Lakhs in the current year under the Budget Head 2810-60-800-92, Director ANERT is designated as the drawing and disbursing officer of this programme. The plan fund of Rs 200.00 Lakhs sanctioned for last year is under two administrative approvals of the Government – Rs 112.00 Lakhs for the 'Preliminary Reconnaissance Study and Preparation of a database of potential Small Hydro Power sites for TESM with participation of Local Self Government Institutions' vide the GO (Rt) No 315/07/PD dated 26.10.2007 and Rs 88.00 Lakhs for 'Knowledge Support Services to the Total Energy Security Mission' vide GO (Rt) No 19/08/PD dated 30.01.2008. Under the project on Preliminary Reconnaissance Study and Preparation of a database of potential Small Hydro Power sites, TESM team had prepared a consolidation of all probable sites that could be located from GTS topo sheets and the district wise digital maps showing Panchayat wise distribution of these sites is prepared through Kerala State Land Use Board. Based on these data a meeting of LSG leaders of Kannur District was organised and steps are being initiated to carry out preliminary reconnaissance visits of these sites. This



process will be replicated in other districts also for which steps are being initiated to mobilised organisations and faculty capable of providing local support. The Phase I of the project on Knowledge Support Services to the Total Energy Security Mission was tendered once but had to be cancelled subsequently. It is envisaged to retender the same along with tenders for Knowledge Support Services phase II and III.

The detailed budget for the utilisation of the plan fund of Rs 500 Lakhs provided for the current year is approved by the Mission Group and the 3rd meeting of the Special Working Group. The programmes envisaged for the current year includes provision for meeting salary and allowances of the project staff of TESM, digitisation of cadastral maps for Power Line Mapping, GIS support for Power Line Mapping, provision for Chulha campaign, provision for meetings, trainings and workshops, provision for inter disciplinary research studies on energy and environment, Phase 2 and 3 of Knowledge Support Services and the provision for reimbursing the preoperative expenses advanced by ANERT. The programmes are under implementation.

New Initiatives taken up in the emerging perspective of joint functioning with Local Self Government Institutions

Programme for Demand Side Management in Urban Local Body Street Lighting system:

This is a programme initiated jointly with TESM as an initiative to be tried out in 25 urban local governments, with a focus to study the energy conservation potential of the Urban Local Body Street Lighting system and to formulate a “Responsible Street Lighting Programme” that would be provide an energy-saving streetlight scheme, where the system would continue to provide the most optimum lighting level for the city streets with up-to-date technology and benefits for the city residents throughout its lifetime. In addition to reducing energy consumption and costs, decreasing carbon emissions is an important factor in choosing the street lighting system. Energy savings combined with reduced maintenance costs are prime benefits of street light control and management. Emphasis shall be to deploy LED based lighting systems. Solar power pack shall be provided wherever necessary. Base studies for the programme and preliminary discussions with urban local body leaders had been carried out in the current year and the programme shall move to surveys and implementation in the coming year.



Establishing Rural Energy Enterprises at the Block Level:

This is a programme envisaged to establish enterprises of unemployed youth at the block level, to be launched jointly with TESM with a target to improve the marketing of Renewable Energy and Energy Conservation products and services. These enterprises expected to be trained and positioned to take up various activities, like, installation of improved chulhas, installation of energy efficient bulbs, lanterns, home lighting systems, task lighting systems, street lighting systems, installation of solar photovoltaic and solar thermal devices including solar power packs, solar cookers, solar scheffler cookers, installation of biogas plants, biomass gasifiers and other non conventional energy devices for thermal and electrical purposes etc. and to take up repair and maintenance of such installations. Preliminary discussions in this regard, with the local body leaders had been initiated and a selection process is being formulated.

Improving the IT infrastructure for dynamic functioning:

Serious steps for skill upgradation/ in-house capacity Building, strengthening of infrastructure and IT Services aimed at revamping the organization to be a professional body that could be of assistance to LSGIs in implementing various renewable energy projects were initiated in the year 2008-09. A committee was constituted for evaluating the organisational requirements and formulating an IT development master plan for the organisation. Based on the advice of the committee, Infrastructure for archiving spatial and non spatial data and also for providing high speed data connection to the state wide area network and state data centre were targeted for ANERT head quarters with storage solutions for archiving data, wireless communication network, high speed internet connectivity, GIS application, database and portal solutions etc. Computers and all necessary peripherals with Operating System, Antivirus, data line connection etc as well as Digital Cameras and Multimedia LCD projectors were targeted for the District Offices for aiding the various functions like organisation of surveys, data processing, documentation and awareness creation programmes. Activities for procurement and positioning these devises and conducting skill up-gradation training for the staff were initiated in the year, which is expected to culminate in the coming years.