



**Government of Kerala  
Energy Conservation Awards 2009**



**Kerala State Energy conservation Awards 2009**

It is the 13th State Energy Conservation Awards, an appreciation for noble and concerted effort towards energy conservation in the State of Kerala. The State Level Monitoring Committee for Energy Conservation in Kerala, on evaluating the various entries for State level awards selected organizations/individuals for conferring Awards and Commendation Certificates.

<b>Category -1</b>	<b>Large scale energy consumers</b>	<b>Prize</b>
1	Apollo Tyres Ltd, Perambra, Thrissur	<b>Award</b>
2	Bharat Petroleum Corporation Ltd, Kochi	<b>Commendation</b>
3	Veega Holidays & Parks Pvt.Ltd, Kochi	<b>Commendation</b>
4	BSES Kerala Power, Kochi	<b>Commendation</b>

<b>Category-2</b>	<b>Medium scale energy consumers</b>	
1	Coconut Lagoon, Kumarakom, Kottayam	<b>Award</b>
2	Herbal Isolates (p) Ltd, Cochin	<b>Commendation</b>

<b>Category-3</b>	<b>Channels and Media</b>	
1	Sri. Rasheed Anappuram, Senior Reporter "Deshabhimani "daily, Malapuram unit	<b>Award</b>
2	Sri. Reji Joseph, Bureau Chief, Deepika daily Kottayam	<b>Commendation</b>
3	Sri. Deepak Dharamadam, Bureau Chief, Amrita TV, Calicut	<b>Commendation</b>

<b>Category-4</b>	<b>Small scale energy consumers</b>	
1	Pankajakasthuri Herbals India Ltd, Kattakkada, Trivandrum	<b>Award</b>
2	Escapade Resorts Pvt Ltd, Alapuzha	<b>Commendation</b>

<b>Category-5</b>	<b>Non-profit organizations</b>	
1	Energy Press, Palakkad	<b>Award</b>
2	Eloor Grama Panchayath, cochin	<b>Award</b>
3	The International association of Lions Club, Thrissur	<b>Commendation</b>

<b>Category-6</b>	<b>Research &amp; Innovation</b>	
1	Dr. Sasi.K.K	<b>Commendation</b>
2	Dr. Joshi.P.N	<b>Commendation</b>

<b>Category-7</b>	<b>Individuals</b>	
1	Sri. C.Jayaraman, Senior Manager (Engineering & Construction), of BPCL-KOCHIN REFINERY	<b>Award</b>
2	Sri. T.P.Sadananda Pai, Executive Engineer, PWD(Electrical) division, Kozhikode	<b>Award</b>
3	Sri. Sajiprasad.G.C	<b>Commendation</b>

<b>Category-8</b>	<b>Buildings</b>	
1	Wipro Limited, KODC, Ernakulam	<b>Award</b>
2	Regional Telecom Training Centre, Kaimanam, Thiruvananthapuram	<b>Commendation</b>

<b>Category-9</b>	<b>Energy Clinic Volunteers</b>	
1	Smt. Sudarsana John, Idukki	<b>Award</b>

<b>Category-10</b>	<b>Fleet Operators</b>	
1	KSRTC, Thiruvananthapuram	<b>Commendation</b>

<b>Category-11</b>	<b>Certified Energy Auditors</b>	
1	Sri. Suresh Babu B V, Trivandrum	<b>Award</b>
2	Sri. Promod.P.Mani, IRE, Chavara	<b>Commendation</b>

<b>Category-12</b>	<b>Educational Institutions</b>	
1	Toc H Institute Of Science & Technology, Ernakulam	<b>Award</b>
2	P.S.M.O.College, Malppuram	<b>Commendation</b>

<b>Category-13</b>	<b>Best Suggestion for EC/EE</b>	
1	Sri. N.P.Antony, Managing Director of M/s Pavizham Healthier Diet (Pvt) Ltd	<b>Award</b>

## **LARGE SCALE ENERGY CONSUMERS**

### ***Award: Apollo Tyres Ltd, Perambra, Thrissur***

Apollo tyres has been conferred the award considering their all-round performance and consistency in Energy Conservation measures. They were able to achieve significant reduction in overall energy levels by constant monitoring and achieving set targets. Reduction in Specific Energy levels was achieved through their continuous efforts at various levels.

Some of their Energy saving measures are:

- ▶▶ Hot water recovery using HP purging in Tyre Curing Presses
- ▶▶ Dome steam Consumption reduction by providing Ceramic cloth blanket insulation in Platen Presses
- ▶▶ Flash steam recovery from hot water sump
- ▶▶ Installation for new process Deaerator in Tyre Curing
- ▶▶ Tyre Curing Press piping insulation revamping
- ▶▶ Tyre Curing Press dome insulation revamping
- ▶▶ Elimination of process De aerator overflow
- ▶▶ Energy efficient motor for Plant Air Compressor
- ▶▶ Installation of auto controller for process pump

## **MEDIUM SCALE ENERGY CONSUMERS**

### ***Award : Coconut Lagoon, Kumarakom, Kottayam.***

Coconut lagoon has been conferred the award considering their all-round performance and consistency in Energy Conservation measures. They were able to achieve significant reduction in overall energy levels by constant monitoring and achieving set targets. Reduction in Specific Energy levels was achieved through their continuous efforts at various levels.

Some of their Energy saving measures are

- ▶▶ Introduction of Methane gas for cooking instead of LPG
- ▶▶ Installation of Solar LED's for pathway lights.
- ▶▶ Replacement existing water-cooled package unit.
- ▶▶ Introduction Asia's Largest Solar Boat.
- ▶▶ Installation of Solar water heaters
- ▶▶ Rain Water Harvesting
- ▶▶ Periodic Energy conservation Awareness programmes for the staff

## **CHANNELS AND MEDIA**

***Award : Rasheed Anappuram, Sr. Reporter, Deshabhimani, Malappuram***

Shri.Rasheed Anappuram is the Senior Reporter “Deshabhimani “daily, Malappuram unit. He was born in Vallikkunnu, Kadalundi town, Malappuram district. He has published various journals and articles related to Energy sector. He has been associated in Energy conservation project of Vallikkunnu Gramapanchayath. Considering his involvement and efforts in investigative reporting on Energy conservation, he has been selected for this year’s award.

## **SMALL SCALE ENERGY CONSUMERS**

***Award : Pankajakasthuri Herbals India Ltd, Kattakkada  
Thiruvananthapuram***

Pankajakasthuri Herbals India Pvt. Ltd, is a ISO certified company established by Dr. J.Hareendran Nair located at Kattakada , Thiruvananthapuram, to manufacture quality Ayurvedic medicines and the unit had been awarded with GMP registration. Pankajakasthuri Herbals India Pvt. Ltd has been conferred the award considering their all-round performance and consistency in Energy Conservation measures. They were able to achieve significant reduction in overall energy levels by constant monitoring and achieving set targets. Reduction in Specific Energy levels was achieved through their continuous efforts at various levels

Some of the energy saving measures adopted are :

- ▶▶ Installation of Modern Electronics Equipments to minimize electric wastages & reduction in Electricity Consumption
- ▶▶ Installation of Energy efficient electrical equipments,
- ▶▶ Formed High Power Committee and Implementation Task Force
- ▶▶ Installation of energy efficient Lighting system.
- ▶▶ Conducted Mass Awareness Camps for Employees and their families

## **NON-PROFIT ORGANISATION**

### ***1. Award: Energy Press, Palakkad***

The Energy Press has launched the inaugural issue of a quarterly energy/ environment magazine “Energy Manager” in January 2008 aimed at filling the information gap at different levels from policy making to practical application both in conventional and non conventional energy sectors. The magazine is addressing a wide spectrum of issues on quarterly basis with focus on a particular issue of timely relevance. The magazine through its innovative approaches and attitudes on energy efficiency and conservation, draw the attention of diverse spectrum of readers and deliver the most contemporary global issues hitherto inaccessible through a magazine. Considering the contribution to convey the message of energy conservation and energy efficiency to the mass, Energy Press has been selected for this year’s award

## ***2. Award: Eloor Grama Panchayath, Kochi***

Eloor Grama Panchayath is situated in Eranakulam District and the following activities helped them to achieve this award:

- ▶▶ Awareness programme on Energy conservation for 2000 families.
- ▶▶ CFL distribution for public.
- ▶▶ Power generation from waste.
- ▶▶ Energy conservation campaigns in association with MES Eastern School, Eloor.

### **INDIVIDUALS**

#### ***1. AWARD: C. Jayaraman, Kochi***

Shri C. Jayaraman, Senior Manager (Engineering & Construction), of BPCL-KOCHIN REFINERY and a certified energy Auditor, having 24 years of Professional Experience in the industry with strong interest in Energy and Environment Conservation activities.

Some of the energy conservation activities that helped them to achieve this award are.

- ▶▶ Conducted a state wide campaign on Energy Conservation: “Switch-off one light and Avoid Power Cut” covering all the Districts
- ▶▶ Carried out several Energy Audits, awareness workshops(in domestic, agriculture, industry and transport sectors), organized Driver Training Programmes, Exhibitions, Seminars, Emission Awareness Programmes, etc in the State of Kerala
- ▶▶ Carried out numerous studies in industries, delivered lectures in engineering colleges, industrial training institutes, schools and colleges on energy and environmental concerns

Considering his involvement and energy saving realized by his efforts, he has been selected for this year’s award.

#### ***2.AWARD: T.P.Sadananda Pai, Kochi***

Shri.T.P.Sadananda Pai is an Executive Engineer in PWD(Electrical) division ,Kozhikode.He is actively involved in enhancing energy efficiency in the lighting system and public buildings .He is instrumental in getting approved T5 fluorescent lamps and several other star labelled equipments

Some of the energy conservation activities that helped them to achieve this award are.

- ▶▶ Detailed study on T5 lamps
- ▶▶ Propagation of use of T5 lamps
- ▶▶ Energy efficiency consideration in new projects, O&M activities and in the electrical installation of LSGIs/ULBs
- ▶▶ Awareness program and seminars on energy conservation

Considering his involvement and substantial energy demand reduction and energy saving realized, he has been selected for this year’s award.

## **BUILDINGS**

### ***AWARD : Wipro Limited, Eranakulam***

Wipro Limited, Kochi Development Corporation(KODC), is leading end-to-end IT service provider. One of the activities taken up the organization is to build Environment Friendly and Energy Efficient Buildings. The Kochi Development Centre is very energy efficient and this has been achieved with a nominal increase of 10% in the construction cost while the potential recurring energy savings is in the order of 30%. It has also provided a template where all issues of energy and environment with regard to the building has been dealt with. Kochi Development Centre is Gold Rated LEED Building by United States Green Building Council(USGBC).

The Energy saving approach and methodology adopted are

- ▶▶ Implementation of Building Automation System
- ▶▶ Installation of Biogas Plant
- ▶▶ Thermal Storage System for power demand management
- ▶▶ Implementation of Water efficient landscaping
- ▶▶ Use of treated sewage from Sewage Treatment Plant
- ▶▶ Use of energy efficient Lighting System
- ▶▶ Reduction in water usage
- ▶▶ Periodic energy audits are conducted and innovative solutions are implemented

## **ENERGY CLINIC VOLUNTEERS**

### ***AWARD: Sudarsana John, Idukki***

Energy Clinic is a unique programme of EMC in energy conservation activities in domestic sectors through women change agents. Through awareness, 10-15 % of total energy can be saved. The energy clinic is to provide valuable information to the rural population on energy conservation, energy efficient equipments, right methods of energy use to reduce wastage etc. At present there are 206 trained women volunteers in the State In connection with the Energy Conservation Month activities, best energy clinic volunteers are awarded prizes based on their performance.

Considering her involvement and substantial energy demand reduction and energy saving realized by her efforts through Energy Clinic, she has been selected for this year's award

## **CERTIFIED ENERGY AUDITOR**

### ***BEST PERFORMANCE AWARD : B. V .Suresh Babu, Thiruvananthapuram***

Shri.Suresh Babu B.V is a senior engineering consultant and Certified Energy Auditor. He is the founder partner of Ottattraction Kochi an energy audit firm which is very active in the state. In his personal capacity as certified energy auditor, he has made following remarkable contributions.

- Conducted over 29 Energy audits in diversified industries and utilities.
- Assessment of Energy conservation potential in four SME clusters viz Rice, Re-rolling, Rubber and Sea food Industries in Kerala for National Productivity council
- Conducted Biomass gasifier and Small Hydro Projects
- Published papers and conducted workshops on renewable energy and energy efficiency and conservation

Considering his involvement as Energy Auditor, he has been selected for this year's award

## **EDUCATIONAL INSTITUTION**

### ***Best Performance Award: Toc H Institute of Science & Technology, Ernakulum***

M/s TocH Institute of Science & Technology established in 2002, located at Arakkunnam, 26 kms from the city of Cochin, Kerala. It is one of Kerala's fastest growing Engineering schools, attracting extremely talented engineering students from across the nation. Some of the energy saving measures that helped them to achieve this award are.

- ▶▶ Energy conservation campaign
- ▶▶ Energy conservation initiative
- ▶▶ Energy related product development
- ▶▶ Energy related researches
- ▶▶ Energy Audits.
- ▶▶ Renewable energy applications

## **BEST SUGGESTION FOR ENERGY CONSERVATION**

### ***Award: N. P Antony, Eranakulam***

Shri N.P. Antony, Managing Director of M/s Pavizham Healthier Diet (Pvt) Ltd, Kaladi, Kochi. He has developed an energy recovery measure having an additional benefit of pollution prevention and this is considered for the best suggestion in this category. The heat recovery from soak water used for par boiling rice and subsequent gas generation from soak water has been identified by him. This has been developed with help of RRL and successfully installed in one of his rice mill.

## **LARGE SCALE ENERGY CONSUMERS**

### ***Commendation Certificate: Bharat Petroleum Corporation Ltd, Kochi Refinery***

M/s BPCL Kochi Refinery, a 9.5 MMTPA fuels refinery is located at Ambalamugal, Kochi in the Kerala State in a green, sprawling campus of 1200 acres. Commissioned in 1966 as a 2.5 MMTPA refinery, Kochi Refinery (then known as Cochin Refineries Ltd) has gone through a series of expansions and modernizations to be the present Kochi Refinery. Major products include LPG, Motor Spirit, Naphtha, Aviation Turbine Fuel, Kerosene, Special Boiling Point Spirit (SBPS), Mineral Turpentine Oil (MTO) High speed diesel, light diesel oil, furnace oil, LSHS, bitumen, Natural Rubber Modified Bitumen, aromatic products like Benzene & Toluene and petrochemical like Poly isobutene.

Some of their Energy saving measures are

- ▶▶ Replacement of Naphtha stabilizer reboiler with a steam reboiler and Old low efficiency fired heater replaced with a high efficiency steam reboiler
- ▶▶ Optimisation of excess air in boiler through automatic air fuel ratio based combustion control scheme
- ▶▶ Conversion of metallic blades to FRP blades for air fin fans
- ▶▶ Waste heat recovery through steam generation in Biturox unit.
- ▶▶ Replacement of mineral wool insulation with Perlite.

## **LARGE SCALE ENERGY CONSUMERS**

### ***Commendation Certificate : Veega Holidays and Parks Pvt. Ltd Kochi***

M/s Veega Holidays and Parks Pvt. Ltd'- known as 'Veega Land'- A land of amusement from the house of V-Guard, which started its operations on 3rd April 2000, is today one of the most exciting amusement parks in India. Veega Land is so unique with its combination of technology, natural splendor and human craftsmanship.

The measures taken by them to achieve the energy conservation performance are

- ▶▶ Use of Renewable Energy
- ▶▶ Time scheduling of rides/equipments based on the no. of guests or utility
- ▶▶ Re designing of Blowers and Duct in Wave pool area
- ▶▶ Installed Motion sensors for lighting
- ▶▶ Installed Energy Saver and there by voltage optimized to 210 V
- ▶▶ Periodical audit and reviews of maintenance schedule.
- ▶▶ Increased the usage of natural light by providing translucent roofing
- ▶▶ Upgradation and optimization of old Equipments with Energy efficient Equipments



## **LARGE SCALE ENERGY CONSUMERS**

### ***Commendation Certificate: BSES Kerala Power, Kochi***

M/s BSES Kerala Power Limited ,a fully owned subsidiary of Reliance Infrastructure Ltd has established and operating a combined cycle power plant at Udyogamandal for supplying power to KSEB. The plant has an installed capacity of 165 MW comprising of 3 x 43 MW GE Make LM 6000 PC Gas turbines Aero derivative gas turbines ,3 Nos. of Thermax Babcock and Wilcox make duel pressure recovery steam generators and 1 X 36 MW BHEL make Steam turbine .The main fuel is Naphtha and the startup fuel is HSD. Electricity generated is transmitted to KSEB through two number 110 KV double circuit transmission lines.

. The measures taken by them to achieve this reduction are

- ▶▶ Reduction of set pressure of air compressor from 7.2 bar to 6.7 bar and attending air leakages.
- ▶▶ De staging of the Condensate extraction pump (CEP).
- ▶▶ De staging of LP Boiler feed water pump (BFP) Pump.
- ▶▶ Improvement in the lighting system.
- ▶▶ Rain water harvesting.

## **MEDIUM SCALE ENERGY CONSUMERS**

### ***Commendation Certificate: Herbal Isolates Pvt Ltd, Kochi.***

M/s Herbal Isolates (P) Ltd started its operations in May 1984 primarily for the production of essential oils from herbs and spices mainly for the export market. In the next couple of years the company was able to get substantial orders for oils and was able to fully utilize its capacity by 1986. By 1987 the company expanded its product line to Spice Powders and Dehydrated Green Pepper, which today has become its main line of activity. In 1988, the company was able to substantially reduce its cost of operations by installing agro waste fired boilers using our own spent material after distillation, in the place of oil fired boilers. By 1989 two new products for the export market was developed namely Green Pepper in Brine and Sterilized Spices and a market in Europe for these products were established in the face of stiff competition. By 1997, the company completed the installation of a modern ETP to treat all its effluents to Pollution Control Board norms. In 1999, the company implemented imported Spinning Cone Column technology and received ISO 9000 and HACCP certification. In 2000 the company installed Spin Flash Drier and was able to develop a valuable bye product out of polluting waste material by this operation. The company has a Turnover of around Rs. 15 crores and Profit Rs. 4.3 crores..

Some of their Energy saving measures are

- ▶▶ Optimizing SFD plant burner nozzles.
- ▶▶ Installation of gasifier in SFD replacing HSD and Steam consumption eliminated.
- ▶▶ Replacement of SFD disperser.
- ▶▶ Improvement of effluent quality through modifying the existing treatment system with new chemical combination
- ▶▶ Modification of tray dryers at Dehydrated Green Pepper Plant
- ▶▶ Installed Automatic Power Factor Controller to improve Power Factor

### **Channels and Media**

#### ***Commendation Certificate: Reji Joseph, Bureau of Chief, Deepika, Kottayam***

Shri Reji Joseph is a Bureau chief “Deepika” daily, Kottayam. He has published various journals and articles related to Energy Crises in the state.

Considering his involvement in reporting on Energy sectors and his efforts in Energy conservation activities, he has been selected for the year’s commendation Certificate.

### **Channels and Media**

#### ***Commendation Certificate : Deepak Dharamadam, Bureau Chief Amrita TV, Calicut***

Sri. Deepak has 14 years media experience. Worked in both print and visual media. Now the **Bureau Chief of Amrita TV Calicut**. Reported many exclusive political issues and noted human interested, Medical, development stories. Reported many stories relating Energy crisis and conservation in Kerala. Within the age of 30 years he got many well known Media Awards. Considering his involvement in audio-visual reporting on Energy sectors and his efforts in promoting Energy conservation activities, he has been selected for the year’ s commendation Certificate

### **SMALL SCALE ENERGY CONSUMERS**

#### ***Commendation Certificate : Escapade Resorts Pvt Ltd, Alapuzha***

M/s Escapade Resorts Pvt Ltd is part of a CGH (Clean, Green and healthy) Earth Experience Hotels, started in 1998, is situated in a local fishermen’s village called Mararikulam in Alleppey District. Some of the energy saving measures adopted are :

- ▶▶ Installation of Sewage Treatment Plant with water recycling.
- ▶▶ Rain water harvesting
- ▶▶ Installation of solar cooker and water heaters
- ▶▶ Introduction of Electric Scooter & Bicycles for staffs
- ▶▶ Introduction of Methane gas instead of LPG for cooking
- ▶▶ Constituted an energy conservation cell, which is very active

### **NON PROFIT ORGANISATIONS**

#### ***Commendation Certificate:***

#### ***The International association of Lions Club, Dist. 324 E2, Thrissur***

Lions Clubs International is the world's largest service club organization, with more than 1.3 million members in more than 45,000 clubs and countless stories of Lions acting on the same simple idea: let's improve our communities.. The Thrissur units organized several programme

in the energy conservation and renewable energy field, which lead them to receive the commendation certificate. Some of the energy conservation measure adopted are :

- ▶▶ Awareness Programme on Energy Conservation in domestic sector
- ▶▶ Awareness Programme Electricity Meter Reading and Energy Saving Concepts
- ▶▶ Conducted a Programme on Save Earth Campaign for Next Generation A planetary emergency
- ▶▶ Conducted A Series of Programme conducted for School/Colleges/Technical Institutions & Elite Community
- ▶▶ Seminar on energy efficient products

## ***RESEARCH AND INNOVATION***

### ***Commendation Certificate: Dr Sasi K. K., Palakkad***

Dr Sasi K Kottayil has his basic and post graduate degrees in Electrical Engineering and doctoral degree on Utility Scale Wind Electricity Generation. Dr Sasi has been in the teaching profession for the last 26 years. He is presently working as Professor and Vice Chairman in the Department of Electrical & Electronics Engineering at Amrita Vishwa Vidyapeetham, Ettimadai, Coimbatore. He published about 48 research papers, delivered more than 70 invited lectures, chaired a few sessions in national and international conferences, carried out six sponsored projects and reviewed several papers for National and International Journals and conferences. He supervises three PhD works in the area of renewable energy. His activities in energy efficiency and conservation both in academics and practical field is acknowledged by this commendation certificate

## **RESEARCH AND INNOVATION**

### ***Commendation Certificate : Dr. P. N. Joshi, Cochin***

Dr. P. N. Joshi has a Ph. D and M. Tech in Mechanical Engineering. Dr. Joshi is presently the Principal Scientist, Head of Engineering Division and Joint Director of Central Institute of Fisheries Technology, Cochin, under Indian Council of Agricultural Research. Dr. Joshi has more than 30 years of experience as a Scientist in various capacities, mainly in the design and development of equipment and machineries for fish processing industries and utilization of Renewable Solar Energy for fish preservation. He has developed various types of hybrid solar dryers for hygienic and continuous drying of fish without spoilage using alternate backup heating systems like LPG, Biogas, Biomass etc. He has conducted several training programmes on Solar drying techniques, delivered invited talks and presented papers during National and International Conferences on Energy Conservation. Dr. Joshi has over the years, handled a number of national energy conservation programmes related to renewable solar energy. He was involved in the development and implementation of solar fish drying plants for community, institutional and industrial applications.

## ***INDIVIDUALS***

### ***Commendation Certificate : Sri. Saji Prasad G. C, Vamanapuram Thiruvananthapuram***

Shri Saji Prasad.G.C is the President of Energy Conservation Club, Mulamana VHSS which was started in the year 2004 for promoting Energy Conservation Activities among students and public. He conducted many competitions and exhibitions among students to increase importance of energy conservation. Production units for manufacturing energy efficient devices like electronic chokes and CFL's were also started by him and distributed CFLs to students in the schools. Considering his overall performance he has been selected for the year's commendation Certificate.

## **PUBLIC BUILDING**

### ***Commendation Certificate: Regional Telecom Training Centre(RTTC, BSNL), Thiruvananthapuram***

BSNL is the largest Central Government owned Public Sector undertaking engaged in providing World class Telecommunication services. BSNL has always been in the forefront of energy conservation, ever since the Energy Conservation Act 2001 was enacted. Considering the outstanding performance of RTTC,BSNL Thiruvananthapuram in energy conservation, they have been selected for this year's commendation Certificate. The energy saving measures adopted are

- ▶▶ Replacement of Garden Pump set
- ▶▶ Replacement of Main Pump sets
- ▶▶ Replacement of CRT Monitors by LCD monitors for computers
- ▶▶ Conducted Seminars and Workshops specific to Energy conservation
- ▶▶ Replacement of switching equipments with modern SMPS type
- ▶▶ Introduction of a module on "Energy efficiency and conservation" in the training syllabus of RTTC,BSNL

## **FLEET OPERATORS**

### ***Commendation Certificate: KSRTC, Thiruvananthapuram***

KSRTC is the largest Public sector Unit in Kerala, Established on 1st April 1965 under RTC Act 1950, by converting erstwhile State Transport Department into Corporation with Head Office at Thiruvananthapuram. The specific fuel consumption of KSRTC is 4.23 Kilometer per Liter(KMPL) and daily revenue collection of around of Rs 3.19 Crore.

Some of the energy saving measures that helped them to achieve this award are

- ▶▶ Reduced specific fuel consumption by improving mileage from 4.05 KMPL(Year 2004) to 4.18 KMPL(Year 2009)

- ▶▶ Regular training program for staff which includes, Supervisor training, Driver training for corrective O&M and KMPL improvement.
- ▶▶ Depot level counseling to crews for improvement of specific fuel consumption.
- ▶▶ Upgradation of Installed Fuel Injection pump calibration units
- ▶▶ Started Staff Training Centers
- ▶▶ Formed Research & Development Unit
- ▶▶ Strict Adherence to Vehicle maintenance schedules
- ▶▶ Pollution control measures.

## **CERTIFIED ENERGY AUDITOR**

### ***Commendation Certificate : Promod P.Mani, Kollam***

Shri. Promod P.Mani is a Certified Energy Auditor and designated Energy Manager of Indian Rare Earths Ltd, Chavara, having more than 17 years of industrial experience in the field of Energy Conservation and Energy efficiency.

- ▶▶ Conducted several awareness programs on Energy conservation.
- ▶▶ Undergone training program and participated in seminars on Energy Conservation and Efficiency.
- ▶▶ Associated with various energy audit teams for energy audit in various IREL units.

Considering his overall performance he has been selected for the year's commendation Certificate.

## **EDUCATIONAL INSTITUTION**

### ***Commendation Certificate: P.S.M.O. College, Malappuram***

M/s P.S.M.O. College, Tirurangadi is one of the premier institutions of higher learning under University of Calicut. Some of the energy saving measures that helped them to achieve this commendation Certificate are.

- ▶▶ Formed Energy & Environment Club with 150 students as members and has adopted the Tirurangdi village area surrounding the college for its activities.
- ▶▶ Conducted several Energy conservation activities for students and public.
- ▶▶ Construction of vermin compost pit, installation of an incineration plant for waste disposal in the campus, commissioning of ground water recharge pit
- ▶▶ Installation of smokeless oven, distribution of CFL bulbs, water quality monitoring.
- ▶▶ Seminar/workshop for students as well as general public including ICDS workers and Kudumbasree members