


FORM IV
(Refer regulation 7(2))
Bureau of Energy Efficiency
REGISTER CONTAINING NAMES OF OFFICES AND FIRMS OF ACCREDITED
ENERGY AUDITORS

Serial Number:- (AEA - 0099)		As on:- 26 February, 2013	
A.			
1	Name of accredited energy auditor	Shanavaz.K.M	
2	Father's name	Muhammed	
3	Date of certification as Energy Manager (Energy Auditor)	18 th February, 2008	
4	Date of passing the examination in "Energy Performance Assessment for Equipment and Utility Systems"	18 th November, 2007	
5	Examination Registration Number of (i) Energy Manager (ii) "Energy Performance Assessment for Equipment and Utility Systems"	EA-3384	
6	Certificate Registration Number of (i) Energy Manager (ii) "Energy Performance Assessment for Equipment and Utility Systems"	3039	
7	Date of issue of accreditation certificate	(to be filled by BEE)	
B. Information in respect of trade name or firms' name			
8	Trade name / firms name under which energy audit is proposed to be conducted	Kerala State Productivity Council (KSPC)	
9	Date of accreditation as accredited energy auditor	(to be filled by BEE)	
10	Type of firm/ private/ Government / NGO etc.	NGO	

11	Name of contact person along with designation, address, telephone, mobile and fax number along with STD codes and email address (All details compulsory)	Sivakumar.G , Director Kerala State Productivity Council (KSPC) Productivity House, P.B No: 08, H.M.T Road, Kalamassery, Cochin - 683 104, Kerala, India. Phone : + 91 484 2555526, 2555367, 2532107 FAX : + 91 484 2532107, e-mail : kspc@asianetindia.com
12	Professional postal address with Pin Code of the accredited energy auditor	Kerala State Productivity Council (KSPC) Productivity House, P.B No: 08, H.M.T Road, Kalamassery, Cochin - 683 104, Kerala, India.
13	E-mail address	kmschanavaz@gmail.com
14	Telephone numbers . with STD Code (R) (O) Mobile no:	91-485 2548578 91-484 2555526, 2555367 91-9447816767
15	Year of establishment of the trade name / firms' name for undertaking the energy audit	1959
16	Year of commencement of energy audit of the firm	1993
17	Whether any certificate to support the excellence in the system has been obtained (ISO etc.)	Empanelled Energy Audit firm with PCRA, Chennai Empanelled Energy Audit firm with Energy Management Centre – Kerala, (SDA, BEE) (www.keralaenergy.gov.in)
18	No. of branch offices (List of complete addresses including heads of all branch offices with telephone, fax and email addresses)	Nil
C	Details of Associated Energy Experts	
19	Number of resource persons available	11

20	I. Number. of full-time energy auditors in position with work experience of all energy auditors associated with the firm	CEA -2 Other Auditors - 5
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1. JOSE A.P - Joint Director, KSPC

- **Jose.A.P**, born on 27th May 1964 at Udayamperoor, Ernakulam District, Kerala.
- Graduated in Industrial and Production Engineering from M.S. Ramaiah Institute of Technology, Banagalore University in 1987.
- Joined Kerala State Productivity Council, Kalamassery as **Engineer Trainee** in 1988.
- Appointed as **Industrial Engineer** in Kerala State Productivity Council in 1990.
- Underwent 6 months course on “Energy Management Consultation and Training (EMCAT)” at Dr.Ambedkar Institute of Productivity, NPC, Chennai in 1992.
- Promoted as **Consultant** (Industrial Engg. & Energy Management) in 1998 and **Deputy Director** (Industrial Engg. & Energy Management) in 2004.
- Certified as **Energy Auditor** (EA- 0464) by Bureau of Energy Efficiency in 2006.
- Promoted as **Joint Director** in 2007 and continuing in that position.
- **Professional experience** over 20 years includes Industrial Engineering and Energy Management projects with Kerala State Productivity Council.
- Conducted more than **150 Energy Audit assignments (Both Electrical & Thermal)** in various industries in Kerala, which includes Chemical, Engineering, Metallurgical, Cement, Tea, Minerals and Mineral processing, Food and Food Processing, Printing etc. and Commercial and Office buildings.
- Carried out more than **60 Industrial Engineering Consultancy assignments** of various magnitudes.

2. Sumesh M V, Consultant, KSPC

- Sumesh.M.V educated at College of Engineering Trivandrum (B Tech Mechanical Stream - Industrial Engineering).
- Over 4 years of experience in Industrial Engineering Studies and Energy Audits in various Industries in and around Kerala.
- Currently he is Consultant of Kerala State Productivity Council since 2006.

3. Sriram A, Consultant, KSPC

- Sriram A educated at College of Engineering Kidangoor (B Tech Electrical and Electronics Engineering)
- About 3 years of experience, having done/ part of about 40 Energy Audit Studies done in various types of Industries which include Food Processing, Forging, Tyre, Timber, Process Industries and Commercial Buildings.

- Currently he is Consultant of Kerala State Productivity Council since 2008.

4. Anish Antony, Consultant, KSPC

- Anish Antony educated at Adi Sankara Institute of Dcienc & Technology, Kalady (B Tech Mechanical Engineering) and Anna University (PG Diploma in Electrical Energy management & Energy Audit)
- Over 3.5 Years experience in Electrical field (Operation and maintenance) and energy audit

5. Arjun K.N, Consultant, KSPC

- Arjun.K.N educated at TOC H College of engineering, Kochi (BTech Electrical & Electronics Engineering)
- Over 2 years experience which includes as trainee engineer at Apollo Tyres Kalamassery . Now working as consultant at Kerala State Productivity Council and got experience in Energy Audits in various Industries in and around Kerala.

6. Jubin K Varghese

- Jubin K Varghese graduated from TOC H College of engineering, Kochi in Electrical & Electronics Engineering branch in 2011.
- He Joined KSPC as consultant in January 2012 in Energy division and now participating in energy audits doing in various Industries in and around Kerala.

II. No. of part-time energy auditors in position during the current year / previous year associated with the energy auditor / energy auditor's firms.

CEA - 4

No.1

Mr. A SANTHOSH (EA-7597)

B-.Tech (Mechanical)

PG Diploma in Energy Management (Hyderabad Central University)

Diploma in Energy Engineering.

MBA - Energy Management (Undergoing)

Mob: 09746194984

PROFESSIONAL EXPERIENCE

- Managing Director, Athul Engineering Systems and Energy Consultants, B2/A BEVEE Complex, C.P Ummer Road, Ernakulam., Kerala Pincode: 682305
- 20 years Transnational experience in hard core chemical & Process industries at core executive level.
- Executed & managed critically important industrial operations in high risk environments.

Engineering Exposure areas

UTILITIES

- Fire tube & Water tube Boilers (FO Fired, Coal, CNG, Agro waste, HVAC & Refrigeration)

(Vapour Compression & Vapour absorption), Air Compressors (Reciprocating & Screw type), Large capacity cooling towers & Systems, Ice Plants & Brine units, Nitrogen Generators, Air drier systems, Captive Power Generators (DGs CNG Engines & steam Turbines, Raw water treatment (Softener and DM Plants)

STANDARDS & QUALITY ASSURANCE AREA EXPOSURE

- BEE Accredited Energy Auditor, Lead Auditor – BIS 160001, ISO 9001 & ISO 140001, Good Manufacturing Practices (GMP), Good Engineering Practices (GEP).

ENERGY AUDITS

- Expert in Electrical & Thermal Energy audit covering Boilers, Steam System, Waste Heat Recovery Systems, Solar Water Heating/Drying, Biogas, Compressed Air System, Air Conditioning & Refrigeration System, Fans & Blowers, Pumps And Pumping System etc

No.2

Mr.MOHANDAS T.V. (EA – 1968)

Sree Bhavan,Vettekkara (P.O), Katambazhipuram,, Palakkad (Dist.)
Kerala ,India PIN:678633,

Educational Qualifications:

DIPLOMA in Mech. Engg.
B.Tech. in Mech: Engg.

Details of Experience:

- Southern Railway, Palghat Division as DIESEL ASSISTANT - Assisting the Diesel Locomotive Driver in operation & en-route maintenance.
- Directorate of Technical Education, (Govt: Engg.& Polytechnic Colleges) WORK SHOP INSTRUCTOR IN MECHANICAL ENGG
- SPERINTENDENT/PRINCIPAL OF TECHNICAL HIGH SCHOOL Teaching as well as Administration
- LECTURER IN MECHANICAL ENGG. Directorate of Technical Education, (Govt: Engg.& Polytechnic Colleges)

Other Relevant Experiences/ Achievements

- **Certified Energy Auditor No: EA 1968** {www.bee-nic.in/energy auditors Energy managers/2005 pass out}
- Conducted Energy Audit covering major areas such as Pumps, Refrigeration & A/C equipments.
- **Guest Faculty Member** of various Institutions like Energy Management Center, Thiruvananthapuram, Kerala State productivity council, Kalamassery, Curriculum development center, Various Engineering colleges & Polytechnics, ANERT,
- **About 7 years of experience** In Conducting more than 25 Trainings to: a. Energy Professionals of various Industries, b. Staff of Polytechnics of Kerala, & Tamilnadu states especially in the area of Energy conservation c. Students of various Engineering Colleges / Polytechnic Colleges

No.3

K.K.GEORGE (EA-3731)
33, GIRINAGAR, Kadavanthara, Cochin – 682 020. E-mail:
engineerkkgeorge@gmail.com, Mobile: 9846017635

- Diploma in Electrical Engineering – 1952 from University of Travancore.
- Grad. I.E (Graduate in Electrical Engineering) – 1963 from The Institution of Engineers (India), Calcutta.
- Completed M.Tech (Industrial Electronics) from Cochin University 1984.
- Certified Energy Auditor – May 2008 with the Reg. No. EA-3731 from the Bureau of Energy Efficiency, Govt. of India.
- Was employed with INDAL (Indian Aluminium Company Limited), Alwaye. Retired in 1991 as Chief Engineer, Indian Aluminium Company Limited.
- As Project Engineer, did the Erection, Testing and Commissioning of a 30 MVA, 110 kV Sub-Station & 68000Amps Silicon Rectifier Station and related 11 kV Substation and Ancillaries for INDAL in 1963 - 64.
- 1992 – 94 – External Auditor Consultant to Kerala State Productivity Council, undertaking Energy audit for Industries.
- As Project Consultant, GTN Textiles, Alwaye (1995 – 2008), responsible for Design, Erection, Testing and commissioning of 110 kV, 8 MVA Substation for the Textile Mill.
- Presently: Secretary, Kerala State High Tension and Extra High Tension Industrial Electricity Consumers' Association, Kalamassery – 683 104.
- Age 78 years. Married, and have a son and a daughter (both married).
- Expert in Electrical system audit covering Electric Motors, Lighting System, DG Sets and Transformers

No.4

K.Madhusoodanan (EA-1741)
Chief Engineer - Projects
TCC Ltd, Udyogamandal P.O
Kochi , India

Educational Qualifications

- 2004 Certified Energy Auditor (EA-1741) of Bureau of Energy Efficiency, New Delhi
- 1995 M Tech in Process Control, University of Calicut, Kerala
- 1992 Certificate in Personnel Computer Techniques and Application, IHRD, Kochi, Kerala
- 1987 AMIE in Mechanical Engg, The Institution of Engineers India, New Delhi

- 1983 BSc Engg, in Chemical Engg. First class with Hons., University of Cochin, Kerala

Career Enhancement

- 27 Years in the field of Chemical and Mechanical Engineering in Chlor-Alkali Industry, Cold Rolling steel plants and in the field of Energy Management and Conservation.

Major Career Achievements

- Successfully conceptualized and executed import substitution/alternate sourcing of spares which had resulted in substantial cost savings
- Successfully implemented process Modification/ retrofit projects/ /Energy efficiency EE resulting in annual saving of Rs 1 crore annually.
- Indirectly responsible for energy saving to the tune of Rs 6 crores annually through recommendations in Energy Auditing in about 20 Firms.
- Published articles in journals/dailies
- Organised about 15 National/state /regional seminars and workshops.
- Carried out energy audits in about 20 installations.
- Resource person for many Seminars and workshops on Energy management and Audit.
- Guided more than 25 Undergraduate and post graduate projects/Thesis work
- Edited a resource compendium for Industrial Energy Managers
- Editor of quarterly magazine 'energy manager'
- Expert in Thermal system (boiler, furnace, WHR, DPR preparation etc,..)

21	Sectors in which the energy auditor has conducted energy audits since inception	<ul style="list-style-type: none"> • Commercial Buildings - 47 Nos. • Tea - 24 " • Cement - 2 " • Rubber - 22 " • Food Processing - 15 " • Dairy - 11 " • Engineering - 45 " • Chemical - 3 " • Textile - 6 " • Iron & steel - 12 " • Aluminium - 2 " • Tyre - 3 " • Pharma - 4 " • Breweries - 1 " • Coir - 4 " • Printing - 5 " • Entertainment (Water theme park) - 3 "
22	Subject wise expertise	

(a)	Energy audit process system (list sectors) - If no energy audit has been carried out of the process system and parameters, please list nil. Bureau of Energy Efficiency will be calling for detailed information in case agency has listed its energy audit expertise in the process systems	<ul style="list-style-type: none"> • Tea • Rubber • Food Processing • Dairy • Iron & Steel • Cement • Minerals • Textile • Tyre • Pharma • Coir • Galantine
(b)	Energy audit thermal utility system (list sectors)	<ul style="list-style-type: none"> • Boilers • Steam System • Industrial Furnaces • Insulation And Refractories • Waste Heat Recovery Systems • Solar Water Heating/Drying • Biogas
(c)	Energy audit electrical utility system (list sectors)	<ul style="list-style-type: none"> • Electric Motors • Compressed Air System • Air Conditioning & Refrigeration System • Fans & Blowers • Pumps And Pumping System • Cooling Towers • Lighting System • DG Sets • Transformers
23	Instruments available	
	(a) Electrical (list the name of the instruments)	<ul style="list-style-type: none"> • Three phase Power & Harmonics Analyser (Krykard - ALM30) • Digital Power Recorder (MULTI - MPR600S) • Clamp – On Power meter- Meco 4500 • Lux Meter – Peaktech 5025
	(b) Thermal (list the name of the instruments)	<ul style="list-style-type: none"> • Combustion Analyser - KM 900/ Kane May • Infra Red Thermometer - MTX8/Metravi • Digital Temperature Indicator - Multi/Metravi • Dry & Wet Bulb Thermometer - Dimple • Digital Anemometer - AVM04/Metravi
24 (i)	Details of training programme/ seminars/ workshops conducted during the last 3 years in the field of energy efficiency / energy audit	

Sl.No.	Programme Title	Date	Venue
(i)	National Seminar on 'Clean Development Mechanism - Carbon Trading : Business Opportunities and Options' organized in association with Energy Management Centre, Trivandrum	17-18 Mar.2009	Rivera Suits, Cochin
(ii)	Energy Conservation & Management	18-19 May, 2009	Indian Rare Earths Ltd. Chavara, Kollam
(iii)	Maintenance of Electrical Equipment and Machines	4-5 Aug.2010	Productivity House, Kalamassery, Kochi
(iv)	Reducing Energy Cost	6-7 Oct.2009	Productivity House, Kalamassery, Kochi
(v)	Electrical Energy Conservation	26 th Nov.2009	Indian Rare Earths Ltd. Chavara, Kollam
(vi)	Electrical Energy Conservation	25 th Mar.2010	Indian Rare Earths Ltd. Chavara, Kollam
(vii)	'Energy Management System for Sustained Prudence' organized in association with SEEM, Kerala	17 th Aug.2010	International Hotel, Kochi
(viii)	Efficient Operation & Maintenance of DG Sets	28 th Oct.2010	Productivity House, Kalamassery Kochi
(ix)	Energy Conservation	14 th Dec.2010	Cochin International Airport Ltd, Kochi
(x)	Energy Conservation	27-28 Jan.2011	Indian Rare Earths Ltd. Chavara, Kollam
(xi)	Electrical Energy Conservation	13 th Sep 2011	Productivity House, Kalamassery Kochi
(xii)	Energy Conservation Awareness Programme (Half day)	14 th Dec 2011	Cochin Shipyard Limited, Kochi

D	Remarks(if any)

(Note: Responsibility of the authenticity of the above information rests with the concerned energy auditor/energy auditing agency.)