# **FORM IV**

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

Serial Number (AEA- 0102)		As on ( )	
A.			
1	Name of accredited energy auditor	Shri S. Nagarajan	
2	Father's name	S Srinivasan	
3	Date of certification as Energy Manager	August 10, 2007	
4	Date of passing the examination in "Energy Performance Assessment for Equipment and Utility Systems"	August 10, 2007	
5	Examination Registration Number of (i) Energy Manager (ii) "Energy Performance Assessment for Equipment and Utility Systems"	(i) EA 6456 (ii) EA 6456	
6	Certificate Registration Number of (i) Energy Manager (ii) "Energy Performance Assessment for Equipment and Utility Systems"	(i) 2792 (ii) 2792	
7	Date of issue of accreditation certificate	( to be filled by BEE)	
B.	Information in respect of	of trade name or firms	s' name
8	Trade name / firms name under which energy audit is proposed to be conducted	M/s.U.V.Krishna Mohan Rao Associates Chennai	
9	Date of accreditation as accredited energy auditor	( to be filled by BEE)	
10	Type of firm/ private/ Government / NGO etc.	Private	

11	Name of contact person along with designation, address, telephone, mobile and fax number along with STD codes and email address ( All details compulsory)	Mr. Krishna Mohan Rao Chief Executive &Proprietor 6 Rajaji Nagar Main Road, Madipakkam CHENNAI-600 091 Phone:044-2258 4172: Mobile:93823 82859 Telefax:044-2258 4172 Email:uvkrao@vsnl.net	
12	Professional postal address with Pin Code of the accredited energy auditor	C/O M/S.U.V.Krishna Mohan Rao Associates, 6 Rajaji Nagar Main Road, Madipakkam, Chennai-600 091	
13	E-mail address	nagarajan@uvka.net uvkrao@vsnl.net	
14	Telephone numbers . with STD Code (R) (O) Mobile no:	(044)32212859 (044)22584172 Mobile:93823 82859	
15	Year of establishment of the trade name / firms' name for undertaking the energy audit		
16	Year of commencement of energy audit of the firm	2001	
17	Whether any certificate to support the excellence in the system has been obtained (ISO etc.)	(i) Winner of PCRA Award of Excellence for Best performance as Energy Auditor during 2006 issued by secretary to Government of India, Ministry of Petroleum and Natural Gas and Chairman, Petroleum Conservation Research Association(PCRA)	
		(ii) Award Winner for Regional Project of the year 2012, from Association of Energy Engineers, Atlanta, USA	
		(iii) Bry Air Award for Best HVAC&R Project Implemented 2012	
		(iv) IPPAI Award for Best Energy Services Company 2012	

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18	No. of branch offices	Associate office in United Arab Emirates	
	(List of complete addresses including heads of all branch offices with telephone, fax and email addresses)	Y I M//C (Elabal Enginoaring Syctome E//:	
С	Details of Associated Energy Experts		
19	Number of resource persons available	18	
20	I. Number. of full-time energy auditors in position with work experience of all energy auditors associated with the firm	(1) Name: Balasubramanyam Umesh Role in Organisation: Senior associate  Number of Years Experience: 25  Survey of exist ion installations, type, mounting Ht, application area, natural light vents, type pf surroundings (walls) etc., As per relevant standards, lighting design preparation practice, type luminaries, sources, controls (are sensors required) etc., Recommendation of appropriate lighting installation w.r.t to the application and the task. Preparation of final design (for essential applications) plotting the ISO lux curves, with luminaries finalization along with proper legends Assisted in preparation of tenders, Negotiation, finalization guarantee, etc, from vendors. Assisted in procurement, inspection of the quality, type etc., installations, Finally inspection of Power consumption, savings, illuminations, w.r.t the existing and recommended, calculating payback of recommended luminaries practically. Clients have conserved 51% energy savings and about 30% increment in illumination levels with payback of about 12 months.  (2) NAME: Srinivasan NAGARAJAN B.Tech- Mechanical Engineering Certified Energy Auditor	

**Duties:** Senior Manager – Resources Conservation.

This position involves following actions: Conducting Preliminary and detailed energy audits, in Energy Intensive Industries. Identification, evaluation and implementation support for energy and water conservation in the Industrial and Commercial Establishments in the Country and neighbour countries, under the domain of Sustainability. Promotion of techniques and technologies that may be well adapted in the loca Implementation of schemes under Sustainable Development. Initiating projects, seminars and training programs related to energy and environment

#### (3) NAME:S.ARULMOHAN

Certified energy Auditor and Accredited **Energy Auditor** and Implementation Specialist Completed 28 energy audits across India and 6 Abroad including Cement ,Pulp & Paper, Engineering and Chemicals & Fertilizers, Glass & Ceramics, Dairy& food processing, Refineries, Sugar, Metals, Textiles, Hotels & Commercial buildings Implemented savings measurements, Jointly certified savings through accepted Measurement &verification protocol for above implementation assignments taken up by the company(practices listed In BEE WEB sites). with ITC paper industry, Grant Hyatt, ITC Sheraton hotel, Maurya Sheraton hotels Conducting training & Awareness programs in assignments wherein company implemented Audit Recommendations

#### (4) Name: V.Prabakaran,

B.E in electrical and Electronics Engineering

Role in the Organisation: Energy Efficiency

Implementation Specialist

Analysis of energy efficiency questionnaire, date collection and site measurements. Identifying energy efficiency proposals. Preparation of energy audit report and presentation of audit findings to client including top management.

Preparation of detailed specifications, vendor evaluation, logic note preparation with implementation plan

Proposed role on project Associate Auditing – Data collection & site measurements, verification and joint confirmation of data with client executives.

Energy saving concept identification and report preparation with technical details

#### (5) Name: Malic Mohamed Batcha

Graduate Electrical and Electronics Engineer Certified Energy Auditor

**Experience Relates to:** 

### **Energy Efficiency Implementation Specialist**

Analysis of energy efficiency questionnaire, data collection and site measurements. Identifying energy efficiency proposals. Experience in Design, Operation & maintenance HVAC, Compressed air & fan systems in industries Preparation of energy audit report and presentation of audit findings including top management,

Preparation of detailed specifications, vendor evaluation, logic note preparation Conducting training programmes for clients and assisting client to make energy policy

Following up with the client for early implementation of the energy proposals to achieve the Savings

CO<sub>2</sub> emissions calculations

**Numbers of Years Experience**: 30

Past Experience: Worked as a maintenance electrical engineer & Energy efficiency

engineer in nylon yre Tyre cord plant Experience in Design , operation & maintenance HVAC system in industrial plants Experience in Fans & Compressed Air system in industrial plants

Experience in ISO auditing

Experience in dairy energy management system including auditing of dairy sector in India, KSA

Experience in project management system including design of MEP works for residential towers, shopping malls in Dubai & KSA

Experience in electrical system auditing including lighting

Performance assessment of electrical equipments (transformers, Motors, VFDs) Experience in construction management of industrial plants-

Aluminum production plant (Qatalum -QATAR) Experience in design of electrical substations up to 110 KV

(6) Name : Dr.R.Saravanan

Role in the organization: Professor (Anna

University, Chennai)

Professor of

Refrigeration and Air-conditioning Laboratory

Specialized

in Energy Engineering

Sub

specialized in absorption cooling and heating system cogeneration and waste heat recovery

Sub

specialized in energy conservation and management

Guiding post

graduate students for energy audit in building & industrial sectors

Consultancy

assignments and guiding teams for conducting energy audits in building & industrial sectors

Proposed role project

: Advisor

#### Numbers of years Experience : 20

#### **Past Experience**

Design & development of Biomass based cold storage systems for Rural Area Applications

Studies on methanol based absorption Design & development of half effect vapour. Absorption cold storage systems using new working fluids for low potential heat sources

Development of single pressure Refrigeration System using Bio-gas as energy input.

Eco-friendly vapour adsorption heat transformer for water purification

81 articles published in various international conferences & journals and national conferences

Selected as member to conduct shortterm training program on Energy Conservation,

demand side management and advances in energy conservation for

TNEB (Tamilnadu Electricity Board) officials and conducted other programs

Certified energy Auditors from TNEB ((Tamilnadu Electricity Board), PCRA

(Petroleum Conservation Research Association) and KEB (Kerala Electricity Board)

Selected as one of five member delegation to attend the Energy Sector procurement

Training Programme conducted by SARIE / USAID, New Delhi at Sri Lanka – June 2003 / Dec 2003 for Energy Professional Exchange Program.

Membership includes Indian Society for Heating. Refrigerating and Air conditioning Engineers (ISHRAE) – President 2010-11, Indian Society for Heat and Mass Transfer (ISHMIT Indian society for Technical Education(ISTE)

	II. No. of part-time energy auditors in position during the current year / previous year associated with the energy auditor / energy auditor's firms.	12
21	Sectors in which the energy auditor/ energy audit firm has conducted energy audits since inception	High energy intensive clientele in Cement, Pulp & Paper, Metal & Metal products, Chemicals & Fertilizers, Glass& Ceramics, Sugar & Distilleries, Textiles, Fibers, Tyres, Granite processing, Iron & Steel, Automotive industry, Dairy & food processing, Captive power generation plants, Large Hotels, Hospitals, Malls, IT & Commercial Establishments
22	Subject wise expertise	Electrical, Thermal, Lighting, Water, Steam, hot water & condensate systems, renewable energy, Refrigeration & Air-conditioning, Rotating & Static equipments, (like compressors, Pumps, Vacuum pumps, Fans & Blowers), Captive power plants, Boilers, furnaces, kilns, ovens
(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	nil
(b)	Energy audit thermal utility system (list sectors)	Paper, Chemical, Cement, Captive power plants including Boiler Systems, High energy

		intensive Buildings such as Hospitals & Hotels, Fertilizers, Glass & Ceramics, Sugar & Distilleries, Iron & steel, Automotive, Dairy & Food processing, Textiles & Fibers, Metals & Metal processing, Tobacco processing & others	
(c)	Energy audit electrical utility system (list sectors)	Paper, Chemical, Cement, Captive power plants including Boiler Systems, High energy intensive Buildings such as Hospitals & Hotels, Fertilizers, Glass & Ceramics, Sugar & Distilleries, Iron & steel, Automotive, Dairy & Food processing, Textiles & Fibers, Metals & Metal processing, Tobacco processing &others	
23	Instruments available		
	(a) Electrical (list the name of the instruments)	Energy meters, Power analyzers Energy loggers Voltage and amps loggers	
	(b) Thermal (list the name of the instruments)	Flue gas analysers, Thermometers (contact & non contact type) Hygrometers (Whirling & digital)	
24 (i)	Details of training programme/ seminars/ workshops conducted during the last 3 years in the field of energy efficiency / energy audit	Grant Hyatt, Four seasons, Mumbai, &ITC Ltd covering the division of Pulp & Paper, Food processing, Cigarette & Tobacco, Printing & Packaging, Hotels & Malls on energy Efficiency &energy audit and brainstorming for energy & water savings	Conducted at: Agra-UP Bangalore-Karnataka Haridwar-Uttarkhand Tribeni-West Bengal Nadu New Delhi Bhadrachalam-AP Mumbai
(ii)		Training Program conducted on behalf of Danish Energy	Training Program conducted on behalf of Danish Energy

	Management, for future energy auditors in Vietnam	Management, for future energy auditors in Vietnam
(iii)	Training Program conducted on behalf of Danish Energy Management, for future energy auditors in Vietnam- in two energy intensive sectors-Brewery and Textiles	in Vietnam- in two

D	Remarks( if any)