


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

<b>Serial Number (AEA - 0080)</b>		<b>As on :- 26 February, 2013</b>	
<b>A.</b>			
1	Name of accredited energy auditor	M.MOHAMED BATCHA	
2	Father's name	M.SYED MALIK BATCHA	
3	Date of certification as Energy Manager	30 <sup>th</sup> April 2007	
4	Date of passing the examination in "Energy Performance Assessment for Equipment and Utility Systems"	2006	
5	Examination Registration Number of (i) Energy Manager (ii) "Energy Performance Assessment for Equipment and Utility Systems"	EA0387	
6	Certificate Registration Number of (i) Energy Auditor (ii) "Energy Performance Assessment for"	EA 0387	

	Equipment and Utility Systems”		
7	Date of issue of accreditation certificate	( to be filled by BEE)	
<b>B.</b>	<b>Information in respect of trade name or firms’ name</b>		
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 Tele fax: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	<a href="mailto:batcha@uvka.net">batcha@uvka.net</a> 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	2001
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.)	.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) UVKA home office at Chennai is first Platinum rated Green home in INDIA
18	No. of branch offices (List of complete addresses including heads of all branch offices with telephone, fax and email addresses)	
<b>C</b>	<b>Details of Associated Energy Experts</b>	
19	Number of resource persons available	24
20	I. Number. of full-time energy auditors in position with work experience of all energy auditors associated with the firm	12
	II. No. of part-time energy auditors in position during the current year / previous year associated with the energy auditor /	12

	energy auditor's firms.	
	CV of resource persons	<p><b>Name:</b> Balasubramanyam Umesh <b>Role in Organisation:</b> Senior associate</p> <p><b>Number of Years Experience:</b> 25</p> <p>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.</p>
	CV of resource persons	<p><b>Name:</b> Krishnan Premkumar, , B.E in electrical and Electronics Engineering</p> <p><b>Period</b> : From 2006 to till date  <b>Employer</b> : U V Krishna Mohan Rao Associates  <b>Designation</b> : Energy Efficiency Implementation Specialist  <b>Sectors handled</b> : Part of Audit team for more than 100 Audits in sectors like Tobacco Processing, Cigarette and lters, Commercial buildings, Dairy, Engg Industries, Food Processing industries, Textiles, Printing Packaging, Pharmaceutical &amp; Chemicals, Pulp &amp; Paper, Cement.</p> <p><b>Area of specialization:</b> HVAC&amp;R (High &amp; Low Side), Electrical &amp; Lighting, Pumping System, Compressed Air Systems, Water Audit, Boiler &amp; Steam Systems and Co Generation Plant.</p> <p><b>Description of Duties:</b>  Designing industry-wise preliminary and detailed audit energy efficiency scoping questionnaire  Analysis of energy efficiency questionnaires, data collection and measurements, performance assessments, identifying and preparing techno-commercial viability of energy efficiency schemes  Assess carbon savings and carbon footprint  Energy audit report preparation and presentation of energy audit findings and energy saving measures to client engineers and top management  Obtain client confirmation on acceptance of audit findings and recommendations  Finalizing specifications of recommended equipment and systems  Provide support for vendor identification, evaluation, logic note preparation with implementation plan  Provide support for execution of energy saving measures and any necessary trouble shooting  Measure, verify and jointly certify savings on implemented schemes  Comparing client facility consumption with national and international standards and comment on possible benchmarks. And providing target to client for</p>

		<p>energy consumption reduction</p> <ul style="list-style-type: none"> <li>• Conducting training programs on energy, water and carbon savings</li> <li>• Assist clients evolve energy policy, on need basis</li> <li>• Improving energy efficiency at inception / design stage</li> </ul>
CV of persons	resource	<p>1. <b>NAME:</b> <b>Srinivasan NAGARAJAN</b> <span style="float: right;">B.Tech- Mechanical Engineering</span></p> <p><b>Certified Energy Auditor</b>  <b>Position Held and Description of Duties:</b>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 local area. Implementation of schemes under Sustainable Development . Initiating projects, seminars and training programs related to energy and environment</p>
CV of persons	resource	<p><b>NAME:</b> <b>S.ARULMOHAN</b> <span style="float: right;">Certified energy Auditor and Implementation Specialist</span></p> <p>Completed 28 energy audits across India and 6 Abroad including Cement ,Pulp &amp; Paper, Engineering and Chemicals &amp;Fertilizers, Glass &amp; Ceramics, Dairy&amp; food processing, Refineries, Sugar, Metals, Textiles, Hotels &amp; Commercial buildings  Implemented savings measurements, Jointly certified savings through accepted Measurement &amp;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 &amp; Awareness programs in assignments wherein company implemented Audit Recommendations</p>
CV of persons	resource	<p><b>Name:</b> <b>V.Prabakaran,</b> <span style="float: right;">B.E in electrical and Electronics Engineering</span></p> <p><b>Role in the Organisation:</b> Energy Efficiency Implementation Specialist  Analysis of energy efficiency questionnaire, data 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</p> <p><b>Proposed role on project</b> <span style="float: right;">Associate</span>  Auditing – Data collection &amp; site measurements, verification and joint confirmation of data with client executives.  Energy saving concept identification and report preparation with technical details  Preparation of detailed specification and vendor information for all concepts.  <b>Numbers of years Experience</b> : 4</p>

		<p>Part of energy audit team for more than 80 audits including Buildings, hotels and commercial</p> <p>Experience in data collection and measurements on HVAC system at Buildings, Hotels and commercial malls.</p> <p>Air flow measurements and air balance in Air handling units, Fresh air units, exhaust system</p> <p>Chilled water system study and balancing system</p> <p>Total energy balance in commercial complex and Hotels.</p> <p>Carried out more than 20 water audits in various facilities</p> <p>Experience in rotating equipments including pumps and fans (performance measurement of equipments and system)</p>
CV of the resource persons		<p><b>Name: Malic Mohamed Batcha</b></p> <p>Graduate Electrical and Electronics Engineer</p> <p>Certified Energy Auditor</p> <p><b>Experience Relates to:</b>  <b>Energy Efficiency Implementation Specialist</b></p> <p>Analysis of energy efficiency questionnaire, data collection and site measurements.  Identifying energy efficiency proposals.  Experience in Design, Operation &amp; maintenance HVAC, Compressed air &amp; 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</p> <p><b>Numbers of Years Experience: 30</b></p> <p><b>Past Experience:</b> Worked as a maintenance electrical engineer &amp; Energy efficiency engineer in nylon tyre cord plant</p> <p>Experience in Design, operation &amp; maintenance HVAC system in industrial plants</p> <p>Experience in Fans &amp; Compressed Air system in industrial plants</p> <p>Experience in ISO auditing</p> <p>Experience in dairy energy management system including auditing of dairy sector in India, KSA</p> <p>Experience in project management system including design of MEP works for residential towers, shopping malls in Dubai &amp; KSA</p> <p>Experience in electrical system auditing including lighting</p> <p>Performance assessment of electrical equipments (transformers, Motors, VFDs)</p> <p>Experience in construction management of industrial plants- Aluminum production plant (Qatalum -QATAR)</p> <p>Experience in design of electrical substations up to 110 KV</p>
CV of the resource persons		<p><b>Name : Dr.R.Saravanan</b></p> <p><b>Role in the organization:</b> Professor (Anna University, Chennai)</p> <ul style="list-style-type: none"> <li>• Professor of Refrigeration and Air-conditioning Laboratory</li> </ul>

		<ul style="list-style-type: none"> <li>• Specialized in Energy Engineering</li> <li>• Sub specialized in absorption cooling and heating system cogeneration and waste heat recovery</li> <li>• Sub specialized in energy conservation and management</li> <li>• Guiding post graduate students for energy audit in building &amp; industrial sectors</li> <li>• Consultancy assignments and guiding teams for conducting energy audits in building &amp; industrial sectors</li> </ul> <p><b>Proposed role project</b> : Advisor</p> <p><b>Numbers of years Experience</b> : 20</p> <p><b>Past Experience</b></p> <ul style="list-style-type: none"> <li>• Design &amp; development of Biomass based cold storage systems for Rural Area Applications</li> <li>• Studies on methanol based absorption</li> <li>• Design &amp; development of half effect vapour. Absorption cold storage systems using new working fluids for low potential heat sources</li> <li>• Development of single pressure Refrigeration System using Bio-gas as energy input.</li> <li>• Eco-friendly vapour adsorption heat transformer for water purification</li> <li>• 81 articles published in various international conferences &amp; journals and national conferences</li> <li>• Selected as member to conduct short-term training program on Energy Conservation, demand side management and advances in energy conservation for TNEB (Tamilnadu Electricity Board) officials and conducted other programs</li> <li>• Certified energy Auditors from TNEB ((Tamilnadu Electricity Board), PCRA (Petroleum Conservation Research Association) and KEB (Kerala Electricity Board)</li> <li>• 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.</li> <li>• 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)</li> </ul>
21	Sectors in which the energy auditor has conducted energy audits since inception	, Pulp & Paper, Textiles, 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 &Cigarettes
(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 &Cigarettes
23	Instruments available	List attached
	(a) Electrical (list the name of the instruments)	Energy meters, Power analyzers
	(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-Utterakhand Tribeni-West bangal Coimbatore-Tamil Nadu New Delhi Bhadrachalm-AP Mumbai
(ii)		Tamilnadu Electricity board, from various districts of Tamil nadu on energy conservation Act , Energy Audit & efficiency	Chennai –Tamil Nadu
(iii)		Reserve bank of India staff college& head office, Chennai on Energy conservation Act, Energy Audit & Efficiency	Chennai-Tamil Nadu
		The Institution of Engineers (India) on National Mission for enhanced Energy Efficiency	Hyderabad-AP
<b>D</b>	<b>Remarks( if any)</b>		

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