



**Energy Management Centre - Kerala**  
**(Department of Power, Govt of Kerala)**

**CERTIFICATE OF EMPANELMENT**

*This is to certify that M/s Athul engineering systems and Energy Consultants, (4/2. Capital Legend, Korapath Lane, Round North Thrissur- 680021) is empanelled as Energy Audit firm in Energy Management Centre Kerala to conduct mandatory energy audit as per Government of Kerala G.O (Rt) No.2/2011/PD dated 01.01.2011.*

**Empanelment No:**

**EMCEEA- 0811F-1**

Scope/Area	Building	Industry -Electrical	Industry Thermal
	Yes	Yes	Yes

*This empanelment is valid up to 31st August 2017*

*Issuing Date: 05/11/2014*

*Place: Thiruvananthapuram*

Director,  
Energy Management Centre Kerala

## INFORMATION OF FIRM


1	Name & address of the firm	<b>ATHUL ENGINEERING SYSTEMS AND ENERGY CONSULTANTS</b> 4/2. CAPITAL LEGEND KORAPATH LANE, ROUND NORTH THRISSUR
2	Office(with STD)	
	Mobile	09746194984
	Fax number	
3	Website (if any)	www.athulenergy.in
4	Email address	<a href="mailto:info@athulenergy.in">info@athulenergy.in</a> asanthoshwarrier@yahoo.com
5	Name ,Designation and address of Contact person	<b>SANTHOSH.A</b> Managing Director,Athul Engineering Systems and Energy Consultants, 4/2 CAPITAL LEGEND , KORAPATH LANE, ROUND NORTH THRISSUR Kerala
6	Office(with STD)	
	Residence(with STD)	0487-2323653
	Mobile	09746194984
7	Email address	asanthoshwarrier@yahoo.com
8	Year of establishment	2010
9	Year of commencement of energy audit by the firm.	2010
10	No. of branch offices (List of complete addresses including heads of all branch offices with telephone, fax and email addresses)	Nil

## DETAILS OF ASSOCIATED ENERGY EXPERTS AND AUDITS CONDUCTED BY FIRM

1.	Number of resource persons available		05
2.	Number. of full-time energy auditors in position, with work experience of all energy auditors associated with the firm		02
3.	No. of part-time energy auditors in position during the current year / previous year associated with the firm.		02
4.	Sectors in which the energy audit firm has conducted energy audits since inception and number of audits in each sector		<ul style="list-style-type: none"> <li>• Chemicals 05</li> <li>• Food and spices and diary 09</li> <li>• Building and assembly line 09</li> <li>• Granite and crushers 09</li> <li>• Coir sector 05</li> <li>• Steel industry 05</li> <li>• Printing and publishing 11</li> <li>• Miscellaneous 03</li> </ul>
5.	Energy audit process system (list sectors) - If no energy audit has been carried out of the process system and parameters, please list nil.		Chemical , Steel, Printing, coir and jute, granite crushing, assembly line, electronic components, ayurveda and herbs, Hotels,Buildings, tea,Flour Mill etc.
6.	Energy audit of thermal utility system (list sectors)		Coir and Jute. Bread, Rubber Retreading. Tea, Chemical,Hot printing, Ayurveda medicines. Diary etc
7.	Energy audit of electrical utility system (list sectors)		Coir and Jute, Bread, Rubber Retreading, Spice, Corporate Offices, Mattresses, Flour mill., Printing, Electronic components,Crushers,Steel ,Asbestoses, Chemical, Etc.
8.	Instruments available	(a) Electrical (list the name of the instruments)	<b>1. Power Analyzer , Fluke1735 with flexi probes and software version 2.9</b> <b>2. Power and Harmonic Analyzer Kry Kard ALM35, with flexi and HT probes</b>

			<b>3. Clamp on meter ,Meter of Metravi DT-2250</b> <b>4. LUX meter, Amprobe LM-120</b> <b>5. Motwane Earth Tester</b> <b>6. Phase Sequence Indicator</b> <b>7. Single phase power analyzer Meco 4500</b> <b>8. Digital insulation Tester DT 990</b>
		(b) Thermal (list the name of the instruments)	<b>9. Vane flow meter , Metravi</b> <b>10. Fluke ,mini 62 Infra red thermometer</b> <b>11. Tachometer Metravi NCTM-1000</b> <b>12. Flue gas analyzer KANE 900+</b>

## BIO DATA OF CERTIFIED ENERGY AUDITOR.

1.	Name of energy auditor	<b>A SANTHOSH</b>	
2.	Qualifications.	B-.Tech (Mechanical)	
3.	Experience. (use additional sheet if required)	25 Years in industry and conducted more than 70 energy audits	
4.	Residence(with STD)	0487-2323653	
5.	Mobile	09746194984	
6.	Email address	<a href="mailto:asanthoshwarrier@yahoo.com">asanthoshwarrier@yahoo.com</a>	
7.	Date of certification as Energy Manager or Energy Auditor (pl	4 <sup>th</sup> September-2008	

	specify) by Bureau of Energy Efficiency (BEE) ( if not appeared list as nil		
8.	Date of passing the examination in “Energy Performance Assessment for Equipment and Utility Systems”	11 <sup>th</sup> February -2010	
9.	Examination Registration Number of (i) Energy Manager (ii) “Energy Performance Assessment for Equipment and Utility Systems” ( In case of Certified Energy Auditor, please write CEA Registration No.)		EA-7597
10.	Certificate Registration Number of (i) Energy Manager (ii) “Energy Performance Assessment for Equipment and Utility Systems”		For Energy Manager 3105 For Energy Performance 5098
	<b>Remarks( if any)</b>		
	<b><u>Additional Qualifications after B.Tech</u></b> PG Diploma in Energy Management (Hyderabad Central University) Diploma in Energy Engineering. MBA (Energy Management) External Faculty (PCRA)		

## PROFESSIONAL EXPERIENCE

### INDUSTRIAL BACKGROUND.

- 20 years Trans national experience in hard core chemical & Process industries at core executive level.
- Executed & managed critically important industrial operations in high risk environments.
- Posses a solid Engineering instinct with a perfect amalgamation of mass management in multiple area interlinked operations.
- Well exposed to the realities and vivid engineering problems barring the barrier of individual states.
- Associated with the industrial corporate of India viz. Hindustan lever, Tata, Birla, Jyothi laboratories etc.
- Have vivid exposure and seasoned training in the following areas.
  - Soap and Detergent Industry.
  - Petrochemicals.
  - Pharma Ingredients.
  - Agro Chemicals.
  - Spice extracts and food packaging.
  - Toxic and Hazardous chemical products.
  - Dye Intermediates
  - Drug & pharmaceutical industry
  - Solvent Extractions.
- **Executive & Managerial responsibilities shouldered in the following areas**
  - Project planning and execution
  - Budgetary preparation and analysis.

- Predictive maintenance and emergency break downs.
- Inventory Management.
- Training and HR (Energy awareness & others).
- Industrial Energy Audits.

➤ 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)

- PLANT

- ❖ Chemical reactors (MS, SS, MSGL, MSTL, MSRL, Lead lined, HDPE).
- ❖ Agitators (MS, SS, MSGL, MSRL, Lead lined, HDPE) of various varieties.
- ❖ Mixers & Blenders for various applications.
- ❖ Industrial filters (Filter press, Vibro screen, Bag filters, sparkler and cartridge.)
- ❖ Blowers & Fans (Axial & Centrifugal)
- ❖ Pumps (Centrifugal, Reciprocating , Screw,Vane,Diaphragm pumps)
- ❖ Material handling systems (Bucket elevator, Belt conveyor, Screw Conveyor, Pneumatic conveyors, Redlor conveyors, Roller conveyors).

- ❖ Packaging Machineries for various items.
- ❖ Evaporators & Condensers
- ❖ Heat exchangers (Graphite, MS, SS etc).
- ❖ Vacuum Pumps (Liquid Rings , Oil)
- ❖ Spray Drier.& Distillation
- ❖ Motors & Transformers.
- ❖ Lighting Systems.
- ❖ Cables & Control gear.
- ❖ Industrial Bio Gas Systems.
- ❖ Solar PV Systems.

#### **PREVIOUS EMPLOYERS & ASSOCIATES**


- ❖ Tata vasishti Detergents Ltd, Chiplune, Maharashtra, India.
- ❖ Hindustan Lever Ltd, Chiplune, Maharashtra, India.
- ❖ Kesar Petrochemicals Ltd, Chiplune, Maharashtra, India.
- ❖ Sriman Organic Chemical Industries Ltd, Tharapur, Maharashtra, India.
- ❖ Zenith Chemicals Ltd (A Unit of Yash Birla Group), Tharapur, Maharashtra, India.
- ❖ Jyothi Laboratories Ltd, Indore, Madhya Pradesh.
- ❖ Gujarat Agro Chemicals Ltd, Ankaleshwar, Gujarat, India.
- ❖ Aarathi Drugs Ltd, Ankaleshwar, Gujarat, India.
- ❖ Kancor Ingredients Ltd, Angamaly, Kerala, India.
- ❖ Energy Conservation Society, (An NGO working in the Energy – Environmental sector).

#### **STANDARDS & QUALITY ASSURANCE AREA EXPOSURE**

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



## BIODATA OF CERTIFIED ENERGY AUDITOR.

1.	Name of energy auditor	<b>K K BABU</b>	
2.	Qualifications.	B.Sc Engineering (Electrical)	
3.	Experience. (use additional sheet if required)	34 Years and conducted more than 70 Energy Audits	
4.	Residence(with STD)	0485-2207204	
5.	Mobile	09447987935	
6.	Email address	<a href="mailto:bmassociates1949@gmail.com">bmassociates1949@gmail.com</a> , <a href="mailto:babukilinal@gmail.com">babukilinal@gmail.com</a>	
7.	Date of certification as Energy Manager or Energy Auditor (pl specify) by Bureau of Energy Efficiency (BEE) ( if not appeared list as nil	18 <sup>th</sup> November -2005	
8.	Date of passing the examination in “Energy Performance Assessment for Equipment and Utility Systems”	30 <sup>th</sup> April -2006	
9.	Examination Registration Number of (i) Energy Manager (ii) “Energy Performance Assessment for Equipment and Utility Systems” (In case of Certified Energy Auditor, please write CEA Registration No.)	EA-2422	

10.	Certificate Registration Number of (i) Energy Manager (ii) "Energy Performance Assessment for Equipment and Utility Systems"	For Energy Manager - 0657 For Energy Performance -2231
<b>Remarks( if any)</b> <i>Having Advanced Diploma in Management from IGNOU</i>		
<b>PROFESSIONAL EXPERIENCE</b>		
<p style="text-align: center;"><b><u>KERALA STATE ELECTRICITY BOARD(KSEB).</u></b></p> <p><b>Retired as Dy. Chief Engineer in 2004.</b></p> <p><b>Entered in service as Asst. Engineer and completed 30 years of Service (1974 – 2004).</b></p> <p><b><u>Responsibilities.</u></b></p> <p><b>Electrical Design, Planning and Estimation:</b></p> <ul style="list-style-type: none"> <li>• Design, Planning and Estimation of various Electrical Installations (LT &amp; HT)</li> </ul> <p><b>Design, Construction, Operation and Maintenance</b></p> <ul style="list-style-type: none"> <li>• Undertaken Design, Construction, Operation and Maintenance of various Distribution Systems (LT &amp; HT), Transmission Lines and Substations (EHT), and Generating Stations.</li> </ul> <p><b>System Operation and Load Despatching :</b></p> <ul style="list-style-type: none"> <li>• Involved in functions like Grid Management, Load Generation Balance and Water Management which were highly challenging under ABT regime.</li> <li>• Represented K.S.E.B. in major meetings and discussions related to System Operation.</li> </ul> <p><b>Human resource management:</b></p> <ul style="list-style-type: none"> <li>• Always tried to motivate the supporting Engineers &amp; Technicians and enhanced their service skills and competencies.</li> </ul> <p><b>Major Achievements:</b></p> <ul style="list-style-type: none"> <li>• Directly involved in the construction and commissioning of 3 Nos. EHT Substations and 2 Nos. EHT Transmission Lines.</li> <li>• As Dy. Chief Engineer in charge of Grid Management, led a team of dedicated Engineers and Technicians to successfully implement Availability Based Tariff (ABT) in K.S.E.B.</li> </ul>		

**Bcubenergy Systems, Cochin.(Energy Management Consultants)**

**Senior Consultant, Jan 2007 - Oct 2009.**

**Responsibilities:**

**Energy Conservation, Efficiency Improvement:**

- Exploit expertise in Energy Management; undertake Energy Audits and Energy Conservation and Energy Efficiency Improvement projects.
- Review various Energy Efficiency Projects and enhance efficiency by incorporating appropriate Energy Efficient Technology.

**Major Achievements:**

- Successfully conducted Energy Audits and recommended Energy Efficiency Improvement measures

**Connect It, Palarivattom, Kochi. (Electrical Consultants)**

**Chief Consultant, Feb 2007 – Oct 2009**

**Responsibilities:**

**Electrical Design, Planning and Estimation:**

- Design, Planning and Estimation of various types of Electrical Installations (LT, HT, and EHT).
- Develop a team of Power Engineers, personally train them and enhance their skills and competencies.

**Major Achievements:**

- Successfully completed Electrical Design, Planning and Estimation (LT and HT) of 12 Nos. Apartment Buildings and 2 Nos. Hotel Projects.

**BM Associates, Kochi, Kerala.(Electrical & Energy Management Consultants)**

**Chief Consultant, Oct 2009 onwards.**

**Responsibilities:**

**Energy Conservation and Energy Efficiency Improvement:**

- Exploit expertise in Energy Management, establish and undertake Energy Audits, Energy Conservation, and Energy Efficiency Improvement Projects.
- Review various Energy Efficiency Projects and enhance efficiency by incorporating

appropriate Energy Efficient Technology.

- Develop a team of Energy Engineers, personally train them and enhance their skills and competencies.

**Electrical Design, Planning and Estimation:**

- Design, Planning and Estimation of various types of Electrical Installations (LT, HT, and EHT).
- Develop a team of Power Engineers, personally train them and enhance their skills and competencies.