

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

## **CERTIFICATE OF EMPANELMENT**

This is to certify that **M/s. The Energy and Resources Institute** (**TERI**), (4th Main, 2nd cross, Domlur II Stage, Bangalore – 560 071) 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-1111F-3

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

This empanelment is valid up to 01/02/2024 Issuing Date: 02/02/2021 Place: Thiruvananthapuram

> Director, Energy Management Centre Kerala

	Information of firm			
1.	Name & address of the firm	The Energy and Resources Institute (TERI), 4th Main, 2nd cross, Domlur II Stage, Bangalore – 560 071		
	Office(with STD)	080 – 25356590 (5 lines)		
	Mobile			
	Fax number	080 – 25356589		
2.	Website (if any)	www.teriin.org.com		
3.	Email address	terisrc@teri.res.in		
4.	Name ,Designation and address of Contact person	G R Narsimha Rao Sr.Fellow & Area Convenor The Energy and Resources Institute (TERI), 4th Main, 2nd cross, Domlur II Stage, Bangalore – 560 071		
5.	Office(with STD)	080 – 25356590 (5 lines)		
	Residence(with STD)	080-26723750		
	Mobile	09448083750		
6.	Email address	grnrao@teri.res.in		
7.	Year of establishment	1974 – TERI		
8.	Year of commencement of energy audit by the firm.	1985		
9.	No. of branch offices (List of complete addresses including heads of all branch offices with telephone, fax and email addresses)	<ul> <li>H.O. : The Energy and Resources Institute, Darbari Seth Block, Habitat Place, Lodhi Road, New Delhi – 110 003. Tel: 011-24682100/2111, Fax No. 011- 24682144, Email: mailbox@teri.res.in</li> <li>Southern Regional Centre: TERI, 4<sup>th</sup> Main, 2<sup>nd</sup> cross, Domlur II Stage, Bangalore – 560 071. Tel: 080 – 25356590 (5 lines), Fax: 080 – 25356589, Email: terisrc@teri.res.in</li> <li>Western Regional Centre: TERI, House No.233/GH-2, Vasudha Housing Colony, Alto-St.Cruz, Tiswadi, Goa-403202. Tel: 0832-2459306, email: teriwrc@teri.res.in</li> <li>Mumbai office: TERI, Office No. 318, Raheja Arcade, Sector-11, CBD-Belapur, Navi Mumbai – 400 614. Tel: 022-27580021, Fax: 27580022, Email: terimumbai@teri.res.in</li> <li>Northern office: TERI, Chachal Hengrabari, Express Highway, Guwahati-781 036, Tel: 0361-2334790, Fax: 0361-2334869, Email: terine@teri.res.in</li> </ul>		

	Details of Associated Energy Experts and Audits Conducted by firm				
1.	Number of res	ource persons available	20		
2.	Number of full-time energy auditors in position, with work experience of all energy auditors associated with the firm		8		
3.	No. of part-time energy auditors in position during the current year / previous year associated with the firm.		1		
4.	Sectors in which the energy audit firm has conducted energy audits since inception and number of audits in each sector				
5.	Energy audit process system (list sectors) - If no energy audit has been carried out of the process system and parameters, please list nil.		Paper, Sugar Sectors		
6.	Energy audit of thermal utility system (list sectors)		Power plants, Cement, Pulp & paper, Textiles, Chlor-Alkali, Fertilizer, Iron & Steel, Sugar, Buildings etc.,		
7.	Energy audit of electrical utility system (list sectors)		Power plants, Cement, Pulp & paper, Textiles, Chlor-Alkali, Fertilizer, Iron & Steel, Buildings etc.,		
8.	Instruments available	<ul> <li>(a) Electrical (list the name of the instruments)</li> <li>(b) Thermal (list the name of the instruments)</li> </ul>	<ol> <li>Power quality analyzer (three phase) – 3 Nos.</li> <li>Power quality analyzer (single phase) – 2 Nos.</li> <li>Hand held power &amp; harmonic analyzer – 3 Nos.</li> <li>Motor tester – SMT 20 – Techno links – 2 Nos.</li> <li>Digital Lux meter - 3 Nos.</li> <li><i>Calibration of Instruments done on regular basis for ISO purpose</i></li> <li>Ultrasonic Flow Meter – 4 nos.</li> <li>Flu gas analyser – 2 Nos.</li> <li>Hygrometer – 2 Nos.</li> <li>Hot wire Anemometer – 2 Nos.</li> <li>Anemometer - 2 Nos.</li> <li>Velocity monitor (with pitot tube) – 3 Nos.</li> <li>Multifunction Kit - Testo – 2 Nos.</li> <li>Non Contact type Infra Red Temperature Indicator – 3 Nos.</li> </ol>		
			<ul> <li>10 Data logger (12 – 42 channels)– 2 Nos.</li> <li>11. Non Contact type Stroboscope – 1 No.</li> <li>12. Thermocouples with indicators - 5 Nos.</li> <li><i>Calibration of Instruments done on regular basis for ISO purpose</i></li> </ul>		

	*Biodata of Certified Energy Auditor				
1	Name of energy auditor	G R Narsimha Rao			
2.	Qualifications.	B.Tech (Mech. Engg) M.Tech (Energy Systems) PG in Environmental Management			
3.	Experience. (use additional sheet if required)	TERI – 13 years Andhra Pradesh Productivity Council– 1 year Total Experience – 14 years			
4.	Residence(with STD)	080-26723750			
5.	Mobile	09448083750			
6	Email address	grnrao@teri.res.in			
7	Date of certification as Energy Manager or Energy Auditor (pl specify) by Bureau of Energy Efficiency (BEE) ( if not appeared list as nil	6 <sup>th</sup> April 2005			
8	Date of passing the examination in "Energy Performance Assessment for Equipment and Utility Systems"	2004			
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 - 0011	<u>.</u>		
10	Certificate Registration Number of				
	(i) Energy Manager				
	<ul> <li>(ii) "Energy Performance Assessment for Equipment and Utility Systems"</li> </ul>				
	Ren	narks( if any)Nil			

I hereby state that information furnished above is true and correct to the best of my knowledge.

Place: Bangalore

Date: 26.12.2011

G. R. Norsinta Ro

Signature: Name: G R Narsimha Rao \*please attach biodata of all auditors/managers of your firm (attached below)

Sl. No.	Name & Designation	Educational qualification	Experience	Energy Auditor's Exam of BEE
1.	Girish Sethi Sr Fellow	M.E. (Technology in the Tropics) - University of Applied Sciences, Cologne (Germany) M.Tech (Energy studies) – Indian Institute of Technology, New Delhi	Total experience above 22 years. TERI – 14 years National Council for Cement and Building Materials, New Delhi – 8 years	
2.	Prosanto Pal Sr Fellow	M. Sc. (Manufacturing Systems Engineering), University of Warwick, Coventry, U.K., 1994 M. Sc. (Process Engineering), University of Strathclyde, Glasgow, U.K., 1991 B. Tech. (Chemical Engineering), IIT, Delhi, 1986	Total experience 21 years. TERI – 14 years CMDC Design Private Limited, New Delhi – 2 years National Research Development Corporation, New Delhi – 1 year Britannia Industries Limited, Mumbai – 4 years	
3.	N Vasudevan Fellow	BE (Mechanical Engg) - Thiagarajar College of Engg (Madurai Kamaraj Univ); M Tech (Energy conservation) - Bhartidasan School of Energy	Total experience 17 years. TERI – 16 years Usha Martin Industries Limited, Kolkata – 1 year	Certified Energy Auditor
4.	Dr Debashis Pramanik Fellow	Ph. D (Mechanical Engineering) from Bengal Engineering & Science University, Shibpur, Howrah, 2002-2005. M. Tech. In Energy Studies - IIT, New Delhi, B.Sc. (Engg) in Mechanical Engineering - BIT, Mesra, Ranchi University, Jharkhand.	Total experience – 22 years TERI – 19 years Ankur Energy Development Pvt Ltd, Baroda – 6 months Tata Steel (RMD), Jharkhand - about 2 years	
5.	Ananda Mohan Ghosh Fellow	M.Tech. (Engineering Systems & Management)	TERI – 9 years Defence – 15 years Total experience – 24 years	Certified Energy Auditor

## LIST OF CERTIFIED ENERGY AUDITORS AVAILABLE WITH THE FIRM

SI. No.	Name & Designation	Educational qualification	Experience	Energy Auditor's Exam of BEE
6.	P Sridhar Chidambaram Associate Fellow	M.Tech (Energy Conservation & Management) B.E (Mechanical Engineering)	Experience: 7 years TERI - Joined in May 2005 Blue Star Ltd, Mumbai – 1 year Pranam Consultants (P) Ltd, Pune – 3 years	Certified Energy Auditor
7.	Mr Pawan Kumar Tiwari Research Associate	M.Tech (Energy Management) from School of Energy and Environment Study, Indore B.E (Electronics) from Bhopal University)	Joined TERI in December 2008. Earlier worked with KGL Systel Ltd., SGS India Pvt. Ltd , and Conzerv Systems Pvt. Ltd.	
8.	G R Narasimha Rao Fellow	B Tech (Mech Engg.) M Tech (Energy Systems) PG in Environmental Management	TERI –14 years Andhra Pradesh Productivity Council – above 1 year Total Experience – above 15 years	Certified Energy Auditor
9.	T Senthil Kumar Fellow	B E (Electrical & Electronics Engineering) M B A – Certificate Course in Energy Audit	TERI – above 12 years Audit and Conservation of Energy Technologies Pvt. Ltd. – 2.5 years TTK Ltd. – around 1 year Total Experience – around 16 years	Certified Energy Auditor
10.	D Ramesh Fellow	B E (Electronics Engineering) M.B.A (Mktg) Certificate Course in Energy Audit	TERI – 1 year GTZ – 3.5 years Others – 12.5 years Total Experience –17 years	Certified Energy Auditor
11.	B S Dwajan Sr. Fellow	B. E (Electrical) TPSPTI – 1 year Env. Management – 3 Months PG Diploma in Industrial Management	TERI – around 11 years CIGFIL – 3 years KPCL - 22 years Total Experience – Nearly 36 years	Certified Energy Auditor
12.	Vijayakumar C Research Associate	M.Tech (Energy Conservation & Management) B E (Chemical Engineering)	TERI – 1 year Lipi Boilers – 2 years Chemical industry – 1 year Total Experience – 4 years	Certified Energy Auditor
13.	M Nagarajan Research Associate	BE (Electrical & Electronics Engineering)	TERI – 2 Years	
14.	T.Sivakumar Research Associate	BE (Electrical & Electronics Engineering) M.Tech (Energy Conservation & Management) Diploma in Computer Technology	TERI – 2 months Sridevi Boilers & Consultancy - 1 year Pranam Consultants – 4 mths Total experience – 1 year 6 mths	Certified Energy Manager

SI. No.	Name & Designation	Educational qualification	Experience	Energy Auditor's Exam of BEE
15.	Kumara Swamy C Research Associate	B.E. (Mechanical)	TERI – 2 years Haryana Steels (p) Ltd .– 3.5 years Auroma Consultancy – Biomass Power – 2.5 years <b>Total Experience – 8 years</b>	
16.	Nisha Rekha K Research Associate	B.E (Electrical Engineering) M.Tech (Energy Engineering)	TERI – 4 years Engineering Industry– 3 years IT Industry – 2 Years <b>Total Experience – 9 years</b>	
17.	Mr.L.Manjunath Research Associate	B.E ( Chemical Engg. ) M.Tech ( Energy & Environmental Engg.)	Total Experience – 2 years	
18.	Mr.Atul Kumar Yashwanth Atui Research Associate	B.E. (Chemical Engg)	Total Experience – 2 years	
19.	Stuti Narayan Research Associate	B.E (Electrical)	TERI – 2 Years <b>Total Experience – 2 years</b>	