



# INDUSTRIAL ENERGY AUDIT





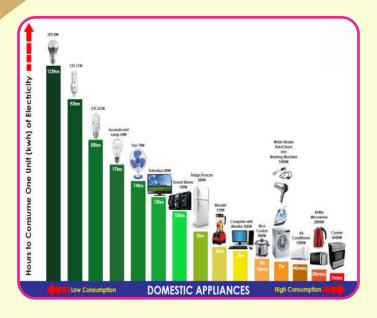
Estd: 1994

# **K.L.N. College of Engineering**

**Department of Electrical and Electronics Engineering** 

Pottapalayam - 630 612 Sivagangai District, Tamilnadu





# **Centre of Excellence Energy Audit Division**

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#### **ABOUT THE COLLEGE**

#### Vision

To become a Premier Institute of National Repute by Providing Quality Education, Successful Graduation, Potential Employability and Advanced Research & Development through Academic Excellence.

#### Mission

To Develop and Make Students Competent Professional in the Dynamic Environment in the field of Engineering, Technology and Management by emphasizing Research, Social Concern and Ethical Values through Quality Education System.

## A Brief History of the College

K.L.N. College of Engineering is the first self-financing Co-educational Engineering College in Madurai, started in 1994 by Munificence of Philanthropist and well-wishers in Sourashtra Community which is a linguistic minority in Tamilnadu. This college is sponsored by the committee of eminent industrialists and academicians led by enthusiastic, educationalist and industrialist (Late) Thiru K.L.N. Krishnan. This college has the approval of All India Council for Technical Education, New Delhi and is affiliated to Anna University, Chennai. We offer seven UG Courses, B.E, Mech, EEE, ECE, CSE, AUE, EIE & B.Tech IT and Seven PG Courses, M.E. CAD / CAM, PSE, CS, CSE, CSE, CSE (N/W, MBA & MCA & PhD Full Time & Part Time Programmes

## The Department of Electrical and Electronics Engineering

Started offering B.E. in Electrical and Electronics Engineering in the year 1994. Started offering M.E. in Power Systems Engineering in the year 2005. Accredited in March 2004 (First time) and Re-accredited (Second time) by National Board Accreditation, New Delhi. Re-accredited (Third time) National Board Accreditation, New Delhi. Recognized Research Centre Approved by Anna University, Chennai with effect from December 2012, and offering guidance for M.S & Ph.D. (Full time/Part time). Both UG and PG programs are permanently affiliated to Anna University, Chennai with effect from December 2012.

#### **HISTORY OF THE DEPARTMENT**

B.E Electrical and Electronics Engineering		M.E Power Systems Engineering		Ph.D.	
Year of start & History of Intake	1994, with an intake of 40	Year of start & History of Intake	2004, with an intake of 18	Year of Recognition as Research Centre	2012
	1996, with an intake of 60		2012, with an intake of 24	HIRST RENEWAL	2015, upto December 2018
	2002, with an intake of 90				
	2011, with an intake of 120				

Both UG & PG programs are permanently affiliated to Anna University, Chennai.

Accreditation status						
First Accreditation	Second Accreditation	Third Accreditation	Fourth Accreditation			
3 YEARS W.E.F. 19-3-2004			Academic Year 2016-17,2017-18 and 2018-19, i.e., upto 30-06- 2019			

## **Energy Audit**

An energy audit is an inspection, survey and analysis of energy flows, for energy conservation in a building, process or system to reduce the amount of energy input into the system without affecting the output(s). In industries, Hotels, Hospitals, Residential Buildings, Colleges, Schools, Banks, Theatres, HT, LT, LTCT, Mills, SIDCOS & Etc., an energy audit is the first step in identifying opportunities to reduce energy expense. The testing will be conducted asper the standard of IEI, IEEE, IEC, BS, IS for the industries enable to find out the losses and minimizing methods. We verify all AMC records about the activities carried out by the contractor for smooth functioning of the equipments.

# **Electrical Energy Audit**

Electrical Energy Audit forms an integral part of an Industrial Energy use. Electrical Energy Audit consists of Studying, Assessing, Measuring and Analysing electrical utilities. In a typical Plant the electrical utilities consists of Generators, EB incoming, Transformers, Power Distribution System, Metering and Monitoring System, Motors, Blowers, UPS, Batteries, Stabilizers, Fans, APFC, Maximum Demand Controllers, Air Conditioners, Compressors, Pumps, Lighting, Lightning arresters, Earthing, Solar Power Plants, On grid, Off grid & Net metering Etc. This all equipments will be tester based on the specification of the equipments.

## **Electricity Bills**

Further to this analysis of electricity bills, energy consumption trends, bench-marking in line with process requirement is also carried out.

## **Benefits of Energy Audit**

Reduces Electricity Bills, Increase energy efficiency, Reduce energy usage, Improve indoor air quality, Produce consistent interior temperatures, Reduce interior drafts, Improve humidity control & ventilation etc.

#### Our Work

Our Energy audits will evaluate your facility "as a whole", to consider a wide range of available facilities (Electrical, Mechanical, Envelope and Water).

The audit will not only inform you of opportunities but provide you with financial analysis. This will enable prioritization based on financial benefit and return on investment.

Provide you with solid, easy to understand technical information regarding the proposed energy conservation measures.

A good quality audit will analyze your historical energy use and find potential issues using statistical methods.

Provide you with emissions analysis to help you understand the benefits of your decisions from an environmental standpoint.

Understand where energy is used and which areas are worth focusing on the most.

The cost-benefit analysis of the audit suggestion would help decision makers prioritize opportunities and evaluate them as investments.

Training will be provided for the users, operators, Engineers

The Suggestion and Details will be given through our Department of EEE, K.L.N. College of Engineering with expert opinions.





Energy Audit at M/s.P.K.S.Engineering Kappalore Madurai



PEACE Awareness program at Perambalore for General Manager DIC, Perambalore



Energy Audit Awareness program at Theni along with The Collector, Petroleum conservation and research Associations (PCRA) and DIC Theni



**Energy Audit at a Home at Kochadai** 



Promotion of Energy Audit and Conservation of Energy (PEACE) training program for Industries at Rameswaram On behalf of District Industries centre, Ramanathapuram



Energy Audit PEACE Training program and valedictory function along with General Manager, DIC Madurai



IEEE HUB CONGRESS AT THIAGARAJAR COLLEGE OF ENGINEERING MADURAI



Promotion of Energy Audit and Conservation of Energy (PEACE) with Collector Madurai and GM,DIC,
Madurai for the promotion of Energy Audit



Electrical Engineers
A Grade Association Meeting at
Courtralam , Thirunelyel District



**Energy Audit at Unit Trust of India, Madurai** 



Energy Audit at M/s.MEDNOB HEALTH CARE Madurai



Energy Audit at M/s. ANNAPOORNA TOWERS
Madurai



Energy Audit at M/s.VETRI CINIMAS
Madurai



Energy Audit at M/s.TEMPLE CITY
Madurai



**Energy Audit Training Programme Rameshwaram** 



Energy Audit Training Programme
Perambalur



**Energy Audit Training Programme Kovilpatti** 



Energy Audit Training Programme Namakkal



Energy Audit at M/s.Bargavi Textiles Kappalore, Madurai

Energy Audit at M/s.MM Hospital, Namakkal



M/s Ramanujam Mill Owner Residence Theni District



M/s Thambis
Theatre Cumbum
Theni District



M/s Krishna Theater, Theni Theni District



M/s Bargavi Textiles, Kappalore, <u>Madurai</u>



M/s Vetri cinemas Madurai



M/s Ansell, Bommanasandra Bangalore



M/s. Scientific Agricultural Laboratory, Madurai



M/s Tamilnadu Theological college, Madurai



M/s CDD Center, Madurai



M/s J-Cup Residency, Thirunagar Madurai



M/s Agriya Chemical, Madurai



M/s Temple City Hotel Dreams, Surveyor colony Mattuthavani, Madurai



M/s Temple City Hotel, Mattuthavani, Madurai



M/s Gokul Industries, **Theni District** 



M/s Jeyaraj Industries, Periyakulam, Theni District

**B** Vikram Multispeciality Hospital



M/s Vikram Multi speciality Hospital, Madurai



M/s Apollo First Med Hospital, K.K.Nagar, Madurai



M/s TVS and Sons PVT LtD, 211, South veli street Madurai



M/s I-TAS, Palanganatham, Madurai



M/s IK Engineering Solutions, Kappalore **Madurai District** 



M/s Sharon Solar Solutions, Thiruparangundram, Madurai.



M/s Maheswari Industries, Uranganpatty, Madurai District



M/s Arunachalam Lathe Industries, Urnganpatty, Madurai District



M/s Meenakshi Urangan patty, Madurai District



M/s Mookan Rice Mill, Uranganpatty, Madurai



KS Hospital, Near Anna Bus stand, Madurai-625020



Visited University of Nottingham Kuala Lumpur Malasyia Kuala Lumpur Malasyia



Visited CDAC, Power Electronics Group Thiruvananthapuram, Kerala







M/s Madanapalle Institute of Technology & Science ,
Angallu (Village), Madanapalle-517325,
Chittoor District, Andhra Pradesh



M/s J.S.Publication, Mattuthavani, Madurai- 625007



IEEE, Madras Section At
CEG's TAG Auditorium SB Introduction and
Energy Audit Speech For all IEEE Members



M/s Jawahar wood , Thankkankulam, Madurai



M/s Vasundra Textiles Shed 9,



M/s Standard Enterprises Kappalore, Madurai



Vijay polymer, unit-II, SIPCOT, Nilakottai Dindigul



M/s Jeyarenge Textiles, Theni For PhD work Of Mr.A.Sahayaraj



M/s Amway India Enterprises Pvt. Ltd., SIPCOT, Nilakottai Dindigul



M/s Aurolab, Veerapanchan, Madurai.



M/s Shanlax press, Madurai



M/S Jeevan Nission, Thoppor, Madurai



M/s Jawaharlal and Co, Vasanthanagr, Madurai



Star Biological, Kappalore Madurai



AAA College of Engineering Sivakasi



M/s Dhaya Calibrations, Andalpuram, Madurai



M/s Bagathsing Furniture, Thanakkankulam, Madurai



M/s AVN Hospital, Vilacherry, Madurai



M/s Raj weaving Shed No 18, Unit – II, SIDCO Industrial Estate Kappalore, Madurai



M/s Raj weaving Shed No 18, Unit - I, SIDCO Industrial Estate Kappalore Madurai



TANGEDCO
Industrial Meet on energy saving and safety,
SIDCO, Kappalore Madurai District



TANGEDCO
Industrial Meet on energy saving and safety,
Dindigul



M/s Port trust Hospital, Chennai



M/s Magnum Imaging and Diagnostics.
Trichy



M/s Kreative India, Trichy



Arulmigu Subramaniay swamy temple Thiruparangundram, Madurai



M/s Keswik Public School, Madurai.



M/s Hotel Times, Madurai



M/s Kaveri Mahal, Madurai.



M/s Jeyaraj Automobiles and Deepthi Agencies Madurai.



M/s Jeyaland School, Jeyaraj Nagar, Madurai.



State Bank of India,
Personal Banking, Madurai City Branch
Madurai



State Bank of India, SME Branch, Madurai



M/S Barkavi Textiles Kappalur, Madurai.



M/S Ansell, Bangalore



M/s Hayargreeva school, Mayladumparai, Theni District



M/s Rajkumar Restaurant Triplicane, Chennai



M/s Unnamalai Ammal Multispecialty Hospital & Research Centre, Kadamalaikundu, Theni



M/s Thiagarajan Automobiles, IOC, South veli Street, Madurai



M/s Thiagarajan Automobiles, IOC, Thallakulam, Madurai



M/s Aravind Eye Hospital, Anna Nagar, Madurai



M/s Madurai City Hospital, Sathamangalam, Madurai



M/s ACME Elastomer, Kappalore



M/s Madurai ACME Enterprises, Madurai



M/s Tusker Designer Tiles, Kappalore



M/s Natchiar Silks, Madurai



Mr.Rengarao /K.L.N.C.E Solar PPA, Madurai



**K.L.N.C.E Solar PPA Meeting** 



**KLN College Function** 



**K.L.N.C.E A/C Power Saver** 



M/S Man Make Tailors,
Near Madanagopalasamy temple street,
Madurai



M/S VSR(P) LTD, K.Pudur, Madurai 625 007



M/S Chiamala Pressing, K.Pudur, Madurai - 625 007



M/S Priya Complex, Anna Nagar, Madurai - 625 020



M/S Mahendra Crushers, Checkanurani (PO), Madurai – 625 514



Aravind Eye Hospital,
Madurai
Interaction for 100 th Program on Instrumentation



SIDCO Association, K.Pudur, Madurai.



IVLR Concrete No 9, Madurai Ramnad Main Road, Near Teppakulam Iravathanallur Madurai City, Madurai - 625001



M/S TOUCH INFRAS,
MADURAI(Builders and Promoters)



Air conditioner Energy Testing at M/S Meenakshi Mission Hospital Madurai for Positive Power solution, Madurai



Pre Energy Audit Talk at M/S Meenakshi Mission Hospital Madurai for their Employees



J.K. Fenner (India)Ltd., Madurai- 625016.



M/S Vijay polymer, SIPCOT, Pallapatti (Post), Nilakottai (TK), Dindigul District.



Sri Ayyanar Aqua Farm., Pudupatti, Othakadai, Madurai



# M/s Vetri Theatre, Villapuram, Madurai



## **News Paper - 2017 Clippings**



# **IEEE & Energy Audit Activities**

# **MADURAI**









# SIVAGANGAI









# PROMOTION OF ENERGY AUDIT AND CONSERVATION OF ENERGY (PEACE)

K.L.N College Of Engineering Centre Of Excellence Energy Audit Division, Department Of Electrical Electronics Engineering Is Promoting Energy Audit From Jan 2016. We Have Completed energy audit for 125 industries.

We Promote Energy Audit As Per The Government Guidelines

# **Awareness Programme**

Awareness among MSMEs is the level of understanding about the importance and implications of energy audit and conserving energy. High awareness among MSMEs occurs when a significant proportion of the MSMEs agree that the energy audit and conserving energy is an issue that is of great importance to the financial performance and competitiveness of their enterprise.

# **Training Programme**

# **Conduct Energy Audit**

We are Conducting Energy Audit, MSMEs, LT & LTCT, HT Industries. We have achieved prove and energy conservation for the consumers. We suggest for reducing electricity bill, power factor penalty, Maximum Demand issues.

# **OUR TECHNICAL CO- ORDINATOR**



ER. P.THANGARAJ

Assistant Executive Engineer Rto
TNEB
Non Conventional Consultant

# SHORON SOLAR SOLUTIONS

A Grade Electrical Contractor



# SRI ANNAI LAKSHMI POWER SERVICES

Total Power Solution

Madurai - Theni



# SUN ENERGY SYSTEMS

Save Energy - Save Cost - Save Environment

Chennai - Madurai



# IMPULSE' ELECTRO SYSTEMS

An Innovative Power Saver Madurai - Ramanathapuram

**Harvest Solar Energy, Conserve Water** 



# **TJ SOLUTIONS**

**Madurai** 



# **GREEN SOLAR TECHNOLOGY**

Chennai - Covai - Trichy - Erode - Dindigul - Palani - Madurai



**INTEGRATED - TRAINING AND ASSESSMENT SYSTEMS** 

**MADURAI** 

# **OUR MAJOR CUSTOMERS**

SBI

**PCRA** 



# **GOVT OF TAMILNADU**

State Bank of India



# **TANGEDCO**



# DISTRICT INDUSTRIES CENTRI







# **APPOLLO FIRST MED HOSPITAL**







# SAL UNITED INDIA INSURENCE CPA COLLEGE, BODI TTS MADURAI









**TVS** 











#### **Courses Offered**

## Name of the programmes approved by the AICTE

# **UG Programmes**

- B.E. Mechanical Engineering (4thtime Accredited)
- B.E. Electrical and Electronics Engineering (4thtime Accredited)
- B.E. Electronics and Communication Engineering (2ndtime Accredited)
- B.E. Computer Science and Engineering (3rdtime Accredited)
- B. Tech. Information Technology (3rdtime Accredited)
- B.E. Automobile Engineering
- B.E. Electronics and Instrumentation Engineering

## **PG** programmes

Master of Business Administration

Master of Computer Applications (2ndtime Accredited)

- M.E. CAD / CAM
- M.E. Communication systems
- M.E. Power Systems Engineering
- M.E. Computer Science and Engineering
- M.E. Computer Science and Engineering(WITH SPECIALISATION IN NETWORKS)

# **Ph.D Full Time & Part Time programmes**

# For Industrial & Domestic Energy Audit & Reduce Electricity Bill



Amarar Shri K.L.N. KRISHNAN

# **Contact**

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