

# ENERGY, ENVIRONMENT & GREEN AUDIT REPORT

## DETAILS OF THE CLIENT

### **KINGS COLLEGE OF ENGINEERING**

Punalkulam, Pudukkottai District - 613 303, Tamilnadu, INDIA



**KINGS**  
COLLEGE OF ENGINEERING  
Affiliated to Anna University, Chennai.

## DATE OF AUDIT

**16 FEBRUARY 2022**

## AUDIT CONDUCTED AND SUBMITTED BY

**RAM-KALAM CENTRE FOR ENERGY CONSULTANCY AND TRAINING**

(Chennai ♦ Coimbatore ♦ Erode)

Mobile: +91- 80567 19372, 99420 14544 (Whatsapp) E-mail: ramkalamcect@gmail.com





# ENERGY, ENVIRONMENT & GREEN AUDIT REPORT

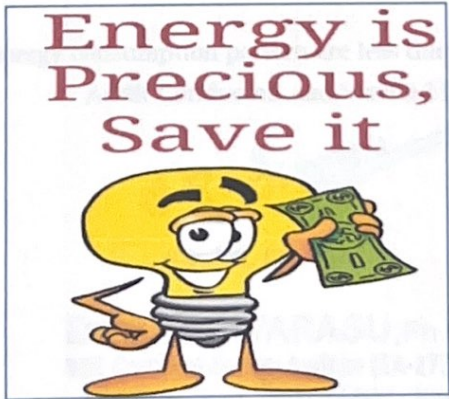
Summary of Energy Conversion (Before and After Proposals)

Sl. No.	Description	Parameters		
		Present	After	Savings
1.	Annual Energy Consumption	3,68,124 kWh + 12,853 kg LPG	3,03,925 kWh + 8,308 kg LPG	64,199 kWh 4,545 kg of LPG
2.	Annual Energy Cost	Rs. 45.7 Lakhs	Rs. 35.7 Lakhs	Rs. 10.0 Lakhs
3.	Initial Investment	-	-	Rs. 15.3 Lakhs
4.	Payback Period	-	-	Nearly 1.3 Years

## 5. EXECUTIVE SUMMARY

Note:

- Apart from the Energy Conservation, the audit team proposes all technical recommendations focusing on energy, equipment's life improvement, safety and best operating practices.
- The above calculation was performed for the year 2018-19 as all the energy carriers were fully functional during that year.
- However all the energy consumption of all the carriers are accounted for the last five years and are presented in the following sections.
- All types of energy carriers (like Electricity and LPG) used for regular applications are taken into account.
- During 2020-21, the electricity consumption was less due to COVID lockdown.



## EXECUTIVE SUMMARY

### Electrical and Thermal Energy Analysis:

A detailed audit was conducted in KINGS COLLEGE OF ENGINEERING, Punalkulam, Pudukkottai District - 613 303, Tamilnadu, INDIA. The audit team has come out with **11 Energy Conservation Proposals (ENCONs)** and the summary of all the ENCONs are given below:

Description/Year	2016-17	2017-18	2018-19	2019-20	2020-21
Annual Electricity Consumption (kWh)	4,48,566	3,52,862	3,68,124	3,23,562	2,48,939
Annual LPG Consumption (kg)	13,281	13,509	12,863	8,987	589
<b>Summary of Energy Conversion (ENCON) Proposals</b>					
S. No.	Description	Parameters			
		Present	After	Savings	
1.	Annual Energy Consumption	3,68,124 kWh + 12,863 kg LPG	3,03,925 kWh + 8,308 kg LPG	64,199 kWh + 4,555 kg of LPG	
2.	Annual Energy Cost	Rs. 45.7 Lakhs	Rs. 35.7 Lakhs	Rs. 10.0 Lakhs	
3.	Initial Investment Required	--	--	Rs. 13.3 Lakhs	
4.	Simple Payback Period	--	--	Nearly 1.3 Years	

### **Note:**

- Apart from the Energy Conservation, the audit team proposes **18 technical recommendations** focusing on energy, equipment's life improvement, safety and best operating practices
- The above calculation was performed for the year 2018-19 as all the energy carriers were fully functional during that year
- However all the energy consumption of all the carriers are accounted for the last five years and are presented in the following sections
- All types of energy carriers (like Electricity and LPG) used for regular applications are taken into account
- During 2020-21; the energy consumption pattern are less due to COVID lockdown.

Audit Conducted and Verified by



(Dr. S.R. SIVARASU)

**Dr. S.R. SIVARASU, Ph.D.,**  
**BEE Certified Energy Auditor (EA-27299)**  
**Lead Auditor - ISO 14001: EMS**  
**IGBC - AP, GRIHA - CP**  
**Mobile: 80567 19372, 99420 29372**  
**E-Mail: ramkalamcct@gmail.com**



# ENERGY, ENVIRONMENT & GREEN AUDIT REPORT

## ANNEXURE: AUTHORISED CERTIFICATES OF THE AUDITOR

Reg No.: EA-27299

Certificate No.: 9645/19



# National Productivity Council

(National Certifying Agency)

## PROVISIONAL CERTIFICATE

This is to certify that Mr./Mrs./Ms. **SIVARASU SULUR RATHINAVELU** .....  
son / daughter of Mr. **P RATHINAVELU** ..... has passed the National certification  
Examination for Energy Auditors held in September 2018, conducted on behalf of the Bureau of Energy Efficiency,  
Ministry of Power, Government of India. He / She is qualified as **Certified Energy Manager** as well as  
**Certified Energy Auditor**.

He / She shall be entitled to practice as Energy Auditor under the Energy Conservation Act 2001, subject to the fulfillment  
of qualifications for Accredited Energy Auditor and issuance of certificate of Accreditation by the Bureau of Energy  
Efficiency under the said Act.

This certificate is valid till the Bureau of Energy Efficiency issues an official certificate.

Digitally Signed by: K V R RAJU  
Mon Apr 22 16:22:42 IST 2019  
Controller of Examination, NPC AIP Chennai

Place : Chennai, India

Date : 22nd April, 2019

Controller of Examination



**ISO 14001:2015 Lead Auditor  
(Environmental Management Systems)  
Training course**

it is hereby certified that

**Dr. S. R. Sivarasu**

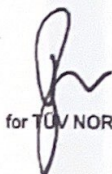
has successfully completed the above mentioned course and examination

08<sup>th</sup> - 12<sup>th</sup> December 2017

Coimbatore, India

Certificate No. 3521 2982 02

Delegate No. 71968



for TÜV NORD CERT GmbH

Essen, 2018-01-11

Course 18125 is certified by CQI/IRCA and meets the training requirements for those seeking certification under the IRCA EMS auditor certification scheme.

TÜV NORD CERT GmbH

Langemarckstraße 20

45141 Essen

[www.tuev-nord-cert.com](http://www.tuev-nord-cert.com)



IGBC



Confederation of Indian Industry

## The Indian Green Building Council


hereby certifies that


**Sivarasu S R**

has successfully demonstrated knowledge on the Green Building Design & Construction, Building Standards & Codes, IGBC Resources & Processes and Green Design Strategies & their Impacts,

required to be awarded the title of

## IGBC Accredited Professional

  
**K S Venkatagiri**  
Executive Director  
CII-Godrej GBC

  
**V Suresh**  
Chairman  
Indian Green Building Council

  
**Gurmit Singh Arora**  
Vice-Chairman  
Indian Green Building Council

200239

20 June 2020





**GREEN RATING FOR INTEGRATED HABITAT ASSESSMENT**  
**GRIHA CERTIFIED PROFESSIONAL CERTIFICATE**

This is to certify that

Sivarasu SR

has qualified as a GRIHA Certified Professional For V. 2015

Date of issue: 18th September 2020

Note : This certification is valid only for GRIHA version 2015.

Chief Executive Officer  
GRIHA Council