



**KONGU ENGINEERING COLLEGE**  
**(Autonomous)**  
**PERUNDURAI, ERODE - 638 060, INDIA**



CERT No : 89-100-20786  
SC 9001 : 2015

**Dr.T.Logeswaran, M.E., Ph.D**

Associate Professor

BEE Certified Energy Auditor (Regd.No:EA13164)

Department of Electrical and Electronics Engineering

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Mobile : 97877-33910

E-mail : logeskec@gmail.com

**Ref: KEC/EA/2017-2018/918**

**05/09/2018**

**GREEN AUDIT CERTIFICATE**

This is to certify that, we have conducted a **Green Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 03<sup>rd</sup> September, 2018. The audit process investigates the following activities.

- I) Coverage of matured trees
- II) Reduction of heat island effects
- III) Inspection of the water conservation measures
- IV) Coverage of turf and landscape

**Audited and Accounted for June2017 to May2018**

Yours Truly

DEPT. OF ELECTRICAL & ELECTRONICS ENGG  
KONGU ENGINEERING COLLEGE,  
THOPPUPALAYAM (PO)  
PERUNDURAI (TK), ERODE - 638 060

**ATTESTED**

**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**

E.G.S. Pillay Engineering College,  
Thethi, Nagapattinam - 611 002.  
Nagapattinam (Dt) Tamil Nadu.



# KONGU ENGINEERING COLLEGE (Autonomous)

PERUNDURAI, ERODE - 638 060, INDIA



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Ref: KEC/EA/2017-2018/918

05/09/2018

## ENERGY AUDIT CERTIFICATE

This is to certify that, we have conducted an **Energy Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 03<sup>rd</sup> September, 2018. The audit team has identified energy saving measures and the summary of Energy Audit Process is given below.

S.No.	Description	Parameters
1	Annual Energy/ fuel Consumption	320000 litres diesel, 540 LPG cylinders & 309417 kWh electricity
2	Present Annual Energy Cost	Rs. 2,51,04,762.00
3	Proposed cost Savings due to the replacement 100 fans with BLDC fans	Rs. 78,750.00
4	Proposed cost savings per year due to the installation of 100 LED lights	Rs. 49,500.00
5	Proposed cost savings per year from LPG cylinders by efficient usage	Rs. 12,650.00
6	Initial Investment Required	Rs. 3,50,000.00
7	Total savings ((3)+(4)+(5))	Rs. 1,40,900.00
8	Payback period in years	2.48

### Equipment/Systems Audited

Electrical Network  
Inverter, UPS and Battery System  
Lightings, Fans & Air Conditioning System  
Diesel Fuel Consumption

Audited and Accounted for June 2017 to May 2018

ATTESTED

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Therthi Nagar, 607 002,  
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Yours Truly

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DEPT. OF ELECTRICAL & ELECTRONICS ENG.  
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Ref: KEC/EA/2017-2018/918

05/09/2018

**ENVIRONMENTAL AUDIT CERTIFICATE**

This is to certify that we have conducted an **Environmental Audit** in **EGS Pillay Engineering College, Nagapattinam, Tamil Nadu** on 03<sup>rd</sup> September, 2018. This audit process highlights the present CO<sub>2</sub> emission and methods adopted to neutralize the same in the college campus.

S.No.	Description	Type of fuel and their conversion process		
		Electrical energy consumed	Diesel	LPG
1	Annual Energy Consumption	309417 kWh	3,20,000 lit	540 Nos.
2	CO <sub>2</sub> Emission standards	0.95 kg/kWh	2.68	56.2 kg/cyl.
3	Total CO <sub>2</sub> emission(tonne/Annum)	1181.9		
4	Total No. of students and staff	2990		
5	Per capita CO <sub>2</sub> emission per year	0.395 tonnes (+)		
6	No. of Matured Trees (1 tree absorbs 22 kg CO <sub>2</sub> /year)	200		
7	CO <sub>2</sub> neutralised due to matured trees	4.4 tonnes		
8	CO <sub>2</sub> to be neutralised per capita per year	0.394 tonnes (-)		

**Systems Audited**

- ✓ Electricity consumption
- ✓ Diesel consumption
- ✓ LPG consumption

**Systems Inspected**

- ✓ Solid & E-waste handling & Management
- ✓ Usage of chemical, salts & acids
- ✓ RO system

Audited and Accounted for June 2017 to May 2018

**ATTESTED**

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**Ref: KEC/GA/2018-2019/918**

**09/08/2019**

**GREEN AUDIT CERTIFICATE**

This is to certify that, we have conducted a **Green Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 9<sup>th</sup> August, 2019. The audit process investigates the following activities.

- I) Coverage of matured trees
- II) Reduction of heat island effects
- III) Inspection of the water conservation measures
- IV) Coverage of turf and landscape

**Audited and Accounted for June2018 to May2019**

Yours Truly

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PERUNDURAI (TK), ERODE - 638 060

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This is to certify that we have conducted an **Environmental Audit** in **EGS Pillay Engineering College, Nagapattinam, Tamil Nadu** on 9<sup>th</sup> August, 2019. This audit process highlights the present CO<sub>2</sub> emission and methods adopted to neutralize the same in the college campus.

S.No.	Description	Type of fuel and their conversion process		
		Electrical energy consumed	Diesel	LPG
1	Annual Energy Consumption	333121 kWh	366000 lit	534 Nos.
2	CO <sub>2</sub> Emission standards	0.95 kg/kWh	2.68 kg/lit	56.2 kg/cyl.
3	Total CO <sub>2</sub> emission(tonne/Annum)	1327.35		
4	Total No. of students and staff	2828		
5	Per capita CO <sub>2</sub> emission per year	0.469 tonne (+)		
6	No. of Matured Trees (1 tree absorbs 22 kg CO <sub>2</sub> /year)	200		
7	CO <sub>2</sub> neutralised due to matured trees	4.4 tonne		
8	CO <sub>2</sub> to be neutralised per capita per year	0.468tonne (-)		

**Systems Audited**

- ✓ Electricity consumption
- ✓ Diesel consumption
- ✓ LPG consumption

**Systems Inspected**

- ✓ Solid & E waste handling & Management
- ✓ Usage of chemical, salts & acids
- ✓ RO system

Audited and Accounted for June 2018 to May 2019

**ATTESTED**

*[Signature]*  
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# KONGU ENGINEERING COLLEGE (Autonomous)

PERUNDURAI, ERODE - 638 060, INDIA



CERT No. 96-100-20788  
ISO 9001:2015

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Ref: KEC/EG/2018-2019/918

09/08/2019

## ENERGY AUDIT CERTIFICATE

This is to certify that, we have conducted an **Energy Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 9<sup>th</sup> August, 2019. The audit team has identified energy saving measures and the summary of Energy Audit Process is given below.

S.No.	Description	Parameters
1	Annual Energy/ fuel Consumption	366000 litres diesel, 534 LPG cylinders & 333121 kWh electricity
2	Present Annual Energy Cost	Rs. 2,82,33,082.00
3	Proposed cost Savings due to the replacement 100 fans with BLDC fans	Rs. 78,750.00
4	Proposed cost savings per year due to the installation of 100 LED lights	Rs. 49,500.00
5	Proposed cost savings per year from LPG cylinders by efficient usage	Rs. 14,950.00
6	Initial Investment Required	Rs. 3,60,000.00
7	Total savings ((3)+(4)+(5))	Rs. 1,43,200.00
8	Payback period in years	2.51

### Equipment/Systems Audited

Electrical Network

Inverter, UPS and Battery System

Lightings, Fans & Air Conditioning System

Diesel Fuel Consumption

Audited and Accounted for June 2018 to May 2019

**ATTESTED**

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**Ref: KEC/EA/2019-2020/918**

**18/09/2020**

**GREEN AUDIT CERTIFICATE**

This is to certify that, we have conducted a **Green Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 15<sup>th</sup>September, 2020. The audit process investigates the following activities.

- I) Coverage of matured trees
- II) Reduction of heat island effects
- III) Inspection of the water conservation measures
- IV) Coverage of turf and landscape

**Audited and Accounted for June2019 to May2020**

Yours Truly

**DEPT. OF ELECTRICAL & ELECTRONICS ENG.**  
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**18/09/2020**

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This is to certify that we have conducted an **Environmental Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 15<sup>th</sup>September, 2020.This audit process highlights the present CO<sub>2</sub> emission and methods adopted to neutralize the same in the college campus.

S.No.	Description	Type of fuel and their conversion process		
		Electrical energy consumed	Diesel	LPG
1	Annual Energy Consumption	362548 kWh	382000 lit	538 Nos.
2	CO <sub>2</sub> Emission standards	0.95 kg/kWh	2.68 kg/lit	56.2 kg/cyl.
3	Total CO <sub>2</sub> emission(tonne/Annum)	1398.42		
4	Total No. of students and staff	2961		
5	Per capita CO <sub>2</sub> emission per year	0.472 tonne (+)		
6	No. of Matured Trees (1 tree absorbs 22 kg CO <sub>2</sub> /year)	200		
7	CO <sub>2</sub> neutralised due to matured trees	4.4 tonne		
8	CO <sub>2</sub> to be neutralised per capita per year	0.471 tonne (-)		

**Systems Audited**

- ✓ Electricity consumption
- ✓ Diesel consumption
- ✓ LPG consumption

**Systems Inspected**

- ✓ Solid & E waste handling & Management
- ✓ Usage of chemical, salts & acids
- ✓ RO system

Audited and Accounted for June2019 to May 2020

**ATTESTED**  
*[Signature]*  
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Thethi, Nagore - 611 002,  
Nagapattinam (Dt) Tamil Nadu.

Yours Truly  
*[Signature]*  
**DEPT. OF ELECTRICAL & ELECTRONICS :**  
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**18/09/2020**

**ENERGY AUDIT CERTIFICATE**

This is to certify that, we have conducted an **Energy Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 15<sup>th</sup>September, 2020. The audit team has identified energy saving measures and the summary of Energy Audit Process is given below.

S.No.	Description	Parameters
1	Annual Energy/ fuel Consumption	382000 litres diesel,538 LPG cylinders & 362548 kWh electricity
2	Present Annual Energy Cost	Rs. 3,29,15,698.00
3	Proposed cost Savings due to the replacement 100 fans with BLDC fans	Rs. 78,750.00
4	Proposed cost savings per year due to the installation of 100 LED lights	Rs. 49,500.00
5	Proposed cost savings per year from LPG cylinders by efficient usage	Rs. 13,000.00
6	Initial Investment Required	Rs. 3,74,000.00
7	Total savings ((3) + (4) + (5))	Rs. 1,41,250.00
8	Payback period in years	2.64

**Equipment/Systems Audited**

Electrical Network  
Inverter, UPS and Battery System  
Lightings, Fans & Air Conditioning System  
Diesel Fuel Consumption

Audited and Accounted for June 2019 to May 2020

Yours Truly

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08/11/2021

**GREEN AUDIT CERTIFICATE**

This is to certify that, we have conducted a **Green Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 4<sup>th</sup> November, 2021. The audit process investigates the following activities.

- I) Coverage of matured trees
- II) Reduction of heat island effects
- III) Inspection of the water conservation measures
- IV) Coverage of turf and landscape

Audited and Accounted for June2020 to May2021

Yours Truly

DEPT. OF ELECTRICAL & ELECTRONICS ENGG  
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**08/11/2021**

**ENVIRONMENTAL AUDIT CERTIFICATE**

This is to certify that we have conducted an **Environmental Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 4<sup>th</sup> November, 2021. This audit process highlights the present CO<sub>2</sub> emission and methods adopted to neutralize the same in the college campus.

S.No.	Description	Type of fuel and their conversion process		
		Electrical energy consumed	Diesel	LPG
1	Annual Energy Consumption	177910 kWh (after deduction from 80 kW solar plant)	17860 lit	235 Nos.
2	CO <sub>2</sub> Emission standards	0.95 kg/kWh	2.68 kg/lit	56.2 kg/cyl.
3	Total CO <sub>2</sub> emission(tonne/Annum)	230.09		
4	Total No. of students and staff	3048		
5	Per capita CO <sub>2</sub> emission per year	0.075 tonne (+)		
6	No. of Matured Trees (1 tree absorbs 22 kg CO <sub>2</sub> /year)	200		
7	CO <sub>2</sub> neutralised due to matured trees	4.4		
8	CO <sub>2</sub> to be neutralised per capita per year	0.074 tonnes(-)		

**Systems Audited**

- ✓ Electricity consumption
- ✓ Diesel consumption
- ✓ LPG consumption

**Systems Inspected**

- ✓ Solid & E waste handling & Management
- ✓ Usage of chemical, salts & acids
- ✓ RO system

Audited and Accounted for June 2020 to May 2021

**ATTESTED**  
*[Signature]*  
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This is to certify that, we have conducted an **Energy Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 4<sup>th</sup> November, 2021. The audit team has identified energy saving measures and the summary of Energy Audit Process is given below.


S.No.	Description	Parameters
1	Annual Energy/ fuel Consumption	17860 litres diesel, 235 LPG cylinders & 177910 kWh electricity
2	Present Annual Energy Cost	Rs. 34,27,137.00
3	Proposed cost Savings due to the replacement 100 fans with BLDC fans	Rs. 78,750.00
4	Proposed cost savings per year due to the installation of 100 LED lights	Rs. 49,500.00
5	Proposed cost savings per year from LPG cylinders by efficient usage	Rs. 15,000.00
6	Initial Investment Required	Rs. 3,90,000.00
7	Total savings ((3)+(4)+(5))	Rs. 1,43,250.00
8	Payback period in years	2.72

### Equipment/Systems Audited


Electrical Network  
80 kWp Solar PV Power Plant  
Inverter, UPS and Battery System  
Lightings, Fans & Air Conditioning System  
Diesel Fuel Consumption

Audited and Accounted for June 2020 to May 2021

ATTESTED

  
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**Ref: KEC/GA/2021-2022/918**

**24/01/2023**

**GREEN AUDIT CERTIFICATE**

This is to certify that, we have conducted a **Green Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 19<sup>th</sup> January, 2023. The audit process investigates the following activities.

- I) Coverage of matured trees
- II) Site Preservation
- III) Reduction of heat island effects
- IV) Inspection of the water conservation measures
- V) Pedestrian network
- VI) Energy efficiency
- VII) Health and well-being facilities

Audited and Accounted for June 2021 to May 2022

Yours Truly

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24/01/2023

**ENVIRONMENTAL AUDIT CERTIFICATE**

This is to certify that we have conducted an **Environmental Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 19<sup>th</sup> January, 2023. This audit process highlights the present CO<sub>2</sub> emission and methods adopted to neutralize the same in the college campus.

S.No.	Description	Type of fuel and their conversion process		
		Electrical energy consumed	Diesel	LPG
1	Annual Energy Consumption	335590 kWh (after deduction from 110 kW solar plant)	12000 lit	220 Nos.
2	CO <sub>2</sub> Emission standards	0.95 kg/kWh	2.68 kg/lit	56.2 kg/cyl.
3	Total CO <sub>2</sub> emission(tonne/Annum)	363.33		
4	Total No. of students and staff	3357		
5	Per capita CO <sub>2</sub> emission per year	0.108 tonne (+)		
6	No. of Matured Trees (1 tree absorbs 22 kg CO <sub>2</sub> /year)	210		
7	CO <sub>2</sub> neutralised due to matured trees (tonne/Annum)	4.62 tonnes		
8	CO <sub>2</sub> to be neutralised per capita per year	0.107 tonnes(-)		

**Systems Audited**


- ✓ Electricity consumption
- ✓ Diesel consumption
- ✓ LPG consumption

**Systems Inspected**

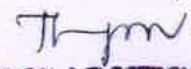
- ✓ Solid & Bio-medical waste handling & Management
- ✓ Usage of chemical, salts & acids
- ✓ RO system

Audited and Accounted for June 2021 to May 2022

ATTESTED

  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002,  
Nagapattinam (Dt) Tamil Nadu.

Yours Truly

  
DEPT. OF ELECTRICAL & ELECTRONICS ENGR  
KONGU ENGINEERING COLLEGE,  
THOPPUPALAYAM (PO)  
PERUNDURAI (TK), ERODE - 638 080



**KONGU ENGINEERING COLLEGE**  
**(Autonomous)**  
**PERUNDURAI, ERODE - 638 060, INDIA**



**Dr.T.Logeswaran, M.E., Ph.D**

Associate Professor

BEE Certified Energy Auditor (Regd.No:EA13164)

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**Ref: KEC/EA/2021-2022/918**

**24/01/2023**

**ENERGY AUDIT CERTIFICATE**

This is to certify that, we have conducted an **Energy Audit** in **EGS Pillay Engineering College**, Nagapattinam, Tamil Nadu on 19<sup>th</sup> January, 2023. The audit team has identified energy saving measures and the summary of Energy Audit Process is given below.

S.No.	Description	Parameters
1	Annual Energy/ fuel Consumption	12000 litres diesel, 220 LPG cylinders & 335590 kWh electricity
2	Present Annual Energy Cost	Rs. 41,59,836.00
3	Proposed cost Savings due to the replacement 100 fans with BLDC fans	Rs. 75,000.00
4	Proposed cost Savings per year from LPG cylinders by efficient usage.	Rs. 34,000.00
5	Proposed cost savings per year due to the installation of 50 kW solar PV Plant.	Rs. 4,62,000.00
6	Initial Investment Required	Rs. 19,00,000.00
7	Total savings ((3)+(4)+(5))	Rs. 5,71,000.00
8	Payback period in years	3.33

**Equipment/Systems Audited**

Electrical Network  
110 kWp Solar PV Power Plant  
Inverter, UPS and Battery System  
Lightings, Fans & Air Conditioning System  
Diesel Fuel Consumption

**Audited and Accounted for June 2021 to May 2022**

**ATTESTED**

**Dr. S. RAMABALAN, M.E., Ph.D.,**  
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