



# RAM KALAM - CENTRE FOR ENERGY CONSULTANCY & TRAINING

CHENNAI

COIMBATORE

ERODE

(Regt. Office No. 8, VPK Garden, Coimbatore-641 062,

Mobile: +91-99420 14544, 80567 19372, Email: ramkalamcect@gmail.com)

(GST No. 33AAZFR8890A1ZN)

## CERTIFICATE FOR ENVIRONMENTAL AUDIT PROCESS


This is to certify that, we have conducted an ENVIRONMENTAL AUDIT in KONGU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), Nanjanapuram, Erode - 638 107 on 25 & 26 November 2021. This audit process highlights the present CO<sub>2</sub> emission and methods adopted to neutralize the same in the college campus.

| System Audited                                    | Systems Inspected                           |
|---|---|
| • Electricity Consumption                         | • Solid and E-Waste Handling & Management   |
| • Diesel Consumption (Vehicles + DG)              | • RO Plant, Water Distribution System & STP |
| • LPG Consumption                                 | • Water Conservation & Management           |
| • Transport System, GWP & OPD of AC Refrigeration | • Usage of Chemical, Salts & Acids          |

Thank You

Audit Conducted and Verified by,



  
Dr. N. RAMAN  
PRINCIPAL,  
KONGU ARTS AND SCIENCE COLLEGE  
(AUTONOMOUS)  
NANJANAPURAM, ERODE - 638 107.

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(Dr. S.R. SIVARASU)

**Dr. S.R. SIVARASU, Ph.D.,**  
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Environmental System: CO<sub>2</sub> Balance Sheet (2017-18)

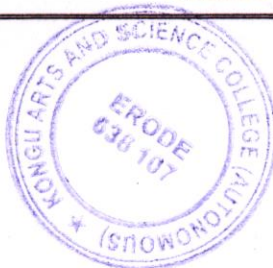
| S. No.   | Energy Consumption & CO <sub>2</sub> Emission |                         |                                       | CO <sub>2</sub> Neutralization                     |              |  |
|--|---|-------------------------|---------------------------------------|--|--------------|--|
|  | Description                                   | Energy Quantity (Annum) | CO <sub>2</sub> Emission (Tons/Annum) | Description  | Energy Usage | CO <sub>2</sub> Neutralized (Tons/Annum) |
| 1.   | Electrical Energy                             | 5,17,639 kWh            | 424.5                                 | CO <sub>2</sub> Neutralized due to Solar PV System | 1,20,777 kWh | 99.04                                    |
| 2.   | Diesel (Transport + DG)                       | 1,66,504 Litres         | 439.6                                 | CO <sub>2</sub> Neutralized due to Mature Trees    | 786 No's     | 17.13                                    |
| 3.   | LPG Consumption                               | 12,787 kg               | 38.4                                  | CO <sub>2</sub> Neutralized due to Solar Thermal   | 7,600 kWh    | 6.23                                     |
|  |   |                         |                                       | CO <sub>2</sub> Neutralized due to Biogas          | 3,825 kg     | 11.48                                    |
| 4.   | <b>Total Emission</b>                         |                         | <b>902.4</b>                          | <b>Total-Neutralized</b>                           |              | <b>133.0</b>                             |
| Balance CO <sub>2</sub> to be Neutralized = 768.5 Tons/Annum & Per Capita CO <sub>2</sub> Consumption = 0.15 Tons/Annum <sup>1</sup> |   |                         |                                       |  |              |  |

(<sup>1</sup> Total strength of students: 4,733 + Teaching and technical staff: 251 = 4,984)

Environmental System: CO<sub>2</sub> Balance Sheet (2018-19)

| S. No.   | Energy Consumption & CO <sub>2</sub> Emission |                         |                                       | CO <sub>2</sub> Neutralization                     |              |  |
|--|---|-------------------------|---------------------------------------|--|--------------|--|
|  | Description                                   | Energy Quantity (Annum) | CO <sub>2</sub> Emission (Tons/Annum) | Description  | Energy Usage | CO <sub>2</sub> Neutralized (Tons/Annum) |
| 1.   | Electrical Energy                             | 5,31,475 kWh            | 435.8                                 | CO <sub>2</sub> Neutralized due to Solar PV System | 1,30,613 kWh | 107.10                                   |
| 2.   | Diesel (Transport + DG)                       | 1,77,963 Litres         | 469.8                                 | CO <sub>2</sub> Neutralized due to Mature Trees    | 786 No's     | 17.13                                    |
| 3.   | LPG Consumption                               | 17,442 kg               | 52.3                                  | CO <sub>2</sub> Neutralized due to Solar Thermal   | 7,600 kWh    | 6.23                                     |
|  |   |                         |                                       | CO <sub>2</sub> Neutralized due to Biogas          | 3,825 kg     | 11.48                                    |
| 4.   | <b>Total Emission</b>                         |                         | <b>958.0</b>                          | <b>Total-Neutralized</b>                           |              | <b>141.9</b>                             |
| Balance CO <sub>2</sub> to be Neutralized = 816.0 Tons/Annum & Per Capita CO <sub>2</sub> Consumption = 0.16 Tons/Annum <sup>2</sup> |   |                         |                                       |  |              |  |

(<sup>2</sup> Total strength of students: 4,823 + Teaching and technical staff: 254 = 5,077)



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Environmental System: CO<sub>2</sub> Balance Sheet (2019-20)

| S. No.   | Energy Consumption & CO <sub>2</sub> Emission |                         |                                       | CO <sub>2</sub> Neutralization                     |              |  |
|--|---|-------------------------|---------------------------------------|--|--------------|--|
|  | Description                                   | Energy Quantity (Annum) | CO <sub>2</sub> Emission (Tons/Annum) | Description  | Energy Usage | CO <sub>2</sub> Neutralized (Tons/Annum) |
| 1.   | Electrical Energy                             | 4,76,888 kWh            | 391.0                                 | CO <sub>2</sub> Neutralized due to Solar PV System | 87,650 kWh   | 71.87                                    |
| 2.   | Diesel (Transport + DG)                       | 1,78,798 Litres         | 472.0                                 | CO <sub>2</sub> Neutralized due to Mature Trees    | 786 No's     | 17.13                                    |
| 3.   | LPG Consumption                               | 13,680 kg               | 41.0                                  | CO <sub>2</sub> Neutralized due to Solar Thermal   | 7,600 kWh    | 6.23                                     |
|  |   |                         |                                       | CO <sub>2</sub> Neutralized due to Biogas          | 3,825 kg     | 11.48                                    |
| 4.   | <b>Total Emission</b>                         |                         | <b>904.1</b>                          | <b>Total-Neutralized</b>                           |              | <b>106.7</b>                             |
| Balance CO <sub>2</sub> to be Neutralized = 797.4 Tons/Annum & Per Capita CO <sub>2</sub> Consumption = 0.16 Tons/Annum <sup>3</sup> |   |                         |                                       |  |              |  |

(\* Total strength of students: 4,778 + Teaching and technical staff: 255 = 5,033)

Environmental System: CO<sub>2</sub> Balance Sheet (2020-21)

| S. No.   | Energy Consumption & CO <sub>2</sub> Emission |                         |                                       | CO <sub>2</sub> Neutralization                     |              |  |
|--|---|-------------------------|---------------------------------------|--|--------------|--|
|  | Description                                   | Energy Quantity (Annum) | CO <sub>2</sub> Emission (Tons/Annum) | Description  | Energy Usage | CO <sub>2</sub> Neutralized (Tons/Annum) |
| 1.   | Electrical Energy                             | 2,34,796 kWh            | 192.5                                 | CO <sub>2</sub> Neutralized due to Solar PV System | 80,251 kWh   | 65.81                                    |
| 2.   | Diesel (Transport + DG)                       | 58,155 Litres           | 153.5                                 | CO <sub>2</sub> Neutralized due to Mature Trees    | 786 No's     | 17.13                                    |
| 3.   | LPG Consumption                               | 4,560 kg                | 13.7                                  | CO <sub>2</sub> Neutralized due to Solar Thermal   | 7,600 kWh    | 6.23                                     |
|  |   |                         |                                       | CO <sub>2</sub> Neutralized due to Biogas          | 3,825 kg     | 11.48                                    |
| 4.   | <b>Total Emission</b>                         |                         | <b>359.7</b>                          | <b>Total-Neutralized</b>                           |              | <b>100.6</b>                             |
| Balance CO <sub>2</sub> to be Neutralized = 259.1 Tons/Annum & Per Capita CO <sub>2</sub> Consumption = 0.06 Tons/Annum <sup>4</sup> |   |                         |                                       |  |              |  |

(\* Total strength of students: 4,438 + Teaching and technical staff: 237 = 4,675)



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## Environmental System: CO<sub>2</sub> Balance Sheet (2021-22)

| S. No.   | Energy Consumption & CO <sub>2</sub> Emission |                         |                                       | CO <sub>2</sub> Neutralization                     |              |  |
|--|---|-------------------------|---------------------------------------|--|--------------|--|
|  | Description                                   | Energy Quantity (Annum) | CO <sub>2</sub> Emission (Tons/Annum) | Description  | Energy Usage | CO <sub>2</sub> Neutralized (Tons/Annum) |
| 1.   | Electrical Energy                             | 1,31,718 kWh            | 108.0                                 | CO <sub>2</sub> Neutralized due to Solar PV System | 31,805 kWh   | 26.08                                    |
| 2.   | Diesel (Transport + DG)                       | 20,756 Litres           | 54.8                                  | CO <sub>2</sub> Neutralized due to Mature Trees    | 786 No's     | 17.13                                    |
| 3.   | LPG Consumption                               | 2,375 kg                | 7.1                                   | CO <sub>2</sub> Neutralized due to Solar Thermal   | 7,600 kWh    | 6.23                                     |
|  |   |                         |                                       | CO <sub>2</sub> Neutralized due to Biogas          | 3,825 kg     | 11.48                                    |
| 4.   | <b>Total Emission</b>                         |                         | <b>169.9</b>                          | <b>Total-Neutralized</b>                           |              | <b>60.9</b>                              |
| <b>Balance CO<sub>2</sub> to be Neutralized = 109.0 Tons/Annum &amp; Per Capita CO<sub>2</sub> Consumption = 0.03 Tons/Annum<sup>5</sup></b> |   |                         |                                       |  |              |  |

(<sup>5</sup> Total strength of students: 4,058 + Teaching and technical staff: 250 = 4,308)



  
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