



# **Kathir College of Engineering**

Wisdom Tree, Avinashi Road, Neelambur, Coimbatore 641062

## **Criteria-7**

### **Institutional Values and Best Practices**

#### **Sub Criteria 7.1**

#### **Institutional Values and Social Responsibilities**

**7.1.6: Quality audits on environment and energy are regularly undertaken by the Institution and any awards received for such green campus initiatives:**

- 1.Green audit**
- 2.Energy audit**
- 3.Environment audit**
- 4.Clean and green campus recognitions / awards**
- 5.Beyond the campus environmental promotion activities**

### Energy audit report of Kathir College of Engineering

Name of the Organisation & Address	Kathir College of Engineering, Wisdom Tree, Avinashi Rd, Near Bye Pass, Neelambur, Coimbatore, Tamil Nadu 641062
Date of Audit	23 <sup>rd</sup> September 2021
Name of the lead Auditor	Mr. K. Syril Jenifer Paul
Is it a new audit or renewal process?	New Audit
Purpose	To ensure that the organisation is involving energy savings and consumption towards the roadmap of the National development economy by assessing the electric current usage through energy audit.

#### Power Supply and Equipment, Instruments and Machineries utility

S.No	Major and Minor Equipment, Instrument and Machineries Utility on day-to-day basis	Rating/Capacity	Quantity (Nos)
1.	LED Tube lights	20W	50
2.	Halogen Lamps	500W	1
3.	Sodium Vapour Lamp	250W	15
4.	CFL	18W	20
5.	Tube Lights	40W	432
6.	Solar Panel	35kW	1
7.	UPS	20kW	4
8.	LCD Projectors		8
9.	Refrigerators	1280W	4
10.	Solar street Lights	16W	10
11.	RO Water Plant & Water Purification System	1000 L/D	1
12.	AC ( Split, Window and Centralized AC)	2 ton	10
13.	Stabilizers	2000 W	10
14.	Ceiling Fans	70 W	240
15.	Pedestal Fans	70 W	2
16.	Generators		1
17.	Pumps	10HP	2
18.	Motors	5HP	1
19.	Vacuum Cleaner		1
20.	Biogas plant		1
21.	Drip & Sprinklers Irrigation		1
22.	Ventilators		20
23.	Exhaust Fans		10
24.	Insect Trap		3
25.	Internet Connectivity	30Mbps	1
26.	Podium details - Mike		5
27.	Podium details - Speakers		8
28.	Podium details - Amplifiers		4
29.	Podium details - Camera		2

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Principal

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30.	Computers		376
31.	Xerox Machines		2
32.	Server		1
33.	Inverter with UPS		3

Department of Electronics and Communication Engineering

S.No	Major and Minor Equipment, Instrument and Machineries Utility on day-to-day basis	Rating/Capacity	Quantity (Nos)
1.	CRO	30MHz/40VA	16
2.	DSO	50Mhz	02
3.	Microprocessor Trainer Kits	85/86/51	15
4.	Digital Electronics Trainer Kits	12 V	05
5.	Counters	12 V	
6.	Half Adder Circuits	12 V	02
7.	Full Adder Circuits	12V	02
8.	Power Supply	30 V	24

Department of Electrical and Electronics Engineering

S.No	Major and Minor Equipment, Instrument and Machineries Utility on day-to-day basis	Rating/Capacity	Quantity (Nos)
1.	DC Shunt Motor	5HP,3HP	2,1
2.	DC Series Motor	5HP	2
3.	DC Compound Motor	3HP	1
4.	DC Shunt Generator	5HP	2
5.	DC Series Generator	3KW	1
6.	DC Compound Generator	2.25 HP	1
7.	Single phase Transformer	1KVA,2KVA	4,2
8.	Three phase Transformer	3KVA	2
9.	Single phase auto Transformer	(0-230) V	8
10.	Three phase auto Transformer	(0-470) V/15A	4
11.	Loading Rheostat	10A	5
12.	Single phase Inductive Load		2
13.	Single phase Capacitive Load		2
14.	Three phase Inductive Load	10A	5
15.	Three phase Capacitive Load	10A	3
16.	Three phase squirrel cage induction motor	3HP,5HP	2,1
17.	Single Phase induction motor	1HP,2HP	1,1
18.	Three phase slip ring induction motor	5HP	1
19.	Alternators	5HP	4

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Department of Mechanical Engineering


S.No	Major and Minor Equipment, Instrument and Machineries Utility on day-to-day basis	Rating/Capacity	Quantity (Nos)
1.	Lathe Machine	1.5 to 2KW each	9
2.	Drilling Machine	1KW	3
3.	Shaping Machine	2KW	1
4.	Grinding Machine	1KW	3
5.	Universal Testing devices	1.5 KW	1
6.	Thermal Conductor	0.25Kw	4
7.	Air Compressor	1.5 KW	1
8.	CNC Turning Centre	0.5KW	1
9.	Kaplan Turbine	1KW	1
10.	Pelton Wheel Turbine	1KW	1
11.	Francis Turbine	1KW	1
12.	Venturi Meter	0.25 KW	1
13.	Orifice meter	0.25KW	1
14.	Nephelometer	0.25Kw	1
15.	Tensile strength apparatus	0.5kW	1
16.	Younggus modulus apparatus	0.5kW	1
17.	Gear Hobbing Machine	1.5KW	1
18.	Pumps	1.5KW to 2KW	4
19.	Pumps	0.5KW	4

  
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S.No	Major and Minor Equipment, Instrument and Machineries Utility on day-to-day basis	Rating/Capacity	Quantity (Nos)
1.	Ultrasonic interferometer	5MHz	5
2.	Sodium vapour lamp with transformer	35W	5
3.	Laser kits	2mW/670nm	5
4.	Mercury vapour lamp	125W/50Hz	5
5.	Post office box	12V	5
6.	PN junction apparatus	20V/150mA	5
7.	Heater –thermal conductivity	1000W/50Hz/1400V	5
8.	Carey foster bridge setup	12V	5
9.	Power supply DC	12V	5
10.	Table lamp	40W	9
11.	Hysteresis apparatus	12V/5 A	5
12.	Heating oven	1000W/50Hz	5
13.	Digital conductivity meter with Electrode	230V	20
14.	Digital Visible Spectrophotometer	230V	2
15.	Digital Flame Photometer	230V	1
16.	Electronic Top Loading Balance	12V	1
17.	Digital PH Meter with Electrode	230V	15
18.	Digital Potentiometer	230V	15
19.	Hot Plate	230V	1
20.	Demineraliser Double Bed Model	220V	1
21.	Weston Cadmium Standard Cell	12sV	2

  
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## Energy Consumption and Cost Profile for the Academic Year 2020-2021

S.No	Months	Cost in Rs.	Reading ( in kWh)
1	June 2020	58722	6608
2	July 2020	56634	6344
3	August 2020	76107	8816
4	September 2020	63627	7232
5	October 2020	64632	7360
6	November 2020	75380	8724
7	December 2020	60588	6848
8	January 2021	25797	2432
9	February 2021	43773	4712
10	March 2021	79688	9260
11	April 2021	69935	8033
12	May 2021	31184	3114
Total			79483

The CO<sub>2</sub> emission from electricity:

= (electricity usage per year in kWh/1000) x 0.84 (is the coefficient to convert kWh to metric tons)

=66.77 metric tons

  
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Signature of the Lead Auditor

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