

## ENERGY AUDIT REPORT

Client Name	AGTI's Dr. Daulatrao Aher College of Engineering, karad
Project Name	AGTI's Dr. Daulatrao Aher College of Engineering, karad. Tal- Karad, Dist.- Satara
Date	Year 2020-21
Submitted by	Dept. of Electrical Engineering , Rajarambapu Institute of Technology, Rajaramnagar , Islampur Dist- Sangli.MH



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## ACKNOWLEDGEMENT

We appreciate the interest and participation of Honorable Management and Principal and Faculty in carrying out the energy audit AGTI's Dr. Daulatrao Aher College of Engineering, karad, Tal- Karad, Dist.- Satara . Our special thanks to Technicians and Staff involved for college who have extended their co-operation and courtesy to the energy audit team during the audit.

Our Special thanks to Honorable Management and Director of Rajarambapu Institute of Technology, Islampur for continuous support and providing facilities regarding the energy audit.



## THE ENERGY AUDIT TEAM

Team Member	<ul style="list-style-type: none"><li>• Dr. H.T.Jadhav Ph. D (Electrical) Energy Auditor (BEE) (Electrical Engg. Dept.)</li> <li>• Mr. S.S Kadam Technical Expert</li></ul>
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• **SUMMARY OF SAVINGS POTENTIAL OF CLASSROOM**

1) **Civil Department: -**

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
Tube	40W	11	0.440	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Ceiling Fan old	80W	102	8.160	6 hr.	
CFL Bulb	24W	183	4.392	6 hr.	
computers	300W	37	11.1	4 hr.	
Printers	550W	7	3.850	2 hr.	
UPS	5KW	1	5	1 hr.	
Total			32.942		

2) **Mechanical Department:**

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
Tube	40W	86	3.440	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Ceiling Fan old	80W	56	4.480	6 hr.	
Computer system	New LCD computer	61	18.30	4 hr.	
Total			26.22		

3) **ENTC Department**

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
CFL Bulb	24W	88	2.112	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Tube	40W	14	0.560	6 hr.	
Ceiling Fan old	80W	38	3.040	6 hr.	
Computer system	New LCD computer	15	4.500	4 hr.	
Printer HP	550W	04	2.200	2 hr.	
Total			12.412		



## 4) CSE Department: -

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
Tube	40W	44	1.760	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Ceiling Fan old	80W	26	2.080	6 hr.	
CFL Bulb	24W	40	0.960	6 hr.	
Computers	300W	220	66.00	4 hr.	
Printers	550W	12	6.600	2 hr.	
UPS	20KW	4	20.00	1 hr.	
Total			97.4		

## 5) BSH Department

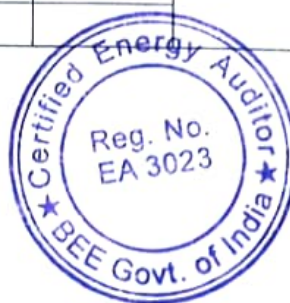
Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
CFL Bulb	24W	88	2.112	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Tube	40W	14	0.560	6 hr.	
Ceiling Fan old	80W	38	3.040	6 hr.	
Computer system	New LCD computer	33	9.900	4 hr.	
Printer HP	550W	04	2.200	2 hr.	
IM Motor	3HP	2	4.476	1 hr.	
Total			22.288		

## 6) College Auditorium :

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
CFL Bulb	24W	35	0.840	2 hr..	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Ceiling Fan old	80W	15	1.200	2 hr..	
Computer system	New LCD computer	01	0.15	1 hr..	
Total			2.19		

## 7) Yashvantrao Chavan Central Library:

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
CFL bulb	24W	133	3.192	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Tube	40W	31	1.240	6 hr.	
Ceiling Fan old	80W	35	2.800	6 hr.	
Computer system	300W	1	0.300	6 hr.	
Total			7.532		



Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
Chl. Bulb	24W	106	2.544	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Tube	40W	5	0.200	6 hr.	
Fan	80W	18	1.440	6 hr.	
Computers	300W	17	5.100	6 hr.	
Printers	550W	11	6.050	6 hr.	
Inverter	4500W	1	4.5	1 hr.	
Xerox machine	1200W	1	1.2	2 hr.	
Total			21.034		

## 9) Ladies Hostel

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
Tube	40 W	46	1.840	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Zero bulb	10W	74	0.740	6 hr.	
Ceiling Fan old	80W	34	2.720	6 hr.	
Computer system	300W	03	0.900	6 hr.	
Printer	550W	1	0.550	1 hr.	
LED TV	100W	1	0.100	2 hr.	
Total			6.85		

## 10) Boy's Hostel

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
Tube	40 W	46	1.840	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Zero bulb	10W	74	0.740	6 hr.	
Ceiling Fan old	80W	34	2.720	6 hr.	
Computer system	300W	--	--		
Printer	550W	1	0.550	1 hr.	
LED TV	100W	1	0.100	2 hr.	
Total			5.95		



### 11) Workshop

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
CFL Bulb	24W	17	0.408	4 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Ceiling Fans	80W	14	1.120	6 hr.	
Lathe machine	1100W	30	33.570	2 hr.	
Milling Machine	1500W	2	3.000	2 hr.	
Shapping Machine	1500W	2	3.000	2 hr.	
Grinning Machine	373W	1	0.373	2 hr.	
CNC	12HP	1	8.952	2 hr.	
Computer	300W	1	0.300	4 hr.	
Printer	550W	1	0.550	2 hr.	
Total			51.273		

### 12) College Canteen

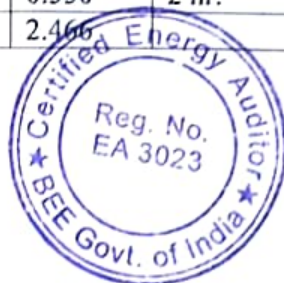
Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
Tubes	40W	20	0.800	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Ceiling Fans	80W	18	1.440	4 hr.	
Total			2.24		

### 13) Security Cabin and street light

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
Tube	40W	7	0.280	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Fan	80W	2	0.160	6 hr.	
CFL Bulb	36W	86	3.096	6 hr.	
Total			3.536		

### 14) Gymkhana

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
Tube	40W	17	0.680	6 hr.	<ul style="list-style-type: none"> <li>Replace 80W old fan by energy efficient fan.</li> </ul>
Fan	80W	9	0.720	6 hr.	
CFL	24W	9	0.216	6 hr.	
Computer	300W	1	0.300	4 hr.	
Printer	550W	1	0.550	2 hr.	
Total			2.466		



### 15) Central Store

Particulars	Wattage	Numbers	Load (KW)	Approx. hrs.	Recommendation
Tube	40W	11	0.440	6 hr	<ul style="list-style-type: none"><li>• Replace 80W old fan by energy efficient fan.</li></ul>
Fan	80W	4	0.320	6 hr	
CFL	24W	0	---	--	
Computer	300W	1	0.300	4 hr	
Printer	550W	1	0.550	2 hr	
Total			1.61		

- **INSTITUTE IN PROCESS TOWARDS ENERGY CONSERVATION:**

- Replacing the 80W ceiling fan in class rooms and laboratories by energy efficient fans of 60w is much help to save the energy.

- **SCOPE OF WORK:**

1. Detailed examination of the existing energy uses of the facility.
2. Measurement and analysis of demand and power factor, energy meter to reduce the energy bill.
3. Detailed examination of lighting system and other electrical equipment in laboratory and class rooms.
4. Survey report of lighting system in overall institute.






• **CONCLUSIONS AND GENERAL RECOMMENDATION OF THE  
AUDIT**

- a) Replace 80 W old fan by energy efficient fans.
- b) Replace old version computer system with energy efficient LCD monitor and new generation energy efficient computer systems.
- c) Ensure maximum natural daylight and natural ventilation in class rooms, Labs and staff rooms i.e. when it's bright outside in the day time, turn off the light and open blinds of windows.
- d) In fact, try to turn on lights in our cabin, labs only after the sun sets. Do your reading and writing near a window or natural illumination.
- e) Installing occupancy sensors to turn ON-OFF lighting and fan can save considerable energy.
- f) Overhead projectors, computers and UPS all use electricity for power. Be sure to unplug these types of items when they're not in use can achieve energy saving considerably.
- g) Use power "saving option" for computer and possibly switched off when not in use.
- h) Consider planting trees and shrubs in strategic locations to help to reduce the temperature and airflow in Laboratory, classroom etc. Trees planted on the west and south sides of buildings help to keep the buildings shaded during hotter weather.



  
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Energy Auditor (BEE)  
EA3023

निर्मल ग्राम पुरस्कार प्राप्त व तंटामुक्त गांव



# ग्रामपंचायत बनवडी



ता. कराड, जि. सातारा, फोन (०२१६५) २०१२९२

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प्रति,

डॉ. अशोक गुजर टेविनकल इन्स्टिट्यूट

डॉ. दौलतराव आहिर कॉलेज ऑफ इंजि. बनवडी

ता-कराड, जि-सातारा



विषय - " स्वच्छ भारत अभियान " अंतर्गत सन्मान पत्र

भारत सरकारच्या " स्वच्छ भारत अभियान " अंतर्गत सदाविष्यात येत असलेल्या योजने अंतर्गत बनवडी ग्रामपंचायत चे पदाधिकारी यांनी ग्रामपंचायत अंतर्गत कराड शहर नजिकच्या महाविद्यालयांची पाहणी केली असता, त्यामध्ये डॉ. अशोक गुजर टेविनकल इन्सि. चे डॉ. दौलतराव आहिर कॉलेज ऑफ इजिनिअरिंग यांनी या योजने अंतर्गत महाविद्यालयाच्या आवारात योग्य प्रकारचे निसर्ग संवर्धन करित सर्व नियमांचे पालन काटेकोरपणे करित, महाविद्यालयाच्या आवारात लागणारे सर्व प्रकारचे झाडे, स्वच्छता योग्य रित्या पार पाडले आहे.

स्वच्छ भारत अभियान अंतर्गत बनवडी ग्रामपंचायत यांना महाराष्ट्रातील स्वच्छ गांव म्हणून जो सन्मान मिळाला, त्या सन्माना मध्ये आपल्या महाविद्यालयाचा मोलाचा वाटा आहे. बनवडी ग्रामपंचायत व ग्रामस्थ यांच्या वतीने सन्मान पत्र देताना आम्हांस सार्थ अभिमान आहे.

सरपंच

(ग्रामपंचायत, बनवडी)

सरपंच

ग्रामपंचायत बनवडी  
ता. कराड, जि. सातारा

ग्रामविकास अधिकारी

(ग्रामपंचायत, बनवडी)

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ता. कराड, जि. सातारा

D.A.C.O.E., KARAD

Inward No. - 7/46

Date. - 2-10/2019

Sign. - [Signature]

The campus environmental promotional activities :



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79°F

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