Janseva Foundation Loni Budruks

Arts & Commerce College, Shendi

Tal-Akole, Dist-Ahmednagar Pin-422604

Unipune ID- PU/AN/AC/93/2007 Email- principal.acshendi@pravara.in

Website- www.acscollegeshedi.in

Self Study Report: 2023 (1st Cycle)

DVV Clarification

Criterion No. 7.
Institutional Values and Best Practices

Key Indicator 7.1
Institutional Values and Social Responsibilities

Metric: 7.1.3 (QlM)

Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through the following

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

7.1.3 QnM

Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through the following

1. Green audit / Environment audit
2. Energy audit
3. Clean and green campus initiatives
4. beyond the campus environmental promotion activities

Table Of Content

IQAC Co-Oridinator
Janseva Foundation Loni Budruks
Arts And Commerce College,Shendi
Tal.Akole, Dist.Ahmednagar.

Janseva Foundation Loni Budruks
IQAC
Arts And Commerce College, Shendi

PRINCIPAL
Janseva Foundation Loni Bk's
Art's And Commerce College,
Shendi(Bhandardara)-422604
Tal.Akole. Dist. Ahmednagar,

Audit Report of the Green Audit/ Environmental Audit/ Energy Audit

Audit Report of the Green audit/ Environmental audit/Energy audit

PowerTech Energy Solutions
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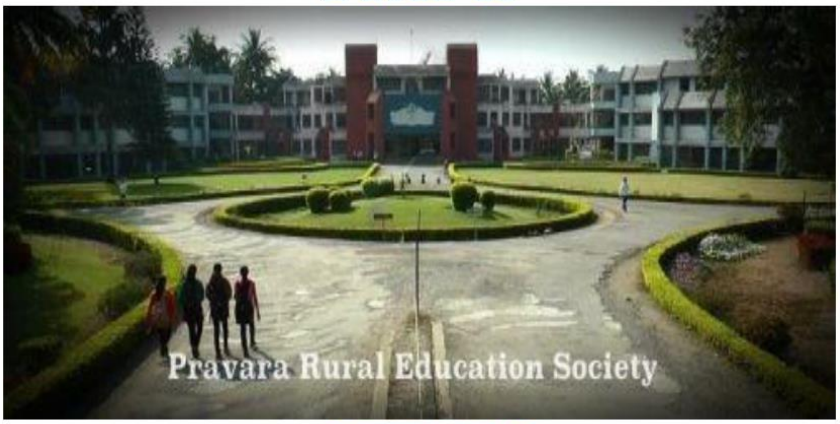
Energy & Green Audit Report Of Janseva Foundation - Arts Commerce, Science College, Shendi For the Year of 2020-21, 2021-22 & 2022-23



Prepared By PowerTech Energy Solutions (A MEDA Empaneled Class A Category Consultancy Firm)

Submitted By,

Atul S Kakad
Email: atul@ptesolutions.in
Mob: 09226936163
Web: www.ptesolutions.co.in

Reg. Office: - 6, Vaikuntha Apt, Hire Nagar, Nashik-Pune Road, Nashik.422 011
Pune Office: - Office No.10, B Wing, 3rd Floor, Phuge Prima, Bhosari, Pune
Mob. +91 9226936163, Email: info@ptesolutions.in
www.ptesolutions.co.in

Contents

Acknowledgement

PowerTech Energy Solutions extends gratitude to Janseva Foundation - Arts Commerce, Science College, Shendi for extending us the opportunity to conduct the Energy & Green Audit.

We are thankful to the professors & supporting staff of the college for their transparency & consistent support in sharing relevant information and for providing data about policies and projects along with their other valuable information. This report would have not been possible without their support.

The study team would like to acknowledge the following distinguished personnel's of college

- **Dr. Vaishali Rokade – Principal**
- **Mr. Janardan Wagh – NAAC Co-Ordinator**
- **Mr. Khatik Naim – Assistant NAAC Co-Ordinator**

Our Certificates

BEE Certified Energy Auditor Certificate


Regn. No. EA-20121

Certificate No. 8299

National Productivity Council

(National Certifying Agency)

PROVISIONAL CERTIFICATE

This is to certify that Mr. / Mrs./ Ms. Swapnil Sanjay Gaikwad

son / daughter of Mr. Sanjay J. Gaikwad

has passed the National Certification Examination for Energy Auditors held in August - 2014, 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 the Accredited Energy Auditor and issue of certificate of Accreditation by the Bureau of Energy Efficiency under the said Act.

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

Place : Chennai, India

Date : 9th January, 2015

Controller of Examination

Lead Auditor Certificate – ISO 50001: Energy Management System

TÜV NORD

PR366: ISO 50001:2018 Lead Auditor (Energy Management System) Training Course

Certificate of Achievement

Atul Kakad

has successfully completed the above mentioned course and examination.

26th - 30th November 2019

PUNE, INDIA

Certificate No. 35258395 07

Delegate No. 222777

for TÜV NORD CERT GmbH

Essen, 2020-01-08

The course is certified by CQI and IRCA (Certification No. 2088). The learner meets the training requirements for those seeking certification under the IRCA EnMS Auditor certification scheme.

TÜV NORD CERT GmbH Langemarckstraße 20 45141 Essen www.tuev-nord-cert.com

CQI | IRCA

CERTIFIED COURSE

MEDA Registration Certificate

MAHARASHTRA ENERGY DEVELOPMENT AGENCY

Maharashtra Energy Development Agency
(A Government of Maharashtra undertaking)
Aundh Road, Opposite Spicer College,
Near Commissionerate of Animal Husbandry, Aundh, Pune – 411 067
Ph No: 020-26614393/266144403
Email: eee@mahaurja.com, Web: www.mahaurja.com

ECN/2022-23/CR-44/3803 — 4th October, 2022

CERTIFICATE OF REGISTRATION
FOR CLASS 'A'

We hereby certify that, the firm having following particulars is registered with *MAHARASHTRA ENERGY DEVELOPMENT AGENCY (MEDA)* under given category as "Energy Planner & Energy Auditor" in Maharashtra for Energy Conservation Programme of MEDA.

Name and Address of the firm : M/s PowerTech Energy Solutions
Office No. 10, B-wing, 3rd floor,
Phuge Prima, Bhosari Dighi Road Bhosari,
Pimpri Chinchwad- 411 039.

Registration Category : *Empanelled Consultant for Energy Conservation Programme for Class 'A'*

Registration Number : *MEDA/ECN/2022-23/Class - A/EA-31*

- Energy Conservation Programme intends to identify areas where wasteful use of energy occurs and to evaluate the scope for Energy Conservation and take concrete steps to achieve the evaluated energy savings.
- MEDA reserves the right to visit at any time without giving prior information to verify quarterly activities performed by the firm and canceling the registration, if the information is found incorrect.
- This empanelment is valid till **3rd October, 2024** from the date of registration, to carry out energy audits under the Energy Conservation Programme
- The Director General, MEDA reserves the right to cancel the registration at any time without assigning any reasons thereof.

General Manager (EC)

1 About College

Education is an effective tool for social change. Therefore, Sahkar Maharshi Padmashri Dr. Vitthalrao Vikhe Patil believed that education should reach in all common people. In this view an educational society 'Janseva Foundation Loni Bk' was started in 1996. Sanstha has only one college of Arts, Commerce and Science At-Chichondi Po-Shendi, Tal-akole, Dist-Ahmendgar . This college run from 2007-08. With the inspiration of Late, Loknete, Padmabhushan Dr. Balasaheb Vikhe Patil saheb. This College located in hilly and tribal area and specially developed for the trible students who are away from higher education. The aim of college is to spared social, educational, financial, political awareness on the tribal and economically backward students.

The college run under the guidance and valuable contribution of Hon. Radhakrisha Vikhe Patil and Mrs. Shalinitai Vikhe Patil. Loksabha member Hon. Sujaydada Vikhe Patil and Mrs. Dhanashritai Vilkhe Patil has also contributed valuable guidance in the development of the college. The social and political leader from the located area also supported and contributed to run the college.

Also, this college has created its own unique position in the field of education by giving priority to relevant and socially oriented courses. Along with the intellectual development of the student, the intention is to give priority in the field of arts and sports. This college, which has set the path for others by creating a bright educational tradition, is working as a beacon of knowledge for the tribal community.

2 Energy Audit

An energy audit is an inspection, survey and analysis of energy flows, for energy conservation in a building, process or system to reduce the amount of energy input into the system without negatively affecting the output(s). In commercial and industrial real estate, an energy audit is the first step in identifying opportunities to reduce energy expense and carbon footprints.

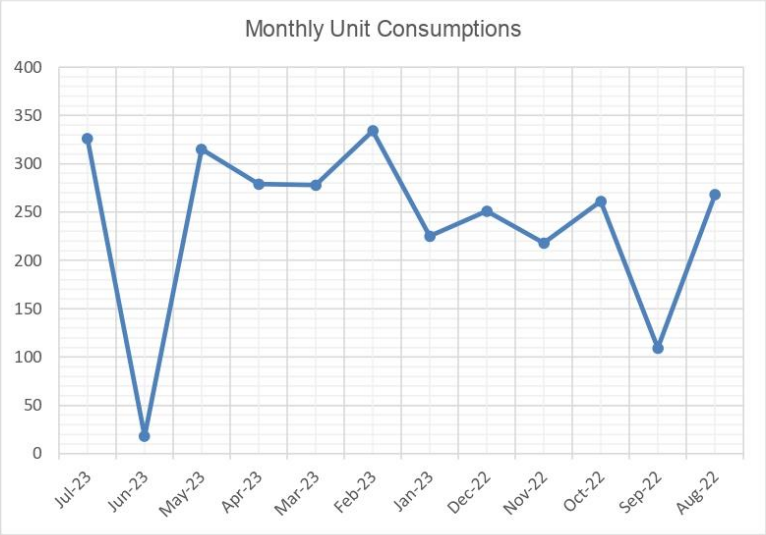
2.1 Electricity Bill Analysis

At present, one electricity meter is there for all campus

Bill analysis for consumer number 174462986503 shown below

Bill Months	Consumption(kWh)
Jul-23	326
Jun-23	18
May-23	315
Apr-23	279
Mar-23	278
Feb-23	334
Jan-23	225
Dec-22	251
Nov-22	218
Oct-22	261
Sep-22	109
Aug-22	268
Average	**240**
Total	**2,882**

Below graph shows the Monthly billed unit consumption


Monthly Unit Consumptions
400
350
300
250
200
150
100
50
0
Jul-23
Jun-23
May-23
Apr-23
Mar-23
Feb-23
Jan-23
Dec-22
Nov-22
Oct-22
Sep-22
Aug-22

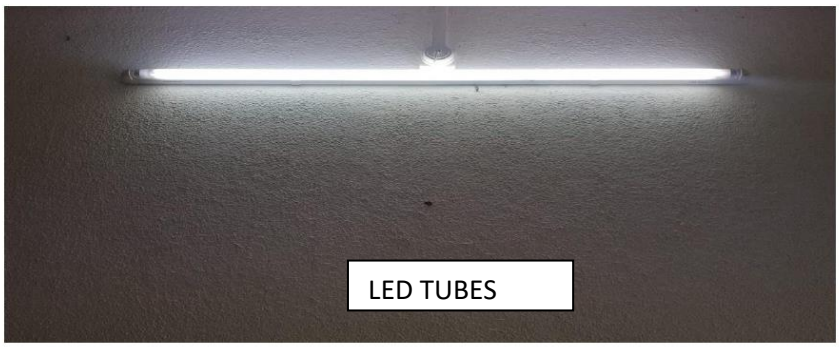
2.2 Observations

- Monthly average billed energy consumption is 240 units.

2.3 Connected Load List – Lighting

Below are some actual site photographs of LED light installation.

LED Bulbs



Area	Type of light (LED/Conventional)	Watt	Total Qty.	Load in kW
Principle cabin	LED	20	5	0.1
Principle waiting room	LED	20	2	0.04
Staff Room	LED	20	3	0.06
Staffroom Toilet	LED	20	1	0.02
Kitchen	LED	20	2	0.04
Girls Toilet	LED	20	2	0.04
Boys Toilet	LED	20	2	0.04
Board room	LED	20	2	0.04
Chemistry Lab	LED	20	4	0.08
N.s.s Office	LED	20	4	0.08
Store room	LED	20	2	0.04
Jeena-1	LED	20	1	0.02
NAAC Office	LED	20	2	0.04
Exam Department	LED	20	2	0.04
Gallery-1	LED	20	8	0.16
Office	LED	20	4	0.08
Porch -1	LED	20	4	0.08
Porch-2	LED	20	1	0.02
Outer Halogen	LED	20	3	0.06
Class room -1	LED	20	4	0.08
Class room -2	LED	20	4	0.08
Class room -3	LED	20	4	0.08
Class room -4	LED	20	4	0.08
Class room -5	LED	20	8	0.16
Class room -6	LED	20	8	0.16
Boys Toilet (1-flower)	LED	20	3	0.06
Girls Toilet (1-flower)	LED	20	3	0.06
Gallery-2	LED	20	8	0.16
Jeena -2	LED	20	1	0.02
Tribal Cell	LED	20	4	0.08
Seminar hall	LED	20	7	0.14
Girls Common room	LED	20	6	0.12
Zoology department	LED	20	6	0.12
Botany department	LED	20	5	0.1
Physics department	LED	20	6	0.12
Computer lab	LED	20	8	0.16
Library	LED	20	11	0.22
Gallery-3	LED	20	8	0.16
Jeena -3	LED	20	1	0.02
Various department - 1	LED	20	4	0.08

Various department - 2	LED	20	4	0.08
Total			**171**	**3.42**

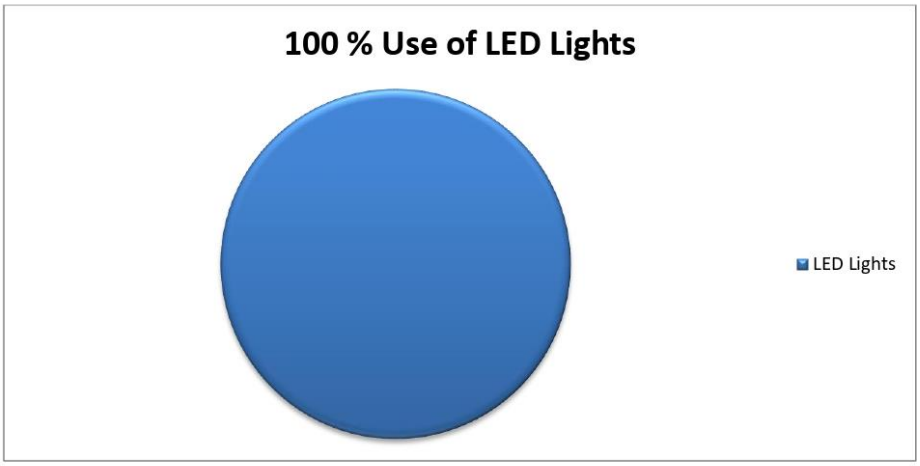
2.4 Connected Load List – Fans

Area	Watt	Total Qty.	Daily Running Hrs.	Monthly working days.	Load in kW	Monthly kWh
Principle cabin	75	1	2	24	0.075	3.6
Principle waiting room	75	1	0	24	0.075	0
Staff Room	75	1	0	24	0.075	0
Chemistry Lab	75	8	0	24	0.6	0
N.s.s Office	75	2	0	24	0.15	0
Store room	75	2	0	24	0.15	0
NAAC Office	75	1	1	24	0.075	1.8
Exam Department	75	1	2	24	0.075	3.6
Office	75	2	0	24	0.15	0
Class room -1	75	4	0	24	0.3	0
Class room -2	75	4	0	24	0.3	0
Class room -3	75	4	0	24	0.3	0
Class room -4	75	4	0	24	0.3	0
Class room -5	75	8	0	24	0.6	0
Class room -6	75	8	0	24	0.6	0
Tribal Cell	75	4	0	24	0.3	0
Seminar hall	75	6	0	24	0.45	0
Girls Common room	75	3	0	24	0.225	0
Zoology department	75	3	0	24	0.225	0
Botany department	75	3	0	24	0.225	0
Physics department	75	4	0	24	0.3	0
Computer lab	75	7	0	24	0.525	0
Library	75	8	0	24	0.6	0
Various department -1	75	4	0	24	0.3	0
Various department -2	75	4	0	24	0.3	0
Total		**702**			**16.28**	**9**

2.5 Percentage Wise Distribution of Lighting

All the tubes used are of LED type.

Type of Light	Total Nos.	% Use
LED	171	100%
Total	171	



3 Requirements of NAAC

3.1 Alternative Energy Initiative

3.1.1 Percentage of lighting power requirement met through LED bulbs

= (Lighting power requirement met through LED bulbs / Total lighting power requirement) X 100

= (171/171) X 100

= 100 %

3.1.2 Percentage of lighting power requirement met through renewable energy sources

= (Lighting power required met through renewable sources / Total lighting power requirement) X 100

= (0/2882) X 100

= **0 %**

4 Green Audit

Green audit was initiated with the beginning of 1970s with the motive of inspecting the work conducted within the organizations whose exercises can cause risk to the health of inhabitants and the environment. It exposes the authenticity of the proclamations made by multinational companies, armies and national governments with the concern of health issues as the consequences of environmental pollution. It is the duty of organizations to carry out the Green Audits of their ongoing processes for various reasons such as; to make sure whether they are performing in accordance with relevant rules and regulations, to improve the procedures and ability of materials, to analyze the potential duties and to determine a way which can lower the cost and add to the revenue. Through Green Audit, one gets a direction as how to improve the condition of environment and there are various factors that have determined the growth of carrying out Green Audit. Some of the incidents like Bhopal Gas Tragedy (Bhopal; 1984), Chernobyl Catastrophe (Ukraine; 1986) and Exxon-Valdez Oil Spill (Alaska; 1989) have cautioned the industries that setting corporate strategies for environmental security elements have no meaning until they are implemented.

Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade a, Grade B or Grade C according to the scores assigned at the time of accreditation.

The intention of organizing Green Audit is to upgrade the environment condition in and around the institutes, colleges, companies and other organizations. It is carried out with the aid of performing tasks like waste management, energy saving and others to turn into a better environmental friendly institute.

4.1 Goals of Green Audit

- The objective of carrying out Green Audit is securing the environment and cut down the threats posed to human health.
- To make sure that rules and regulations are taken care of
- To avoid the interruptions in environment that are more difficult to handle and their correction requires high cost.
- To suggest the best protocols for adding to sustainable development

4.2 Benefits of Green Audit

- It would help to shield the environment
- Recognize the cost saving methods through waste minimizing and managing
- Point out the prevailing and forthcoming complications
- Authenticate conformity with the implemented laws
- Empower the organizations to frame a better environmental performance
- It portrays a good image of a company which helps building better relationships with the group of stakeholders
- Enhance the alertness for environmental guidelines and duties

5 Initiatives by College

5.1 Tree Plantation

Tree-planting is the process of transplanting tree seedlings, generally for forestry, land reclamation, or landscaping purpose. It differs from the transplantation of larger trees in arboriculture, and from the lower cost but slower and less reliable distribution of tree seeds.

In silviculture the activity is known as reforestation, or afforestation, depending on whether the area being planted has or has not recently been forested. It involves planting seedlings over an area of land where the forest has been harvested or damaged by fire, disease or human activity. Tree planting is carried out in many different parts of the world, and strategies may differ widely across nations and regions and among individual reforestation companies. Tree planting is grounded in forest science, and if performed properly can result in the successful regeneration of a deforested area. Reforestation is the commercial logging industry's answer to the large-scale destruction of old growth forests, but a planted forest rarely replicates the biodiversity and complexity of a natural forest.

Because trees remove carbon dioxide from the air as they grow, tree planting can be used as agro engineering technique to remove $CO_2$from the atmosphere. Desert greening projects are also motivated by improved biodiversity and reclamation of natural water systems, but also improved economy and social welfare due to increased number of jobs in farming and forestry.

College has planted the trees campus area to make it more environments friendly. Below are some records, photos which shows the

Tree Plantation

Tree Plantation

Tree Plantation

5.2 Rain Water Harvesting

Rainwater harvesting: College implement rain water harvesting that collect and store rainwater from rooftops of college surfaces in tanks and later use for gardening.

Rain water which is accumulated on terrace of different building is getting utilised by means of rain water harvesting system. Water from the various buildings is transferred to the one big chamber. 78000 This water is used to recharge the ground water Following are the same images of actual system

Rain Water Harvesting

5.3 Vermicomposting

Details of Vermicomposting: Our College situated in Tribal area. Vermicomposting or worm composting is a simple technology for converting biodegradable waste into organic manure with the help of earthworms. Earthworms are valued by farmers because, in addition to aerating the soil, they digest organic matter and produce castings that are a valuable source of humus.

Vermicomposting processing Unit

5.4 Waste Management Program

Arts and Commerce College, Shendi, has undergone partial digitalization. The institute is equipped with 40 PCs, 02 printers, and 2 Xerox machines, all of which are in working condition. Despite this, the production of E-waste at the institute is relatively low.

All E-waste generated within the college premises is diligently collected and stored within their respective departments. Once every five years, this accumulated E-waste is gathered from the various departments and subsequently handed over to an authorized recycling agency for proper disposal.

However, it's worth noting that there is currently no available data concerning the quantity of E-waste generated by the institution or the methods employed for its disposal. The college lacks a documented policy outlining procedures for the collection and segregation of E-waste.

In summary, Arts and Commerce College, Shendi, has embraced a certain level of digitalization, housing a modest number of electronic devices. The institution demonstrates responsible E-waste management by collecting and storing such waste within departments and periodically engaging authorized recyclers. Nonetheless, the absence of data and an established policy highlights areas that could be improved for more comprehensive E-waste management.

E-Waste Management

5.5 Initiative Taken to Avoid Use of Paper / Plastic, Etc.

College has taken some below initiative to use of plastic / paper

- Reducing paper usage:
  - Prints and photocopies are taken on both sides of the pages to avoid excess paper usage. Rather than photocopy, digitalization (scanning) is practiced.
  - Faculty and administration staff use old papers and envelop for internal usages as rough work, file markers, page separators, etc.
- Storing paper materials:
  - The dissertation reports, journals, and answer papers are stored as per the University rules. Most answer papers will be archived and stored in a record room. Old publications are still stored in the library.
- Disposal of paper waste:
  - As per the memo, for the disposal of old newspaper, scrap dealer is called by librarian.

Don’t use plastics

Waste Management

Green/Environmental Audit and Energy audit completion certificate for A.Y 2020-21

Green/Environmental Audit/ Energy audit completion certificate for A.Y 2020-21

PowerTech Energy Solutions
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ENERGY & GREEN AUDIT COMPLETION CERTIFICATE

This is to certify that the following facility has carried out Energy & Green Audit for the academic year of 2020-21 as per guidelines laid down by the Bureau of Energy Efficiency (BEE), Ministry of Power. Govt. of India

Name of the Installation	Janseva Foundation - Arts Commerce, Science College, Shendi
Details of Facilities Audited	Main college building including laboratories, libraries, Classroom, etc.
Date of Energy and Green Audit	13 July 2021
Name of Certified Energy Auditor & Certification Number	Mr. Swapnil Gaikwad - EA 20121
Name of ISO 50001 Lead Auditor & Certification Number (Certification by Accreditation Body – TUV Nord)	Mr. Atul Kakad 35258395 - 07
Empanelment No (With Maharashtra Energy Development Agency, Govt. of Maharashtra)	MEDA/ECN/2022-23/ Class- A/EA-31
Validity of the Certificate	12 July 2022

Authorised Signatory

Digitally signed by ATUL SHARAD KAKAD

Atul S Kakad

PowerTech Energy Solutions

Reg. Office: - 6, Vaikuntha Apt, Hire Nagar, Nashik-Pune Road, Nashik.422 011
Pune Office: - Office No.10, B Wing, 3rd Floor, Phuge Prima, Bhosari, Pune 411 039
Mob. +91 9226936163, Email: info@ptesolutions.in
www.ptesolutions.co.in

Green/Environmental Audit and Energy audit completion certificate for A.Y 2021-22

Green/Environmental Audit/ Energy audit completion certificate for A.Y 2021-22

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Details of Facilities Audited	Main college building including laboratories, libraries, Classroom, etc.
Date of Energy and Green Audit	12 July 2022
Name of Certified Energy Auditor & Certification Number	Mr. Swapnil Gaikwad - EA 20121
Name of ISO 50001 Lead Auditor & Certification Number (Certification by Accreditation Body – TUV Nord)	Mr. Atul Kakad 35258395 - 07
Empanelment No (With Maharashtra Energy Development Agency, Govt. of Maharashtra)	MEDA/ECN/2022-23/ Class- A/EA-31
Validity of the Certificate	11 July 2023

Authorised Signatory

Digitally signed by ATUL SHARAD KAKAD

Atul S Kakad

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Details of Facilities Audited	Main college building including laboratories, libraries, Classroom, etc.
Date of Energy and Green Audit	21 July 2023
Name of Certified Energy Auditor & Certification Number	Mr. Swapnil Gaikwad - EA 20121
Name of ISO 50001 Lead Auditor & Certification Number (Certification by Accreditation Body – TUV Nord)	Mr. Atul Kakad 35258395 - 07
Empanelment No (With Maharashtra Energy Development Agency, Govt. of Maharashtra)	MEDA/ECN/2022-23/ Class- A/EA-31
Validity of the Certificate	21 July 2024

Authorised Signatory

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Beyond the campus environmental promotion activities

Pravara River Basin Cleaning In Collage Students

Swatch Bharat mission

River Basin Cleaning In Collage Students

Ratangad Fort Cleaning In NSS Collage students

Ratangad Fort Cleaning In NSS Collage students

Water-Shed Management at Shelad Ghigewadi

Water-Shed Management at Shelad Ghigewadi

Waranghushi Village Road safety working by Collage Students

Waranghushi Z. P School Village Drainage working by Collage

Waranghushi Village Road Cleaning working by Collage

Kalsubai Temple Campus cleaning by Collage

Kalsubai Temple Campus cleaning by Collage

Kalsubai Temple Campus cleaning by Collage

Chichondi Village Cleaning NSS Camp students

Chichondi Village Cleaning NSS Camp students