Nutan Urja Solutions

A 703, Balaji Witefield, Near Sunni's World,

Sus Road, Sus, Pune 411 021

Phone: 83568 18381. Email: nutanurja.solutions@gmail.com

Date: 21/08/2019

CERTIFICATE

This is to certify that we have conducted Environmental Audit at Brahma Valley College Of Engineering And Research Institute, Nashik in the year 2018-19.

The College has already adopted following projects for making the campus **Energy Efficient.**

- Installation of Bio Composting Pit
- Installation of Biogas Generation Plant
- Installation of Rain Water Harvesting System
- Installation of Solar Thermal Hot water System
- Installation of Sewage Treatment Plant

We appreciate the support of Management, involvement of faculty members and students in the process of Energy Conservation & making the campus Green.

Nutan Urja Solutions,

NUTAN URJA SOLUTIONS

K G Bhatwadekar,
Certified Energy Auditor,
EA – 22428

Report

On

Environmental Audit

At

Brahma Valley College Of Engineering And Research Institute, Nashik

(Year 2018-19)

Prepared by

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NUTAN URJA SOLUTIONS

Acknowledgement

We at Nutan Urja Solutions, Pune wish to express our sincere gratitude to the management of Brahma Valley College Of Engineering And Research Institute, Nashik for assigning the work of Environmental Audit of college campus.

We appreciate the co-operation and support extended to our team members during the entire tenure of field study.

We are also thankful to various Head of Departments & other Staff members for helping us during the field measurements.

We are also thankful to all other staff members who helped us during the Measurements at the field and for giving us the necessary inputs to carry out this vital exercise.

Abbreviations

AC	:	Air conditioner
PES	:	Progressive Education Society
CFL	:	Compact Fluorescent Lamp
FTL	:	Fluorescent Tube Light
LED	:	Light Emitting Diode
kWh	:	kilo-Watt Hour
Qty	:	Quantity
W	:	Watt
kW	:	Kilo Watt
PF	:	Power Factor
M D	:	Maximum Demand
PC	:	Personal Computer
MSEDCL	:	Maharashtra State Electricity Distribution Company Ltd

2011	E-waste (Management and Handling) Rules
2011	National Green Tribunal (Practices and Procedure) Rules
2011	Plastic Waste (Management and Handling) Rules

1.1.6 National Environmental Plans & Policy Documents: Table No-3:

1.	National Forest Policy, 1988
2.	National Water Policy, 2002
3.	National Environment Policy or NEP (2006)
4.	National Conservation Strategy and Policy Statement on Environment and Development, 1992
5.	Policy Statement for Abatement of Pollution (1992)
6.	National Action Plan on Climate Change
7.	Vision Statement on Environment and Human Health
8.	Technology Vision 2030 (The Energy Research Institute)
9.	Addressing Energy Security and Climate Change (MoEF and Bureau of Energy Efficiency
10	The Road to Copenhagen; India's Position on Climate Change Issues (MoEF)

1.2 Objectives

1. To study present usage of Natural resources the College is consuming
2. To Study the present pollution sources
3. To study various measures to make the campus Self sustainable in respect of Natural resources
4. To suggest the various measures to reduce the pollution: Air, Water, Noise

1.3 Audit Methodology:

1. Study of College as System
2. Study of Electrical Energy Consumption
3. Study of CO2 emissions
4. Suggestions on usage of Renewable Energy

1.4 General Details of College

No	Head	Particulars
1	Name of Institution	Brahma Valley College Of Engineering And Research Institute, Nashik
2	Address	Brahma Valley College Of Engineering And Research Institute, Anjaneri, Trimbak Road, Nashik, Maharashtra 422 213.
3	Affiliation	Savitribai Phule Pune University

Table 2.1: Electrical Energy Consumption

No	Month	Energy (kWh)
1	Jun-19	14214
2	May-19	16868
3	Apr-19	19567
4	Mar-19	26305
5	Feb-19	30022
6	Jan-19	35051
7	Dec-18	30618
8	Nov-18	18106
9	Oct-18	37846
10	Sep-18	36966
11	Aug-18	39650
12	Jul-18	35990
	Total	**3,41,203**
	Maximum	39,650
	Minimum	14,214
	Average	28,434

2.1 Variation of Monthly Electrical Energy Consumption

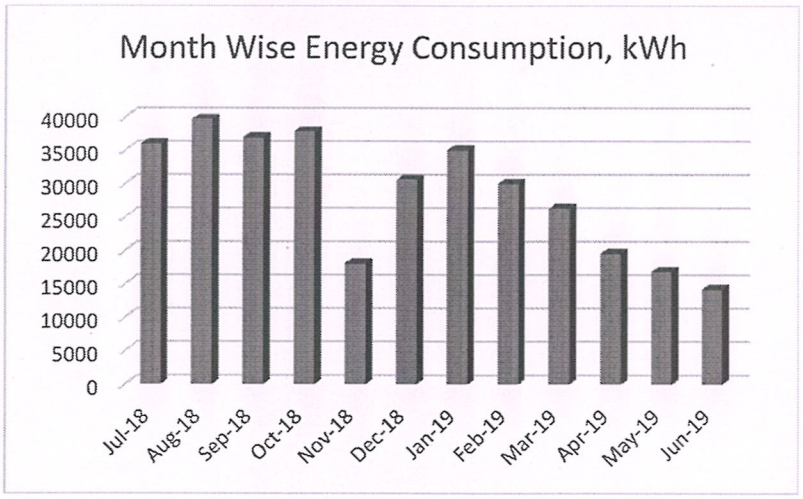

Figure 2.1 : Monthly Electrical Energy Consumption

2.2 Key Inference drawn

From the above analysis, we present following important parameters:

3. Study of Environmental Pollution

In this Chapter, we present the various types of Pollution as under:

3.1 Air Pollution

The College is using two forms of Energies, namely: Thermal in the form of LPG and Electrical Energy used for day to day operations of the College. The major pollutant on account of above Energy forms is the Carbon Di Oxide.

- 1 unit (kWh) of Electrical Energy emits 0.8 Kg of CO_2 in the atmosphere
- 1 Kg of LPG emits 3 Kg of CO_2 in the atmosphere

In the following Table, we present the CO_2 emissions.

Table 3.1: Month wise Consumption of Electrical Energy & CO_2 Emissions:

No	Month	Energy Consumed, kWh	CO2 Emissions, MT
1	Jun-19	14214	11.37
2	May-19	16868	13.49
3	Apr-19	19567	15.65
4	Mar-19	26305	21.04
5	Feb-19	30022	24.02
6	Jan-19	35051	28.04
7	Dec-18	30618	24.49
8	Nov-18	18106	14.48
9	Oct-18	37846	30.28
10	Sep-18	36966	29.57
11	Aug-18	39650	31.72
12	Jul-18	35990	28.79
	Total	**3,41,203**	**272.96**
	Maximum	39,650	31.72
	Minimum	14,214	11.37
	Average	28,434	22.75

3.4 Study of e-Waste Management:

The internal communication is through emails and there is hardly any generation of e-Waste in the premises.