

Green Audit Report
For
2019-2020
Prahladrai Dalmia Lions
College
Of Commerce and Economics,
Malad West, Mumbai

Report by – Dr.Rajashekhar O. Patil

M.A, LL.M, PGDBM, Ph.D.

Date of Audit: 02/01/2020 and 02/01/2020

Green Audit Report 2019-2020

Introduction:

In recent times, the Green Audit of an institution has become a paramount for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems.

Green audit can be a useful tool for an institute to examine how and where they are using the resources or most of the energy or water; the college can then improve and consider how to implement changes and make savings.

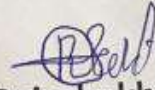
This report serves to highlight the accomplishments of Prahladrai Dalmia Lions College and to make recommendations for maintaining a sustainable environment in the college. The college conducted the Internal Green Audit in Academic Year 2019-2020 and strives to maintain eco-friendly atmosphere in the campus:

The activities taken by the college to make the campus eco-friendly:

- ❖ To create more awareness about environment the "Tree Plantation" was organized by college on 17th December 2019.
- ❖ In compliance with the recommendation given in Green Audit report of 2019-2020, The college has taken following initiatives:
 - E – Waste Box installation for disposal of Electronic waste items.
 - Sanitary Napkin Wending Machine has been installed in washrooms for Girl students.
 - Disaster is very common in each and every corner of the world. Regarding this U.N.O. has made some necessary recommendation for member countries. Government of India, Maharashtra State Government as well as BMC has their own regulations to reduce disasters. Prahladrai Dalmia Lions College has already taken measures in this direction. So college have "Disaster Management Cell/Aapat Bhandhav" it creates more awareness among the students community.

Suggestion/Recommendations:

- ❖ Form a "Nature Club", which is based on United Nations Environmental Program (UNEP). UNEP is at Global Level whereas your Nature Club will be at local Level.
- ❖ College should take initiative in "Seeds Bombing" in the nearby Green Zone Area/Forest Areas as a part of Monsoon Activities.
- ❖ To set up rain water harvest plant.



Dr. Rajashekhar O. Patil

M.A, LL.M, PGDBM, Ph.D.

(Auditor)

Place: Mumbai

Date: 03/01/2020



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Green Audit Report



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<u>Site Description</u>	
Building Name	: <u>Prahladrai Dalmia Lions College of Commerce & Economics.</u>
Address	: <u>Sunder Nagar, S.V Road, Malad West, Mumbai, Maharashtra 400064.</u>
City	: <u>Mumbai</u>
State	: <u>Maharashtra</u>
Pin code	: <u>400064</u>
Building Type	: <u>Educational Institute</u>
No. of Units	: <u>1 Nos</u>
No. of Floors	: <u>Nos</u>
No. of Parking Floors	: <u>0 Nos</u>
Age of Structure	: <u>51 years (Approximately)</u>
No. of Employees (Teaching and Non-teaching staff)	: <u>141 Nos (Approximately)</u>
No. of students	: <u>7284 Nos (Approximately)</u>
No. of Lifts	: <u>1 Nos</u>
Contact Person	: <u>Dr. Kiran Mane</u>
Position	: <u>Principal</u>
Contact Email	: <u>principal@dalmialionscollege.ac.in</u>
Contact Number	:
No. of Connections	:



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Prahladrai Dalmia Lions College of Commerce & Economics - Educational Institute

Electricity Consumption

The institute has several elements that are completely dependent on electrical energy for operations.

It is observed from the bills that:

Electricity	Consumption (units)	Emissions (tons of CO ₂ e)
Daily	162.115	0.314
Monthly	4931	9.426
Yearly	59172	114.69

Based on the consumption in 2022, it was observed that there is an average fluctuation of approximately 27%. This fluctuation can be the result of **work demand**.

The facility has several types of instruments, equipment, devices and items that includes light fittings, fans, air conditioners, lifts, computer projectors, cameras etc. and items that induce *inductive or capacitive load*. This has a direct impact on the efficiency at which the power is being consumed at the Institute. (In simpler terms, use of such devices has a direct contribution towards the power factor of the facility.)

Based on the bills provided for the months from Oct 2022 to November 2022, it can be observed that the average power factor for the institute was 0.8889. the month of February has observed the lowest Average Power Factor of 0.8678 for the institute.



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Fugitive Emission

Air Conditioners are found on each floor in the specific rooms. Fugitive emissions are introduced due to the leaked refrigerant from the air conditioning system/refrigeration system. The Air conditioning systems were operated throughout the working hours of the college. Refrigerant R-32 was used in each of the air conditioners. The Average Fugitive Fluctuation over is 10%

Fugitive Emissions	Emissions (tons of CO ₂ e)
Daily	0.006
Monthly	0.198
Yearly	2.42

Commute

Commute of a total of 7,425 people was considered which included the students, faculty, and the non-teaching staff of the institute. Public transportation such as local trains for long distance travel and buses for short distance travel were considered.

Emissions due to Commute	Emissions (tons of CO ₂ e)
Daily	1.188
Monthly	35.65
Yearly	433.78



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Water

Based on the Average Consumption of water based on the Water bills Provided of the Year 2022.

Emissions due to Commute	Emissions (tons of CO2e)
Daily	3.00
Monthly	90.15
Yearly	1096.87

Waste

On the Approximated Calculation done on the waste generation at the Premises Of both Wet and Dry waste.

Emissions due to Commute	Emissions (tons of CO2e)
Daily	0.902
Monthly	27.07
Yearly	329.4



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Total emissions

Considering all the parameters mentioned earlier, the total emissions generated due to the institute was determined.

Total Emissions	Emissions (tons of CO₂e)
Daily	5.416
Monthly	162.50
Yearly	1977.16

Remarks

There is a 20% error margin due to the lack of verification of the data collected by the volunteers.



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Recommendations

Based on the audit conducted, there is a scope of reduction and offsetting the emissions generated within the organizational boundary of the institute.

- Plantations: Planting 8000 trees per year for the next 5 years would make a major contribution in offsetting the emissions generated.
- Energy Audit: Targeted audit can help achieve up to 10-15 % savings on electrical consumption by recommending changes or upgrades to the existing systems in place.
- Solar Installation: Setting up at least 20kW of solar power plant will not only reduce energy consumption from conventional grids but also yield monetary savings.
- Water conservation: Reuse of grey water should be considered wherever possible. Rainwater harvesting with immediate use of water and not from borewells, will
- Waste Management: Design policies for on-site waste management in the organization. For off-site wet and dry waste management partner with registered organizations
- Shared buses: Set up shared buses for commute up to the railway station as most of the students take local trains.





INTERNATIONAL ASSOCIATION OF
ENVIRONMENTALISTS AND ECO-SOCIALISTS

FOR SUSTAINABILITY

CERTIFICATE OF CLEAN AND GREEN CAMPUS AWARD - 2021

THIS CERTIFICATE IS PROUDLY AWARDED TO :

**PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS,
MALAD WEST, MUMBAI**

FOR SUCCESSFULLY COMPLETING THE CLEAN AND GREEN CAMPUS AUDIT AND HAS BEEN AWARDED FOR THE YEAR 2021 BY
THE "INTERNATIONAL ASSOCIATION OF ENVIRONMENTALISTS AND ECO-SOCIALISTS (TM) ON DECEMBER 12, 2021.

C.NO. : BE/ISO/IAEE/23/221

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Kumardatt Ganjre

Managing Director

GREEN CERTIFICATE

YEAR - 2021-22

This certificate has been awarded to
Prafiladrai Dalmia Lions College of
Commerce & Economics,
Malad (West), Mumbai – 400064.
in recognition of the organizations efforts for
sustainable development.

Empanelled with

महाराजा

महाराष्ट्र ऊर्जा विकास अभिकरण
(Govt. of Maharashtra Institution)

Reg no. MEDA/ECN/CR-14/2020-21/EA-17



Kedar

Kedar Khamitkar

Energy Auditor CEA-8287

Certified by BEE,
Ministry of Power, Govt. of India



Kedar Khamitkar & Associates, Latur

Empanelled with Mahaurja, Govt of Maharashtra Institution

Issued Date : 23/03/2022



ऊर्जा धन...
इंधन...
पर्यावरण...!
संवर्धन

Note : Certificate is based on organisation compliance on green audit
recommendations and continual maintenance of the system & conduction of surveillance audit

❖ Energy Audit Certificate ❖

Year - 2021-22

**This is to certify that following utility has carried out
College building Energy Audit
in recognition of the organizations efforts for
sustainable development.**

Name of the Institute	: Prahladrai Dalmia Lions College of Commerce & Economics, Malad (West), Mumbai – 400064.
Date of Energy Audit	: 22/03/2022
Name of Energy Auditor	: KEDAR KHAMITKAR Certified by BEE (Bureau of Energy Efficiency) Ministry of Power, Govt. of India
Registration No	: EA - 8287

Empaneled Energy Auditor & Planner
Reg no. MEDA/ECN/CR-14/2020-21/EA-17

महाराष्ट्र ऊर्जा विकास अभिकरण
(Govt. of Maharashtra Institution)



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