ENGRESS SERVICES

Yashashree, 26, Nirmal Bag Society, Near Muktangan English School, Parvati, Pune 411 009 Tel: 09890444795 Email: engress123@gmail.com

MEDA Registration No: ECN/2022-23/CR-43/1709 ISO: 9001-2015 Certified (Cert No: 23EQKC13), ISO: 14001-2015 Certified (Cert No: 23EEKW20)

GREEN AUDIT CERTIFICATE

Certificate No: ES/MMMIMERT/22-23/02

Date: 18/4/2023

This is to certify that we have conducted Green Audit at Marathwada Mitra Mandal's Institute of Management Education Research & Training, Karvenagar, Pune, in the Academic year 2022-23.

.The Institute has adopted following Energy Efficient & Green practices:

- > Usage of Energy Efficient LED Light Fitting
- Usage of BEE STAR Rated Energy Efficient Equipment
- Maximum Usage of Day Lighting
- Installation of Solar Thermal Water Heating System at Hostel block
- Segregation of Waste at source
- Installation of Bio Composting Unit for conversion of Organic Waste
- Provision of Sanitary Waste Incinerator, for disposal of Sanitary Waste
- > Installation of Rain Water Harvesting Project
- > Maintenance of good Internal Road
- > Tree Plantation in the campus
- Provision of Ramp for Divyangajan
- Creation of awareness on Resource Conservation by display of posters

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

For Engress Services,

A Y Mehendale,

B E- Mech, M Tech-Energy, Certified Energy Auditor, EA-8192

ASSOCHAM GEM Certified Professional: GEM: 22/788





Regd. Office & Factory: C/o. Rudrapratap Forms Pvt. Ltd., Plot No. 58, MIDC, Bhosari, Pune - 411 026. MH, INDIA • Cell: +91 9370146599 / 7507183340

Email: niceleds@gmail.com • Web.: www.niceleds.in

CIN No.: U72400PN2009PTC133897 • GSTIN: 27AADCN0033A1Z9



Natural Info Com and Engineers Pvt. Ltd. Plot No. 58, Sec No. 7 MIDC Bhosari Pune-411026 Contact No. 9158214594

Website: www.niceled.in

Ref No: NICE/MMIMERT/14

Date: 10/06/2022

Energy and Green Audit: Summary

- Name of the Client: Marathwada Mitra Mandal's Institute of Management Education Research and Training, Karvenagar, Pune.
- 2. Form of Usage of Energy: Electrical Energy and LPG
- 3. Important Parameters: Electrical Energy Usage:

No	Parameter	Max	Min	Average
1	Units Consumed, kWh	7078	1478	3033
2	Max Demand, kVA	19.98	14.19	16.75

4. Floor wise Calculation of Energy Consumption

6th Floor

Sir No	Premises Type	Electrical Appliance	Present Quantity	Usage Hours
1	Director's Office	Led Lights	8	8
2		Fans	1	5
3		A/c	2	6
4	CRD Room	Fans	6	8
5		Led Lights	17	8
6	Board Room	A/c	2	4
7		Led Lights	6	5
8	Pantry	Led Lights	2	6
9		Fans	1	6



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10	Exam Control Room	Led Lights	5	6
11		Fans	2	8
12	Faculty Room	Led Lights	10	8
13		Fans	6	8
14	Corridor	Led Lights	10	4
15	Washroom	Led Lights	4	4

5th Floor

Sir No	Premises Type	Electrical Appliance	Present Quantity	Usage Hours
1	NACC Office	Led Tube Lights	2	6
2		Fans	2	5
3	Account Office	Fans	4	8
4		Led Tube Lights	6	8
5	Library	Fans	8	8
6		Led Tube Lights	14	4
7	Class Room	Fans	2	6
8		Led Tube Lights	4	6
9	Corridor	Led Tube Lights	10	4
10	Washroom	Led Tube Lights	4	4

4th Floor

Sir No	Premises Type	Electrical Appliance	Present Quantity	Usage
1	Tutorial Room	Led Tube Lights	4	6
2		Fans	2	5
3	OIA	Fans	2	6
4		Led Tube Lights	2	6
5	Class Room 5	Fans	4	8
6		Led Tube Lights	6	4
7	OIA	Fans	2	6
8		Led Tube Lights	2	6
9	Computer Room	Fans	14	5



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10		Led Lights	15	4
11		Computers	60	3
12	Corridor	Led Tube Lights	10	4
13	Washroom	Led Tube Lights	4	4

3rd Floor

Sir No	Premises Type	Electrical Appliance	Present Quantity	Usage
1	Faculty Room	Led Tube Lights	2	6
2		Fans	2	7
3	Seminar Hall	Fans	14	5
4		Led Lights	17	5
5	Corridor	Led Tube Lights	10	4
6	Washroom	Led Tube Lights	4	4

2nd Floor

Sir No	Premises Type	Electrical Appliance	Present Quantity	Usage
1	Faculty Room	Led Tube Lights	4	8
2		Fans	2	8
3	Class Room 1	Fans	4	7
4		Led Tube Lights	4	7
5	Class Room 2	Fans	4	7
6		Led Tube Lights	6	7
7	Class Room 3	Fans	4	7
8		Led Tube Lights	4	7
9	Girls Room	Fans	4	7
10		Led Tube Lights	4	7
11	Corridor	Led Tube Lights	10	4
12	Washroom	Led Tube Lights	4	4



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1st Floor

Sir No	Premises Type	Electrical Appliance	Present Quantity	Usage
1	First Aid Room	Led Tube Lights	2	2
2		Fans	2	2
3	Central Room	Fans	2	7
4		Led Tube Lights	4	7
5	Cafeteria	Fans	4	7
6		Led Tube Lights	8	7
7	Class Room	Fans	4	7
8		Led Tube Lights	6	7
9	Girls Room	Fans	4	7
10	Corridor	Led Tube Lights	10	4
11	Washroom	Led Tube Lights	4	4

Ground Floor

Sir No	Premises Type	Electrical Appliance	Present Quantity	Usage Hours
1	Premises	Led Tube Lights	11	12
2		Fans	7	18
3	Washroom	Led Tube Lights	4	4
4	Lift	Lift	1	14

5. Findings

- Marathwada Mitra Mandal's Institute of Management Education Research and Training at the time of inception took in consideration the recommendations of the Audit Report dated 10/06/2022, resulting in shifting from Conventional CFL Tube lights to Led Lights and Tubes.
- Average Monthly consumption of Units as per average of year is 3033 Units.
- Average Monthly bill payment is 47460 rupees.
- Average Monthly Unit Rate is 16.75 rupees per unit.



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6. Recommendations

Sir No	Recommendations
1.	Common Street lights to be shifted into Solar Paneled Lights.
2.	Installation of Photovoltaic Solar System On- grid of 24 KW. Generation through solar PV Panels would be approximately 3000 Units/Month.
3.	Area required for installation of 24 KW system will be 1680 Sqft.
4.	Additional Benefits of Solar PV Installation: Government subsidy of rupees 13400/KW. Saving of 5% on Property Tax every Year. The Payback period of the installation is only 3 Years whereas the system has the life of more than 30 Years. Options available for Installations are Bank Loans, BOT, Opex, Capex, etc.
5.	Area required for installation of 24 KW system will be 1680 Sqft.
6.	Estimated Monitory savings by installation of Solar PV would be around - Rs 47460 Monthly and Rs 569520 per Year.

For Natural Info Com and Engineers Pvt. Ltd.

Pune Pune Pune

Mr. Rakesh Bajoria (Chief Executive Officer)



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Date: 04/06/2021

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MIDC Bhosari
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Energy and Green Audit: Summary

- 1. Name of the Client: Marathwada Mitra Mandal's Institute of Management Education Research and Training, Karvenagar, Pune.
- 2. Form of Usage of Energy: Electrical Energy and LPG
- 3. Important Parameters: Electrical Energy Usage:

No	Parameter	Max	Min	Average
1	Units Consumed, kWh	3394	1133	2097
2	Max Demand, kVA	20.4	18.8	19.06

4. Floor wise Calculation of Energy Consumption

6th Floor

Sir No	-Premises Type	Electrical Appliance	Present Quantity	Usage Hours
1	Director's Office	Led Lights	8	8
2		Fans	1	5
3		A/c	2	6
4	CRD Room	Fans	6	8
5		Led Lights	17	8
6	Board Room	A/c	2	4
7		Led Lights	6	5
8	Pantry	Led Lights	2	6
9		Fans	1	6



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13		Fans	6	8
14	Corridor	Led Lights	10	4
15	Washroom	Led Lights	4	4

5th Floor

			Present	Usage
Sir No.	Premises Type	Electrical Appliance	Quantity	Hours
1	NACC Office	Led Tube Lights	2	6
2		Fans	2	5
3	Account Office	Fans	4	8
4		Led Tube Lights	6	8
5	Library	Fans	8	8
6		Led Tube Lights	14	4
7	Class Room	Fans	2	6
8		Led Tube Lights	4	6
9	Corridor	Led Tube Lights	10	4
10	Washroom	Led Tube Lights	4	4

4th Floor

			Present	Usage
Sir No	Premises Type	Electrical Appliance	Quantity	Hours
1	Tutorial Room	Led Tube Lights	4	6
2		Fans	2	5
3	OIA	Fans	2	6
4		Led Tube Lights	2	6
5	Class Room 5	Fans	4	8
6		Led Tube Lights	6	4
7	OIA	Fans	2	6
8		Led Tube Lights	2	6
9	Computer Room	Fans	14	5



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2		Fans	2	7
3	Seminar Hall	Fans	14	5
4		Led Lights	17	5
5	Corridor	Led Tube Lights	10	4
6	Washroom	Led Tube Lights	4	4

2nd Floor

Sir No	Premises Type		Electrical Appliance	Present Quantity	Usage Hours
1	Faculty Room		Led Tube Lights	4	8
2			Fans	. 2	8
3	Class Room 1		Fans	4	7
4			Led Tube Lights	4	7
5	Class Room 2		Fans	4	7
6			Led Tube Lights	6	7
7	Class Room 3		Fans	4	7
8			Led Tube Lights	4	7
9	Girls Room		Fans	4	7
10		-	Led Tube Lights	4	7
11	Corridor		Led Tube Lights	10	4
12	Washroom		Led Tube Lights	4	4



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Ground Floor

Sir No	Premises Type	Electrical Appliance	Present Quantity	Usage Hours
1	Premises	Led Tube Lights	11	12
2	-	Fans	7	18
3	Washroom	Led Tube Lights	4	4
4	Lift	Lift	1	14

5. Findings

- Marathwada Mitra Mandal's Institute of Management Education Research and Training at the time of inception took in consideration the recommendations of the Audit Report dated 04/06/2021, resulting in shifting from Conventional CFL Tube lights to Led Lights and Tubes.
- Average Monthly consumption of Units as per average of year is 2097.25 Units.
- Average Monthly bill payment is 35153 rupees.
- Average Monthly Unit Rate is 16.76 rupees per unit.



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6. Recommendations

Sir No	Recommendations
1.	Common Street lights to be shifted into Solar Paneled Lights.
2.	Installation of Photovoltaic Solar System On- grid of 16.778 KW. Generation through solar PV Panels would be approximately 2097.25 Units/ Month.
3.	Area required for installation of 16.778 KW system will be 1174 Sqft.
4.	Additional Benefits of Solar PV Installation: - Government subsidy of rupees 13400/KW Saving of 5% on Property Tax every Year The Payback period of the installation is only 3 Years whereas the system has the life of more than 30 Years Options available for Installations are Bank Loans, BOT, Opex, Capex, etc.
5.	Area required for installation of 16.778 KW system will be 1174 Sqft.
6,	Estimated Monitory savings by installation of Solar PV would be around Rs 35153 Monthly and Rs 421842 per Year.

For Natural Info Com and Engineers Pvt. Ltd.

Pune

Mr. Rakesh Bajoria (Chief Executive Officer)