

CSIBER

(An Autonomous Institute)

CPE (College with Potential for Excellence – Phase III) Status

Energy Audit Report

(2019-20)



**Chhatrapati Shahu Institute of Business Education and Research,
(CSIBER), Kolhapur**

October, 2020





CSIBER Trusts
**CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION
AND RESEARCH (CSIBER), KOLHAPUR.**

An Autonomous Institute under UGC, New Delhi and Shivaji University,
College with Potential for Excellence (CPE) III Phase,
Reaccredited by NAAC with 'A+' Grade (CGPA 3.55)

CERTIFICATE

This is to certify that, the Energy Audit Report of **Chhatrapati Shahu Institute of Business Education and Research (CSIBER), Kolhapur** has been prepared and certified by the Department of Environment Management based on the documents produced by the Institute.

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Date: 12/04/2021

Place: Kolhapur

Certified by :

Er. D. S. Mali
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ENERGY AUDIT

1. Energy Policy of the Institute

As one of the premier institute in Environment Management in Western Maharashtra, CSIBER has sustainable approach in energy management. Maximum use of natural light and ventilation, production of electricity through renewable sources and conservation of energy through efficient lighting are the basic principles of energy policy of CSIBER, Kolhapur.

2. Details of the Institution

2.1. Name and Address of the Institute:

Name	Chhatrapati Shahu Institute of Business Education and Research, Kolhapur
Address	Shivaji University Road, Kolhapur 416004
City	Kolhapur
State	Maharashtra
Website	www.siberindia.edu.in

2.2. Coordinates:

16°41'14" N, 74°15'08" E

Elevation: 590 Mt MSL

2.3. The Google Earth map of the area:



2.4. Details of Location:

City	Taluka	District	City Survey No.	Area (Ha)	Ownership
Kolhapur	Karveer	Kolhapur	369	0.83	CSIBER Trust
			372	4.52	
			373	0.08	
			Road	(-0.75)	
			Total	4.68	

2.5. Land Use Pattern:

Sr. No.	Particulars	Area (Sq. Mt)	%
1	Main Building	4000	8.54
2	RSEM School	2475	5.28
3	CBSE School	4000	8.54
4	CNCVCW	2000	4.27
5	Central Library	1225	2.61
6	Canteen and Bank	525	1.12
7	Ladies Hostel	1125	2.4
8	Boys Hostel	1000	2.13
9	Parking	2200	4.70
10	Staff Quarters	1000	2.13
11	Play Ground	9400	20.08
12	Road	2130	4.55
13	Open Space	15720	33.58
	Total	46800	100

3. Energy management practices:

3.1. Solar Roof top PVC panels

Institute has successfully harvesting solar energy to fulfil the demand of energy. The total power requirement of the institute is 68.8 KWH out of which 57 KWH is generated through solar energy hence almost 80 % requirement of the energy is fulfilled by solar energy. 120 KW capacity solar power generation system has been installed on roof of the institute. This system is generating electricity and the electricity is being sent to MSEB greed. The amount of power generated is deducted from the total consumption of the electricity by the institute.



Solar power generation PVC panels on Roof top of the institute

3.2. Solar water heater

All three hostels are having the facility of solar water heater. Boys hostel is having solar water heating system of about 5000 liters. Girls hostel is having the 3000 liters' capacity of solar water heating system. Working women hostel situated in the campus is also having the 2000 liters' solar water heating capacity.



Solar Water Heaters at Boys Hostel

3.3. LED lights

All lighting devices have replaced with LEDs in the year 2019-20 under RUFA 2.0 Component 8: “Enhancing Quality and Excellence” funding. This has reduced the electricity consumption by around 30%.

3.4. Well ventilated classrooms

Construction of the institute is very well designed; each room is well ventilated with abundant natural light. No need of artificial lighting is required during most of the time in the office hours.

4. Energy Consumption:

Month	Electricity Consumed (KWH)	Electricity Generated (KWH)	Balance (KWH)
June 2019	11252	310	10942
July 2019	--	0	0
August 2019	11639	0	11639
September 2019	5394	1063	4332
October 2019	4128	0	4128
November 2019	4170	0	4170
December 2019	4962	0	49
January 2019	4198	0	62
February 2019	4316	0	4198
March 2019	4018	0	4316
April 2019	4696	0	4018
May 2019	--	--	--

5. Conclusion:

The energy conservation practices in the campus are very good and promising. Electricity generation by using solar panels is a very good initiative by the Institute. Also, solar water heaters are saving electricity could be used for water heating. Good ventilation and proper arrangement of natural light is also very efficient.

6. Suggestion:

Along with above practices 100% switching on LED lights can be possible to reduce electricity consumption.