

### **Metric 7.1.6**

Quality audits on environment and energy are regularly undertaken by the institution

S.No.	Content
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3	Waste Management
4	Water Harvesting System



# AMITY UNIVERSITY MADHYA PRADESH

## Energy Audit Report

Solar Genration & Carbon Emission		
Month	Generation in KWH	Carbon Emission in tonnes
Jan'23	25514	2.1
Fab'23	34880	2.9
Mar'23	38379	3.2
Apr'23	43831	3.6
May'23	46024	3.8
Jun'23	37739	3.1
Jul'23	35394	2.9
Aug'23	34032	2.8
Sep'23	31941	2.7
Oct'23	37850	3.1
Nov'23	26396	2.2
Dec'23	24171	2.0
Total	<b>416151</b>	<b>34.5</b>

Solar Genration & Carbon Emission		
Month	Generation in KWH	Carbon Emission in tonnes
Jan'24	23474	1.9
Fab'24	33877	2.8
Mar'24	44234	3.7
Apr'24	44350	3.7
May'24	44677	3.7
Jun'24	37618	3.1
Jul'24	32841	2.7
Aug'24	31339	2.6
Sep'24	29771	2.5
Oct'24		0.0
Nov'24		0.0
Dec'24		0.0
<b>Total</b>	<b>322181</b>	<b>26.7</b>

### Solar Profile

Amity Power Management							
AMITY UNIVERSITY GWALIOR							
S. No.	Block	Capacity of Plant (KWp)	Capacity of Inverter (KW)	Modules	String	Inverters	
				Nos.	Nos.	Nos.	Rating
1	A	160	170	501	25	4	3x50 KW + 1x20 KW
2	B	83	80	260	13	2	1x50 KW + 1X30 KW
3	C	64	60	200	10	2	2x30 KW
<b>Total</b>		<b>307.2</b>	<b>310</b>	<b>961</b>	<b>48</b>	<b>8</b>	

**AMITY UNIVERSITY GWALIOR Amity Power Management**

**Summary**

Year	Unit Generated by Solar in KWH	Unit Purchased from MPEB in KWh with Solar	Unit Purchased from MPEB in KWh Without Solar	Solar Unit Generated of Campus Energy Requirements (%)	Approx. % of Saving on Solar	Solar Units Rate (Rs.)
2018	285402	2257960	2543362	11.22	7.17	4.80
2019	392454	2265150	2651814	14.80	9.19	4.85
2020	391675	616242	933707	41.95	39.22	4.90
2021	388941	1061099	1372970	28.33	29.34	4.95
2022	414680	2364708	2757542	15.04	9.39	5.00
2023	416151	2776186	3183863	13.07	7.96	5.05
2024	322181	2624810	2945411	10.94	8.13	5.10



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## AU, Gwalior

Month	Solar			MPEB			Export Unit (KWH) by Solar to The MPEB	Without Solar			Approx. Saving Amount on Solar (Rs)	Approx. % of Saving on Solar
	Unit Generated by Solar in KWH	Rate Rs/KWh)	Payment to Clean Max Amount Rs	Units Received KWh	Unit cost of energy from MPEB (Rs)	Payment to MPEB Amount Rs		Unit Purchased from MPEB in KWh	Unit cost of energy from MPEB Rs	Amount		
Jan'24	23474	5.10	119717	135870	15.61	2120470	0	159344	15.61	2486820	246632	9.92
Feb'24	33877	5.10	172773	122420	16.36	2002300	10	156287	16.36	2556228	381319	14.92
Mar'24	44234	5.10	225594	113260	17.43	1973924	310	157184	17.43	2739445	545330	19.91
Apr'24	44350	5.10	226185	293040	10.67	3127345	920	336470	10.67	3590833	247122	6.88
May'24	44677	5.10	227853	425310	9.85	4189459	10	469977	9.85	4629445	212232	4.58
Jun'24	37618	5.10	191852	419540	9.75	4092559	0	457158	9.75	4459518	175107	3.93
Jul'24	32841	5.10	167487	342110	9.24	3162799	70	374881	9.24	3465762	136123	3.93
Aug'24	31339	5.10	159827	380790	8.97	3416121	210	411919	8.97	3695381	121317	3.28
Sep'24	29771	5.10	151833	392470	9.62	3775511	50	422191	9.62	4061425	134562	3.31
Oct'24												
Nov'24												
Dec'24												
<b>Total</b>	<b>322181</b>	<b>5.05</b>	<b>1643121</b>	<b>2624810</b>	<b>10.61</b>	<b>27860488</b>	<b>1580</b>	<b>2945411</b>	<b>10.76</b>	<b>31684857</b>	<b>2199744</b>	<b>6.94</b>

Note:-	Avg bill p/m 2024 in Rs lacs (Jan'24 to Sep'24)	30.96
	Avg bill p/m 2023 in Rs lacs ( Jan'23 to Dec'23)	28.18
	Total Contacted load	2450 KVA
	Installed Solar Capacity	307 Kwp
	After Solar Installation Reduce MPEB bill amount avg. In 2024 (Approx.)	7%

  
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## Power Profile

Power Profile Of AU-Gwalior 2024	
Sanctioned Load KVA	2450
Released Load KVA	2450
Billing Load KVA	2205
Length of line Km	0.5
Voltage KV	33
Meter No.	XE481822
Meter Make	Secure
Line CT Ratio A	50/5
Line PT Ratio KV/V	33/110
Meter CT Ratio A	-/5
Meter PT Ratio KV/V	33/110
Multiplying Factor (MF)	10
Demand charges	Rs.501 per KVA
Unit Charges	Rs.7.53 per KWh
No Of Transformer	2 Nos 1500 KVA each & 1 No 2500 KVA
No of DG Sets	4 Nos x750 KVA & 1No x250 KVA
Installed Solar Capacity	307 KWp



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*Ujjwal Jain*  
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Gwalior



## Waste Management

The university has segregated waste into three parts:

- Solid Waste
- Liquid Waste
- e-Waste

**Solid Waste:** The waste is generated by all sorts of routine activities carried out in the University that include paper, plastics, glass, metals, foods, etc. The waste is segregated at each level and source. The administrative supervisor in each block ensures that the waste on each floor is collected at designated time intervals. The block cleaning workers on each floor collect, clean, segregate and compile the waste in the dustbins (Green and Blue) provided at each floor. The floor dustbins are emptied in movable containers/dustbins provided for each block and are taken to the dumping yard provided by the University.

The University has contacted an authorized vendor who collects the waste from the designated place, segregates it, recycles it and disposes of it at the landfills authorized by the government.

**Liquid Waste:** Liquid waste generated by the university is of two types:

1. Sewage waste
2. Laboratory, Laundry and cafeteria effluent waste

The above waste is treated through Sewage Treatment Plants (STPs) and Effluent Treatment Plants (ETPs) and the water is used for horticulture and flushing in toilets. **e-Waste Management:** Flip flops, memory chips, motherboard, compact discs, cartridges etc. generated by electronic equipment such as Computers, Radio, TV, Phones, Printers, Fax and Photocopy machines are recycled properly. Instead of buying a new machine buyback option is taken for technological upgradation.

The e-waste generated from hardware which cannot be reused or recycled is being disposed off centrally through government authorized vendors

### **RAINWATER HARVESTING IN THE CAMPUS**

- 1 Amity University Madhya Pradesh was established in the year 2011 in 102 Acre of land. The requirement of water for the campus is being met by digging 10 Nos of Borewells as no water from Nagar Nigam is being supplied.
- 2 The borewells dug in the campus have not enough ground water to yield water continuously. Half numbers of the borewells dry up during continuous pumping. To recharge these existing borewells and to restrict the out-flow of rainwater Amity University arranged to construct 10 Nos of Water Harvesting Pits of capacity 30,000 ltrs at various location (Water Catchment Area) to conserve rainwater. These pits have been provided enough filter media to restrict the mud/silt during rains.
- 3 This has also been applauded by Hon'ble High Court Gwalior MP. Local Newspaper cuttings are attached for ref.
- 4 The above has brought sea change in saving of rainwater and has thus improved the water level, of our borewells which helps us in meeting our water requirement in peak summers.

  
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