Global ECO TECH SOLUTIONS
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ENERGY AUDIT

This is to certify that, *Our Audit Team* has visited BAJSS Arts & Commerce College For Women, **Ranebennur** Dist: Haveri **581...115,** on 12th Jan 2023 and undertook the "***Energy Audit***" of college campus.

The college is located in Ranebennur City Corporation limits. The population of Ranebennur is 1,06,406 as per 2011 census. Ranebennur is absolutely business centre, The whole taluka is known for ***seed production*** of highest quality in Asia. It is also known very good quality best cotton cultivation in Karnataka. This is mainly because of temperature and soil fertility. The taluka is known for rich **flora** (acacia and catechu) and **fauna** (Black buck and Great Indian bustard).

It seems to be, the city is free from industrial harmful- gas effluents.

The Energy Audit is a retrospective survey and analysis of energy requirements. The energy conservation principles have been adopted with minimal use of energy judiciously .i.e

"***Whenever necessary***
and
Where ever necessary use electric energy".

All the energy requirements are collected from each and every class room, laboratory, office, staff common room, library, computer lab etc,.

A separate log sheet of energy consuming appliances is made ready for ease of energy management. An energy **sensitization awareness program** is developed among the staff and students.

Need of Energy Audit

To minimize the cost of energy consumption
To minimize the operational costs
To minimize the cost of maintenance

ENERGY AUDIT METHODOLOGY

The Audit involves visiting physical position of load and to carry out the inventory of load. Due measurements of electrical load of requirement and adequate circuit is carried out . Energy bill received from **HESCOM** is audited and analyzed in various location of energy

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utilisations. The optimum utilization / requirements are judged and finalized. Energy conservation and saving opportunities are identified, proper circuitry plans are implemented.

ANALYSIS OF ELECTRICAL ENERGY UNTILISATION

HESCOM CONSUMER BILL for the last **five years** have been analyzed

There is a single power connection node for the whole college .Analysis follows on separate sheet. The energy sensitization programs are notified among the staff and it is found that there is decline trend in use of electrical power(very judiciously) without affecting the routine work of college activities.

Graphical analysis of use of power meter wise, and total bill wise (consolidated) has been worked out .

The analysis of data is as follows

S.No	Year	Average Power units consumed	Remarks
1	**2018**	**835**	A graphical analysis shows that there is initial incremental trend in the beginning. It is found that there is "***decline trend***" in the two last year
2	2019	804	
3	2020	596	
4	2021	607	
5	2022	746	
		**Achievement	- 10.65 % as compared to 2018
*Note : Optimum utilization i.e max consumption of electric power in the year 2018, 2019 is because of infra structure developments. In later years there is a conservation of electric energy (Adopting modern electric appliances)			

It is observed that stand alone solar energy harvesting units are installed in campus. Because of this facility the college is getting electric bills as per HESCOM norms.

** Decline trend indicate practicing "use of electric power is done very judiciously". This is reflected from the **EXCEL graphical analysis** sheets.

Technical staff

Convener
Energy Audit Team

Place :Ranebennur
Date : 12th Jan 2023

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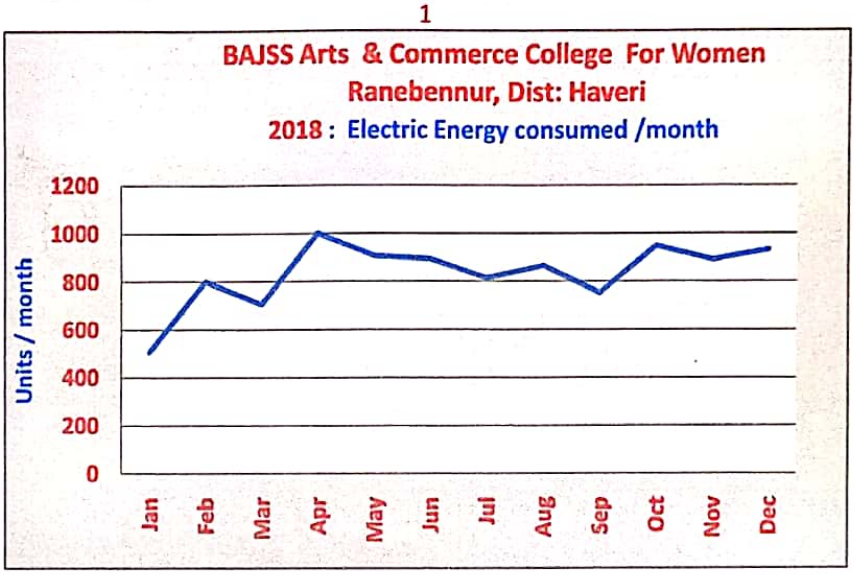
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Dist : Haveri

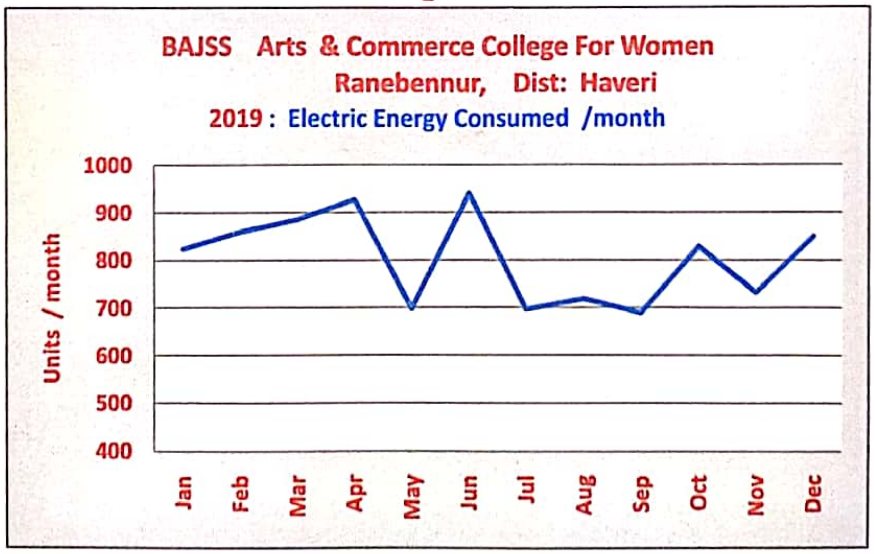
YEAR WISE CONSUMPTION OF ELECTRIC ENERGY

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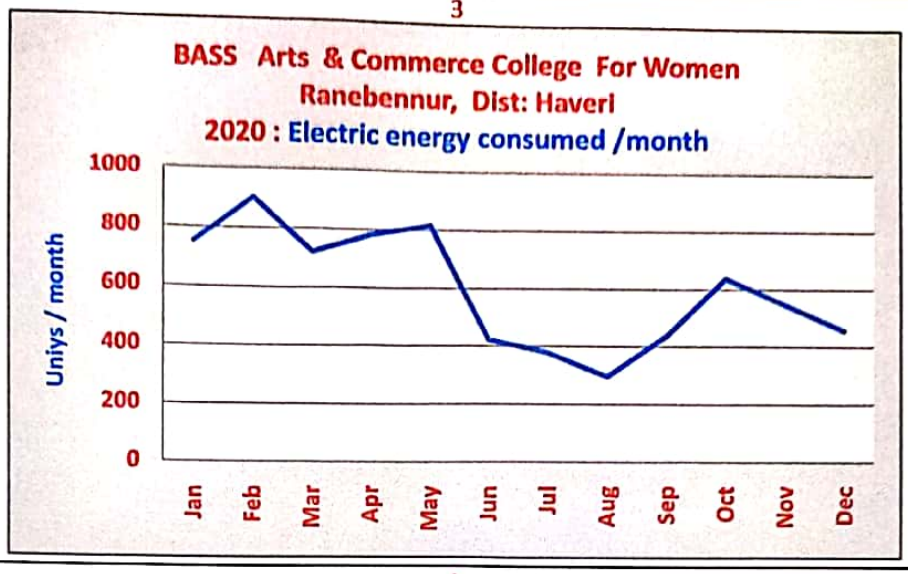
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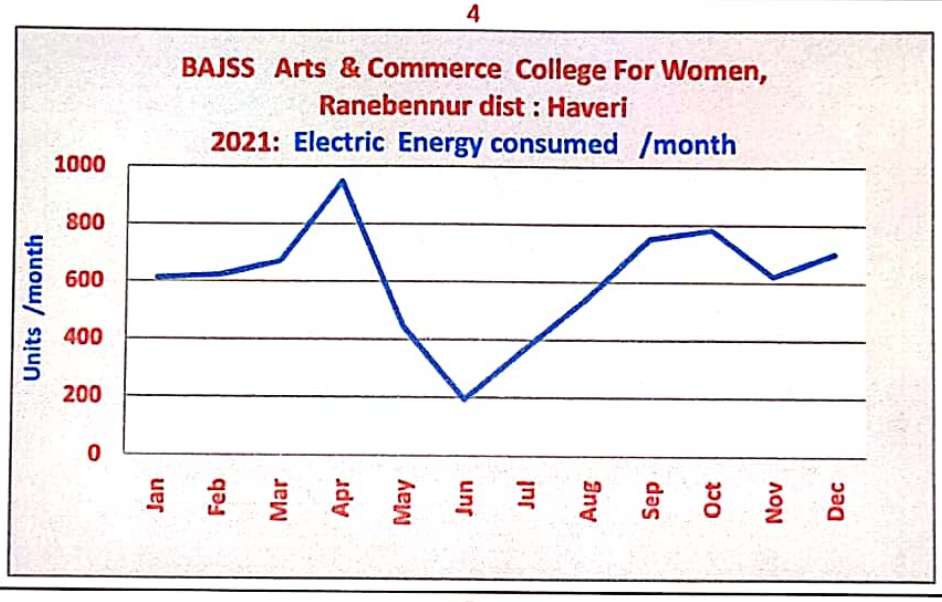
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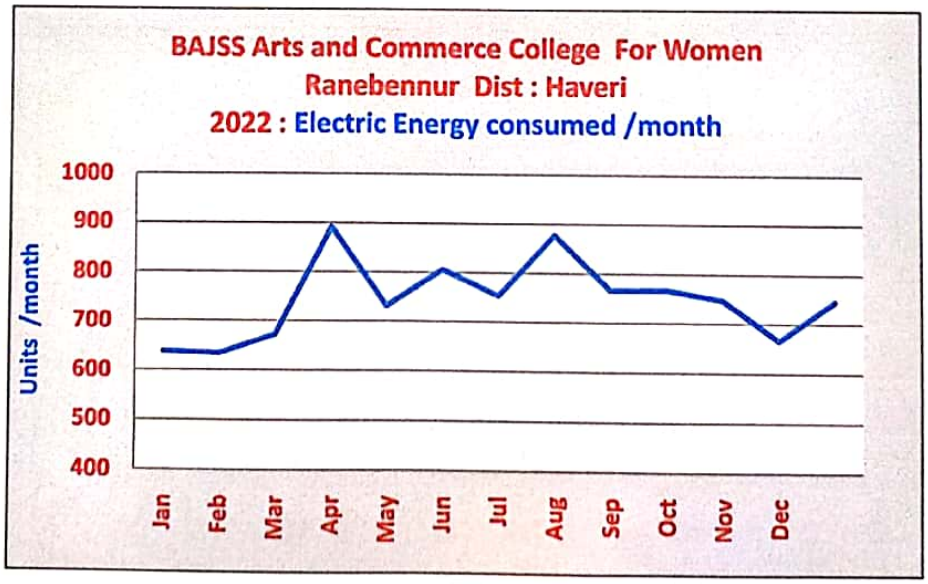
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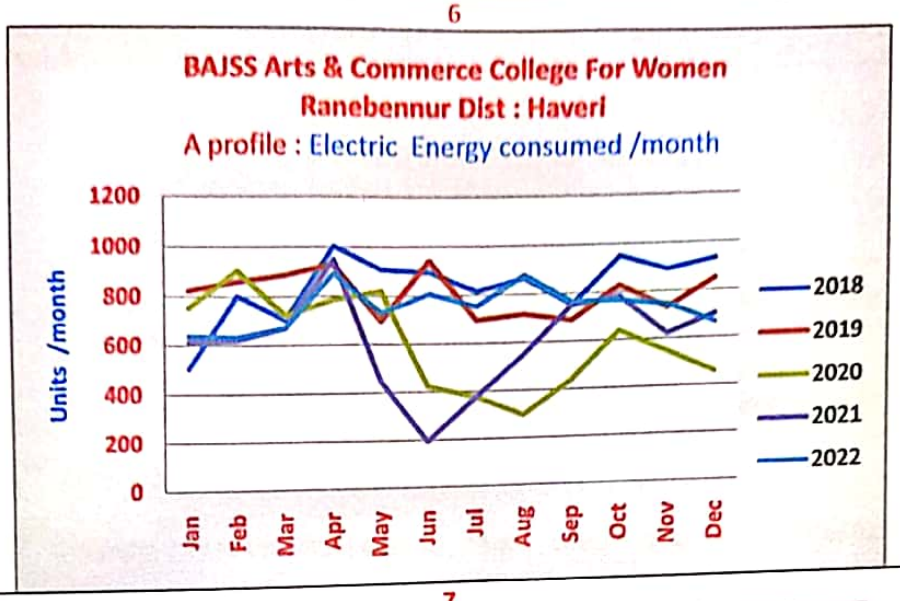
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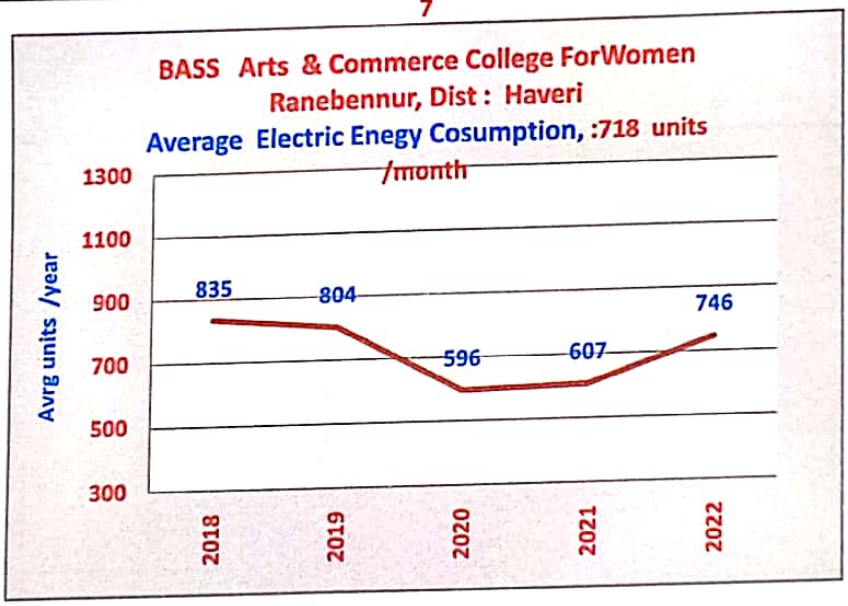
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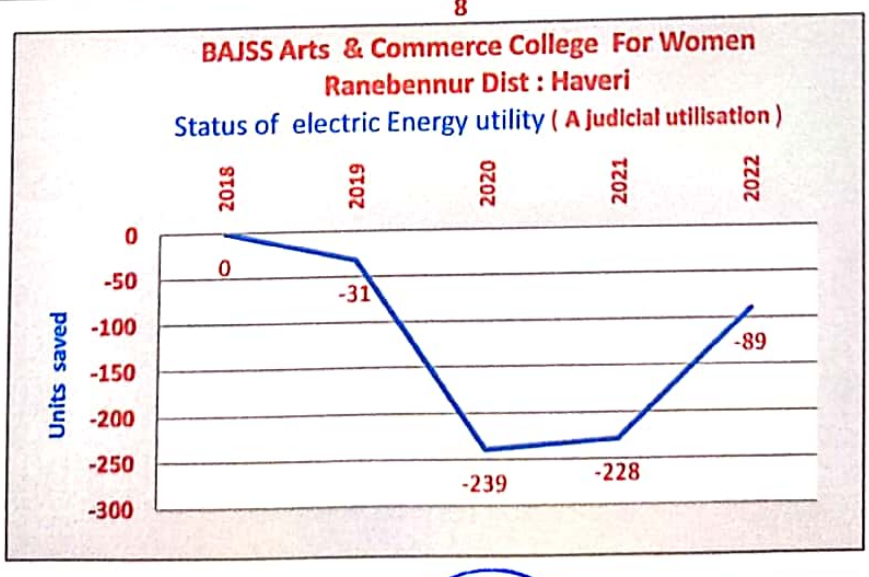
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Observations

*Note

1. All the energy curves show a minimum use in the month of December every year This certainly reflects the judicious use of electricity
2. Analysis show decreasing trend -10.65 % with respect to the maximum use in 2018.
3. The Power Factor has improved.
4. Adopting new technology i.e use of new electrical appliance has better future .

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