

Government College (Autonomous), Kalaburagi

Response/Clarification to the DVV

| Metric ID | Response of HEI |
|------------------|--|
| 7.1.6 | <p>Quality audits on environment and energy are regularly undertaken by the Institution and any awards received for such green campus initiatives;</p> <ul style="list-style-type: none">1. Green audit2. Energy audit3. Environment audit <p>Supporting Documents:</p> <ul style="list-style-type: none">1. Policy document2. Screenshot of webpages of college mentioning Green policy3. Geotagged Photos with Caption, Date & attested by Principal |

All the attached herewith attested


PRINCIPAL
GOVT. COLLEGE
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7.1.6 TRRES IN CAMPUS



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7.1.6 TREES IN CAMPUS



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ENERGY AUDIT REPORT

2021-22

in compliance with the statutory requirements under the NAAC accreditation procedures



GOVERNMENT COLLEGE (AUTONOMOUS)
KALABURAGI-585105 KARNATAKA

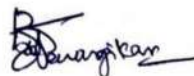


ENERGY AUDIT REPORT

Government College, Gulbarga was established in 1932 as a intermediate college affiliated to Osmania University, Hyderabad. The building was an old, multipurpose high school. The strength of the students was quite good. After some years it was open to all sections of the society and was the first institution to provide co-education. When it became the degree college, various subjects in both science and arts were introduced. It became north star of Mysore state and thereby attracted thousands of students. Later the location was shifted to Subedari building presently know as Mini Vidhan Soudha. The library and central hall of the college were the centre of the attraction. In 1952, the college was affiliated to the Karnataka University, Dharwad.

In the year 1974, a new building of the college came up away from the city and arts section was shifted over there. The science section and the office of the college were shifted in 1996 to this new building. In 1980 Gulbarga University came to existence, the college got affiliated to it and many of the staff members became the faculty members of the university, heading the department.

The college got the autonomous status in year 2016 with re-accredited with 'A' grade by NAAC. The area of the college is 11.3 acres. The building consists of four storeys. At present there are 78 sufficient class rooms well equipped with fans, lights, green boards, CCTV's etc. The total built up area of the college is 86,800 sq. fts. The present strength of the teaching staff is 110, 60 guest staff and 30 non-teaching staff. Over 4500 students are pursuing studies in this college.

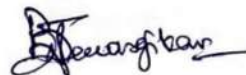


Energy audits reveal the usage patterns, identify waste, over-expenditure and, generally, make us fully cognizant of where our energy dollars are going. This knowledge will enable us to be more efficient with our energy use and be able to track and accelerate savings. To address various issues in context with human health, Energy Audit is assigned to "Criteria 7" of NAAC (National assessment and accreditation council) accreditation. NAAC is a self-governing organization in India that declares the institutions as Grade "A++", "A+", "A", Grade "B", according to the scores assigned at the time of accreditation. Also, the other intention of organising Energy Audit is to update the environment conditions in and around the institution. It is carried out with the aid of performing certain tasks like waste management, energy consumed, diesel burnt it performing the objective of the institution. Lastly to self-assess the net carbon footprint of the conduct of process in the institution.

The institute has a very clear environmental vision and trying to reduce the energy. The building has opted the Energy efficient lighting system that is LED which was good option to save energy. Most of the building have sufficient day light which saves the energy in the institute. The institute has nearly 200 computers, 20UPS, 100 ceiling fans and one diesel generator.

The institute has installed solar power system with grid connectivity on 26th Aug 2021. The capacity of solar system is 50kW from 150 solar panels. Every day it generates energy in the range from 200 to 250 units. In rainy season it generates 20% of the installed capacity. The demand of the college is in the range 5000 to 6000 units per month. Thus, the institute generates more than 80 percent of energy through solar power for its needs.

Also, the institute has installed solar power with grid connectivity on 27th Aug 2021 in extended new building having a capacity of 20kW from 60 solar panels. Every day it generates energy in the range from 60 to 100 units. With the energy conservation measures the institute is now able to go near zero importer of grid power. For the month of August 2021, the energy consumed by institute is 1613 units, on the other hand within 07 days solar generated 612.5 units of energy.



Solar System Energy Generation

| GOVERNMENT COLLEGE (AUTONOMOUS), KALABURAGI | | | |
|---|----------|---|---|
| Sl.No. | Month | Solar Plant Generation (kWH) (OLD BUILDING) | Solar Plant Generation (kWH) (NEW BUILDING) |
| 1 | AUG-2021 | 612.5 | 196 |
| 2 | SEP-2021 | 3893.9 | 690 |
| 3 | OCT-2021 | 4484.4 | 954.8 |
| 4 | NOV-2021 | 3491.1 | 1480.9 |
| 5 | DEC-2021 | 4296.4 | 1200 |

Remedial Measures

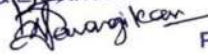
- The institute has to monitor the energy consumption and list the days when the energy consumption is high and the events that cause the demand.
- It is required to install Light Intensity Sensors in all the rooms. Lighting improvements should be carried out by using T5/LED or The Induction Light systems in lieu of normal tube lights.
- The conventional ceiling fans to be replaced with Brushless Direct Current (BLDC) ceiling fans as they save over 50% of electricity consumption.
- An approximate reduction of 10% of the energy costs can be considered if the occupancy sensors are installed.
- It is wise to replace T8 & T12 tube lights with LED tube lights on immediate basis.
- Proper earthing and periodical maintenance with measurement is needed.
- The sensitization of switching off the non-required electrical appliances and devices should be encouraged.

For: Bhavani Power Engineers
& Electricals
[Signature]
Partner

BHAVANI POWER ENGRS & ELECTRICALS
H.No. 2-337 Near Veterinary Hospital
Jagat Kalaburagi-585 105

ENERGY AUDIT COMPLETION CERTIFICATE

I, Bheema Shankar, endorse and confirm that the Energy Audit has been carried out on 29th Dec 2021 under the Request of Dr Shankerappa S Hatti, Principal, Government College (Autonomous) Kalaburagi, Karnataka. This report is generated based on the site visit and evidence collected from the site. All attempts have been made to evaluate the scope for development and inculcate green practices in the campus and extended throughout the campus. The focus is also laid to make positive impact on the society for a better living.

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ENVIRONMENT AUDIT REPORT

2021-22

in compliance with the statutory requirements under the NAAC accreditation procedures



GOVERNMENT COLLEGE (AUTONOMOUS)

KALABURAGI--585105 KARNATAKA




ENVIRONMENT AUDIT REPORT

Government College, Gulbarga was established in 1932 as a intermediate college affiliated to Osmania University, Hyderabad. The building was an old, multipurpose high school. The strength of the students was quite good. After some years it was open to all sections of the society and was the first institution to provide co-education. When it became the degree college, various subjects in both science and arts were introduced. It became north star of Mysore state and thereby attracted thousands of students. Later the location was shifted to Subedari building presently know as Mini Vidhan Soudha. The library and central hall of the college were the centre of the attraction. In 1952, the college was affiliated to the Karnataka University, Dharwad.

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PROFESSOR & CHAIRMAN
Dept. of P.G. Studies & Research in Zoology
Gulbarga University, Kalaburagi-585106
Research Guide in
Env. studies

Environment Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. It aims to analyze environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience.


Environment audit can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings.

It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. It can create health consciousness and promote environmental awareness, values and ethics. Thus, it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

The main objectives of carrying out Environment Audit are:

- To document the quality drinking water
- The document the quality of recycled waste water for gardening
- To document the solid Waste disposal system
- To document the ambient environmental condition of air, water and noise in the campus.
- Benchmarking for environmental protection initiatives
- Reduction in resource use
- Financial savings through a reduction in resource use

The institute has a very clear environmental vision and trying to reduce the energy. The institute has planted a lot of trees and has maintained very good greenery. The institute generates more than 80 percent of energy through solar power for its needs. The building has opted the Energy efficient lighting system that is LED which was good option to save energy. Most of the building have sufficient day light which saves the energy in the institute. For the protection of building from fire we installed nearly 25 Fire extinguishers.


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Institution is following these practices in the college campus.

Solid waste management:

- Dust bins are provided in the campus to keep campus clean, neat and tidy.
- Awareness on segregation of waste is created and blue, green and red dust bins are used.
- Transport arrangements are made for solid waste management.
- Compost arrangements are also made to convert solid waste into fertilizer/manure.

Liquid waste management:

- Practical labs like Chemistry, Botany, Zoology and Microbiology have taken measures to ensure that all the chemicals are diluted before discarding in wash basin.
- Glassware used in the laboratory is washed and rinsed with least quantity of water and placed in the liquid waste container.
- The liquid waste of the laboratories is segregated into organic and inorganic waste. Inorganic wastes are neutralized before disposal. The organic waste yield is treated with cow dung for decomposition due to the action of bacteria and some micro-organisms.

E-waste management:

- Awareness programs are initiated on e-waste management.
- All E-waste is disposed to the corporation.
- The non-functional computers, equipment's and its peripherals are safely disposed.
- The cartridge of laser printer is refilled outside the college campus.
- UPS batteries are recharged / repaired/ exchanged by the suppliers.
- Waste compact disk is used by the students for decoration and participation in competitions.
- The low configured computers are donated to nearby schools.
- The E-wastes generated are safely disposed through certified E-waste recyclers.


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ENVIRONMENT AUDIT COMPLETION CERTIFICATE

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GREEN AUDIT REPORT

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Range Forest Officer
Territorial Range, Kalaburagi

The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crisis. On this background it becomes essential to adopt the system of the green campus for the institute which will lead to sustainable development. Government College (Autonomous), Kalaburagi is deeply concerned and unconditionally believes that there is an urgent need to address these fundamental problems and reverse the trends. Being a premier institution of higher studies, the college has initiated 'The Green Campus' programme few years back that actively promote the various projects for the environment protection and sustainability.

The purpose of this audit was to ensure that the practices followed in the campuses are in accordance with the green policy adopted by the institution, it works on several facets of Green Campus including water conservation, electricity conservation, tree plantation, waste management, paperless work.

The institute has a very clear environmental vision and trying to reduce the energy. The institute has planted a lot of trees and has maintained very good greenery. The institute generates more than 35 percent of energy through solar power plant for its needs. The building has opted the Energy efficient lighting system that is LED which was good option to save energy. Most of the building have sufficient day light which saves the energy in the institute. For the protection of building from fire we installed nearly 25 Fire extinguishers.

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Recommendations

- Say no to NO-VEHICLES at least three days in a week.
- Use of Bicycles/ Battery powered vehicles, Pedestrian Friendly pathways.
- Ban on use of Plastic landscaping with trees and plants.
- Digital documentation process, a step towards paperless office.
- The parking space be marked with borders so that the staff and students park the vehicles at the designated space.
- Regular Maintenance of toilet system and use of water efficient fixtures.
- Saving Water through Monitoring and Operational Procedures.
- The campus needs more plantations especially medicinal plants. Plantation of fruit plants will attract more birds.
- There is urgent need to form a Green Monitoring Committee. The priority of this body is to maintain the greenery of the college campus.
- Vermicompost facility may be practiced, the product of which can be used as manure or fertilizer for plantation purpose.



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