

# ENERGY AUDIT REPORT

2021-22

in compliance with the statutory requirements under the NAAC accreditation procedures



GOVERNMENT COLLEGE (AUTONOMOUS)  
KALABURAGI-585105 KARNATAKA

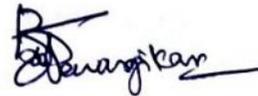


## ENERGY AUDIT REPORT

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.

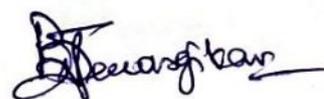


Energy audits reveal the usage patterns, identify waste, over-expenditure and, generally, make us fully cognizant of where our energy dollars are going. This knowledge will enable us to be more efficient with our energy use and be able to track and accelerate savings. To address various issues in context 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 26<sup>th</sup> 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 27<sup>th</sup> 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.

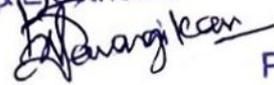
For: Bhavani Power Engineers  
& Electricals  
*Bhavani Kar*  
Partner

BHAVANI POWER ENGRS & ELECTRICALS  
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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.

For: Bhavani Power Engineers  
& Electricals

  
Partner

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