



GURUKULA KANGRI (DEEMED TO BE UNIVERSITY)

ENERGY AUDIT REPORT

2023-2024



Prepared by
EHS ALLIANCE



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CERTIFICATE



CERTIFICATE

PRESENTED TO

GURUKULA KANGRI (DEEMED TO BE UNIVERSITY)

P.O. Gurukula Kangri, Kankhal, Haridwar-249404

That has been assessed by EHS Alliance for the comprehensive study of Energy Audit on institutional working framework to fulfill the requirement of

ENERGY AUDIT

ACADEMIC YEAR 2023 - 24

The energy-saving initiatives carried out by the institution have been verified in the report submitted and were found to be satisfactory.

The efforts taken by management and faculty towards all types of energy used in the institution and sustainability are highly appreciable and noteworthy.



SIGNATURE

06.11.2025

DATE OF AUDIT

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ACKNOWLEDGEMENT

EHS Alliance Services would like to thank the management of Gurukula Kangri (Deemed to be University) for assigning this important work of Energy Audit. We appreciate the co-operation to the teams for completion of assessment.

First of all, we would like to thank ***Hon'ble Vice - Chancellor, Registrar and Finance Officer of the university*** for giving us an opportunity to evaluate the environmental performance of the campus.

We would also like to thank ***Prof. D. S. Malik – Dean, Green Audit Cell*** for his continuous support and guidance, without which the completion of the project would not have been possible. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

We are also thankful to

Er. Ranjit Kumar – Jr. Engineer – Civil & In-Charge, Estate

Er. Vijay Pratap Singh – Jr. Engineer, Electrical

Dr. Harendra Kumar – Associate Professor

Dr. Ajendra Kumar – Associate Professor

Dr. Gagan Matta – Convener Green Audit Cell and Audit Coordinator



DISCLAIMER

EHS Alliance Services Energy Audit Team has prepared this Energy Audit Report for Gurukula Kangri (Deemed to be University) based on input data submitted by the representatives of GKV complemented with the best judgment capacity of the expert team.

While all reasonable care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

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Vijay Singh
Lead Auditor EMS & Energy



Dr. Uday Pratap
Co-Auditor EMS & Energy



ABBREVIATION

A	Amps
AC	Air Conditioner
AC	Alternating Current
AMET	Academy of Maritime Education and Training
CFL	Compact fluorescent lamp
CIP	Comprehensive Inspection Programme
DC	Direct Current
HSD	High Speed Diesel
Hz	Hertz
kg	Kilogram
kVA	kilo-volt-ampere
kW	kilo Watts
kWh	kilowatt hour
kWp	Kilowatt peak
LED	Light Emitting Diode
LPG	Liquefied Petroleum Gas
MMS	Module mounting structure
MPPT	Maximum Power Point Tracker
NAAC	National Assessment and Accreditation Council
SEC	Specific Energy Consumption
SPV	Solar Photovoltaic
STC	Standard Test Condition
TV	Television
V	Volts
W	Watts
W/m²	watt per square metre



OVERVIEW OF GURUKULA KANGRI (DEEMED TO BE UNIVERSITY)

Gurukul Kangri (Deemed to be University) was founded on March 4, 1902 by Swami Shraddhanandaji with the sole aim to revive the ancient Indian Gurukula System of education, on the bank of Ganges in Haridwar and at a distance about 200 km. from Delhi. This institution was established with the objective of providing an indigenous alternative to Lord Macaulay's education policy by imparting education in the areas of Science, Engineering and Technology, Management, Vedic Literature, Indian Philosophy, Indian Culture, Sciences and Research. It is a deemed to be university funded by UGC/Govt. of India

Arya Samaj has been advocating women's education since the day it was founded. As part of its policies for the up-liftment of women in the country, Kanya Gurukula Campus, Dehradun was established in 1922 by Acharya Ramdevji as a second campus of women's education. To give real shape to the dreams of Swami Shraddhanandaji, Kanya Gurukula Campus, Hardwar was established in 1993.

MISSION

- To create a synthesis of our Indian intellectual tradition with the best of modern education.
- Inculcating national spirit and respect for Indian culture among the students and society in order to contribute to the nation-building.
- Focusing on the personality of the students to be developed by value-based education.
- Enriching and empowering all the beneficiaries through the participative, positive, harmonious teaching-learning environment.
- Developing inter-linkages across teaching, research, and extension.
- Making students employable by imparting holistic education and developing skills.

VISION

Reviving the ancient education of Brahmacharya (continence), of rejuvenating and resuscitating ancient Indian philosophy and literature, conducting researches into the Indian and western activities, of building up a Vedic Literature incorporating into itself all that is best and assailable in occidental thought, of producing good citizens possessed of a culture compound of the loftiest elements of the two civilizations.



Facilities in the campus

Amenities at GKV provide far more than academic and administrative facilities on campus. It is dedicated to provide students with an exceptional infrastructure for learning as well as facilities for simplifying the procurement of fundamental skills. To accomplish the goal, GKV offers the following:

- LIBRARY
- SMART CLASSROOMS
- AUDITORIUM AND MINI AUDITORIUM
- MINI-AUDITORIUM
- SEMINAR HALL
- HOSTEL
- SPORTS FACILITY
- FITNESS CENTRE
- CAFETERIA

AUDIT PARTICIPANTS

On behalf of GKV

Name	Designation
Prof. D. S. Malik	Dean, Green Audit Cell
Er. Ranjit Kumar	Jr. Engineer – Civil & In-Charge, Estate
Er. Vijay Pratap Singh	Jr. Engineer, Electrical
Dr. Harendra Kumar	Associate Professor
Dr. Ajendra Kumar	Associate Professor
Dr. Gagan Matta	Convener, Green Audit Cell & Audit Coordinator

On behalf of EHS Alliance Services

Name	Position	Qualifications
Mr. Vijay Singh	Lead Auditor	<i>M.Sc. M. Tech (Environment Science & Engineering), Energy Auditor, Post Diploma in Industrial Safety Management</i>
Dr. Uday Pratap	Co-Auditor	<i>Ph.D., EMS: Lead Auditor ISO14001:2015, QCI-WASH</i>



EXECUTIVE SUMMARY

The purpose of this Energy Audit was to seek opportunities to improve the energy efficiency of the Gurukula Kangri (Deemed to be University). Reducing the energy consumption despite improving the human comfort, health and safety were of primary concern.

Beyond just identifying the energy consumption pattern, this audit sought to detect and categorize the most energy efficient appliances. Additionally, some daily practices relating common appliances have been shared which may help reducing the energy consumption. Data collection for energy audit of the campus was carried out by the EHS Alliance Team. The Energy Audit Report accounts for the energy consumption patterns of the institution on actual survey and detailed analysis during the audit.

The work comprehends the area wise consumption traced using suitable equipment. The analysis was carried out by our team with the support of the staff members from Gurukula Kangri (Deemed to be University). The report provides a list of possible actions to preserve and efficiently access the available source, resources and their saving potential was also identified. We look forward towards optimization that the authorities, students and staff members would follow the recommendations in the best possible way. The report is based on certain generalizations including the approximations wherever necessary. The views conveyed may not reveal the general opinion. They merely represent the opinion of the team guided by the interviews of clients. We are happy to submit this Energy audit report to the Gurukula Kangri (Deemed to be University).



ENERGY AUDIT - ANALYSIS

1. ENERGY CONSUMPTION

To understand the Energy Consumption trends and for analyzing the average monthly consumption we have collected electricity energy bills from July 2023 to June 2024

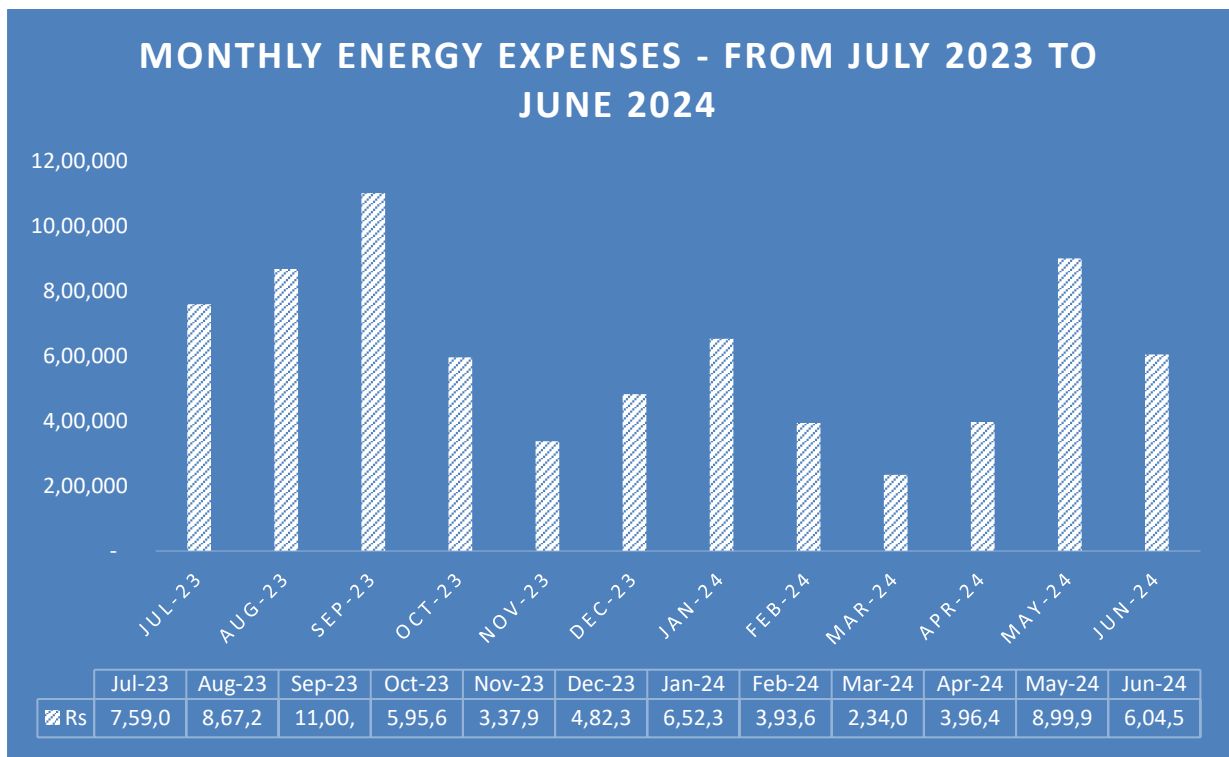
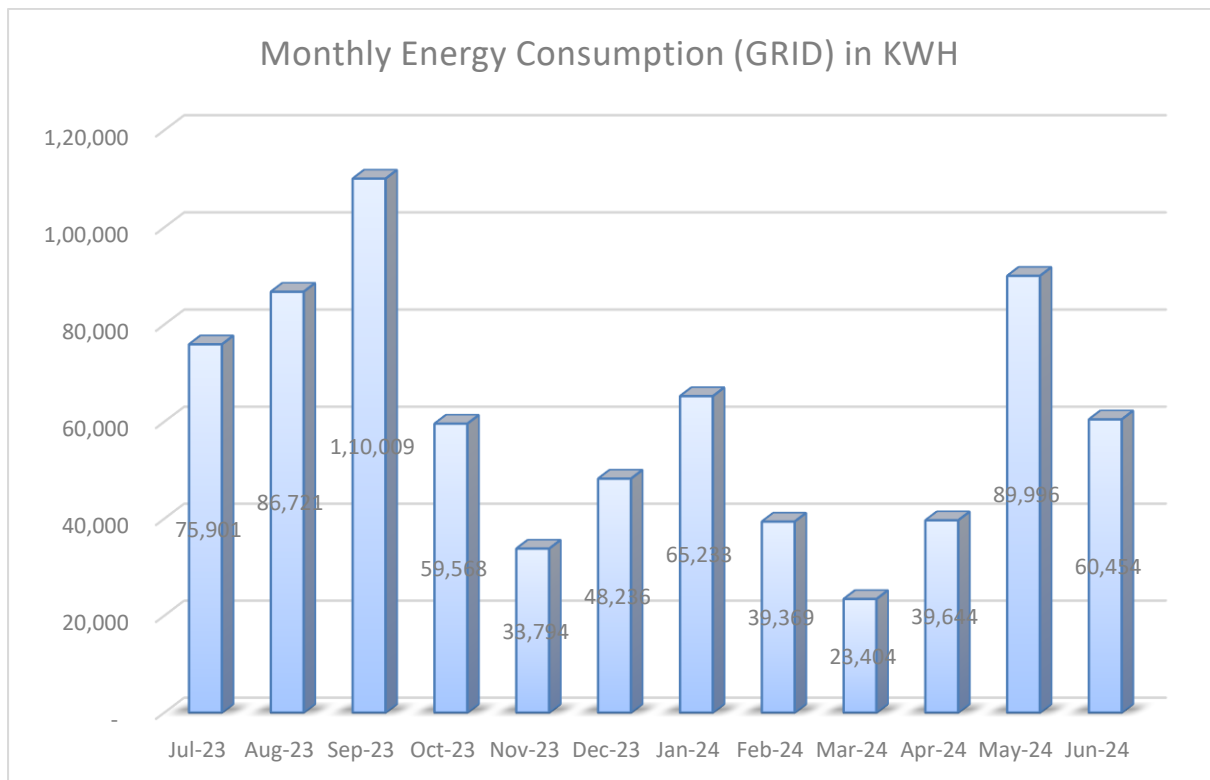
The details of “**Meter Connection**” at “**Gurukula Kangri (Deemed to be University)**” are as follows-

Account Name	Account Number
REGISTRAR GURUKUL KANGARI	40109945848
REGISTRAR GURUKUL KANGRI VISHWAYIDYALAYA	41900128973
PRINCIPAL KANYA GURUKUL	40100071942
KUL SACHIV GKU (KANYA GURUKUL)	40116880166
KULSACHIV G.K.ENG.UNIVERSITY	40100490473

1.1 Summary of Monthly Electricity Consumption and Total Bill Amount

To understand the Energy consumption trend and for developing the baseline parameter we have collected monthly energy bill for the 12 months i.e. from July 2023 to June 2024

Month	Grid Units	Amount	Solar Units	Export kWh	Total	Amount
Jul-23	75,901	10.00	50,051	-	125,952	759,010
Aug-23	86,721	10.00	42,123	-	128,844	867,210
Sep-23	110,009	10.00	54,839	-	164,848	1,100,090
Oct-23	59,568	10.00	46,034	-	105,602	595,680
Nov-23	33,794	10.00	33,159	-	66,953	337,940
Dec-23	48,236	10.00	34,516	-	82,752	482,360
Jan-24	65,233	10.00	38,306	-	103,539	652,330
Feb-24	39,369	10.00	27,137	-	66,506	393,690
Mar-24	23,404	10.00	48,734	-	72,138	234,040
Apr-24	39,644	10.00	73,162	-	112,806	396,440
May-24	89,996	10.00	64,803	-	154,799	899,960
Jun-24	60,454	10.00	52,887	-	113,341	604,540
SUM	732,329		565,751	-	1,298,080	7,323,290





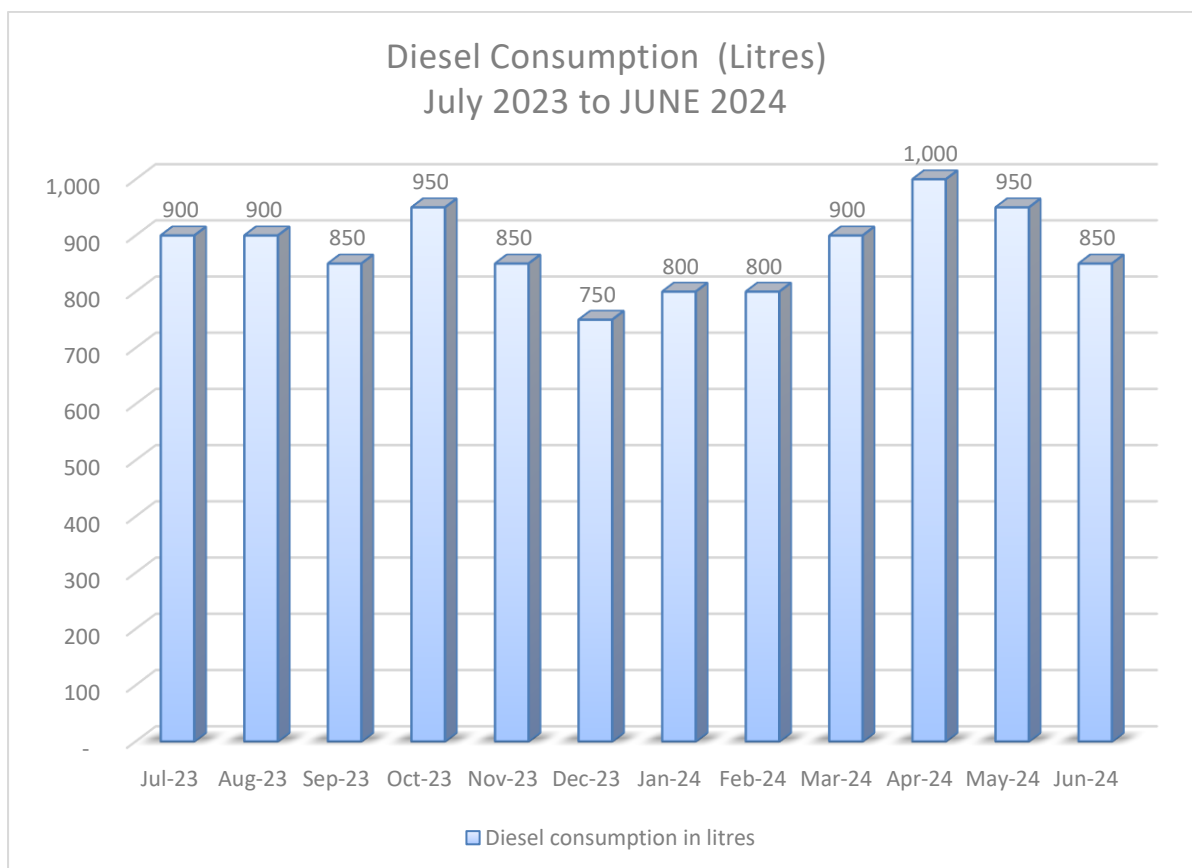
Solar Units Monthly Generation Detail (530 kWp)

Month	Solar units
Jul-23	28,646
Aug-23	37,435
Sep-23	55,211
Oct-23	43,670
Nov-23	45,237
Dec-23	30,988
Jan-24	23,071
Feb-24	54,287
Mar-24	50,491
Apr-24	69,067
May-24	69,510
Jun-24	58,985

2. DIESEL CONSUMPTION

Below is the diesel consumption details in liters from July 2023 to June 2024.

Period	Diesel consumption (in litres)
Mar-23	900
Apr-23	900
May-23	850
Jun-23	950
Jul-23	850
Aug-23	750
Sep-23	800
Oct-23	800
Nov-23	900
Dec-23	1,000
Jan-24	950
Feb-24	850
Total	40374



3. ANALYSIS OF DG SETS

In the campus, there are ten Diesel Generator (DG) set for its electrical power needs in case of Grid power failure. DG sets capacity is 1250 kVA.

Description	Rated capacity (kVA)	Hz	SI No.	Make	Volts	PF	Phase	RPM	Amps	Mfg.
DG Station -1	125	50	6H.3538/1000901	Kirloskar	440 L-L	80%	3	1500	174	Mar-10
DG Station -2	125	50	6H.3538/1002695	Kirloskar	440 L-L	80%	3	1500	174	Sep-10
DG Station -3	125	50	6H.3538/1002190	Kirloskar	440 L-L	80%	3	1500	174	Jul-10
DG Station -4	125	50	6H3538/1002705	Kirloskar	440 L-L	80%	3	1500	174	Sep-10

DG Station -5	125	50	6H.3538/1002743	Kirloskar	440 L-L	80%	3	1500	174	Sep-10
DG Station -6	125	50	TBHM697496	Ashok Leyland	440 L-L	80%	3	1500	174	Jun-11
DG Station -7	125	50	TBHM696819	Ashok Leyland	440 L-L	80%	3	1500	174	Jun-11
DG Station -8	125	50	TBHM697492	Ashok Leyland	440 L-L	80%	3	1500	174	Jun-11
DG Station -9	125	50	4H.6001/1400168	Kirloskar	440 L-L	80%	3	1500	174	Jan-14
DG Station -10	125	50	6H.3538/1001519	Kirloskar	440 L-L	80%	3	1500	174	May-10

Observation and Suggestions: -

Soundproof silent generators are an efficient tool to keep both noise and vibration at low levels. For the power backup of the institution, the soundproof model is installed in the institution.

We recommend GKV to initiate stack monitoring of DG set through authorized lab.





4. AC SYSTEM

Energy Efficiency Ratio (EER): Performance of smaller chillers and rooftop units is frequently measured in EER rather than kW/ton. EER is calculated by dividing a chiller's cooling

Capacity (in Btu/h) by its power input (in watts) at full-load conditions. The higher the EER, the More efficient the unit. The cooling effect produced is quantified as tons of refrigeration (TR). The above TR is also called as air-conditioning tonnage.

There are 355 Split and Window ACs installed in Gurukula Kangri (Deemed to be University) in various areas. Details of the same are provided below:

S. No.	Name of Department	Count of ACs (Window/Split)
1	Sanskrit Department, Kanya Gurukul Parisar, Haridwar	2
2	Kanya Gurukul Campus, Haridwar	26
3	Hindi Department, Kanya Gurukul Parisar, Haridwar	2
4	Hindi Department, GK(DU), Haridwar	3
5	Department of Mechanical engineering	1
6	Registrar office + Establishment I and II + IT cell	9
7	Department of Mathematics and Statistics	17
8	Department of Philosophy	1
9	Kanya Gurukul Campus, Dehradun	22
10	Department of Physical Education and Sports (main building)	10
11	Gym, Badminton Hall. Squash courts and stores	4
12	Department of Microbiology, KGC	3
13	Department of Mathematics and Statistics, Kanya Gurukul Campus	2
14	Computer Centre, K.G.C. Haridwar	2
15	Ancient Indian History, Culture and Archeology	13
16	Accounts Section	8
17	COE	2
18	Exam Section	3
19	Exam Section (Evaluation)	10
20	Department of Electrical engineering, FET	7
21	FMS, GK(DU), Haridwar	32
22	Botany and Microbiology	32
23	Department of Chemistry	22
24	Department of Physics	30
25	Department of Computer Science	35
26	Department of Yogic Science	6
27	Department of Philosophy	3
28	Department of Sanskrit	14
29	Department of Veda	2
30	Department of Psychology	4
31	Department of Zoology and Environmental Science	28
	TOTAL	355

Remarks: - We have checked Energy Efficiency Ratio of AC's and EER of AC's is fairly OK. But in future you should purchase 5-Star rated inverter based split AC's because power consumption of Inverter based BEE 5-Star rated AC's is less than non-star rated AC's.

Also, we recommend Gurukula Kangri (Deemed to be University) to organize periodic maintenance schedule and take corrective actions for insulating of AC's refrigerant lines in order to protect energy losses.





5. FANS ANALYSIS

In the Gurukula Kangri (Deemed to be University), there are 2448 fans installed, all are ceiling fans of 60W. The observation and suggestion are given below.

S. No.	Name of Department	60W Ceiling Fans
1.	Sanskrit Department, Kanya Gurukul Parisar, Haridwar	7
2.	Kanya Gurukul Campus, Haridwar	298
3.	Hindi Department, Kanya Gurukul Parisar, Haridwar	12
4.	Hindi Department, GK(DU), Haridwar	18
5.	Department of Mechanical engineering	100
6.	Registrar office + Establishment I and II + IT cell	32
7.	Department of Mathematics and Statistics	32
8.	Department of Philosophy	5
9.	Kanya Gurukul Campus, Dehradun	214
10.	Department of Physical Education and Sports (main building)	98
	Gym, Badminton Hall. Squash courts and stores	46
11.	Department of Microbiology, KGC	44
12.	Department of Mathematics and Statistics, Kanya Gurukul Campus, Haridwar	28
13.	Computer Centre, K.G.C. Haridwar	6
14.	Ancient Indian History, Culture and Archeology	75
15.	Accounts Section	24
16.	COE	6
17.	Exam Section	24
18.	Exam Section (Evaluation)	24
19.	Department of Electrical engineering, FET	16
20.	KGC Library, Haridwar	17
21.	FMS, GK(DU), Haridwar	98
22.	Botany and Microbiology	109
23.	Department of Chemistry	
24.	Department of Physics	183
25.	Department of Computer Science	119
26.	Department of Yogic Science	127
27.	Department of Philosophy	7
28.	Department of Sanskrit	43
29.	Department of Jyotirvigyan and Vedic Karmkand	5
30.	Department of Veda	7
31.	Department of Psychology	17
32.	Pt. Gurudutt Hostel	182
33.	Pandit Lekhram and Swami Shradhanand Hostel	330
34.	Department of Zoology and Environmental Science	95
	Total	2448

Observation and Suggestions: -

In GKV, all the ceiling fans are of 60 W but BEE 5 Star Rated of 30W Ceiling Fans are present in the market. We recommend to purchasing new fans (BEE 5 Star rated 30W fans) for all future purchases.



Note: - Energy saving will increase or decrease if operating hours of machine /equipment will be increased or decreased and payback period will also increase or decrease if cost of investment (Cost of machine/equipment/accessories of machine) will increase or decrease because cost of investment is taken on tentative basis.

FAN Payback period calculations		
Total no of Ceiling Fans (70W)	-	Nos.
Total no of ceiling Fans (60W)	2,448	Nos.
Total wattage of ceiling Fans (60W)	1,46,880	Watt
Total wattage of BEE 5 Star rated Fans (30W)	73,440	Watt
Total saving in Wattage after replacement	73,440	Watt
Operating hours per day	8	Hours
Operating days per annum	180	Days
Energy charges per unit in Rs.	10	INR
Saving in Rs. /Annum	10,57,536	INR
Investment INR	48,96,000	INR
Payback period: -	4.63	YEARS

Recommendations: - We recommend to replace the existing 60W fans with 5-star BLDC fans but definitely, university should purchase BLDC fans for future requirements;

- ✓ Replace conventional ceiling fans with energy-efficient BLDC fans in a phased manner, prioritising classrooms, hostels, libraries and offices with longer operating hours.
- ✓ Select BEE star-rated models with suitable blade sweep and adequate air delivery for the space.
- ✓ Conduct a room-wise inventory of fan wattage, operating hours and condition before replacement.
- ✓ Initiate a pilot installation to assess energy savings, air delivery, noise levels and user satisfaction.
- ✓ Prefer models with wall-mounted controls, reliable warranties and accessible after-sales service.



6. ANALYSIS OF LIGHTING SYSTEM

6.1 Brief description of existing system

For assessing energy efficiency of lighting system, Inventory of the Lighting System has been noted / collected, with the aid of a lux meter, measurement and documentation of the lux levels at various locations at working level has been done.

6.2 Inventory of Lighting

S. No.	Name of Department	36W Tube Light	20W LED Tube Light	12W LED Bulb
1	Sanskrit Department, Kanya Gurukul Parisar, HW	8	0	
2	Kanya Gurukul Campus, Haridwar	354	76	
3	Hindi Department, Kanya Gurukul Parisar, HW	17	2	
4	Hindi Department, GK(DU), Haridwar	20	-	
5	Department of Mechanical engineering	134	-	
6	Registrar office + Establishment I and II + IT cell	31	18	12
7	Department of Mathematics and Statistics	52	18	
8	Department of Philosophy	3	-	3
9	Kanya Gurukul Campus, Dehradun	445	3	
10	Department of Physical Education and Sports	141		
11	Gym, Badminton Hall. Squash courts and stores	8	50	
12	Department of Microbiology, KGC	55	30	
13	Department of Mathematics and Statistics, Kanya Gurukul Campus, Haridwar	-	31	
14	Computer Centre, K.G.C. Haridwar	-	9	
15	Ancient Indian History, Culture and Archeology	117		
16	Accounts Section	48	-	
17	COE			9
18	Exam Section	21	-	
19	Exam Section (Evaluation)	52	14	
20	Department of Electrical engineering, FET	222	-	
21	KGC Library, Haridwar	31	-	
22	FMS, GK(DU), Haridwar	202	2	
23	Botany and Microbiology	150	28	
24	Department of Chemistry	200	4	
25	Department of Physics	225	66	
26	Department of Computer Science	219	2	
27	Department of Yogic Science	100	85	
28	Department of Philosophy	17	-	
29	Department of Sanskrit	32	53	
30	Department of Jyotirvigyan and Vedic Karmkand	6		
31	Department of Veda	71	-	
32	Department of Psychology	39	15	
33	Pt. Gurudutt Hostel	367		
34	Pandit Lekhram and Swami Shradhanand Hostel	345		
35	Department of Zoology and Environmental Sc.	158	4	
	TOTAL	3890	510	24



6.3 Lux Measurement

Type of Lamp/Luminaire	Typical Luminous Efficacy (lm/W)	Typical CRI	Typical Life (Hours)	Typical Application in Educational Institutions	Recommended Illuminance (Lux)*	Recommended for New Installations
Halogen Lamp	15–30	100	2,000–4,000	Auditoriums, stage lighting, display lighting	300–500	Limited Use
Fluorescent Tube (T8/T5)	70–105	70–85	15,000–24,000	Existing classrooms, laboratories, offices and corridors	200–500	Existing Installations Only
Compact Fluorescent Lamp (CFL)	50–70	80–85	8,000–12,000	Existing hostels, faculty rooms and corridors	150–300	Replacement with LED Recommended
Metal Halide Lamp	75–125	65–90	10,000–20,000	Sports halls, workshops and gymnasiums	300–500	Existing Installations Only
High Pressure Sodium Vapour (HPSV)	80–140	20–30	16,000–30,000	Roads, parking areas and boundary lighting	20–50	Replacement with LED Recommended
LED Tube/Batten	100–160	≥80	50,000–100,000	Classrooms, laboratories, offices, corridors and hostels	300–500	☒ Yes
LED Downlight	90–120	≥80	30,000–50,000	Faculty cabins, washrooms, reception areas and corridors	150–300	☒ Yes
LED High Bay Luminaire	140–180	≥70	50,000–100,000	Workshops, engineering laboratories, indoor sports halls	300–750	☒ Yes



LED Flood Light	110–150	≥ 70	50,000–75,000	Sports grounds, open areas and building façades	100–300	☒ Yes
LED Street Light	130–180	70–80	75,000–100,000	Campus roads, pathways, parking areas and landscape lighting	20–50	

Observations: -

GKV has initiated LED based lighting solution, but still there are 3890 (36W) tube lights. LEDs save energy, the life span is much greater and emit virtually no heat. We recommend to replace the tube lights with LEDs.

- ✓ Maintain an average illumination level of approximately 300 lux in classrooms and lecture rooms for comfortable reading and writing.
- ✓ Provide around 500 lux in laboratories, libraries, drawing rooms and other areas involving detailed visual tasks.
- ✓ Maintain approximately 300–500 lux in faculty rooms and administrative offices, depending on the nature of work.
- ✓ Ensure at least 100–150 lux in corridors, staircases and circulation areas, with uniform lighting and no dark spots.
- ✓ Maintain around 100–200 lux in washrooms, common areas and indoor utility spaces.
- ✓ Conduct periodic lux-level measurements at the working plane and replace inefficient lamps with suitable LED fixtures while controlling glare, flicker and excessive variation in illumination.

We also recommend to use solar lights for open areas like parking, ground, street lights, etc. and motion sensor lights for common areas such as library, corridors, washrooms, etc. Table below shows the performance characteristics comparison of all luminaries.



Table - Luminous Performance Characteristics of Commonly Used Luminaries

Type of Lamp	Lumens/Watt		Colour Rendering Index	Typical Application	Typical Life
	Range	Avg.			
Incandescent	8-18	14	Excellent (100)	Homes, restaurants, general lighting emergency lighting	1000
Fluorescent lamps	46-60	50	Good w.r.t coating (67-77)	Offices, shops, hospitals, homes	5000
Compact fluorescent Lamps (CFL)	40-70	60	Very Good (85)	Hotels, shops, homes, offices	8000-10000
High pressure mercury (HPMV)	44-57	50	Fair (45)	General lighting in factories, garages, car parking. flood lighting	5000
Halogen lamps	18-24	22	Excellent (100)	Display, flood lightening, stadium exhibition grounds, construction areas	2000 - 4000
High pressure sodium (HPSV) SON	67-121	90	Fair (22)	General lighting in ware houses, factories, street lighting	6000 - 12000
Low pressure sodium (LPSV) SOX	101-175	150	Poor (10)	Roadways, tunnels, canals, street lighting	6000 - 12000
Metal halide lamps	75-125	100	Good (70)	Industrial bays, spot lighting, flood lighting, retail stores	8000
LED Lamps	30-50	40	Good (70)	Reading lights, desk lamps, night lights, spotlights, security lights, signage lights, etc.	40000 - 100000



7. OTHER POWER CONSUMPTION

7.1 Inventory of IT Infrastructure

Name of Department	LCD Projectors	Photocopiers	Desktop Computer	Laptop	Printers
Sanskrit Department, Kanya Gurukul Parisar, Haridwar	1	0	2		2
Kanya Gurukul Campus, Haridwar	12	2	76		
Hindi Department, Kanya Gurukul Parisar, Haridwar	1	1	1		
Hindi Department, GK(DU), Haridwar	1	-	4		
Department of Mechanical engineering	2	-	4		
Registrar office + Establishment I and II + IT cell	-	3	15		12
Department of Mathematics and Statistics	3	-	25		7
Department of Philosophy	-	-	1		1
Kanya Gurukul Campus, Dehradun	9	3	98		22
Department of Physical Education and Sports (main building)	6	5	15	3	1
Gym, Badminton Hall. Squash courts and stores					
Department of Microbiology, KGC	2	-	3		2
Department of Mathematics and Statistics, Kanya Gurukul Campus, Haridwar	1	-		4	1
Computer Centre, K.G.C. Haridwar	-	-	32	2	3
Ancient Indian History, Culture and Archaeology	2	1	5		
Accounts Section	-	1	21		
COE	-	-	2		2
Exam Section	-	1	5		
Exam Section (Evaluation)	-	1	9		7
Department of Electrical engineering, FET	1	-	2		
KGC Library, Haridwar	-	1	2		1
FMS, GK(DU), Haridwar	6	1	55		12
Botany and Microbiology	8	-	11		12
Department of Chemistry	4	1	27		12
Department of Physics	5	-	37	7	12
Department of Computer Science	7	1	102		15
Department of Yogic Science	2		10		4
Department of Philosophy	4	-	5		2
Department of Sanskrit	3	1	5		
Department of Jyotirvigyan and Vedic Karmkand	-	-	-		
Department of Veda	1	1	2		1
Department of Psychology	1	0	6		6
Pt. Gurudutt Hostel	-		1		1
Pandit Lekhrum and Swami Shradhanand Hostel			2		2
Department of Zoology and Environmental Science	3	11	16		1
TOTAL	85	35	601	16	141



7.2 Water pump details

Sr. No.	Unit	Rated Power of Motor	Motor Eff.	Discharge Head	Suction Head	Pump Type
		KW	%	m	m	Submersible/ Monobloc/ Centrifugal Etc.
1	Pump No.-1	0.746	80	15	15	Submersible
2	Pump No.-2	0.746	80	15	15	Submersible
3	Pump No.-3	7.46	80	15	15	Submersible
4	Pump No.-4	1.492	80	15	15	Submersible
5	Pump No.-5	7.46	80	15	15	Submersible
6	Pump No.-6	0.746	80	15	15	Submersible
7	Pump No.-7	9.325	80	15	15	Submersible
8	Pump No.-8	9.325	80	15	15	Submersible
9	Pump No.-9	3.73	80	15	15	Submersible
10	Pump No.-10	9.325	80	15	15	Submersible
11	Pump No.-11	3.73	80	15	15	Submersible
12	Pump No.-12	0.746	80	10	30	Monoblock
13	Pump No.-13	0.746	80	10	30	Monoblock
14	Pump No.-14	0.746	80	10	30	Monoblock
15	Pump No.-15	0.746	80	10	30	Monoblock



7.3 Other Loads

S. No.	Name of Department	Water Purification	Water Cooler	Exhaust Fan 150W
1	Sanskrit Department, Kanya Gurukul Parisar, Haridwar	-	1	1
2	Kanya Gurukul Parisar, Haridwar	1	1	
3	Hindi Department, Kanya Gurukul Parisar, Haridwar	1	1	
4	Hindi Department, GK(DU), Haridwar	-	-	
5	Department of Mechanical engineering	1	1	
6	Registrar office + Establishment I and II + IT cell	1	-	
7	Department of Mathematics and Statistics	1	1	
8	Department of Philosophy	-	-	
9	Kanya Gurukul Campus, Dehradun	1	1	
10	Department of Physical Education and Sports (main building)	1	1	
11	Gym, Badminton Hall. Squash courts and stores	1	1	
12	Department of Microbiology, KGC	1	1	
13	Department of Mathematics and Statistics, Kanya Gurukul Campus	-	1	
14	Ancient Indian History, Culture and Archaeology	1	1	
15	Accounts Section	1	-	
16	COE	-	--	
17	Exam Section	-	-	
18	Exam Section (Evaluation)	1	1	
19	Department of Electrical engineering	1	1	
20	KGC Library, Haridwar	1	-	
21	FMS, GK(DU), Haridwar	1	1	
22	Botany and Microbiology	1	1	
23	Department of Chemistry	1	1	110
24	Department of Physics	1	2	
25	Department of Computer Science	1	1	
26	Department of Yogic Science	1	2	10
27	Department of Philosophy	-	-	
28	Department of Sanskrit	1	1	
29	Department of Jyotirvigyan and Vedic Karmkand	1	1	
30	Department of Veda	1	-	
31	Department of Psychology	1		
32	Pt. Gurudutt Hostel	1	1	
33	Pandit Lekhram and Swami Shradhanand Hostel	1	1	
34	Department of Zoology and Environmental Science	1	1	
	Total	27	26	121



ANALYSIS

There should be regular maintenance schedule of equipment like pumps, exhaust fans and IT equipment. Electronics such as computers, printers, scanners, etc. more than 3 year or 5 years (as per their life) should be replaced with new computers/laptops. Ideal Temperature should be maintained for all electronic appliances.

8. CAPACITOR BANK

Not available because the power factor is satisfactory.



***** **END OF THE REPORT** *****