

ENERGY AUDIT REPORT



Aggarwal College

Ballabgarh

March, 2018

ENERGY AUDIT SERVICES

1116, SECTOR # 17

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BUREAU OF ENERGY EFFICIENCY



Examination Registration No. : EA-2877

Accreditation Registration No.: AEA-0067

Certificate of Accreditation

This is to certify that Mr./Ms. Ram Biranjan Sinha having its trade/registered office at Faridabad has been given accreditation as accredited energy auditor. The certificate shall be effective from 26th day of February 2013

The certificate is subject to the provisions of the Bureau of Energy Efficiency (Qualifications for Accredited Energy Auditors and Maintenance of their List) Regulations, 2010.

This certificate shall be valid until it is cancelled under regulation 9 of the Bureau of Energy Efficiency (Qualifications for Accredited Energy Auditors and Maintenance of their List) Regulations, 2010

On cancellation, the certificate of accreditation shall be surrendered to the Bureau within fifteen days from the date of receipt of order of cancellation.

Your name has been entered at AEA No. 0067 in the register of list of accredited energy auditors. Your name shall be liable to be struck out on the grounds specified in regulation 8 of the Bureau of Energy Efficiency (Qualifications for Accredited Energy Auditors and Maintenance of their List) Regulations, 2010.

Given under the seal of the Bureau of Energy Efficiency, Ministry of Power, this 26th day of May 2014

Secretary,
Bureau of Energy Efficiency
New Delhi

ACKNOWLEDGEMENT

The management is very much dedicated to the cause of Energy Efficiency. Several effective steps have already been undertaken for the objective of Energy Efficiency.

The management is keen for furthermore Energy Saving and with this objective, we have been awarded the assignment for Energy Audit.

We express our sincere thanks to the management for awarding this prestigious assignment to us.

We are very much thankful to Shri KRISHNA KANT Ji and his team for providing to us all the support and the best possible co-operation to carryout elaborate measurements and critical studies, covering all the areas of the Hotel.

We express our sincere thanks to Mr. Manmohan Singla, for taking very keen interest in the Assignment and providing us, day –today co-ordination for conducting the Assignment.



(R. B. SINHA)

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SECTION # B

EXECUTIVE SUMMARY

We have carried out the assignment for **Energy Audit** during the month of February - March, 2018. We have carried out **very elaborate measurements** for various Operating-Parameters, covering each area. We have **critically examined** the effectiveness of Energy being consumed in the entire college consisting of three Wings i.e. Wing-1, Wing-2 and Wing # 3.

• MAIN OBSERVATIONS

Various effective steps have already been undertaken for Energy Efficiency. Some of the achievements are being illustrated here with.

1. **LED Lamp** :-Some of the old conventional Lights are being replaced by Energy Efficient LED Lamps, in phases.
2. Some of the '**non star rating**' AC Units are being replaced by Energy Efficient AC Units, in phases.
3. **Solar Energy** # In line with the latest trend for Solar Power Generation, Solar Power generation system has already been commissioned for Wing # 1. Actual Power generation, under normal situation measured to be about 30 KW. This is very encouraging step for Energy Conservation.
- 4.

• OUR OBJECTIVE

To determine what further Energy Saving can be achieved, on the **most practical lines**. Our thrust has been towards **hidden losses & Technical up- gradation**.

• PROPOSALS for further ENERGY SAVING

We have identified several areas, having significant potential for further more Energy Saving.

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Each area has been covered with elaborate details, in the respective Chapters. We have provided elaborate Technical details as well as **Cost- benefit** calculations for each Proposal for Energy Saving.

Various Options for Energy Saving: - Various Proposals for Energy Saving has been illustrated in **Chapter # C**, for the quick reference of the senior Management.

For the details, the respective Chapters may please be referred.

❖ **Summary of Various Proposals for Energy Saving**

SUMMARY OF Various Proposals

1. Expected saving has been worked out on the **annual basis**.
2. All figures in **Rs. Lac**

SI. No.	PARTICULARS	Unit Rate	Expected annual Saving		Estimated Cost of Implementation (Rs. Lac)
			Qty.	Amount (Rs. Lac)	
1	Electricity	Rs. 9.23 per Unit	16,200 Units	1.49	1.08
2	Power Factor Improvement	7.80 Per KVAH	18,500 Units	1.46	Routine Maintenance
4	TOTAL	-	-	2.95	1.08

- Amount of Expected Annual Saving = **Rs. 2.95 Lac**
- **Estimated Cost** = **Rs. 1.08 Lac**
- Simple payback Period ≈ **5 Months**
- Expected Energy Saving works out to be @ **9.2 %** of the total Energy cost.

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- It may please be appreciated that each Proposals for Energy Saving are on the most practical lines.
- We sincerely thank the Management for extending the best possible co-operation to us to carry out the Assignment.

R. B. Sinha

(R. B. SINHA)

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