

**2021**

# ENERGY AUDIT REPORT 2021



**By: World Academy of  
Informatics and Management  
Sciences**

**For: Indira Gandhi Delhi  
Technical University For Women  
(Delhi, India)**



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## **1 Preface**

*A brief energy audit has been conducted in the Indira Gandhi Delhi Technical University main campus in Kashmere Gate, Delhi, India. The focus of the objective has been to appraise the energy conservation practices and commitment of the organization and its best practices adoption for the focus of promoting the use of renewable sources of energy and conserving the non-renewable energy in the campus.*

*The audit has been conducted by World Academy of Informatics and Management Sciences, Jaipur, India, with its team of experts for the said purpose.*

*A team of professionals participated from the auditee organization that heled the auditing team in collection of facts & figures, details of processes, supporting documents, and noting out their observations.*

*The current document is an outcome of the collective efforts of human resources, machinery, and supporting surroundings of both, auditor and auditee, organizations and the report is subjected to the mutual motivation of supporting the energy conservation in and around the campus in scope, and a mutual disclaimer of opinion.*

*The opinion/recommendations/conclusion/any other section/statement presented in this report should be considered ONLY FOR INFORMATION, and not for basis of any claims or demands. The report is an outcome subjected to the limited exposure of the participating team to the audited facts and environment and hereby in no ways, the report can be considered sole basis of any actions/plans/claims or any other financial/non-financial considerations.*

*The report has been prepared with mutual consent with the auditee organization and its participating individuals and solely for the use of them and only for the mentioned purpose. NO Part of this report can be reproduced or distributed for any other purpose or reference. The auditor disclaims correctness/completeness/any other responsibility of any statements made in this report because of mentioned limitations of exposure.*



## **2 Scope of Audit**

Scope of this energy audit is confirmed to Indira Gandhi Delhi Technical University main campus in Kashmere Gate, Delhi, India.

## **3 About the Auditee**

Indira Gandhi Delhi Technical University for Women (IGDTUW) was established by the Govt. NCT of Delhi in May, 2013 vide Delhi Act 09 of 2012, as a non-affiliating University to facilitate and promote studies, research, technology, innovation, incubation and extension work in emerging areas of professional education among women, with focus on engineering, technology, applied sciences, architecture and its allied areas with the objective to achieve excellence in these and related fields.

Erstwhile Indira Gandhi Institute of Technology (IGIT) was established in 1998 by Directorate of Training and Technical Education, Govt. of NCT of Delhi as the first engineering college for women only. In 2002, the college became the first constituent college of Guru Gobind Singh Indraprastha University. Over the years erstwhile IGIT has significantly contributed to the growth of quality technical education in the country and has become not only one of the premier institutions of Delhi but as the most prestigious college of north India.

Since 2013, the University has steadily grown exponentially. It has continued B.Tech. programmes in four disciplines namely computer science engineering, information technology, electronics & communications and robotics & automation engineering. M.Tech. Programmes in niche areas of technology like Information Security Management, Mobile Pervasive Computing, VLSI Design and Robotics and Automation Engineering were started for the first time in institute. The Ph.D programme was started in 2014 in various disciplines. In 2015, the University started B.Arch. Programme. In short span of few years, the University has drastically increased its student strength.

The University is not only providing high-quality teaching in an environment of competitive research but is also committed towards the creation of new knowledge through research, development and innovation. At present the various departments of the University are



running sponsored research projects from the leading Industry/organizations like Microsoft, Atmel, Nokia, Department of Science & Technology, Department of IT, Govt. of India and IITs to name a few. With the support of the Govt. of NCT of Delhi, the University has started its incubation centre – Anveshan that is offering ample opportunities to the young women engineers to realize their dreams by becoming the entrepreneur.

The teaching pedagogy of the University is to make students think, to resolve problems by argument supported by evidence and not to be dismayed by complexity, but bold in unravelling it. The university incessant effort is to produce work-ready graduates and this is achieved through continuously updating the syllabus with the involvement of the experts from Industry and leading academia. As an outcome, the students of the University are placed 100% with multiple job offers in the leading industry like Intel, Microsoft, Facebook, Qualcomm, Intuit, Oracle, ARM, CISCO, Yamaha, Mahindra & Mahindra, Tata Motors to name a few.

The University has decentralized structure with six academic departments and administrative departments to facilitate functioning of the academic departments. The functioning of the academic departments is well organized under the Head of the Department. Besides teaching, and service roles to carry out the academic work, the various academic departments have become the epicentre of research and development activities in their respective areas of specialization. The academic administrative responsibilities of the University are shouldered by Dean(Academic Affairs), Dean (Examination Affairs), Dy. Dean (Research & Consultancy), Dy. Dean (Student Welfare), Chief Proctor and Chief Warden.

## **4 Audit Observations**

### **4.1 Observations from Campus Tour**

- No explicitly/formally defined objectives/policy/procedure/formats focused on energy conservation in the organization, although multiple volunteer activities are conducted for the same.



- Well illuminated building blocks in the campus that are energy efficient in terms of saving energy on artificial illumination inside the building and working space.
- Well ventilated workspaces saving energy on ventilation and temperature moderations.
- Efficient Solar Panels installed to make use of non-perishable sources of energy.
- Energy Efficient Systems (AC/Geyser/Other) are installed to maximize overall utilization of energy and minimize energy leaks/waste.
- Energy Saver Sensors have been installed although in a very small portion of the campus.
- Alternate resources of energy like Bio Gas Plant, Wind Energy Converters, Geothermal Energy Converters etc. are NOT found.

## 4.2 Observations from Artefacts and Documents

### 4.2.1 Consumption of Electricity

Source: BSES Yamuna Power Limited

Consumption Matrix:

1.	14-09-2021 ~ 13-10-2021	:	84820 units
2.	14-08-2021 ~ 13-09-2021	:	83000 units
3.	16-07-2021 ~ 13-08-2021	:	87240 units
4.	16-06-2021 ~ 15-07-2021	:	86600 units

As per above data, on an average

**2850 units of electricity is consumed per day**

from the supply of BSES Yamuna Power Limited.

### 4.2.2 Solar Energy Generation

Sr. No.	Period	Total Units of energy generated
1.	05/03/2021 to 01/04/2021	19869
2.	02/04/2021 to 09/06/2021	45310
3.	10/06/2021 to 29/06/2021	13253



Sr. No.	Period	Total Units of energy generated
1.	30/06/2021 to 29/07/2021	16164

S. No.	Period	Total Units of energy generated
1.	30.07.2021 to 27.08.2021	16,117

As per above data, on an average  
**625 units of electricity is generated per day**  
from the source of Solar Energy in the campus.

This covers approximately 22% of the electricity need of the campus.

## 5 Recommendations

1. The organization needs to formally define the objectives/policy/procedure/formats focused on energy conservation in the organization that would give a uniformly focused directions to the efforts of the organization towards energy conservation and better results can be expected by optimal usage of resources, efforts, and funds.
2. Need to increase the coverage of Sensor based Energy Conservation in the campus. Covering the Campus Corridors with Sensors can make significant conservation of energy.
3. Alternate Sources of energy like Bio Gas Plants are recommendable for use in Hostel Mess and Canteen
4. Solar Energy Generation can be increased by use of Parking Area and available roof tops.

## 6 Conclusion

Overall Commitment and Focus of Energy Conservation Practices in the organization are satisfactory.