September 18, 2021

ENERGY AUDIT REPORT

Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT Jaipur)

Ram Nagariya Rd, Shivam Nagar, Jagatpura, Jaipur, Rajasthan 302017

GSTIN : 08AAJFD9550B1ZH

Design2Occupancy Services LLP

D2O/EA/18092021 **Letter of Certification** Date: 18/09/2021

To,
The Director,
Swami Keshavanand Institute of Technology, Management & Gramothan
Ram Nagariya Rd, Shivam Nagar,
Jagatpura,
Jaipur, Rajasthan 302017

This letter is to certify that Swami Keshavanand Institute of Technology, Management & Gramothan has undergone Energy Audit, Green Audit and Environment Audit.

The audits have been performed by Design2Occupancy Services LLP, which is primarily a consulting firm which deals in Green energy, Energy Audits, Green Building Consultancy etc. We help clients in saving energy, operational costs while creating a sustainable environment.
Design2Occupancy Services LLP bears some of the most valued credentials in the industry such as LEED AP, IGBC AP, GRIHA trainer & evaluator, PQP Professional, ICP, and Certified Energy Auditors etc. and hold valuable experience in various areas like Green building facilitation, Energy Simulation and Analysis, Thermal & daylight modelling, CFD simulation, renewables, sustainability reporting, IAQ consulting, Energy audits & commissioning and several others. Our team's competence is our strength and our projects showcase our commitment towards a greener future.

This assignment is taken up for Swami Keshavanand Institute of Technology, Management & Gramothan, an environmentally responsible educational institution based out of Jaipur (Rajasthan) and embarking into this journey of sustainability. Therefore, we have independently conducted this entire assessment through step by step procedure prescribed for such practices. We have deployed our technical team to gather information and report the institution's effort towards sustainability in comprehensive manner.

We hereby submit these reports dated 18th September 2021. All assessments, results and reported facts are reliable, conservative and verifiable in all aspects.

for, Design2Occupancy Services LLP
Sai Balaji,
LEED AP and GEM Certified Professional
(Senior Counsellor)

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I. Executive Summary

The Swami Keshvanand Institute of Technology, Management & Gramothan acknowledges the importance of Energy as an essential resource for successfully meeting its operational objectives. The Institute also realizes the need to use this resource in a responsible manner that is sustainable and complementary to its Environmental Management Policy.

This document explores how the Institute uses Energy, outlines its approach to managing Energy use and sets targets for Carbon footprint reduction. This strategy is intended to sit alongside the other strategies which together make up the Institute's overall sustainability strategy

The Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur (SKIT) is committed to improving sustainability. SKIT strives to sustain its local and global environment, organizational health and ability to create a positive, viable future. SKIT endeavors to include environmental sustainability principles and targets in all aspects of its decision-making. Through its research, teaching and learning, operations and community engagement, SKIT aims to:

Minimize the environmental impact of its operations and move towards restoring environmental integrity

- Promote social justice, equity and diversity
- contribute to human health and well-being
- Maintain its financial viability.

As part of its commitment to sustainability, SKIT developed a Sustainability Policy and Sustainability Strategy. SKIT is now developing a series of Sustainability Action Plans on energy and greenhouse, water, transport and waste to support implementation of the Policy and Strategy. This document deals with Energy Audit of SKIT.

II. About the Institute

Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT) inspired from the leanings of Swami Keshvanand, was established in the year 2000 by Technocrats and Managers Society for Advanced Learning. In order to carry the same, they leaped forward to establish MRM Public School in Nirwana village of Sri Ganganagar district of Rajasthan in the year 1992. Pursuing the vision of the Great Saint Swami Keshavanand, who devoted his life for the cause of education and the uplift of the rural folk, the promoters added "Gramothan" to the name of the institute not only to epitomize his vision but also to extend their efforts to explore the use of engineering education for innovations for improving the scenario for the rural community. Today the institute is recognized as one of the centers of academic excellence in Northern India.

The Institute is affiliated to Rajasthan Technical Institute, Kota for offering Postgraduate and Graduate Courses in Engineering and Management. Located in the Pink City Jaipur, which is a blend of traditional history and modern outlook, SKIT is putting in efforts for making industry ready engineers and managers through effective Industry –Institute Interface. Apart from Institute curriculum SKIT also pursues activities for research and development in various fields.

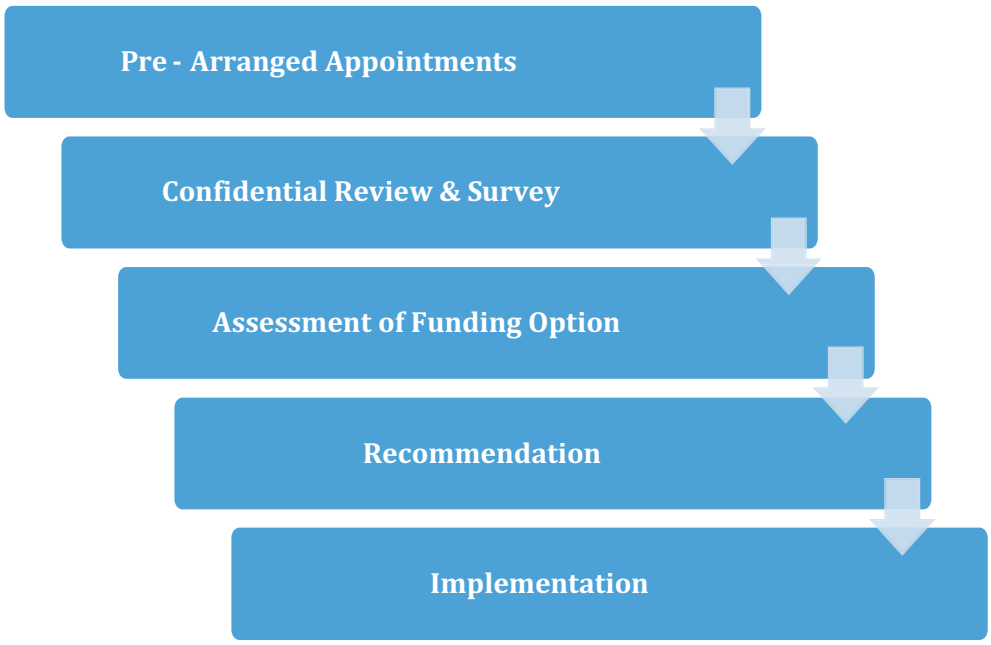
The green landscaping, aesthetic elegance of arches and the vibrant pursuit of knowledge by the young aspirants make the environment serene, pleasant and dynamic.

Students joining the institute share the box full of opportunities for professional and personal development through an environment of practical orientation, industrial interaction and student led activities which help the students to develop good communication skills, integrated personality and greater competitive spirit.

III. Introduction

Based on an inspection of the building plans, measurements and documents, energy auditing includes an evaluation and analysis of the existing situation and the various measures that could be implemented to reduce the energy consumption and improve the indoor environment. The results are presented in an energy analysis report describing the recommended measures with corresponding investments, savings and profit.

The energy analysis in a building is a feasibility study, for it not only serves to identify energy use among the various services but also identify opportunities for energy conservation. The study should reveal to the owner, manager, or management team of the building the options available for reducing energy waste, the costs involved, and the benefits achievable from implementing those energy-conserving opportunities (ECOs). It is to reduce waste of energy and money to the minimum, permitted by the climate in which the building is located, its functions, occupancy schedules, and other factors. It establishes and maintains an efficient balance between a building's annual functional energy requirements and its annual actual energy consumption.



Energy Analysis Process Flow

Occupancy Details

The number of occupants is also important to define the amount of water and energy used in the building; therefore, the following details of the occupants have been considered during the calculation and report preparation. It is observed that the total occupancy of the campus is 5500 approx.

Brief

The Energy analysis was conducted by D2O team for a period of sufficient time, at the Institute premises to study the existing practices of energy consumption and seek possible ways to conserve energy.

SKIT is the first total green campus in Rajasthan with 900 kW Solar Power Plant (400 kW Rooftop + 500 kW Captive). The solar power generation will annually generate nearly 14 lakh units of electricity cutting 1150 tons of CO emissions that shall contribute towards saving nearly 34000 trees annually.

IV. Assessed Parameters

Geology of Jaipur, Rajasthan

Jaipur city is the capital and largest city of the Indian state of Rajasthan. Its municipal boundary of the city extends from 26º46' N latitude to 27º01'N latitude and 75º39'E longitude to 75º57'E longitude. The city is surrounded by the Nahargarh hills in the north and Jhalana in the east, which is a part of Aravalli hills ranges. To its south and west, the city is surrounded by isolated and discontinuous hillocks. The southern end of the city is an open plain stretching far and wide towards Sanganer and beyond. The city was initially located within the walls with the rocky streets providing an easy drainage system on either side of the city but the later extension of the city took place towards the south and west on the alluvial plains formed in the confluence zone of the Amani Shah Nala in the west and Jawahar Nagar Nala in the east and beyond.

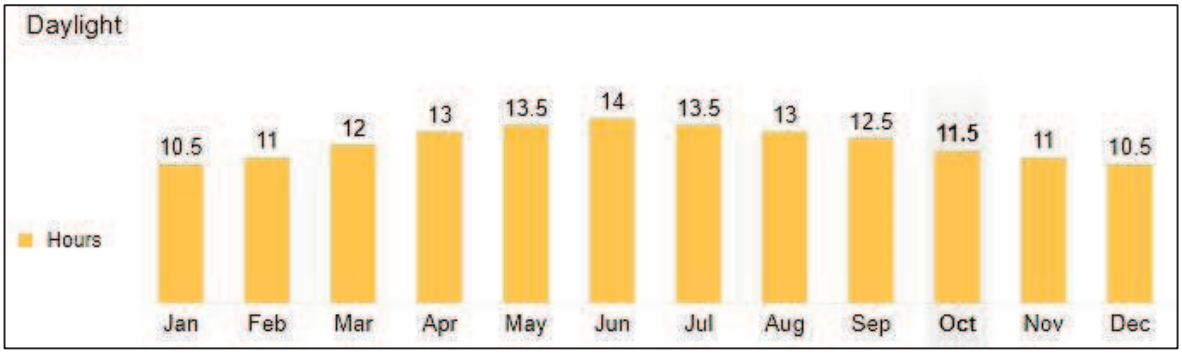
Climate

Jaipur city falls under the semi-arid of climate and experiences a continental type of climate owing to its proximity to the desert and inland location. It is characterized by hot summers and cold winters. The mean daytime temperature of Jaipur is 36^0C varying from

18^{0}C in winter (January) to 45^{0}C in summer (June). The normal rainfall of Jaipur is 600 mm nearly 90 percent of which takes place in the summer monsoon period from (June to September) and the rest comes from the winter cyclones:

Mean Temperature of Jaipur

Mean Maximum Temperature (May)	40^{0}C
Mean Minimum Temperature (January)	8^{0}C

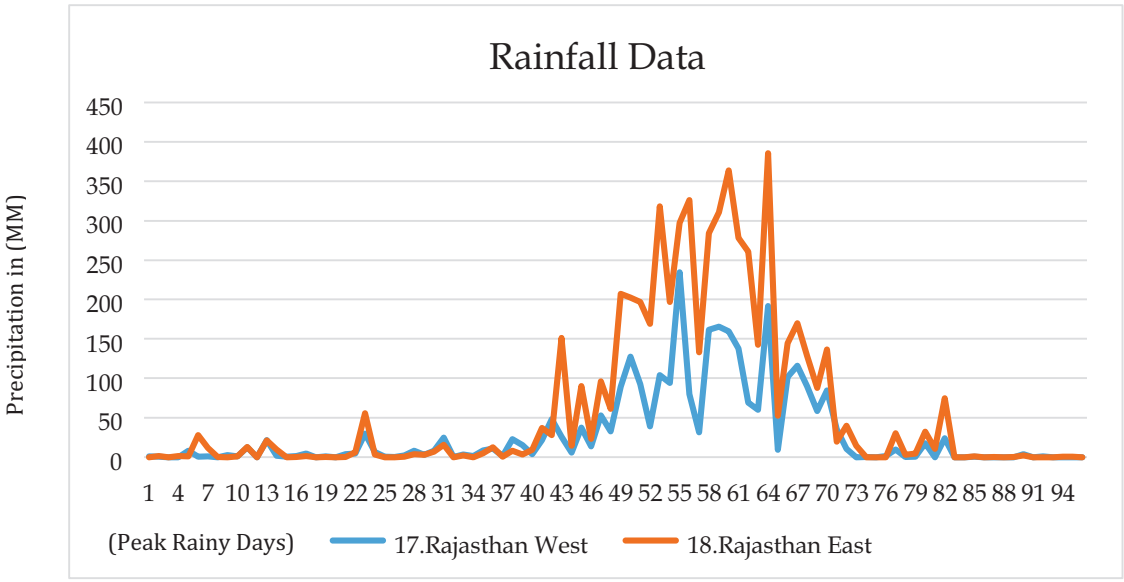


Annual Daylight Hours (Monthly Mean) Source-NOAA

Temperature and Rainfall

The month of May experiences the maximum temperature and January experiences minimum temperature. The data is based on 7 observation years recorded by Indian Meteorological Department (IMD). Jaipur city recorded the maximum temperature of 45.2°C and minimum temperature of 2.5°C in the year 2001 and the maximum temperature of 45.7°C and minimum temperature of 2.2°C in the year 2011.

Heat wave prevails for a few days when day temperature rises 4°C to 6°C above normal. During winter season, minimum temperatures remain at about 4°C to 9°C and fall below 0^{0}C when chilly winds (northerly) blow from the Himalayan region. Mist and Fog occur in the morning hours after passage of western disturbances. The minimum temperature of -2.2°C was recorded on 31st January, 1905 and 16th January, 1964. The surge in temperature starts from April and peaks in the month of June. The downward trend in temperatures commences in September and continues up to January. The mean annual rainfall is around 60 mm. Maximum rainfall is 198.8 mm which occurred in the month of August in 2006. Rainfall increases from the month of June when thundering activities start, and July and August are the rainiest months. Monsoon withdraws in the middle of September. Rainfall decreases sharply in October and November.



Seven Year Rainfall Data (Source: by meteorological sub-divisions)

V. Energy Analysis Definition & Procedure

Definition

This report elaborates the current actual energy performance of the building and real-time performance of all the energy intensive systems installed in the facility. Detailed survey and testing of the energy intensive systems has been performed in order to arrive at the present performance of each equipment. The test results have been carefully analyzed and presented along with improvement measures and general recommendations for each of the systems. The suggested Energy Efficiency Measures (EEMs) presented in the report are mainly of three types depending on their initial cost implications – No Cost, Low Cost and Medium Cost measures. The measures, if implemented, may help the facility team in optimizing the building operations and may result in comprehensive energy and cost savings in the long run.

Objective

The objective of Energy Analysis is to assess the following:

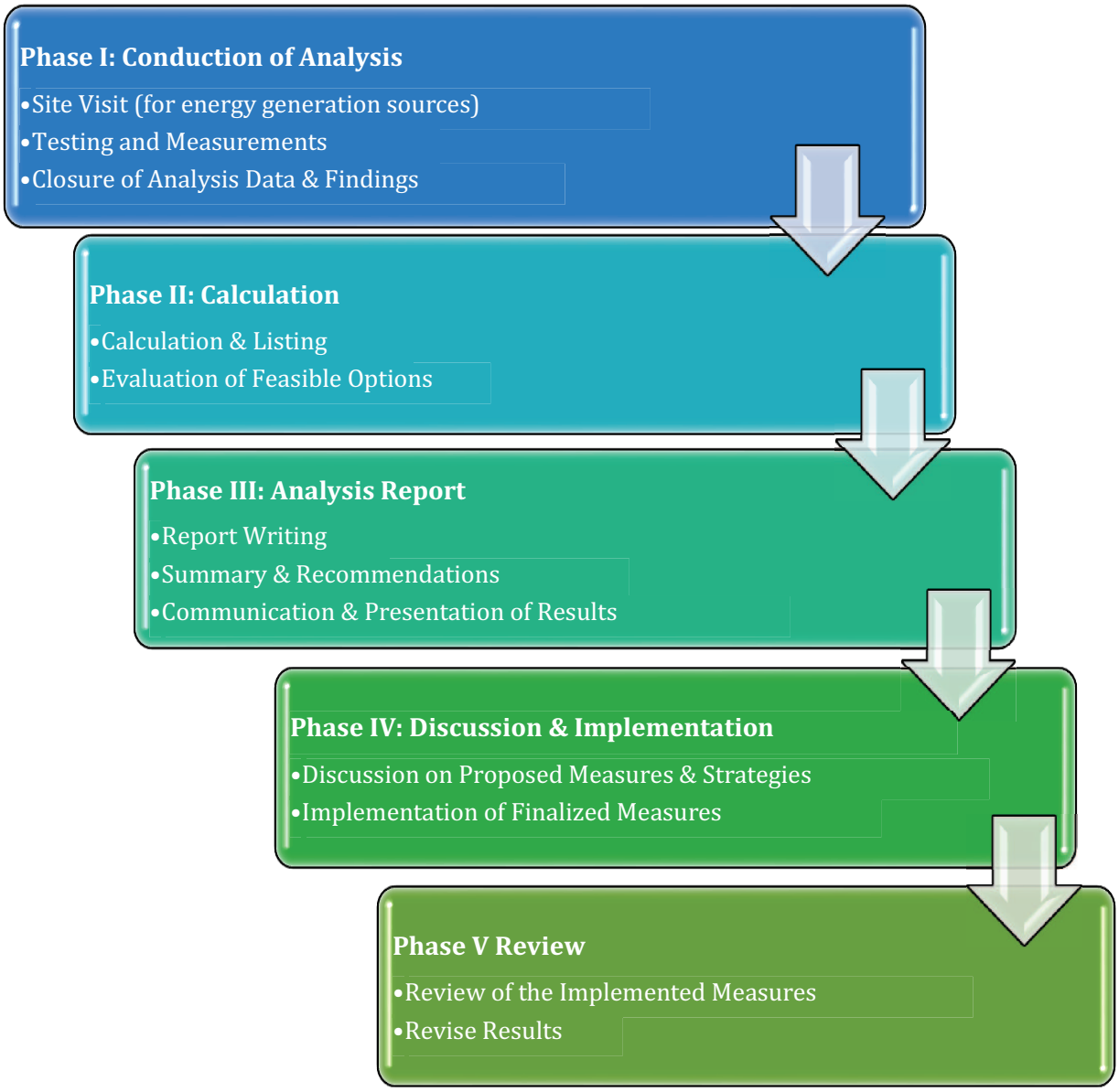
a) Understand the energy consumption scenario.

b) Survey the energy generation systems.

c) Suggest potential energy conservation measures based on end uses.

d) Support with Implementation and maintenance.

VI. Procedure



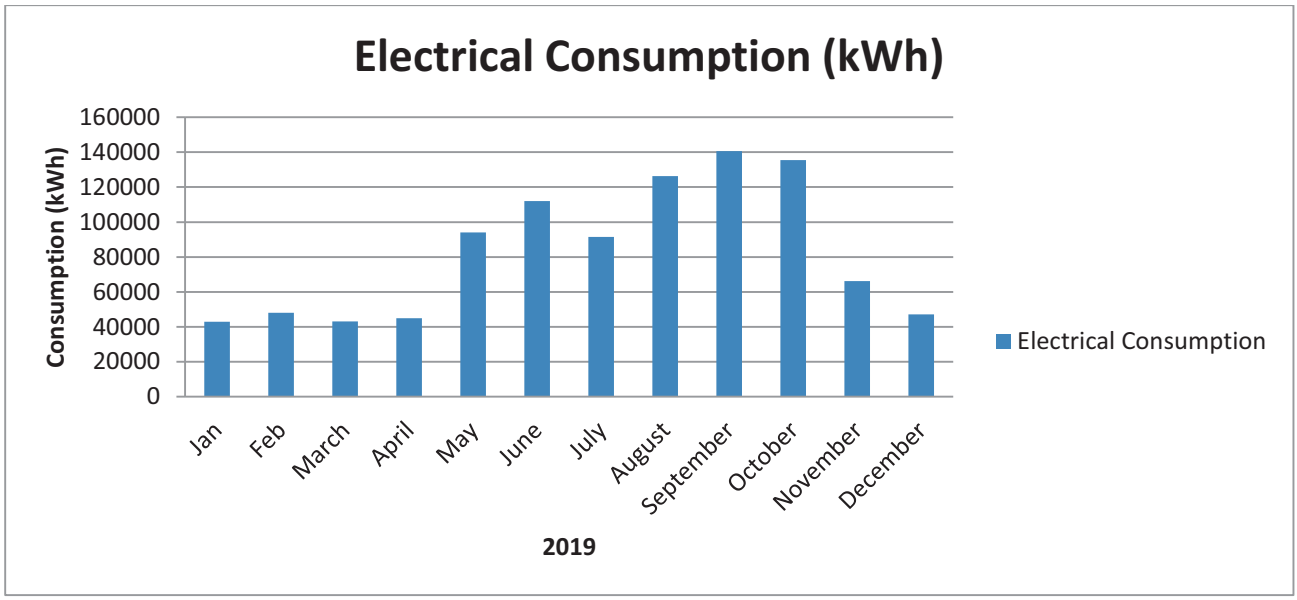
Energy Analysis Procedure

VII. Energy Consumption Scenario

The electric power for the entire facility is mainly procured from the 400 kW Rooftop + 500 kW Captive wheeling. In case of loss of grid power, diesel generator sets are installed at the Campus for power backup.

Energy Consumption (2019)

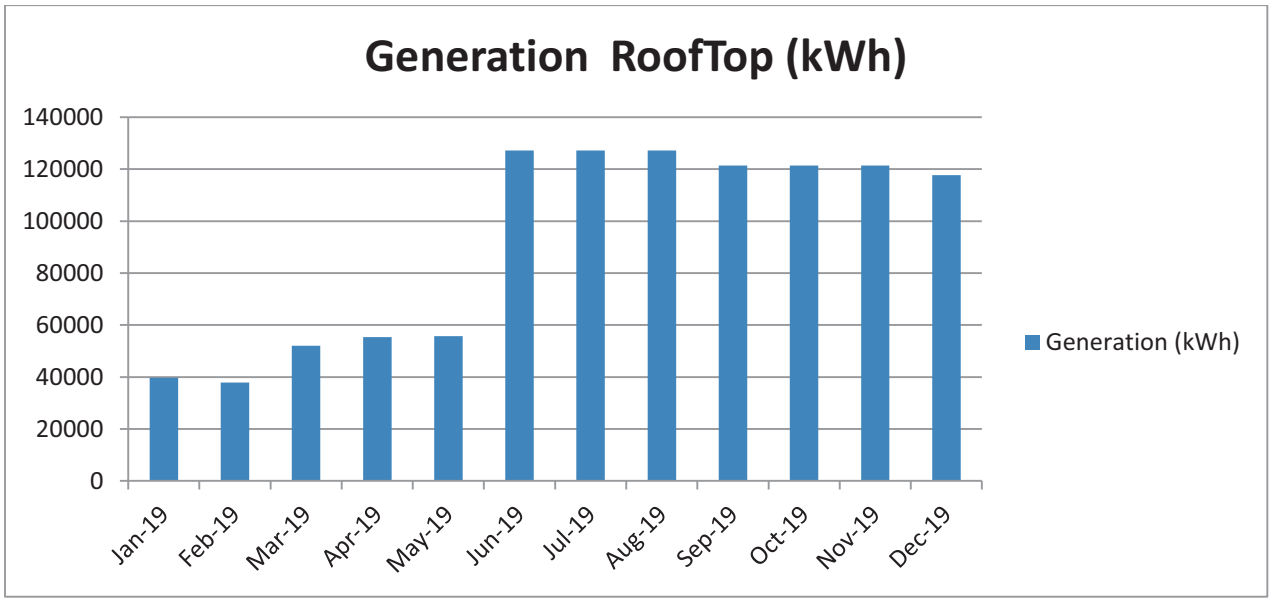
S. No.	Month	Total Energy consumption from SKIT (kWh)
1	January	42940
2	February	48000
3	March	43030
4	April	44970
5	May	94000
6	June	112000
7	July	91570
8	August	126260
9	September	140535
10	October	135385
11	November	66240
12	December	47115
Total Consumption (kWh) - 992045		



Energy Consumption of Campus for 2019

S. No.	Month	Total Energy Generation from Rooftop of SKIT (kWh)
1	January	121368
2	February	121368
3	March	117712
4	April	39676
5	May	37823
6	June	52024
7	July	55370
8	August	55721
9	September	127206
10	October	127206
11	November	127206
12	December	121368
Total Generation (kWh) - 1104048		

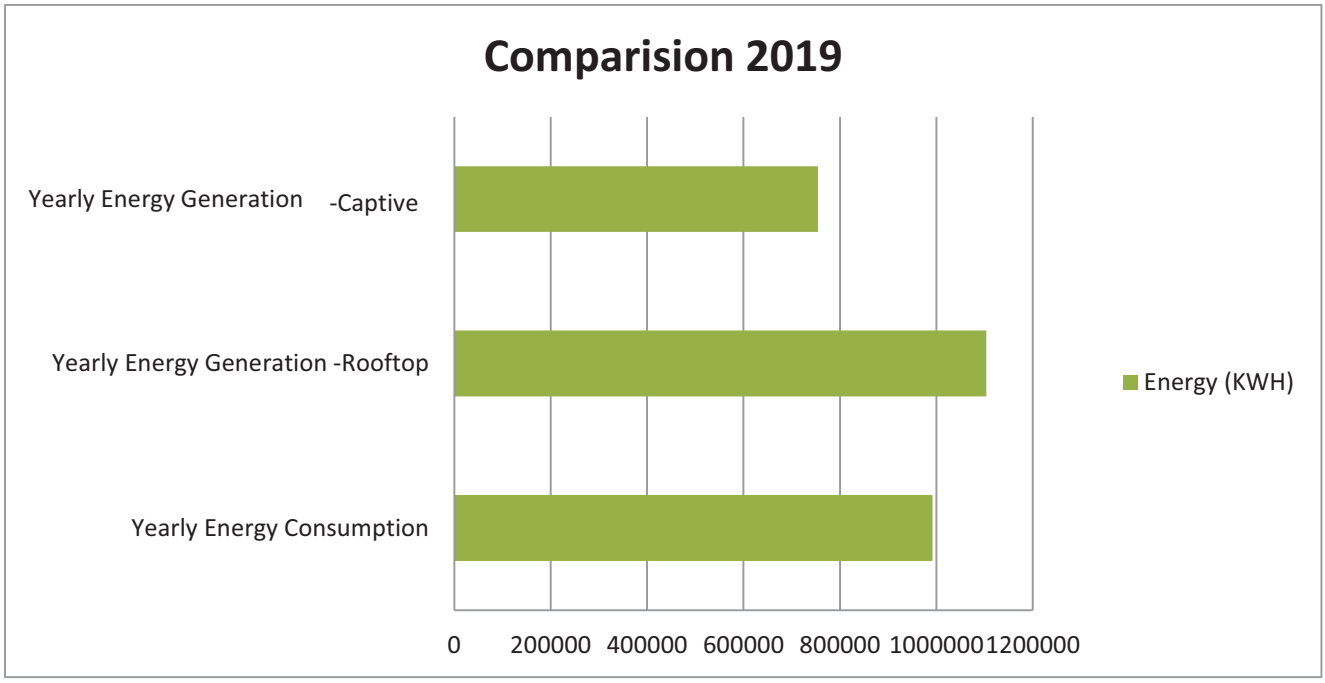
Energy Generation 2019



Energy Generation of Solar Rooftop in SKIT Campus for 2019

S. No.	Month	Total Energy Generation from Rooftop of SKIT (kWh)
1	January	66144
2	February	47189
3	March	29960
4	April	59823
5	May	61647
6	June	76706
7	July	64982
8	August	76621
9	September	75825
10	October	59956
2	November	67327
3	December	68458
Total Generation (kWh) - 754638		

Energy Generation of Solar Capacitive in SKIT Campus for 2019



The Comparison of Energy Consumption and energy generation for SKIT Jaipur in 2019

Installed 400KW Capacity of Solar at Rooftop of SKIT

VIII. Load Calculation

Building No: Vikram Sarabhai Block					Floor: Basement	
S.NO	Name/Location	Fan	LED	Tube light	Computer	AC
1	HOD	2	4	0	1	1
2	AC-002	2	4	0	0	1
3	ECL-01	6	0	9	28	0
4	Faculty-AC03	1	0	1	0	0
5	Faculty-AC04	1	0	1	1	0
6	Faculty-AC05	1	0	1	1	0
7	ECL-02	6	0	8	9	0
8	Faculty-AC011	1	0	2	2	0
9	Faculty-AC010	1	0	1	1	0
10	EPBX Room	1	0	1	0	0
11	Faculty –AC09	1	0	1	1	0
12	Faculty- AC08	1	0	1	0	0
13	Faculty -AC07	1	0	1	1	0
14	Faculty –AC06	1	0	1	1	0
15	ECL-03	6	1	7	18	0
16	ECL-04	8	0	8	16	0
17	Store-2	0	0	2	0	0
18	ECL-05	2	0	4	5	0
19	ECL-06	4	0	5	19	2
20	ECL-07	6	0	7	1	0
21	ECL-08	6	0	6	1	0
22	ECL-09	6	0	7	1	0
23	ECL-10	6	0	7	2	0
24	ECL-11	6	0	6	1	0
25	ECL-12	6	0	7	1	0
26	Corridor	0	0	8	0	0
27	Toilet	0	0	3	0	0
28	Faculty2	2	2	2	2	1

Building No: Vikram Sarabhai Block					Floor: Ground Floor	
S.NO	**Name/Location**	**Fan**	**LED**	**Tubelight**	**Computer**	**AC**
1	Waiting Hall	2	7	0	2	1
2	Meeting Room	0	6	0	0	2
3	Principal Room	1	6	1	0	1
4	Dir. Acad. Room	1	6	1	0	1
5	Exam Cell	5	0	6	4	1
6	Entrance Lobby	3	0	4	0	0
7	Office	2	0	4	1	0
8	TP Cell	11	32	0	7	5
9	Faculty	1	0	2	1	1
10	Faculty	1	0	2	1	1
11	Classroom-106	9	0	5	0	0
12	Classroom-105	9	0	5	0	0
13	Classroom-104	9	0	5	0	0
14	Classroom-103	8	0	4	0	0
15	Classroom-102	8	0	5	0	0
16	Classroom-101	8	0	6	0	0
17	Lab CL-10	4	0	8	30	2
18	CL-11 Lab	5	0	6	32	2
19	Faculty .AC 105	1	0	2	1	1
20	Toilet	0	0	4	0	0
21	Corridor	0	0	5	0	0

Building No: Vikram Sarabhai Block					Floor: First Floor	
S.NO	**Name/Location**	**Fan**	**LED**	**Tubelight**	**Computer**	**AC**
1	Lab ECL-15	4	0	6	3	0
2	Lab ECL-14	5	0	5	1	0
3	Studio-1	0	12	0	2	1
4	Studio-2	1	9	0	2	1
5	Studio-3	1	9	0	2	1
6	Faculty AC-208	1	0	1	0	0
7	Faculty AC-209	1	0	1	0	0

8	Faculty AC-210	1	0	1	0	0
9	Faculty AC-211	1	0	1	1	0
10	Faculty AC-212	2	0	2	0	0
11	Faculty	1	0	1	0	0
12	ECE Lab (T)	5	0	4	1	0
13	Virtual Lab (T)	5	0	4	16	0
14	Faculty -AC205	1	0	1	0	0
15	Faculty –AC 206	1	0	1	1	0
16	Faculty –AC 207	1	0	1	1	0
17	Lab ECL-13	4	0	6	31	0
18	Faculty AC-204	3	0	4	2	0
19	Faculty AC-203	1	0	1	1	0
20	ERP AC-202	2	0	2	3	1
21	Faculty AC-201	2	0	2	0	1
22	Class Room-201	9	0	5	0	0
23	Class Room-202	9	0	5	0	0
24	Class Room-203	9	0	5	0	0
25	Class Room-204	9	0	5	0	0
26	Class Room-205	9	0	5	0	0
27	Class Room-206	9	0	5	0	0
28	Lab ECL-16	5	0	7	20	0
29	Lab ECL-17	5	0	7	27	2
30	Faculty AC-214	1	0	2	1	0
31	Toilet	0	0	4	0	0
32	Corridor	0	0	6	0	0

Building No: Vikram Sarabhai Block **Floor: Second Floor**

S.NO	Name/Location	Fan	LED	Tube light	Computer	AC
1	CS Library	2	0	2	1	0
2	Faculty AC 301	1	0	1	0	0
3	Faculty AC 302	1	0	1	0	0
4	Faculty AC 303	1	0	1	0	0
5	Faculty AC 304	1	0	1	1	0
6	Faculty AC 305	1	0	2	1	0
7	Faculty AC 306	1	0	1	1	1

8	Faculty AC 307	1	0	2	1	0
9	Faculty AC 308	3	0	2	1	0
10	Faculty AC 309	3	0	2	1	0
11	Faculty AC 310	1	0	1	0	0
12	Faculty AC 311	1	0	1	0	0
13	Faculty AC 312	1	0	1	1	0
14	Faculty AC 313	1	0	1	2	1
15	Lab CL-13	3	0	6	32	2
16	Lab CL-14	3	0	6	29	2
17	Lab CL-15	7	0	6	29	2
18	Lab CL-16	7	0	6	29	2
19	Lab CL-17	3	0	6	30	2
20	Lab CL-18	3	0	7	6	2
21	Lab CL-8	4	0	6	33	0
22	Lab CL-9	6	0	9	29	0
23	Class Room -301	9	0	5	0	0
24	Class Room -302	9	0	5	0	0
25	Class Room -303	9	0	5	0	0
26	Class Room -304	8	0	5	0	0
27	Class Room -305	9	0	5	0	0
28	Class Room 306	9	0	5	0	0
29	Toilet	0	0	2	0	0
30	Corridor	0	0	9	0	0
31	Exam (PSMR)	2	0	4	1	1

Building No: Vikram Sarabhai Block **Floor: Third Floor**

S.NO	Name/Location	Fan	LED	Tube light	Computer	AC
1	Faculty AC-401	2	4	0	2	1
2	Faculty AC-402	2	1	1	2	1
3	Faculty AC-403	3	3	0	9	1
4	Faculty AC-404	1	2	0	1	1
5	SERVER ROOM	3	3	0	8	3
6	Class Room-401	10	7	0	1	0
7	Class Room -402	10	7	0	1	0

8	Class Room -403	10	7	0	1	0
9	Class Room -404	8	7	0	1	0
10	Class Room -405	8	7	0	1	0
11	Class Room -406	8	7	0	1	0
12	Lab CL-1	4	5	2	31	2
13	Lab CL-2	4	8	1	31	2
14	Lab CL-3	4	8	0	30	2
15	Lab CL-4 (IBM)	4	8	0	30	2
16	Lab CL-5	4	4	1	25	2
17	Lab CL-6	4	8	0	30	2
18	Lab CL-12	4	5	1	33	2
19	Lab IAI	15	17	0	87	4
20	UPS Room	0	0	2	0	1
21	TOILET	0	0	4	0	0
22	CORRIDOR	0	0	9	0	0
23	RAMAVTAR	1	0	2	0	0

Building No: Dhanwantri Block **Floor: Basement/Ground Floor**

S.NO	Name/Location	Fan	LED	Tube light	Computer	AC
1	Central Comm. Facilities	6	0	12	41	2
2	Digital Library	5	0	8	14	2
3	Central Library	4	0	56	9	0
4	Registrar Office 101	2	10	1	1	1
5	Director Office 102	2	10	1	1	1
6	Principal Office 103	1	0	2	1	1
7	Admission Office 104	1	0	1	1	1
8	Dy. Registrar Office 105	1	0	2	1	1
9	Accounts	1	0	0	1	1
10	Accounts	1	0	2	1	1
11	Accounts	2	0	4	3	0
12	Accounts Store	1	0	2	1	0
13	Admission Cell	3	0	8	8	3
14	Admission Office Cell	7	0	13	1	2
15	Board Room	3	16	0	3	2

16	Bhargav Sir Cabin	1	0	1	1	1
17	Permila Bhafana Cabin	1	0	1	1	1
18	Pantry	1	0	1	0	0
19	Toilet(ladies)	0	0	1	0	0
20	Toilet(Gents)	0	0	1	0	0
21	Corridor	8	0	18	0	0
22	Reception	4	4	0	0	0
Building No: Dhanwantri Block				**Floor: First Floor**		
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Principal Office	2	0	4	1	1
2	Office	1	0	3	1	0
3	Class Room-101	6	0	9	0	0
4	Class Room-102	6	0	9	0	0
5	Machine Room	5	0	10	0	0
6	CIR Room	5	0	10	0	0
7	Pharmaceutical Lab-1	8	0	16	1	0
8	Pharmaceutical Lab-2	8	0	16	1	0
9	Corridor	0	0	10	0	0
10	Toilets	0	0	3	0	0
Building No: Dhanwantri Block				**Floor: Second Floor**		
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Class Room No.201	6	0	9	0	0
2	Class Room No.202	6	0	9	0	0
3	Museum	2	0	1	0	0
4	Practice Lab	8	0	16	0	0
5	Pharmaceutical Lab-3	8	0	16	0	0
6	Computer Lab	4	0	6	24	2
7	Library	13	0	11	3	0
8	Corridor	0	0	5	0	0
9	Toilets	0	0	4	0	0

Building No: Dhanwantri Block				Floor: Third Floor		
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Chemistry lab -1	6	0	12	0	0
2	Chemistry lab -2	5	0	9	0	0
3	Analysis lab	6	0	12	0	0
4	D-Pharmacy Chem. lab	6	0	9	0	0
5	Boys Common Room	3	0	6	0	0
6	Store	3	0	6	0	0
7	HAP Lab	8	0	15	0	0
8	Cog nosy lab	8	0	15	0	0
9	Corridor	4	0	9	0	0
10	Toilets	0	0	4	0	0
Building No: Dhanwantri Block				**Floor: Fourth Floor**		
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Corridor	0	2	0	0	0
2	Cology-1	6	6	0	1	0
3	Cology-2	6	6	0	0	0
Building No: Sir M. Visvesvaraya Block						**Floor: Basement**
S.No.	Name/Location	Fan	LED	Tube light	Computer	AC
1	Tea Room	6	0	4	0	2
2	Seminar Hall (J.C. Bose)	0	33	0	1	0
3	structural Lab	7	0	4	1	0
4	Geotech Lab	6	0	4	1	0
5	Project Lab	8	0	6	0	0
6	Control Room	1	2	0	0	1
7	Auditorium	0	50	0	1	0
8	Stage	0	0	0	0	2
9	Green Room	3	0	7	0	0
10	Electric Machine Lab	6	0	6	0	0
11	Electric Lab	6	0	4	0	0
12	Corridor	0	0	8	0	0

13	Toilet	0	0	3	0	0
Building No: Sir M. Visvesvaraya Block						**Floor: Ground Floor**
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Survey Lab.	6	0	4	0	0
2	Drawing Hall	12	0	8	0	0
3	Drawing Lab.	10	0	5	0	0
4	Computer Lab.	9	0	6	36	0
5	Geology Lab.	10	0	6	0	0
6	Staff Room Civil	6	0	5	5	0
7	Tutorial	6	0	4	0	0
8	Panel Room	1	0	1	0	0
9	Corridor	4	4	12	0	0
10	Toilet	0	0	2	0	0
Building No: Sir M. Visvesvaraya Block						**Floor: First Floor**
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	BCE Lab	6	0	4	0	0
2	Environmental Lab	13	0	9	1	0
3	Faculty Room	1	0	2	0	0
4	Class Room 1F1	9	0	6	0	0
5	Class Room 1F2	9	0	6	0	0
6	Class Room 1F3	9	0	6	0	0
7	Staff Room (English)	6	0	9	0	0
8	Staff Room (Civil)	6	0	9	0	0
9	Civil O/A Room	1	0	2	1	0
10	Soft Skill	6	0	4	1	0
11	Corridor	0	0	8	0	0
12	Toilet	0	0	7	0	0
Building No: Sir M. Visvesvaraya Block						**Floor: Second Floor**
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	I year Incharge Cabin	2	0	2	1	0
2	I year office cabin	1	0	1	1	0
3	Class Room 2F1	9	0	6	0	0
4	Class Room 2F2	9	0	6	0	0

5	Class Room 2F3	9	0	6	0	0
6	Director Office (academics)	2	9	0	1	1
7	Staff Room	5	0	6	3	0
8	Physics Lab	8	0	7	1	0
9	Chemistry Lab	12	0	9	1	0
10	Language Lab	7	0	6	36	0
11	Corridor	0	0	15	0	0
12	Toilets (Gents)	0	0	1	0	0
13	Toilets (Ladies)	0	0	1	0	0
Building No: Sir M. Visvesvaraya Block						**Floor: Third Floor**
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	HV LAB	8	0	5	33	0
2	DE LAB	8	0	4	0	0
3	BEE LAB	6	0	6	1	0
4	PHYSICS LAB	8	0	6	1	0
5	CHEMISTRY LAB	13	0	9	1	0
6	FACULTY CABIN (CS)	2	0	2	0	0
7	Class Room 3F1	9	0	6	0	0
8	Class Room 3F2	9	0	6	0	0
9	Class Room 3F3	9	0	6	0	0
10	Tutorial Room	4	0	2	0	0
11	Staff Room	5	0	4	6	0
12	Corridor	0	0	12	0	
13	Toilets (Gents)	0	0	1	0	0
14	Toilets (Ladies)	0	0	2	0	0
Building No Sir M. Visvesvaraya Block						**Floor: Fourth Floor**
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Staff Room	8	0	7	2	0
2	Tutorial	6	0	4	0	0
3	Class Room 4F3	9	0	6	0	0
4	Class Room 4F2	9	0	6	0	0
5	Class Room 4F1	9	0	6	0	0
6	Faculty Room	1	0	1	0	1
7	Drawing Hall -2	7	0	6	0	0

8	Drawing Hall -1	6	0	4	0	0
9	Computer lab - 1	9	0	6	34	0
10	Computer lab - 2	9	0	6	33	0
11	Faculty Room	4	0	4	4	0
12	Seminar hall	12	0	10	0	0
13	Faculty Room	2	0	2	2	0
14	Corridor	0	0	12	0	0
15	Toilets (Gents)	0	0	2	0	0
16	Toilets (Ladies)	0	0	2	0	0
Building No: Sir M. Visvesvaraya Block						**Floor: Fifth Floor**
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	HOD Cabin	2	4	0	2	1
2	O/A EE Dept.	1	2	0	2	0
3	Faculty Room	1	0	1	0	0
4	Faculty Room	1	0	1	1	0
5	Faculty Room	1	0	1	1	0
6	Faculty Room	1	0	1	1	0
7	Faculty Room	1	0	1	1	0
8	Faculty Room	1	0	1	1	0
9	Faculty Room	1	0	2	1	0
10	EM LAB (5F:EE:LAB05)	9	0	6	1	0
11	Computer LAB01(5F:EE:LAB06)	9	0	6	24	0
12	Computer LAB02(5F:EE:LAB07)	9	0	6	25	0
13	Tutorial Room (5F:T1)	4	0	2	0	0
14	Tutorial Room (5F:T2)	4	0	2	0	0
15	Class Room 5FL1	9	0	6	0	0
16	Class Room 5FL2	9	0	6	0	0
17	Class Room 5FL3	9	0	6	0	0
18	Class Room 5FL4	12	0	6	0	0
19	Corridor	0	0	16	0	0
20	Toilets (Gents)	0	0	2	0	0
21	Toilets (Ladies)	0	0	2	0	0

Building No: Sir M. Visvesvaraya Block						Floor: Sixth Floor
S.No.	Name/Location	Fan	LED	Tube light	Computer	AC
1	Faculty Room	1	0	2	1	0
2	Faculty Room	1	0	1	1	0
3	Faculty Room	1	0	1	0	0
4	Faculty Room	1	0	1	0	0
5	Faculty Room	1	0	1	1	0
6	Faculty Room	1	0	1	1	0
7	Faculty Room	1	0	1	1	0
8	MODROB Lab (6F-EE-Lab 8	4	0	4	16	0
9	Power Electronics Lab (6F-Lab 9)	9	0	6	1	0
10	Computer Lab-3(6F-Lab-10)	9	0	6	22	0
11	Computer Lab-4(6F-Lab-11)	9	0	6	24	0
12	Analog Electronics Lab (6F-Lab-12)	6	0	4	0	0
13	Seminar Hall (6F –L-8)	10	0	6	1	0
14	Department Library (6F-c-16)	6	0	4	1	0
15	Class Room 6FL5	9	0	6	0	0
16	Class Room 6FL6	9	0	6	0	0
17	Class Room 6FL7	9	0	6	0	0
18	Corridor	0	0	15	0	0
20	Toilets (Ladies)	0	0	2	0	0
Building No: Sir M. Visvesvaraya Block						Floor: Seventh Floor
S.No.	Name/Location	Fan	LED	Tube light	Computer	AC
1	Faculty Room	1	0	2	1	0
2	Faculty Room	1	0	1	1	0
3	Faculty Room	1	0	1	0	0
4	Faculty Room	1	0	1	1	0
5	Faculty Room	1	0	1	0	0
6	Faculty Room	1	0	1	0	0
7	Faculty Room	1	0	1	0	0

8	Microprocessor Lab (7F-Lab-13)	7	0	5	0	0
9	Power System Lab (7F-Lab 14)	9	0	6	1	0
10	Electric Drives Lab(7F-Lab-15)	9	0	6	1	0
11	Project Lab (7F-Lab-16)	12	0	8	9	0
12	Tutorial Room	6	0	4	0	0
13	Class Room 7FL9	9	0	6	0	0
14	class Room 7FL10	9	0	6	0	0
15	class Room 7FL11	9	0	6	0	0
16	Corridor	0	0	16	0	0
17	Toilets (Gents)	0	0	2	0	0
18	Toilets (Ladies)	0	0	2	0	0
Building No: Old Engineering Block					**Floor: Ground Floor**	
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Central Store (M.R.)	3	0	3	2	0
2	Mech. Workshop	16	0	14	0	0
3	Toilet	0	0	1	0	0
4	Laundry	4	0	3	0	0
5	Store (Pareek Sb.)	1	0	3	0	0
6	H.O.Testing Lab.	6	0	4	0	0
7	Office 1 (H.K)	1	0	2	0	0
8	Office 2 (Maintenance)	2	0	4	1	0
9	Office 3 (Civil Faculty)	2	0	2	0	0
10	Reception Lobby.	4	0	2	0	0
11	Incubation cell	0	0	12	0	0
12	Corridor		0	5	0	0
13	Boys Dining Hall	14	14	0	0	0
14	Canteen	4	4	2	0	0
15	Mess Cooking Area	0	10	0	0	0
16	Manager	1	0	1	1	1
17	Preparation Room	1	3	0	0	0
18	Vegetable	1	3	1	0	0
19	Mess Store	1	5	0	0	0

20	Wash Room	3	4	0	0	0
21	Pot Wash	1	2	0	0	0
22	Canteen Store	1	1	1	0	0
23	Girls Dining hall	10	10	0	0	0
24	Girls Toilet	0	0	2	0	0
25	Drinking Area	0	0	2	0	0
26	Boys Toilet	0	0	1	0	0
27	stationary	1	0	2	0	0
Building No: Vishvakarma Block Floor: Basement Floor						
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Class Room ME-101	6	0	5	0	0
2	Class Room ME-102	6	0	5	0	0
3	Class Room ME-103	10	0	7	0	0
4	Thermal Lab	25	0	24	0	3
5	Production Lab	24	11	29	0	0
6	MST Lab	7	0	6	0	0
7	IE Lab	8	0	9	2	0
8	Store-1 Thermal Lab	0	0	1	0	0
9	Store-2 Thermal Lab	0	0	1	0	0
10	Store-3 Thermal Lab	0	0	1	0	0
11	Store-4 Thermal Lab	0	0	1	0	0
12	Store-5 ME-103	0	0	1	0	0
13	Corridor	1	0	9	0	0
Building No: Vishvakarma Block Floor: Ground Floor						
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1.	Faculty ME-101	1	0	4	1	1
2.	Faculty ME-102	5	0	3	1	1
3.	Faculty ME-103	1	0	1	1	0
4.	Faculty ME-104	1	0	1	1	1
5.	Faculty ME-105	1	0	2	0	0
6.	Faculty ME-106	1	0	1	1	0
7.	Faculty ME-107	1	0	1	1	0
8.	Faculty ME-108	1	0	2	1	0
9.	Faculty ME-109	1	0	1	1	0

10.	Faculty ME-110	1	0	1	1	0
11.	Faculty ME-111	1	0	1	1	0
12.	Faculty ME-112	2	0	2	1	0
13	Class Room ME-104	8	0	5	0	0
14	Class Room ME-105	7	0	4	0	0
15	Tutorial ME-1T1	6	0	4	0	0
16	Computer Lab-I	10	0	8	46	3
17	CNC Lab	4	0	3	0	0
18	Research Lab	4	0	2	0	0
19	Robotics Lab	2	0	2	1	0
20	Machine Drawing Lab	8	0	10	0	0
21	corridor		0	8	0	0
22	Toilets		0	2	0	0
Building No Vishvakarma Block Floor: First Floor						
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1.	Faculty ME-201	1	0	1	1	0
2.	Faculty ME-202	1	0	1	1	0
3.	Faculty ME-203	2	0	3	3	0
4.	Faculty ME-301	4	0	5	2	0
5.	Faculty ME-302	1	0	1	1	0
6.	Faculty ME-303	1	0	1	1	0
7.	Faculty ME-304	1	0	1	0	0
8.	Faculty ME-305	1	0	1	0	0
9.	Faculty ME-306	1	0	1	0	0
10.	Faculty ME-307	4	0	2	1	0
11.	Tutorial ME-2T1	6	0	6	0	0
12.	Tutorial ME-2T2	6	0	5	0	0
13.	Seminar Hall	10	24	0	1	1
14	Seminar Hall (MBA)	8	16	0	1	2
16	HT Lab	9	0	7	0	0
17	FM Lab	8	0	7	0	0
18	Computer Lab-II	10	0	9	38	3
19	DOM Lab	8	0	4	6	0
20	Corridor	1	0	11	0	0
21	Toilets	0	0	2	0	0

Building No: Vishvakarma Block Floor: Second Floor						
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1.	Faculty ME-401	1	0	1	1	0
2.	Faculty ME-402	1	0	1	1	0
3.	Faculty ME-403	1	0	1	1	0
4.	Faculty ME-404	1	0	1	1	0
5.	Faculty ME-405	1	0	1	1	0
6.	Faculty ME-406	5	0	3	1	0
7.	Class Room ME-301	8	0	8	0	0
8.	Class Room ME-302	6	0	6	0	0
9.	Vibration Lab	8	0	6	0	0
10.	Renewable Energy Lab	8	0	4	0	0
11.	Corridor	0	0	5	0	0
12	Toilets	0	0	2	0	0
Building No: Vishvakarma Block (MBA Floor) Floor:Second Floor						
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Conference Room	3	0	4	0	1
2	MAh Hall	8	0	4	0	2
3	Library	8	0	12	1	0
4	MAH office	1	0	1	1	0
5	MAH Pantry	1	0	1	0	0
6	Faculty Room	2	0	2	1	1
7	Admission Cell	2	0	3	0	1
8	Faculty Room	1	0	2	1	0
9	Faculty Room	1	0	2	2	0
10	Faculty Room	1	0	2	2	1
11	Faculty Room	1	0	1	1	0
	Class Room 301	7	0	6	0	0
13	Class Room 302	7	0	6	0	0
14	Computer Lab	4	0	5	31	2
15	Seminar Hall (APJ)	8	16	0	0	0
16	Corridor	0	0	6	0	0
17	Toilet	0	0	2	0	0

Building No: Nirwana Boys Hostel Floor: B+G+I+II+III&IV Floor						
S.No.	Name/Location	Fan	LED	Tube light	Computer	AC
Basement						
1	Gym	0	0	4	0	0
2	Guest Room	2	0	3	0	0
3	Guest Room	2	0	3	1	0
4	Store	0	0	1	0	0
5	Corridor	0	0	5	0	0
6	Toilet	0	3	0	0	0
7	Toilet	0	3	0	0	0
8	Rooms	71	0	71	0	0
Ground Floor						
9	office	2	0	3	2	1
10	office	1	0	2	1	0
11	Corridor	4	0	15	0	0
12	Toilet	0	0	3	0	0
13	Toilet	0	0	2	0	0
14	Rooms	70	0	70	0	0
15	water Cooler	0	0	2	0	0
16	Guest Room	2	0	3	0	0
First Floor						
17	Corridor	0	0	9	0	0
18	Toilet	0	0	2	0	0
19	Toilet	0	0	2	0	0
20	Rooms	78	0	78	0	0
21	T.V. Rooms	8	1	4	0	0
22	Guest Room	2	0	3	0	0
23	Guest Room	2	0	3	0	0
24	Common Room	6	0	4	0	0
25	RO Plant	0	0	1	0	0
II Floor						
26	Corridor	0	0	10	0	0
27	Toilet	0	0	2	0	0
28	Toilet	0	0	2	0	0
29	Rooms	85	0	85	0	0

30	water Cooler	0	0	2	0	0
III Floor						
32	Corridor	0	0	10	0	0
33	Toilet	0	0	2	0	0
34	Toilet	0	0	4	0	0
35	Room	85	0	85	0	0
IV Floor						
36	Corridor	0	0	9	0	0
37	Toilet	0	0	2	0	0
38	Toilet	0	0	2	0	0
39	Room	68	0	68	0	0
40	water Cooler	0	0	0	0	0
Building No: Noran Girls Hostel (New) Floor: B+G+I+II+III&IV Floor						
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Corridor	1	0	1	0	0
2	Gym	2	0	5	0	0
3	Rooms	18	0	18	0	0
4	Stairs	0	0	1	0	0
5	Main Gate	0	1	0	0	0
6	Reception Area	2	0	2	0	0
7	Office	2	0	2	1	0
8	Corridor	0	0	3	0	0
9	Rooms	12	0	12	0	0
10	Bathroom Area	0	0	2	0	0
11	Corridor	0	0	3	0	0
12	Rooms	12	0	12	0	0
13	Bathroom Area	0	0	2	0	0
14	Corridor	0	0	4	0	0
15	Rooms	22	0	22	0	0
16	Bathroom Area	0	0	2	0	0
17	Corridor	0	0	4	0	0
18	Rooms	21	0	21	0	0
19	Bathroom Area	0	0	2	0	0
20	Corridor	0	0	4	0	0
21	Rooms	20	0	20	0	0

22	Bathroom Area	0	0	2	0	0
Building No: Noran Girls Hostel (Old) Floor: B+G+I+II & III Floor						
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	T.V. Room	5	0	4	0	0
2	Corridor	3	0	3	0	0
3	Rooms	10	0	10	0	0
4	Bathroom Area	0	0	3	0	0
5	Corridor	0	0	2	0	0
6	Rooms	8	0	8	0	0
7	Corridor	0	0	1	0	0
8	Rooms	8	0	8	0	0
9	Corridor	0	0	2	0	0
10	Rooms	16	0	16	0	0
11	Bathroom Area	0	0	2	0	0
Building No: Other Area Floor: Ground Floor						
S.No.	**Name/Location**	**Fan**	**LED**	**Tube light**	**Computer**	**AC**
1	Guard Room (1)	2	0	2	0	0
2	Guard Room (2)	1	0	2	0	0
3	Guard Room (3)	1	0	2	0	0
4	Panel Room	3	0	4	0	0
5	Toilet Gate (1)	0	0	1	0	0
6	Toilet Gate (2)	0	0	2	0	0
7	Near Lib	0	0	2	0	0
8	Near Mess	0	0	1	0	0
9	LED	0	106	0	0	0
10	Metro	0	6	0	0	0
11	Sodium	0	9	0	0	0
12	Guest House	9	0	18	0	6

IX. Energy Performance Index

Energy performance index (EPI) is total energy consumed in a building over a year divided by total built up area in kWh/sq.m /year and is considered as the simplest and most relevant indicator to analyses the energy efficiency of a building.

The total energy kWh consumption by the facility includes the electricity consumption from the grid supply and kWh generated by the DG. The total built-up area doesn't include the parking area and open spaces.

EPI Calculation (2019) for SKIT, Jaipur

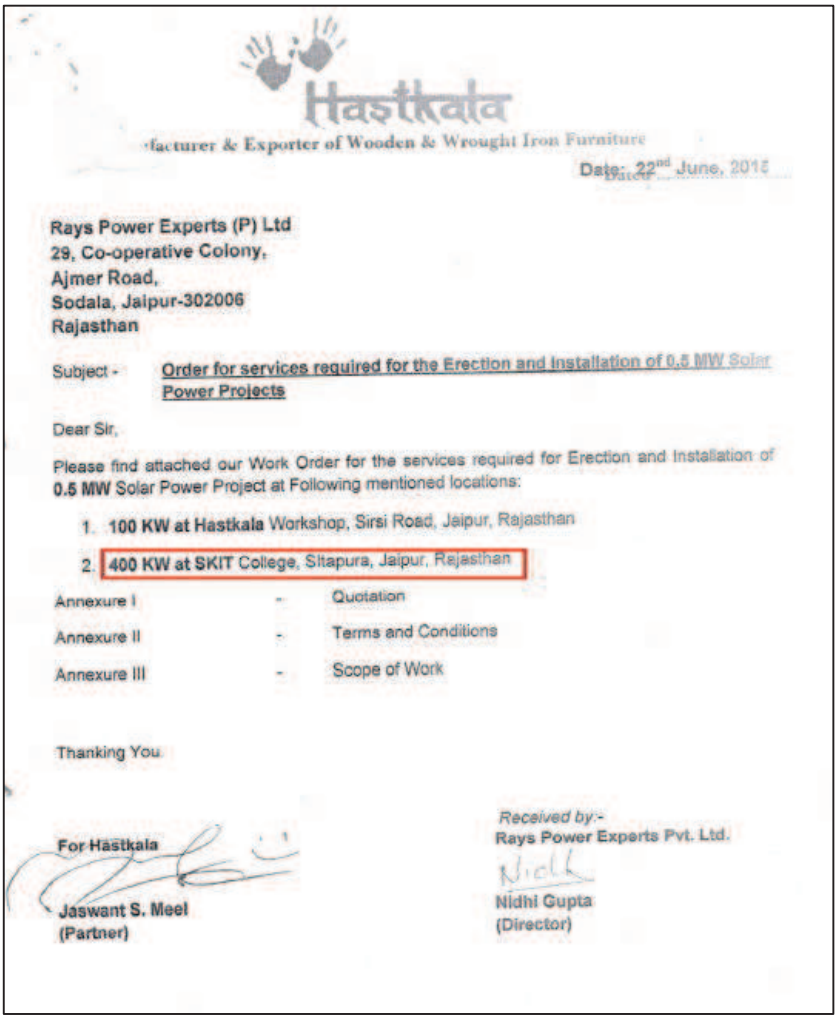
Energy Performance (2019)	
Total Consumption including solar (kWh)	992045
Total Built up Area (m^2)	70235.21
(kWh/m^2/year)	14.12

'The campus consumed 14.12 kWh/m^2 from January 2019 to December 2019.

X. Renewable Energy

Roof Top Solar

The Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT) has installed a 400 kW solar roof top. This provides an alternate clean source of energy. It also provides shade on roof hence reducing the heat gain.



Hastkala

facturer & Exporter of Wooden & Wrought Iron Furniture

Date: 22nd June, 2018

Rays Power Experts (P) Ltd
29, Co-operative Colony,
Ajmer Road,
Sodala, Jaipur-302006
Rajasthan

Subject - Order for services required for the Erection and Installation of 0.5 MW Solar Power Projects

Dear Sir,

Please find attached our Work Order for the services required for Erection and Installation of 0.5 MW Solar Power Project at Following mentioned locations:

1. 100 KW at Hastkala Workshop, Sirsi Road, Jaipur, Rajasthan
2. 400 KW at SKIT College, Sitapura, Jaipur, Rajasthan

Annexure I	-	Quotation
Annexure II	-	Terms and Conditions
Annexure III	-	Scope of Work

Thanking You

For Hastkala

Jaswant S. Meel
(Partner)

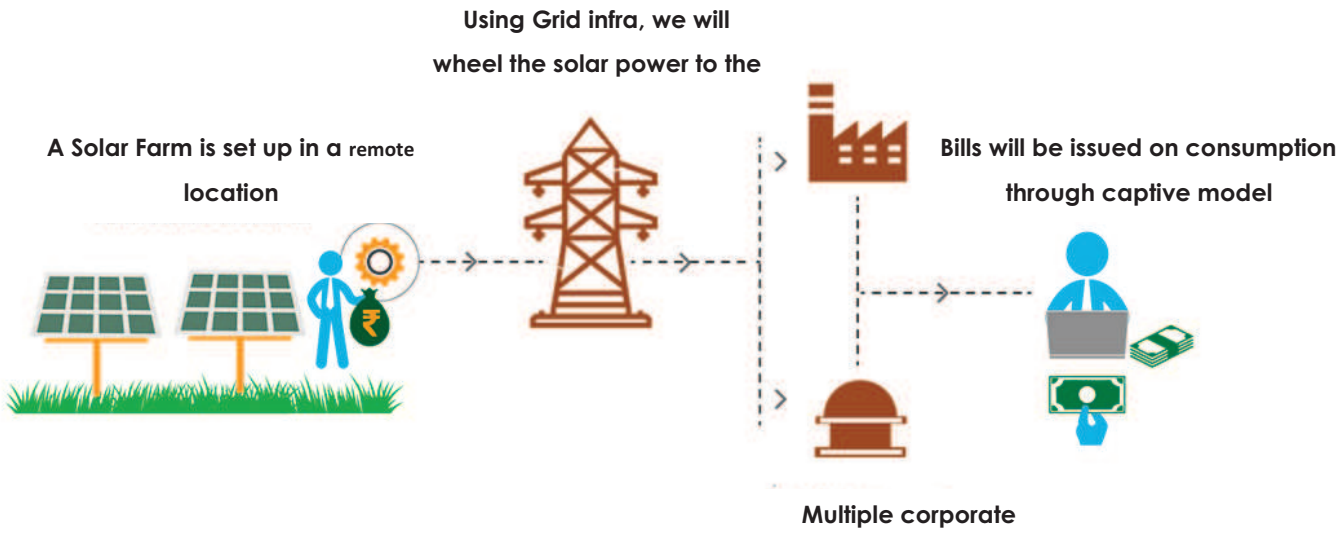
Received by:-
Rays Power Experts Pvt. Ltd.

Nidhi Gupta
(Director)

WO Confirming the installed 400kW Solar at SKIT

Captive Solar

In the captive capex model, the corporate buyer for a utility scale renewable project makes the upfront capital investment. The buyer owns the power generating asset and the solar power generated is used for the corporate buyer's self-consumption. A variant of the captive model is the group captive model. Under the group captive model, a project is developed for the collective usage of one or many corporate buyers.



Representation of Captive Solar

Benefits of usage of captive solar

]

1. Hedge against electricity charges

   Open Access charges from the grid are applicable, but unpredictable charges, such as cross-subsidy surcharge and additional surcharge, are waived in captive and group captive projects.

2. Tax benefits

   Under this structure, a corporate buyer who holds the asset on its balance sheet is also eligible to claim tax benefits through accelerated depreciation.

3. Minimum investment and risk

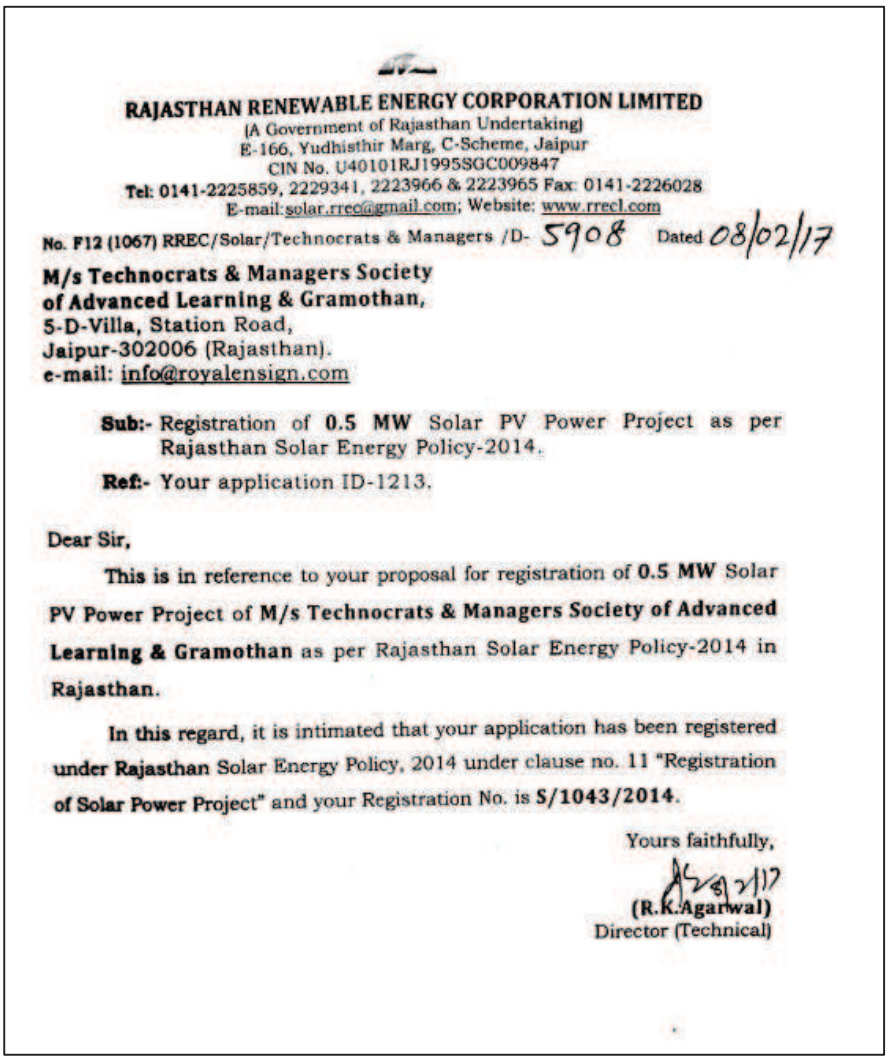
   The corporate buyer can avail open access benefits of a group captive project without being required to completely own the project. Here, contract company will bear 74% of the investment – with the corporate buyer holding at least 26% equity. This is

done to meet the ownership criteria that will allow exemption of cross-subsidy surcharge.

4. Guaranteed savings on electricity

   Even though the user is required to purchase electricity through a Power Purchase Agreement (PPA), it comes at much lower rates than prevailing grid tariffs, resulting in guaranteed savings on every unit consumed.

The Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT) has installed a 500 kW solar PV Power plant at Deh (Sarah Kisanayat), Tehsil: Kolayat, District: Bikaner (Rajasthan) for "Captive Use" under Rajasthan Solar Energy Policy, 2014.



RAJASTHAN RENEWABLE ENERGY CORPORATION LIMITED
(A Government of Rajasthan Undertaking)
E-166, Yudhisthir Marg, C-Scheme, Jaipur
CIN No. U40101RJ1995SGC009847
Tel: 0141-2225859, 2229341, 2223966 & 2223965 Fax: 0141-2226028
E-mail:solar.rrec@gmail.com; Website: www.rrecl.com

No. F12 (1067) RREC/Solar/Technocrats & Managers /D- 5908 Dated 08/02/17

M/s Technocrats & Managers Society
of Advanced Learning & Gramothan,
5-D-Villa, Station Road,
Jaipur-302006 (Rajasthan).
e-mail: info@royalensign.com

Sub:- Registration of **0.5 MW** Solar PV Power Project as per Rajasthan Solar Energy Policy-2014.

Ref:- Your application ID-1213.

Dear Sir,

This is in reference to your proposal for registration of **0.5 MW** Solar PV Power Project of **M/s Technocrats & Managers Society of Advanced Learning & Gramothan** as per Rajasthan Solar Energy Policy-2014 in **Rajasthan.**

In this regard, it is intimated that your application has been registered under **Rajasthan** Solar Energy Policy, 2014 under clause no. 11 "Registration of Solar Power Project" and your Registration No. is **S/1043/2014.**

Yours faithfully,

(R.K.Agarwal)
Director (Technical)

Registration Letter with RRECL

Rays Experts
a solar culture...

Date: 22/06/2017

INSTALLATION CERTIFICATE

OF

M/S TECHNOCRATS & MANAGERS SOCIETY OF ADVANCE LEARNING & GRANMOTHAN

This is to certify that M/S TECHNOCRATS & MANAGERS SOCIETY OF ADVANCE LEARNING & GRANMOTHAN having its office at 5-D-Villa, Station Road, Jaipur, Rajasthan -302006, has successfully installed 0.5MW capacity of their Solar PV Power Generation project under captive use at village- Deh, Tehsil-Kolayat, & Distt. – Bikaner on dated 31/03/2017.

For Rays Power Experts

For Rays Power Experts Pvt.

Auth. Signatory

(Auth. Signatory)

Rays Power Experts Pvt. Ltd.

500KW Installation Certificate for SKIT, Jaipur

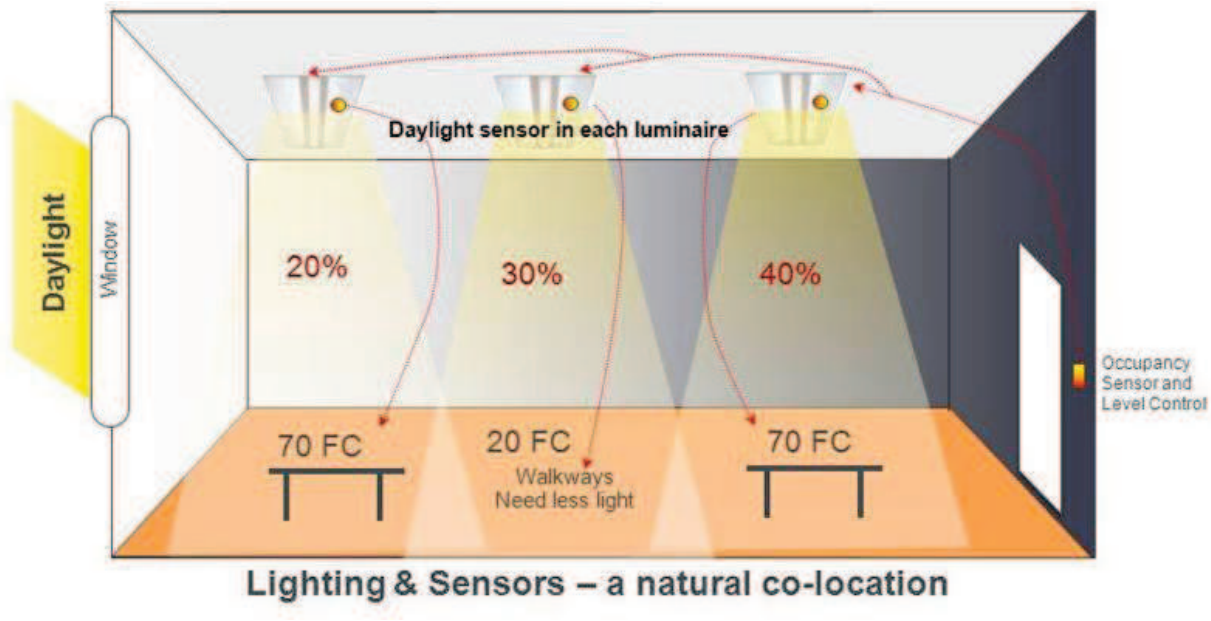
XI. Energy Efficient Measures

The SKIT Campus has set a high standard by being the first green campus in Rajasthan with 900 kW Solar Power Plant (400 kW Rooftop + 500 kW Captive). The solar power generation will annually generate nearly 14 lakh units of electricity.

Further, it as an opportunity to raise the bar by amending the following energy efficient measures in the facility to achieve more savings in electricity.

Occupancy and Daylighting Sensors

Occupancy Sensors provide automatic ON/OFF switching of lighting loads to enhance convenience, security and long-term energy savings. Daylight sensors are battery-powered sensors that save energy by dimming or turning off electric lighting when sufficient daylight is available. The sensor detects light in the space and then adjusts the lights to take advantage of daylight, thus conserving energy. These sensors are being incorporated into most projects and as many retrofit/retro commissioning projects as possible, with funding and electrical/mechanical application being key factors.



Lighting Sensor Illustration in a room with daylight

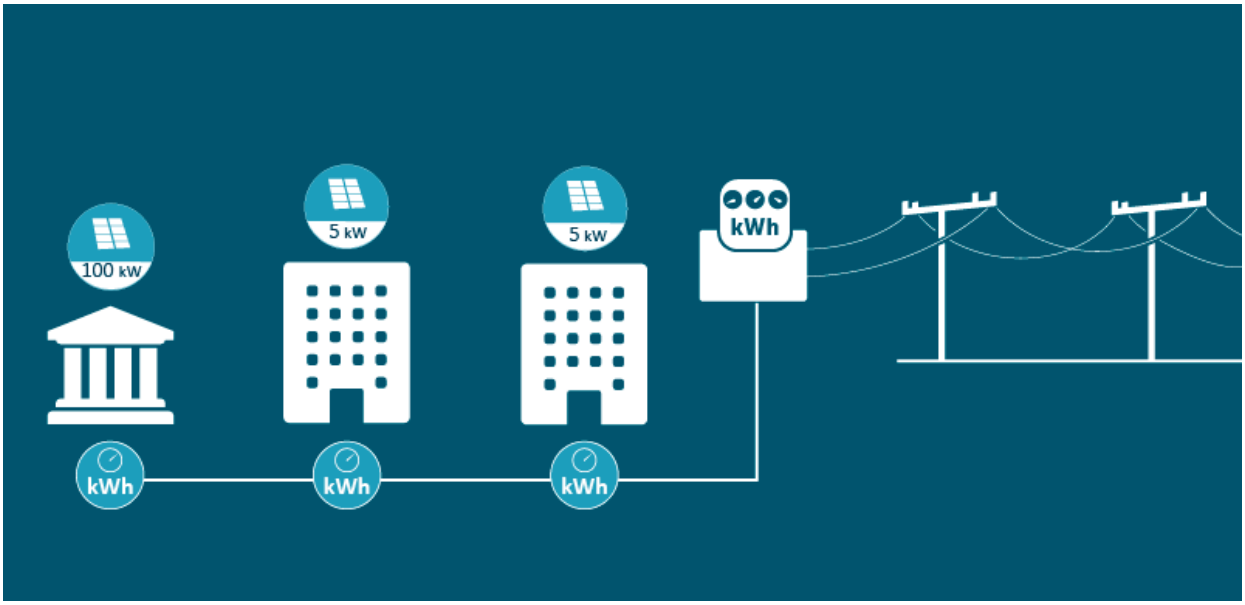
Sub Metering

Energy efficiency is the first step in achieving sustainability in buildings and helps to control increasing their energy costs while reducing their environmental footprint. An energy management system (EMS) or building automation system (BAS) can provide metering, sub metering and monitoring functions that allow facility managers to gather data that allows them to make more informed decisions about energy use.

Electrical sub metering involves the installation power meters (also called power monitors, electrical meters, or energy monitors) that can measure energy usage after it reaches the primary utility meter. Sub metering offers the ability to monitor energy usage for individual tenants, departments, pieces of equipment or other loads to account for their actual energy usage.

There are various Benefits of Sub metering, some are as follows:

- Accurate energy monitoring, real-time energy consumption
- Granular in-depth review of facility energy data
- Better informed to make decisions that can help optimize energy performance
- Ability to record actual energy usage (no estimates)
- Comparison of usage across similar facilities over time
- Ability to identify and eliminate wasted energy
- Early access to maintenance issues for repair before critical equipment fails



Depiction of sub metering installation at each building and floor

Retrofitting lighting and fan fixtures

Retro fitting with low wattage LED's and use of efficient fans for the whole campus can reduce the power consumption over this end.

Retrofitting the facility means that we are adding something new (such as a technology, component, or accessory) that the building didn't previously have or that wasn't a part of the original construction. The term "retrofit" is very much a synonym with the term "conversion." In the case of lighting, most retrofits that are happening today are LED lighting retrofits.

Benefits of Retrofitting

1.Energy efficiency improvements

2. reduce operating costs including recurring maintenance

3. improved lighting quality

Comparison of LED Lighting Fixtures with Other existing types

XII. Final Summary

D2O team has performed thorough energy analysis of the Swami Keshvanand Institute of Technology, Management & Gramothan. The calculations were done using all the measurement taken at all energy consuming units at the facility. The results obtained after the calculation were thoroughly observed. The possible energy efficiency measures were given for the units to reduce the energy consumption and to improve the overall energy efficiency of the facility building. The energy efficiency measures given for each unit are summarized in the below table with the saving and Details.

Summary of ECM Suggested to SKIT, Jaipur with energy savings

ECM	Description	Savings percentage	Remarks
1	ECM 1 – Use of Occupancy and Daylighting Sensors	10%	An occupancy sensor is an indoor motion detecting device used to detect the presence of a person to automatically control lights or temperature or ventilation systems.
2	ECM 2- Sub Metering	5% -10%	Will help in monitoring and logging
3	ECM 3 – Retrofitting lighting and fan fixtures	25%	
4	ECM 4 – Retrofitting of Exterior Lighting	10%	Retrofitting with low wattage LED's and using reflective shading for reduction in Night Pollution.

END OF REPORT

TEAM CREDENTIALS

CERTIFIED COURSE

CERTIFICATE OF ACHIEVEMENT

Avanta Global Pte Ltd

Certified by International Register of Certificated Auditors
Approved Training Partner ID: 01199246

hereby certify that

Ankur Mantri

has successfully completed and passed the exam towards the

ISO 50001:2018 Energy Management System
Auditor / Lead Auditor Course

CQI-IRCA Certified Course Reference No.: 17623

4th, 5th, 6th, 7th and 8th November 2020

D.N: 290184

Director
Training & Development

AG-EnMSLAC-2020-03
16 November 2020

Certificates of Achievement are only valid for three years for the purposes of auditor certification by CQI-IRCA.

Avanta Global Pte Ltd
72 Bendemeer Road, #03-29 Luzerne, Singapore 339941
Tel: +65 62952112 Fax: +65 62956683 Email: enquiry@avanta.com.sg

LEED AP BD+C

GREEN BUSINESS CERTIFICATION INC. CERTIFIES THAT

N Sai Balaji

HAS ATTAINED THE DESIGNATION OF

LEED AP® Building Design + Construction

by demonstrating the knowledge and understanding of green building practices and principles needed to support the use of the LEED® green building program.

11181524-AP-BD+C

CREDENTIAL ID

18 SEP 2018

ISSUED

17 SEP 2022

VALID THROUGH

Mahesh Ramanujam

MAHESH RAMANUJAM
PRESIDENT & CEO, U.S. GREEN BUILDING COUNCIL
PRESIDENT & CEO, GREEN BUSINESS CERTIFICATION INC.

IGBC

Confederation of Indian Industry

The Indian Green Building Council

hereby certifies that

Tanmay Sharma

has successfully demonstrated knowledge on the Green Building Design & Construction, Building Standards & Codes, IGBC Resources & Processes and Green Design Strategies & their Impacts, required to be awarded the title of

IGBC Accredited Professional

K S Venkatagiri
Executive Director
CII-Godrej GBC

V Suresh
Chairman
Indian Green Building Council

Gurmit Singh Arora
Vice-Chairman
Indian Green Building Council

200432

05 September 2020