STUDENTS PROJECT FAIR

&

POSTER PRESENTATION

Organized by

Civil Engineering Department

SAL Institute of Technology & Engineering Research, Opp. Science City, Sola Bhadaj Road, Ahmedabad-380060

Dated & Time:

12th April 2021, 10.00 AM

About the Institute:

Established in 2009 by Adarsh Foundation, SAL Group of Institute offering graduate and post graduate programs in Engineering, Pharmacy, MBA and Architecture, having 6 colleges and 11 branches. SAL Group of Institutes are affiliated to GTU and approved by AICTE, New Delhi. SAL Technical Campus is rated by The Times of India as No. 1, the best in private Engineering colleges in Gujarat. SAL Technical Campus is managed by technically and experienced and well qualified team members under leadership of Dr. Rajendra Shah (Chairman). The Campus has grown steadily and is imparting quality technical education to young engineers. It is the 1st and only institute in Gujarat ranked by QS- I gauge (UK).

About the Department:

The department of Civil Engineering offers Degree course in Civil Engineering and Post graduate program in Structural Engineering. The Department has state of the art well equipped laboratories including computer facilities. Our initiatives are aimed to provide high end technical education and build careers of our students. We give equal emphasis on fundamental studies, practical exposure and industrial orientation. The students also carry out their projects at the leading industries which give them exposures to live industrial problems/activities. Under the student exchange program, in collaboration with foreign universities students are given opportunity to avail global.

Background of event:

Implement innovative ideas to showcase your mind. So this fair has arranged to give exposure to final year students of civil engineering students to show their research and analytical thinking skill for betterment of society as well as human being.

Date	Time	Venue
12-04-2021	**10.00 AM onwards**	**Online mode**

Key points discussed in the event

1. Suggestion about the filing of the patents of innovative projects.
2. Suggestion to implement the projects to solve real life problems.

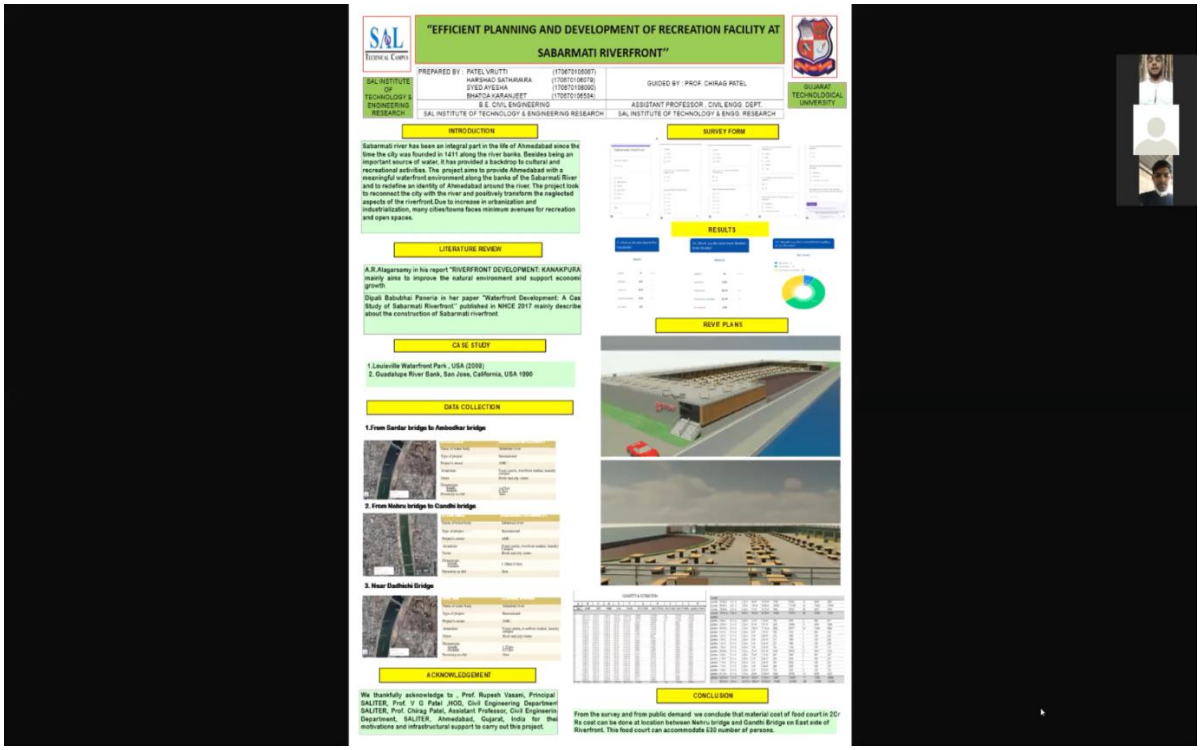
Key outcomes of the event

No of innovative solution was suggested for real life problems like water and wastewater filtration system, traffic solution, innovative concrete technology, revolving bridge, structural design using software and economical construction materials.

Expert list

Sr.no	Name of Jury Member (senior professor/ industrial expert)	Specialization/designation	Organization
1	Prof. Chirag Patel	Assistant Professor	SAL Institute of Technology and Engineering Research
2	Prof. B. Mohanty	Assistant Professor	SAL Institute of Technology and Engineering Research
3	Prof. Mitul Patel		SAL Institute of Technology and Engineering Research
4			

Photo Gallery



FEASIBILITY ANALYSIS OF ENVIRONMENT FRIENDLY ZERO ENERGY APARTMENT

PREPARED BY : PADHIYAR SHREYA (180673106014)
PARMAR CHETAN (180673106535)
PATEL DIVYA (180673106538)
RAJPUT KAJAL (180673106551)
B.E. CIVIL ENGINEERING
SAL INSTITUTE OF TECHNOLOGY & ENGINEERING RESEARCH

GUIDED BY : PROF. CHIRAG PATEL
ASSISTANT PROFESSOR , CIVIL ENGG. DEPT.
SAL INSTITUTE OF TECHNOLOGY & ENGG. RESEARCH

SAL INSTITUTE OF TECHNOLOGY & ENGINEERING RESEARCH

GUJARAT TECHNOLOGICAL UNIVERSITY

INTRODUCTION

The term Net Zero Energy Building is defined as the building with zero net energy consumption i.e., the total amount of energy used by the building on annual basis is roughly equal to the total amount of renewable energy created on the site.

Buildings have a significant impact on energy use and the environment. Commercial and residential buildings account for about 33% of the total electricity in India.

With rapid urbanization, there has been a steady exodus from rural parts of the country to urban areas, leading to increased energy consumption especially in the commercial sector.

OBJECTIVES

Design of a building with energy consumption close to zero that is planned to be built

Reduced requirement for energy austerity

Reduced total net monthly cost of living

SCOPE OF THE STUDY

Reduced total cost of ownership due to improved energy efficiency

Reduced risk of loss from grid blackouts

These kinds of buildings are environmental friendly reducing the environmental hazards (eg. It would release zero carbon content that would help in controlling global warming).

LITERATURE REVIEW

Zero net site energy use:
In this type of ZNE, the amount of energy provided by on-site renewable energy sources is equal to the amount of energy used by the building.

Zero net source energy use:

DESIGN OF SOLAR PANEL (FOR 6 KW/ DAY POWER GENERATION)

Output we required per day = 6 kilowatt

For 1 kilowatt = 3 panels are required

For 6 kilowatt = ?

6 × 3 = 18 panels

1 panel = 77"× 39" = 21 square feet

144

Area for 3 panels ,

21 × 3

= 63 square feet

Area for 18 panels ,

21 × 18

= 378 square feet

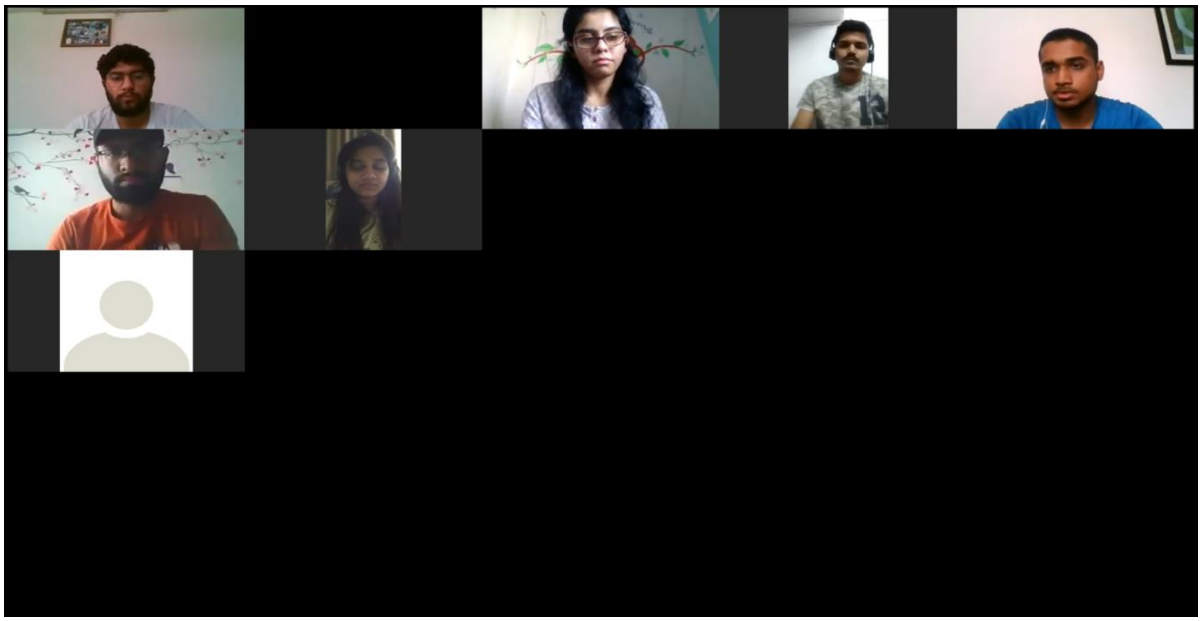
Hence 378 square feet area will covered by solar panels

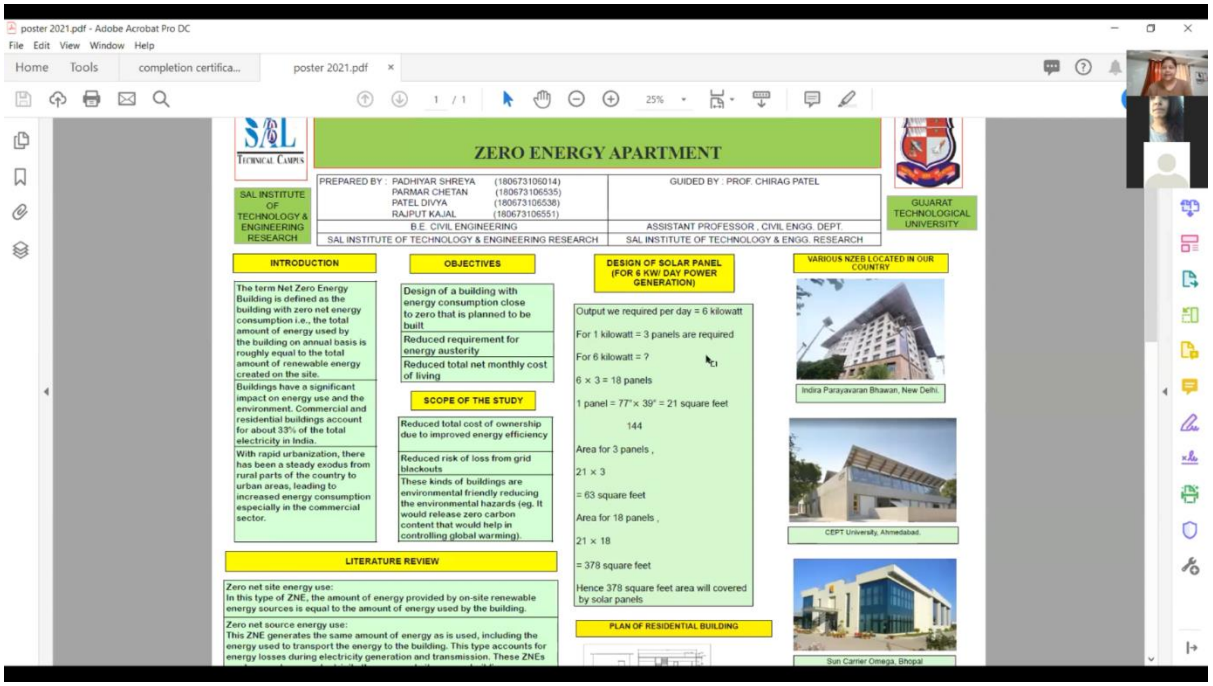
PLAN OF RESIDENTIAL BUILDING

VARIOUS NZEB LOCATED IN OUR COUNTRY

Indira Parayavaran Bhawan, New Delhi.

CEPT University, Ahmedabad.

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Zero net source energy use:
This ZNE generates the same amount of energy as is used, including the energy used to transport the energy to the building. This type accounts for energy losses during electricity generation and transmission. These ZNEs
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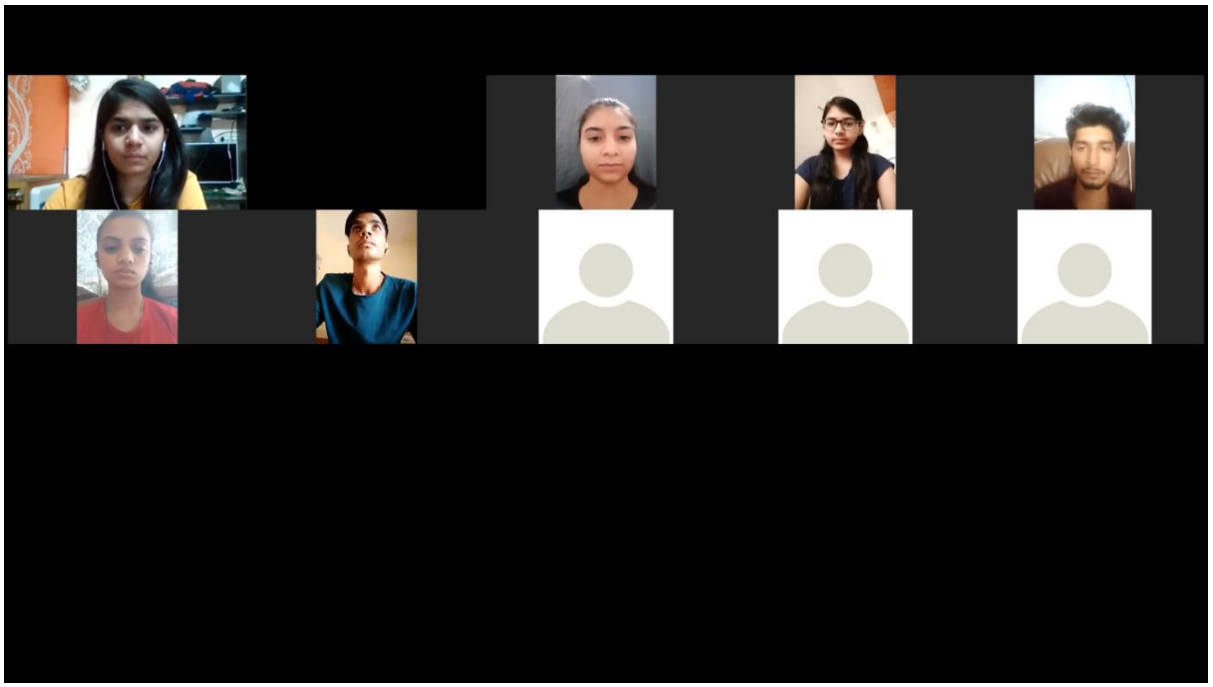
Sun Carrier Omega, Bhopal



SMART WATER QUALITY MONITORING SYSTEM

DAVDA YUGALKUMAR 180673106513,GAJJAR JAY180673106518,KHANIYA VISHAL 180673106
PARMAR ASHISH 180673106534,VAGHELLA JAYESH: 180673116562
PROJECT GUIDE: PROF REKHA PATEL
CIVIL ENGINEERING DEPARTMENT SALITER

ABSTRACT

INTRODUCTION

Sensor Detailing

Objective

GUJARAT TECHNOLOGICAL UNIVERSITY

SAL EDUCATION

PROJECT NAME - SOLID WASTE MANAGEMENT IN METRO CITY

Team Id - 123803 | Guide by - Mrs Rinki Mishra

Introduction

Literature Review

Type of solid waste

Broadly there are 3 types of waste which are as follows:

- Household waste is generally classified as Municipal waste
- Industrial waste as Hazardous waste
- Biomedical waste or Hospital waste as Infectious waste

Methods of Solid Waste Mangement

Shredding and Pulverisation

Sanitary land filling

Vermicomposting

Composting

Incineration

Burging it out in to sea

Composition of solid waste

Composition of City Waste

Results and Discussion

A) Health Hazard

B) Environmental Hazard

Conclusion

Results of the Project Expo:

Rank	Title of Project	Enrolment No.	Name
1	Design & construction of low cost ozonated air purifier	170670106014 170670106016 170670106037 170670106042 170670106064 170670106074	Saurabhsinh Chavda Parth Chopare Sarthi More Manthan Pandya Rushvi Patel Dhrumi Rao
2	Comparative study of different types of Eco-friendly bricks from waste materials	180673106003 180673106010 180673106029 180673106520 180673106530 180673106547	Parth Bhavsar Kalpit Gaudani Aayushi Radadiya Hiren Gohel Parthey Mehta Sagar Prajapati
3	Efficient planning and development of recreation facility at Sabarmati Riverfront	170670106504 170670106079 170670106090 170670106067	Bhatoa Karanjeetsingh Sathavara Harshad Ayesha Sharique Patel Vrutti Vasantbhai

Performance Summary

Identify the overall level of effectiveness in fulfilling society responsibilities by this project.
How effective was the project fair in fulfilling the specified role(s) and responsibilities in Society? [√]Very effective

[ ] Effective [ ] Not effective

Provide performance feedback on each of the key competencies listed below. *Comments are optional unless performance in that area was not as effective as it should have been.*

Theme of Projects	
Level of effectiveness: [√] Very effective [ ] Effective [ ] Not effective	Comments/performance examples ----
Carry forward projects for start-up	
Level of effectiveness: [√] Very effective [ ] Effective [ ] Not effective	Comments/performance examples ----

IDP/UDP Coordinators:

1. Prof. Chirag Patel

2. Prof. B. Mohanty