GREEN BUILDING

Tech Shield

OVERVIEW

As the world is advancing so is the education system and everything around us. We are lucky to be in such a huge and beautiful campus in Mumbai city where we have adequate open spaces and greenery amidst Mumbai city.

The participants will have to provide a **design and a plan to make your building, that is K. J. Somaiya College of Engineering, a green certified building**.

So basic idea behind this is: You have the chance to do make your building more environment friendly and take it a step closer to green certification, what idea would you propose for that and it's implementation. **You will have to identify and study the existing system of the building. Take an example** of the already existing compost pits outside Engineering canteen, where all the organic waste is decomposed or it can also be amount of Oxygen level in the rooms or the ways to improve energy efficiency, recommended level vs the actual ones and ways to improve it. The **norms** for the same are **given below**.

The Indian Green Building Council (IGBC), part of the Confederation of Indian Industry (CII).

The vision of the council is, "To enable **a sustainable built environment** for all and facilitate India to be one of the global leaders in the sustainable built environment by 2025".

IGBC Green Existing Buildings O&M rating system addresses green features under the following categories:

- - Site & Facility Management
- - Water Efficiency
- - Energy Efficiency
- - Health & Comfort
- - Innovation
- - Green Education
- - Innovation in Design

Aim of the event:

The aim of the event is to get students to present innovative ideas so as to provide solutions for making KJSCE, a green building. The winners of the event shall form a green cell along with Faculty Advisors and help in the process of getting green certification.

General Information:

1. The people will have to present their idea in a pitch not more than 10 mins on the day of Abhiyantriki, in front of a panel. They can make use of a presentation if they want to.
2. The participants shall study the already existing system in our building and propose solutions to make it better. Certain norms to make a existing building green are given below for reference.
3. The participants should have a clarity of the idea they are speaking about.
4. The students shall feel free to approach any faculty member in the college for any help they require for the report or event related.
5. For any further reference: https://igbc.in/igbc/html_pdfs/abridged/IGBC%20Green%20EB%20O&M%20Rating%20System%20(Pilot%20Version).pdf

Format

[Topic]

Paragraph 1: Introduction of your topic.

Paragraph 2: The benefits of your topic to the Building as well as people and if the topic has been built on some existing technology.

Paragraph 3: Cost to install the project, is it worth it?

The above mentioned are just points on which you have to build your report, you can add extra points on your own also.

Area of Study

1. **Site & Facility Management**

1.1 Green Policy

Intent: To adopt green practices as and when the buildings go for retrofitting and renovation, thereby reducing the environmental impacts**.**

1.2 Waste Collection & Disposal

Intent: Segregate building waste at source and facilitate proper disposal for recycling, thereby avoiding such waste being sent to landfills.

1.3 Eco-friendly Commuting Practices :

Intent: Reduce air pollution and land development impacts from personal automobile use.

1.4 Eco-friendly Landscaping Practices:

Intent: Adopt eco-friendly landscaping practices to minimise the impact of chemicals on ecology.

1.5 Heat Island Reduction, Non-roof:

Intent: Minimise heat island effect to reduce impact on microclimate.

1.6 Heat Island Reduction, Roof:

Intent: Minimise heat island effect to reduce impact on microclimate.

1.7 Outdoor Light Pollution Reduction:
Intent: Reduce light pollution from exterior and façade lighting to increase night sky access and enhance nocturnal environment.

1.8 Building Operations & Maintenance
Intent: Ensure sustained performance of the building systems, so as to achieve benefits during the lifetime of the building systems & facility.

2. Water Efficiency

2.1 Water Efficient Fixtures
Intent: To enhance water use efficiency and minimise the use of potable water.

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2.3 Rain Water Harvesting:
Intent: Recharge the local aquifer or capture rainwater to reduce potable water consumption.

2.4 Waste Water Treatment:
Intent: Treat wastewater generated on site so as to make it available for reuse or safe disposal and hence avoid polluting the receiving streams

2.5 Wastewater Reuse:
Intent: Use treated waste water thereby reducing dependence on potable water.

2.6 Water Metering Points:
Intent: Ensure continuous monitoring of water consumption, both on supply and demand side, to identify improvement opportunities in potable water efficiency.

2.7 Turf Area:

Intent: Minimise the extent of turf areas in landscaping to reduce potable water consumption.

3. Energy Efficiency

3.1 Eco-friendly Refrigerants & Halons:

Intent: To encourage the use of eco-friendly refrigerants and halons in the facility, thereby minimising leakage in the atmosphere and the resultant impact on the ozone layer

3.2 Minimum Energy Performance:

Intent: Enhance energy efficiency of the building to reduce environmental impacts from excessive energy use

3.3 Improved Energy Performance:

Intent Enhance energy efficiency of the building to reduce environmental impacts from excessive energy use

3.4 On site Renewable Energy:

Intent: Encourage the use of on-site renewable technologies to minimise the environmental impacts of generating energy through fossil fuels

3.5 Energy Metering:

Intent: Encourage continuous monitoring to identify improvement opportunities in energy performance of building

4. Health and Comfort

4.1 Tobacco Smoke Control:
Intent: Minimise exposure of nonsmokers to the adverse health impacts arising due to passive smoking in the building

4.2 Fresh Air Ventilation:
Intent: Provide adequate outdoor air ventilation so as to avoid pollutants affecting indoor air quality

4.3 Carbon dioxide Monitoring & Control:
Intent: Continuously monitor and control carbon dioxide level in the building to provide occupant comfort and well being

4.4 Isolation of Polluting Equipment & Systems:
Intent: To minimise the exposure of building occupants and maintenance team to hazardous indoor pollutants which adversely affect indoor air quality and occupant health

4.5 Eco-friendly Housekeeping Chemicals:
Intent: To encourage the use of eco-friendly housekeeping chemicals so as to reduce adverse health impacts for building occupants.

4.6 Thermal Comfort, Indoor Temperature & RH:
Intent: To provide comfortable thermal indoor environment, to promote productivity and well-being of occupants.

4.7 Facilities for Differently Abled People:
Intent: Ensure that the building is user-friendly for differently abled people.

4.8 Occupant Well-being Facilities:
Intent: To provide facilities so as to enhance physical, emotional & spiritual well being of building occupants.

5. Innovation Category

5.1 INN
Intent: To encourage innovation in performance of existing buildings so as to reduce environmental impacts

5.2 INN:
Intent: To involve green building accredited professionals in the project so as to facilitate design & implementation of environment friendly measures

JUDGING CRITERIA

- Clarity of Idea.
- Feasibility report of your system.
- Clarity of Expression.

The above points have to be presented in the form of a presentation on the day of Abhiyantriki.

It can include images also only for representative purpose which are clicked on site, that is of the existing system.
Given below is a sample of format which you can follow to write your plan, you have full liberty to follow any format as long as your idea is conveyed clearly.

Kindly contact your respective branch representatives to participate.

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