SEP 2020

GREEN BUILDING: CONVERSION FROM EXISTING BUILDING

CASE STUDY/INSIGHT

E2020-09-05

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To address the global warming, many international agencies, governments and NGOs are working together to reduce the GHG emission in sectors like industries, residential and commercial buildings, transport, etc. After a detailed scientific study conducted by the various international scientific organizations, it is found that around 30% of the total energy use in modern countries is due to the energy use in the existing buildings.

Retrofitting of an existing building can sometimes be more cost-effective than building a new facility. Since buildings consume a significant amount of energy (particularly for heating and cooling), and the existing buildings comprise the largest segment of the built environment, it is important to initiate energy conservation retrofits to reduce energy consumption. Following are the few strategies to make the existing buildings into green buildings.

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- Measure the performance of all energy and water systems and then upgrade them to minimize their consumptions
- Develop a plan to optimize the recycling and reuse of demolition debris and construction waste to minimize waste sent to landfills
- Evaluate occupancy patterns and incorporate energy efficient appliance according to the tasks and functions of the spaces
- Determine if natural ventilation and fresh air intake are the feasible alternatives to reduce heating and cooling loads
- Investigate renewable energy options that can offset the purchase of fossil fuel-based energy
- Consider solar shading devices for windows and doors, including those that generate electricity by photovoltaic (PV) devices
- Insulate the building as per the requirements
- To ensure that a newly renovated building continues to perform as designed, measure the performance of the building regularly

Eco-friendly building environment are gaining momentum nowadays. It involves the use of materials and processes that are resource-efficient and environmentally responsible throughout the life cycle of a building. Thus, the renovation of the existing buildings also contribute to the reduction of global carbon emissions.