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Energy Efficient Design Of New Building Except New Low-Rise Residential Buildings: Cleaner And Greener Technologies, Sustainable Development And The Environment

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Globally, buildings are responsible for approximately 40% of the total world annual energy consumption. Most of this energy is for the provision of lighting, heating, cooling, and air conditioning. Increasing awareness of the environmental impact of CO2, NOx and CFCs emissions triggered a renewed interest in environmentally friendly cooling, and heating technologies. Under the 1997 Montreal Protocol, governments agreed to phase out chemicals used as refrigerants that have the potential to destroy stratospheric ozone. It was therefore considered desirable to reduce energy consumption and decrease the rate of depletion of world energy reserves and pollution of the environment. This article discusses a comprehensive review of energy sources, environment and sustainable development. This includes all the renewable energy technologies, energy efficiency systems, energy conservation scenarios, energy savings and other mitigation measures necessary to reduce climate change.

Keywords: Green energy technologies, sustainable development, mitigation measurements

Biography

Omer is an associate professor at the Institute of Sustainable Energy Technology, Department of Architecture and Built Environment, Faculty of Engineering, the University of Nottingham, in the United Kingdom. Dr Omer has over 28 years of teaching and research experiences in sustainable and renewable energy technologies, sustainable building technologies, building integrated renewable energy systems, refrigeration/cooling devices including ejector cooling, absorption and desiccant cooling system and thermoelectric devices, phase change materials and energy efficient systems.