

Top Ten Greenest Buildings Globally | CleanTechies Blog - CleanTechies.com

All throughout the world, the importance of creating a sustainable future is becoming more widely recognized. With this recognition, the need for [green buildings](#) is necessary to create an environmentally sustainable world for future generations. Many new and existing buildings are, therefore, taking the required steps in making their building more energy efficient, increasing utilization of renewable energy sources to make them more sustainable. Here is just a taste of what some buildings around the world are doing to be green.



1) Holy Wisdom Monastery. Madison, Wisconsin's [Holy Wisdom Monastery](#) has made numerous "Greenest Building" lists. It has received the highest rating awarded by the U.S. Green Building Council – the [LEED-NC](#) Version 2.2 rating system with 63 out of 69 potential points. What makes the monastery so green? It offers preferred parking for those with fuel-efficient vehicles, accessible green roof, no permanent irrigation system, photovoltaic cells responsible for the generation of 13 percent of all energy needs, 99 percent of all waste from construction and demolition diverted from landfills, building materials regionally produced, bamboo floors, high sustainable windows, and a monitoring system for outdoor air delivery.

2) Manitoba Hydro Place. The Manitoba Hydro Place in Winnipeg, Manitoba, Canada was listed as the fourth most environmentally friendly design in Canada in 2009. More than 40 percent of the total light is provided by one natural source, being the sun. A geothermal system provides all the heating and cooling needs for the building. Displacement ventilation provides offices with 100 percent fresh air. To retain excess rainwater and provide optimal insulation, a green roof was added to the building. Furthermore, the building was constructed to harness passive solar and wind energies for cooling, heating, and ventilation during seasonal temperatures.

3) India Tower. The [India Tower](#) in Mumbai has a very intriguing design that looks as though a number of boxes were stacked one on top of the other, but symbolizes an increase in environmental awareness throughout the country. It is 74 stories and each block will incorporate a different use, such as office, residential, and retail. The design of the building incorporates solar shading, daylighting, natural ventilation, rainwater harvesting, and a green interior. It is one of the greenest buildings in India and has achieved United States Green Building Council's LEED Gold rating.

4) Crystal Island. [Crystal Island](#) in Moscow, Russia will more 1,500 feet tall with more than 25 million square feet of floor space. It is a self-contained city with eco-friendly management and energy conservation techniques. The island will be able to generate low carbon energy via solar arrays as well as wind turbines located around the building, along with large atriums that will be utilized in the regulation of internal air temperature throughout extreme temperatures that are present during the summer and winter seasons in Russia.

5) The Chicago Center for Green Technology. The [Chicago Center for Green Technology](#) is known for its large array of different sustainable features that have assisted the Illinois building in achieving Platinum LEED status. The building uses an estimated 40 percent less total energy that buildings of similar structure. This is achieved through a high quantity of solar panels located on the roof, awnings, and a lot behind the center. Other sustainable features include 28 vertical wells aiding in regulation of temperature, double insulated glass, a smart lighting system, recycled glass tiles, scrap cork flooring, and the utilization of over 40 percent of the building made with recycled materials. The green roof of the center aids in rainwater absorption and increases building insulation.

6) Masdar. No green project as of lately has been as big or ambitious as [Masdar](#). The more than 64 million square foot development project takes environmental design capabilities and runs with it. The walled city offers no waste and zero carbon emissions. There will be public transportation options every 200 meters and personalized rapid transit, which is good because no cars are allowed into Masdar. There will also be a number of wind turbines, plantations, and solar arrays to make Masdar in Abu Dhabi totally self sustaining.

7) BMW Welt. [BMW Welt](#) in Munich, Germany is a great example of German engineering ingenuity. German company Solarwatt provided the large photovoltaic cell array on the roof of more than 3,500 solar panels

and delivers 824 kWp minimum power capacity. There are also a number of steel panels along the roof that assist with building heating needs through solar gain. Solar energy is also netted via façade working to moderate conditioned air as well as offer natural ventilation. There are also thermally efficient surfaces inside the building to assist in the maintenance of constant thermal comfort and to control swings in the temperature.

8) Clinton Presidential Library. The [Clinton Presidential Library and Museum](#) in Little Rock, Arkansas, received LEED Platinum rating in November 2007. Since then, the library has implemented a number of new green features, such as a rooftop garden which will not only reduce rainwater runoff, but also regulate temperatures and absorb carbon emissions, an elevation in recycling capabilities, green cleaning capabilities, a reduction in waste through the utilization of local sourcing, and a program for carbon offsetting for all sources of non-renewable energy. Future plans for the library include on-site wind turbines and/or photovoltaic cells.

9) Green Lighthouse. Copenhagen, Denmark's [Green Lighthouse](#) is the first public carbon neutral building. Located at the University of Copenhagen, it was designed by Christensen & Co., and made into a sundial-shaped building that houses the student services center. It has proved to other counties that carbon neutral buildings can be achieved. In fact, more than 70 percent of all energy reductions were created by the structure of the building itself and not technologies. A number of green designs were implemented to provide a healthy indoor environment, including natural ventilation and day-lighting via skylights and windows, LED lights powered by solar panels, solar shades on windows, geothermal heat pump, and a district heating system.

10) Bank of America Tower. The Bank of America Tower in New York is the only skyscraper to be awarded [Platinum LEED status by the United States Green Building Council](#). Reaching 1,200 feet, this 54 story tower, the second largest in New York and the fourth largest throughout the nation, boasts a co-generation plant on the seventh floor which captures natural heat, reuses rainwater and waste, and has most of its raw materials for construction coming from local source no more than 500 miles away from the tower's location.

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