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Trending

- A pair of camouflaged Wind turbine are installed inside Eiffel Tower which produces 10,000 Kwh of energy .
- The World Bank last week approved \$55.25 million in funding to support the Geothermal Energy Upstream Development project in Indonesia, aims to facilitate investment in Geothermal power generation in the country.
- Canadian glaciers now major contributor for sea level change.

Source: Internet

Smog Eating Building



It seems interesting that there can be building structures which can reduce the smog effect .

As it turns out, relatively straightforward chemical reactions to improve air quality can be triggered with a little help from the sun.

It's already happening in famously smoggy Mexico City, where a hospital building called the Torre de Especialidades is shielded by an eye-catching 100-yard-long façade made with special tiles that have air-scrubbing abilities. The mass-produced tiles, created by Berlin-based architecture firm Elegant Embellishments, are coated with Titanium Dioxide, a pigment that can act as a catalyst for chemical reactions when it's activated by sunlight. When UV rays hit the tiles, a reaction occurs, converting mono-nitrogen oxides (the substances that make smog smoggy) into less harmful substances such as calcium nitrate and water, along with some not-so-

wonderful carbon dioxide. The titanium dioxide in the tiles doesn't change; it can keep on doing its thing indefinitely.

These buildings can do work of 80 trees in reducing the smog and cut off the pollution generated by 4 cars. The architect's modest hope is that the building can counteract the impact of about 1,000 of Mexico City's 5.5 million cars and provide slightly fresher air in the hospital's immediate area

Italy is also putting some extra effort in constructing it with 9,000 square meters of photo-catalytic concrete that has titanium dioxide mixed in. The building will be able to break down nitric and nitrogen oxides when it's hit by sunlight. Nemesi & Partners, the architectural firm, says it wants the building to resemble a petrified forest, and it will include a rooftop solar array to power itself during the day.



Vertical Rainforest in China

Clever architecture is typically all about aesthetics, but here's a case where the design is actually trying to improve lives. China is trying to alleviate their terrible pollution problem by stuffing plant life into a pair of buildings. This is actually not the first of its kind, as the same architect has already erected "vertical forest" in Italy and Switzerland.

Designed by Stefano Boeri Architects, the unique towers are located in the Pukou district and will include a total of 1100 trees from 23 local species, as well as 2500 cascading plants and shrubs that will cover a 6000-square-metre area. The living towers will help to regenerate local biodiversity and will provide 25 tonnes of CO₂ absorption



each year. The forests will produce about 60 kilograms of oxygen per day. The taller tower will be 200-metres-high and crowned on the top by a green lantern. It will host offices from the eighth to the 35th floor and will include a museum, a green architecture school and a private rooftop club. The second tower, 108-metres-high, will provide the Hyatt hotel with 247 rooms of different sizes as well as a rooftop

swimming pool.

The Chinese city of Nanjing is getting a Vertical Forest, a set of two buildings stylized with around 1,100 trees and a combination over 2,500 shrubs and plants. But it's not all about how it looks. The Nanjing Tower will absorb enough carbon dioxide to make around 132 pounds (60kgs) of oxygen every day, an official press release claimed. Nanjing has an air-quality index of 167, which categorized it as "unhealthy". For reference, Sydney and New York both have "moderate" indexes of around 60, while London sits about 100, teetering between "moderate" and "unhealthy".

source: www.sciencedaily.com

COP 22 : 2016 UN Climate change confer-

The 2016 United Nations Climate Change Conference was a conference on climate change held in Marrakech, Morocco from 7 to 18 November 2016. It was the 22nd conference of the parties (COP22) to be held under the United Nations Framework Convention on Climate Change and was attended by delegates from 196 countries.

The Marrakesh Conference is a continuation of regular global summits organised by United Nations following the adoption of the Kyoto Protocol in 1997, whose application was limited to the period covering 2008-2012. 2009: Copenhagen (COP15), 2011: Durban (COP17), 2014:



Lima (COP20), 2015: Paris (COP21)

On the margins of COP22, a summit involving "around 30 African heads of state" took place on 16 November 2016 in Marrakech. This summit focused primarily on climate negotiations, in the backdrop of Africa being the part of the world that is the most threatened by global warming. On a more local note, the city of Marrakesh also took the opportunity to create for itself a "greener"; for example, it has provided 300 bicycles for public

use as part of a municipal bicycle-sharing scheme.

On 14th November, the Swiss Global Infrastructure Basel Foundation (GIB) presented the newly launched SuRe – The Standard for Sustainable and Resilient Infrastructure at the Climate Summit for Local and Regional Leaders. GIB participated in a dialogue on "financing the sustainable transition of territories" to contribute to the Marrakech Roadmap for Action definition.

The inclusion of fossil fuel lobby groups with observer status, including the World Coal Association, the Business Council of Australia, Business Europe, and the Business Roundtable, has been met with criticism.

Clouds over Maharashtra will have a silver iodide

During monsoon 2017, weather scientists will fly airplanes loaded with silver iodide over clouds hovering above Solapur, Maharashtra and begin a three-year investigation into an old question: does cloud seeding produce sufficient rain? The ₹250crore programme, coordinated by the Indian Institute of Tropical Meteorology, will be the first controlled experiment to quantify the extent to which clouds form water drops large enough to make rain. Seeding involves spraying chemicals into clouds. China used the technique during the 2008 Olympics to veer rain away



because of the frequency of droughts over the Vidarbha region. The State Cabinet had approved a plan to seed clouds for 113 hours with a rainfall level of 1,381mm, at ₹28 crore. However above-normal rains pushed the plan to the back-burner.

from the inaugural venue and now has a full-fledged department that blasts rockets into clouds to induce rain and control pollution. "The benefits of cloud seeding aren't well understood. Lots of organisations make claims," Maharashtra has frequently toyed with the idea of cloud seeding

For this experiment, scientists will fly two aircraft and spray dry ice and silver iodide on 100 clouds then with 100 unseeded clouds.

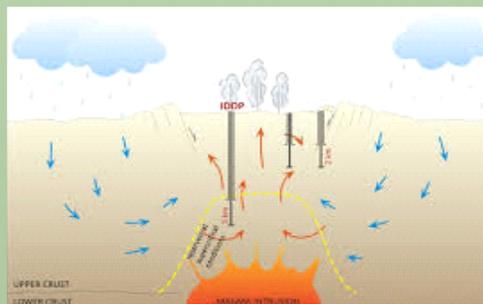
Source: www.thehindu.com

Scientists Drill into Volcano to Harness its Energy

It's not every day that scientists can study a volcano up close, but re-searchers investigating the feasibility of volcano-powered electricity successfully drilled into the core of one in Iceland.

Researchers with the Iceland Deep Drilling Project (IDDP) studied the volcanic system at Reykjanes Peninsula in Iceland, which has been dormant for more than 700 years, said that the depths of Reykjanes geothermal field - an area with high heat flow- had never been explored. Beginning in August 2016, the IDDP spent 168 days drilling into the volcanic belly of Reykjanes. This well was completed on Jan. 25, reaching a record-breaking depth of nearly 3 miles (4.8 kilometers).

At this depth, the hole does not enter the magma chamber but does penetrate the rock surrounding it, which the research-



ers measured to be about 800 degrees Fahrenheit.

Conventional geothermal energy utilizes steam from natural sources such as geysers, or by drawing water from the hot, high-pressure depths of the Earth. The hot vapours are then used to drive electric turbines.

In the case of volcanic geothermal energy, the heat comes from "supercritical water." The researchers explained that energy from so called supercritical water is much higher than conventional geothermal steam. When molten rock and water meet, the ex-

treme heat and pressure bring water to a "supercritical" state, where it is neither liquid nor gas. In this form, the water can carry more energy than normal steam, which could create up to 10 times the power out-put of other geothermal sources.

In its 2016 Power Production Report, the Geothermal Energy Association (GEA) found that only 6-7% of global geothermal power potential has been tapped. However, production is on the rise and the GEA predicts global geothermal energy production will more than double by 2030.

Research will continue through 2018 to explore how the volcano's thermal energy could be used, including as a form of alternative energy, according to IDDP scientists.

Source: www.inhabitat.com

WIPRO EARTHIAN AWARD, 2016

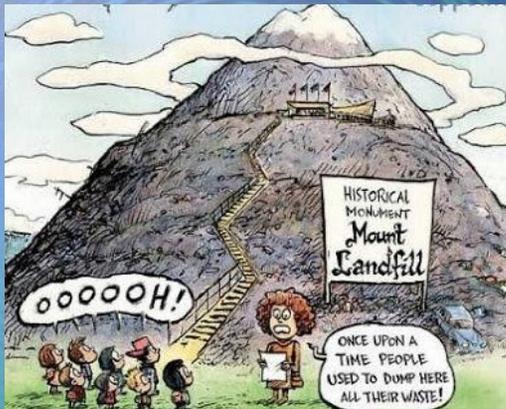


WIPRO EARTHIAN AWARD 2016,
Bangalore

Energy has won the WIPRO Earthians Award. At the award ceremony, held in Bangalore, Mr Azim Premji chair person of WIPRO awarded prize money of 1.5 lakh and mementos. Team has worked on the solid waste management system of Jaipur city which included :-

- Ragpicker's Cooperative
- Digestion Plant Proposal
- Jaipur Swachhta Abhiyaan

COMIC SENSE



GREENOVATION'17

Energy Club will organize 3rd edition of Greenovation in next month. To participate in the event pick one or more given problem statement and give your innovative, feasible and cost effective ideas to solve them. For more updates visit Energy Club Facebook Page:-

www.facebook.com/EH.MNITJaipur.in

QUIZ

1. Name the Indian navy's first naval ship to go green?
2. Where the IGBC is going to organize Green Building Congress 2017 ?
3. National energy conservation day is observed on ?

Send your entries to energyclub@mnit.ac.in

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