

NO STOPPING good business

Does Donald Trump pulling out of the Paris Agreement really make a difference to the climate cause, asks **M Ramesh**



Anger and scorn continue to pour out of the universal consternation over US pulling out of the Paris Agreement, but is it such a great damage? Not really.

The over-hyped Paris Agreement was never truly one that would deliver the targeted results—it wasn't much more than a loosely-worded statement of intentions. Columbia University professor, James Hansen—a man regarded as the father of

climate change awareness—had two words for the Paris accord when it was signed: fake and fraud.

The accord was not an agreement in the legal sense of the word, it depended singularly on moral suasion for implementation and there was nothing anybody could do legally in case of a breach by any country. Further, many of the 'nationally determined contributions', or pledges by each country of what it would do to help the climate cause, hinged on assumptions. Even India has said it would keep its commitment but only with the help of overseas technology transfer, which means 'if no

technology, then bets are off'.

As such, the accord, much on the contrary to the global euphoria around it, wasn't anything great to start with. Then came the Emissions Gap Report, 2016, of the United Nations Environment Programme, which said that even if all the countries kept their word they gave at Paris, global temperatures would rise by 3.2 degrees over the benchmark levels, way higher than the Paris target of 2 degrees and the "ambition" of 1.5 degrees.

The irrelevance of the Paris Agreement can be gauged by the pittance of funds transferred from the developed to the developing countries. For instance, the Green

Climate Fund had, by March, barely financed \$2.2 billion for 43 projects. The Fund's target is to secure annual contributions into the pool of \$100 billion by 2020 and the \$2.2 billion of cumulative financing in early 2017 shows the yawning gap between ambition and reality.

What big damage could the US pulling out of such an agreement do? The perils of Donald Trump's action are bigger in perception than in reality. The blow is more psychological than material.

Good economics

The real solution to climate change mitigation is to get the action anchored in good

economics, which is happening. The fight against global warming is happening because it is good business, not by the force of the Paris Agreement.

No wonder then that in the wake of Trump announcing a pullout, billionaire Michael Bloomberg, former New York City mayor, along with several US cities, States and companies have come together to consider filling the gap. A report in the *New York Times* said that "representatives of American cities, States and companies are preparing to submit a plan to the United Nations pledging to meet the United States' greenhouse gas emissions targets under the Paris

climate accord, despite President Trump's decision to withdraw from the agreement." Bloomberg, who is coordinating the effort, said in an interview, "We're going to do everything America would have done if it had stayed committed."

As is seen all over the world, renewable energy prices have fallen drastically and are set to fall further, winning over fossil fuels. It costs Infosys only ₹2.85 to produce a kWhr of electricity from a solar plant of its in Andhra Pradesh. In Karnataka, energy companies such as CleanMax Solar have begun selling solar power at prices between ₹4 and 5, and consumers are lapping it up. India has cancelled 13.7 GW of coal plants because renewable energy is cheaper than coal, especially if all coal is costed realistically. The Central Electricity Authority has predicted that India would need no new coal power plants until 2027. Energy companies such as Tata Power and NTPC are rapidly building up their renewable energy assets, reading the writing on the wall for coal. Globally too coal plants are going bankrupt, and will continue to struggle against renewable energy's assault, Trump or no Trump. Incandescent lamps are making way for energy-efficient LED lamps, not because governments think of it as a way to keep their Paris commitment, but because saving energy is good for the economy. Electric vehicles are on the rise for the same reason.

The opposite effect

There is an apprehension that the US action could precipitate a spate of follow-suits by many other governments, but early indications suggest that the opposite is more likely to happen.

US' exit is more likely to strengthen the resolve of all other countries to fight climate change and bind them closer in the effort. Its effect can already be seen in the US by the resolve taken by Bloomberg and American cities to come together. EU and China have explicitly said they would work closer against climate change, in the wake of US' exit. In fact, some welcome the emergence of clarity on US' position—it is better to have the US out than have its filibustering negotiators at the tables.

Further, it is evident that Corporate America remains committed to fight climate change, recognising the economic value of it. If anything, the shame that the United States has been put into—it has been bracketed with Nicaragua and Syria, and been described as an environmental vandal—is only likely to galvanise non-government players to higher levels of work.

Look at it any way, US pulling out of Paris Agreement is hardly likely to make a dent, mainly because the agreement itself is not really core to the climate issue.

The bigger threat to the fight against climate lies not in what goes on inside President Trump's head, but elsewhere—such as China's duplicity. Even as it is shutting down coal plants on its soil, China financed \$77 billion worth of coal-fired power plants elsewhere in the world between 2007 and 2014, according to a 2016 report of the Boston Institute. As part of the CPEC project in Pakistan, it is building several coal plants in the country.

Diplomatically, the US move reinforces India's position as a leader in fighting global warming, as all eyes turn towards the world's largest democracy.

A green makeover for AIIMS

Hitachi executes a three-year efficiency project

PREETI MEHRA

The country's largest and most well known medical institution is in the process of turning green department by department.

The sprawling All India Institute of Medical Sciences (AIIMS) in Delhi promises to once again establish some of the best benchmarks just like it did in 1952, giving wings to Pandit Jawaharlal Nehru's dream of creating a centre for excellence in medical sciences.

This time round along with medicine, it hopes to build a green hospital that also excels in energy efficiency, clinical efficiency and all hospital operations. The project started in March this year after a feasibility study that was conducted by Hitachi Ltd from April 2015 to February 2016 and evaluated by New Energy and Industrial Technology Development Organisation (NEDO).

The project, to be implemented in stages, is not as easy as it sounds and will take three years to complete. Hitachi hopes to complete all aspects by 2020, including reducing the hospital's power consumption by 30 per cent.

"If it was a new project the makeover would be much easier, but as we cannot stop any of the systems, cannot replace everything and it has to go hand in hand with everyday functioning it has to be paced accordingly," explains Shusuke Onodera, General Manager Infra & Healthcare, Hitachi India Pvt Ltd, who is executing the project on the ground.

The company will build an Information and Communication Technology platform (ICT) to reduce the power consumption. For this, it will install a new photovoltaic power generation facility and update existing facilities such as the chillers and the lighting with highly efficient ones.

Hitachi says the exercise also involves building a system to carry out control, grasp and monitoring of status of energy consumption of the entire hospital. And by introducing energy saving IT equipment, it will accelerate the electronic management of medical image data. Right now every specialised department has its own data, which cannot be shared electronically with another department.

Hitachi's Deputy General Manager, Anuj Kohli, says that the two-year feasibility study provided crucial pointers to what was needed to make AIIMS more energy efficient. They found that too much manpower was being used for energy management and that the chillers were cooling only 75 per cent.

The company aims to further conserve energy by integrating operational information it obtains from utility and medical equipment, clinical information it obtains from the hospital information system, weather information and others on the ICT Platform and devising an optimal operation plan for utility equipment.

Besides, by the time the project is complete AIIMS will have solar roofs for the car parking sheds and a master remote station connecting all the individual chillers.



Reflecting the future



Sinking island Swamp grass and standing water take over the front yard of a home in Tangier, Virginia, US, where climate change and rising sea levels threaten the inhabitants of the island. Tangier Island has lost two-thirds of its landmass since 1850. If nothing is done to stop the erosion, it may disappear completely in the next 40 years. AFP

SWITCH ON

End-to-end solar solutions

Name of the Company: Rays Power Experts Pvt Ltd

Set up in: 2011 March

Based in: New Delhi / Jaipur

Founder: Rahul Gupta

Funding received: Self-Funded. No external equity funding till date and the company is cash positive since its first year.

What it does: Offers services knit across the mezzanines of solar power project development. Assists clients in site checks, approvals, execution, development and exchange of

power. Also provides support for financing the project. Deals in the 'Rooftop' segment and accepts end-to-end value chain responsibility along with close monitoring of the entire power plant.

How it does it: By offering extensive consulting-engineering-contracting-commissioning services as well as assisting clients in overall solar power project delivery. For setting up a solar plant, it takes care of microfitting, grid connection, HV/ substation creation, electrical (re-

ticulation), foundations and project scheduling. It also offers end-to-end solutions that start at project report and land survey, and extend right across the entire value chain to power evacuation and reaping profits.

Big moment: Became the third largest solar power producer in just five years. Major projects along with the government include DMRC, NHPC, SJVN and NDMC, SECI & CPWD.

Impact: It drove an investment to the tune of ₹600 crore in a small town

like Bikaner over a period of five years, blossoming local business, local supply chain and generated local employment. Made success of the concept of private solar parks in Rajasthan and generated employment for over a hundred full time people and over 300 part time people every year.

Vision: To enable every individual to own a solar plant. Every individual would have a better life if he/she saves electricity and generates power.

Preeti Mehra

GREENVIEW

BY DIPANKAR



Bale it at source

Biocrux's new contraption helps manage dry waste where it is generated

SALMANUL FARISY

Solid waste management poses a massive threat in India. Most of the agencies responsible for waste management are unable to provide proper systems, leading to collection and transportation becoming difficult and uncontrolled.

Against this backdrop, companies in the waste management space are testing technologies that can make a difference and are easy to install. Biocrux, which

launched its at-the-source automatic PET bottle flaking machines some time ago, has now found an automated solution to handle dry waste at source.

It has introduced a new contraption christened the Biocrux VPM Hydraulic Vertical Press. The machine crushes non-bottle dry waste into bales, thereby reducing the cost of transport and fuel consumption while helping recyclers manage garbage efficiently. "To bale the waste, you automatically segregate

it into different types, for instance you bale cans separately, packages and tetra packs separately," explains Ajay Mishra, Founder Director and CEO, Biocrux. "This way waste is gets segregated and baled at the source itself. This helps in faster recycling."

The VPM lets you reduce volume from 50 to 90 per cent depending on the waste you are baling. "This reduction in volume will save transportation cost, reduce fuel consumption hence lower emission of CO₂," Mishra adds. The segregated waste helps in recycling and protecting the environment from landfills and forest dumps. Essentially, the Biocrux VPM is a hydraulic pressing machine com-

monly called compactor. It consists of two chambers and two buttons. The top chamber is filled with soft packaging waste like tetra pack, plastic bags, paper, bubble wrap, waste corrugation boxes, aluminium cans etc.

After loading, the chamber is closed and at the press of a button the machine compresses the waste through its metallic frame attached hydraulic pressure.

Post compacting, at the push of another button the pressure is lifted and reloading can take place. One can continue to compress till the waste reaches the size of the bottom chamber. An attachment is enabled with three straps to tie up the bale once you are done. "VPM runs on

electricity and needs to be plugged in through a 15MPR plug," says Mishra.

Though a VPM weighs a whopping 640 kg, Mishra says this does not hinder easy installation and operation as it requires a mere 4-6 sq ft of space. "It can be installed in malls, IT parks, hotels, educational institutions and residential complexes" in short wherever installing a normal solid waste machine is a problem due to space. "The machine is heavy due to its requirement. You need to have

a rigid and strong outer chamber for baling, else the wall will break due to pressure," he reiterates in its defence, pointing out massive savings by managing waste at source. "Today several hundred trucks move around public spaces every day to clear garbage."

The first such machine is being installed in Bhubaneswar CITM university. The company is in process of placing more such machines along with its Biocrux bottle flaking machines and the certification process is also in progress.



Biocrux VPM Hydraulic Vertical Press

CLEAN FUN

Some facts on: Climate change

If everyone lived the way Americans live, it would take five Earths to provide resources for everyone

Average global sea level is expected to rise 7-23 inches before the end of this century

Over a million species face potential extinction due to disappearing habitats, changing ecosystems, and acidifying oceans

Arctic region may have its first completely ice-free summer by 2040

2014 was the world's hottest year on record. The world lost about 16% of all coral reefs in 1998, the second hottest year on record

Around 15% of the carbon released in the environment is due to deforestation and change in land use

Climate change could increase food prices by 50-60% by 2030

THEY SAID IT

Planning for climate change today is less expensive than rebuilding an entire network after a catastrophe.

MICHAEL R. BLOOMBERG
AMERICAN BILLIONAIRE AND FORMER NEW YORK CITY MAYOR

