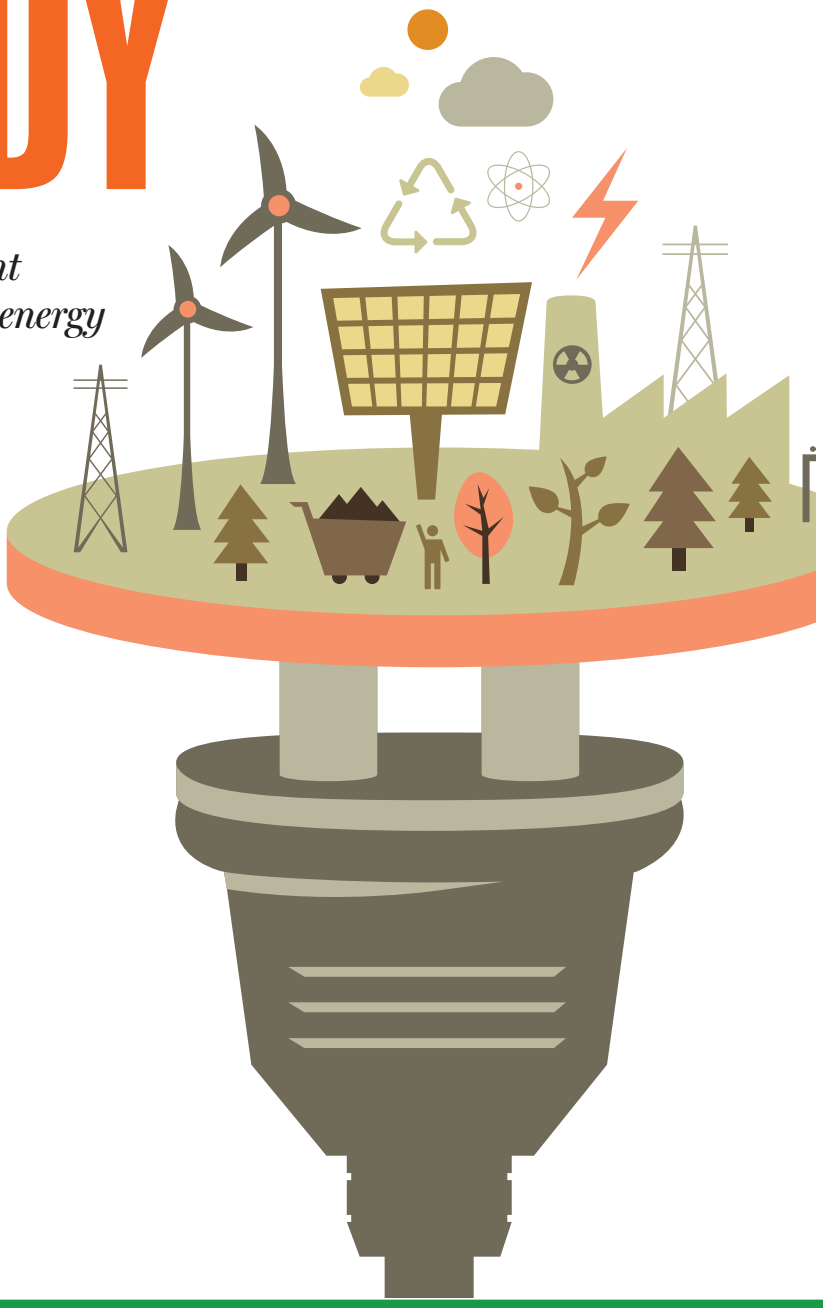
GROWING WITHOUT SUBSIDY

This is the most important characteristic of the renewable energy sector in Latin America

{ *Kamilia Lahrichi* }



As 195 countries reached a landmark agreement to reduce greenhouse gas emissions at the COP21 summit in Paris in December 2015, Latin American countries are taking part in efforts to reduce global warming by investing more in renewables.

With soaring temperatures due to El Niño – the band of warm ocean water in the Pacific Ocean – to increased rainfall and melting glaciers, the region would benefit highly from developing greener sources of energy.

"Solar is going to be key to addressing climate change," said Andrew de Pass, CEO of Conergy in Miami, US, during the Earth to Paris conference on December 7 in Paris.

In fact, Latin America is home to a fast-growing solar energy industry. GreentechSolar[1] found that the region is the fastest growing market for solar energy with the fastest growth in the history of the industry.

For instance, Mexico, which has some of the best solar resources in the world, is currently building a 30 MW solar photovoltaic power plant. It is set to become the region's largest and provide electricity to power about 160,000 households.

Resisting fossil fuels

The issue is that Latin American governments focus more on fossil fuels because of plummeting crude oil prices. Internationally low prices obstruct the development of renewable energy and a green economy.

For example, oil-producer Venezuela, which has some of the largest gas reserves on the planet, has focused on boosting natural gas production to meet its energy demand.

Argentina too is dependent on natural gas, with its huge shale gas formation in the southern Patagonia region. Exploiting it would enable the South American nation to be energy self-sufficient.

In addition, South America cannot take advantage of its largest renewable source – hydropower because of vulnerability to droughts, according to a report[2] by the in Abu Dhabi-based International Renewable Energy Agency (IRENA) titled "Renewable power generation costs in 2014".

Yet, Latin American governments are keen to boosting renewables' use.

Climatescope[3], a resource database providing country-by-country assessment on

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>
> **Lisa Viscidi,**
> Director of Energy, Climate Change and Extractive Industries at the Inter-American Dialogue, a centre for policy analysis in Washington D.C.

[1] http://www.greentechmedia.com/articles/read/energia-solar
[2] http://www.irena.org/DocumentDownloads/Publications/IRENA_RE_Power_Costs_Summary.pdf
[3] http://global-climatescope.org/en/region/lac/

climate-related investment, found that Latin America and the Caribbean boast the highest clean energy penetration than any other region in the world.

As of year-end 2014, 11% of the 352GW installed in the region was represented by biomass, wind, small hydro, solar and geothermal power-generating projects.

Grid parity

The main challenge lies in ensuring that the cost of solar and wind equals that of hydropower and coal.

A 2014 Citibank report[4] titled "The rise of renewables in Latin America" explains that "the most important characteristic of renewable energy in Latin America is that it is competitive with conventional sources of power without subsidy. This is because other sources of power generation in Latin America are relatively expensive – often two to three times more than in the United States or Europe."

This hence encourages the development of renewables.

"Solar and wind have already reached grid parity with natural gas and coal-fired generation in some markets in Latin America," says Lisa Viscidi, Director of Energy, Climate Change and Extractive Industries at the Inter-American Dialogue, a centre for policy analysis in Washington D.C.

In particular, Brazil and Chile have become regional leaders in renewables development with more accessible prices. Developers have offered prices below those of natural gas in some of Brazil's wind auctions.

Also, Brazil's Senate approved in July 2015 tax break for solar power equipment after the large country faced the biggest drought in eight decades, which curbed the country's hydroelectric generation capacity.

"Costs for both technologies globally have dropped significantly in recent years and further technological breakthroughs could make them even more competitive with fossil fuel sources across more markets in the near future," explains Ms. Viscidi.

A November 2015 Deutsche Bank report[5] found that solar energy was the cheapest source of electric power in Chile, which has a very high solar irradiance in the Atacama desert. The country, the the world's largest copper exporter, will install Latin America's first solar energy plant in its Atacama desert in 2017.

In addition, the cost of solar power capacity has significantly dropped with inexpensive panels from China that dominate the market.

The World Wind Energy Association[6] found in February 2015 that wind power is a cheap and reliable power source in Latin America.

In Brazil, renewables represent 15% of the total installed capacity of 126 GW, according to the Climatescope 2014's report "Mapping the global frontiers for clean energy investment". Between 2006 and 2013, the country overcame economic troubles and attracted $96.3 billion worth investment for renewable energy development.

"In Brazil, the wind projects have already reached grid parity with conventional fuels," says Tabaré Currás, Global Advisor on Energy Economics at WWF International Global Climate and Energy Initiative in Mexico.

The South American nation is doing good in the wind business with wind auctions amounting to $60/MW. Besides, it added least 2.9 GW of installed wind capacity to its network in 2014.

Making the shift

Jonas Rama, an Emerging Markets consultant on Latin America, explains that countries rich in fossil fuels,

[4] https://www.citibank.com/tts/trade_finance/financing/docs/rise_renewables_latam.pdf
[5] http://www.pv-tech.org/news/42361
[6] http://www.wwindea.org/new-record-in-worldwide-wind-installations/

In Brazil, renewables represent 15% of the total installed capacity of 126 GW, according to the Climatescope 2014's report "Mapping the global frontiers for clean energy investment"

namely Argentina, Ecuador, Mexico and Venezuela, might be keen to shift to renewables but do not have the means to do so.

Unlike the United States and Europe – which have feed-in tariffs that guarantee developers a set price – renewable energy in Latin America is not subsidised to encourage production.

However, "Latin American countries do offer some important incentives such as wind and solar auctions, regulations allowing self generators (such as through solar panels on rooftops) to sell excess capacity back to the grid, and carbon credits for renewable energy," says Ms. Viscidi.

For instance, Mexico and Chile implemented carbon credit schemes, which require polluters to buy permits to release carbon dioxide.

Accelerate the transition

Although investment in renewables in Latin America went from $15.4 billion in 2013 to $23 billion a year later, according to Climatescope, governments need to do more to accelerate the transition to renewables.

Infrastructure is still weak and countries need to invest more in renewable energy.

Among other measures, governments need to include renewable energy generation in long-term strategies. They should also make sure that there is a regulatory framework to introduce renewables at a competitive price.

Overall, it is about "sending clear signals to investors with investment-friendly policies, having a long-term vision based on ambitious goals and investing in human capital to create a labour force that could boost the energy transformation," says Mr. Currás. IFM

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