99% OF COSTA RICA'S ELECTRICITY CAME FROM RENEWABLE ENERGY IN 2015

In March 2016 the Costa Rican Institute of Electricity (ICE) announced that 99% of the country's electricity comes from green energy, while only the remaining 1% is provided by fossil fuels.

About 80% of electricity comes from hydroelectric plants, while the rest comes from geothermal, wind sources, biomass and solar energy.

With this result of great relevance, Costa Rica gained international attention, figuring out in the small group of countries that point to the green energy self-sufficiency, eliminating dependence on fossil fuels.

Since years the country place a target to environmental sustainability as a national brand, and it <u>ranks 62 on the UNDP Human Development Index</u>. In 1948 Costa Rica has also been worldwide awarded for the abolition of the military forces, investing those resources in development.

The forestry portion of the territory is 52% and 20% of the territory of Costa Rica consists of Reserves and National Parks, including two parks declared "*World Heritage*" by UNESCO.

Even in this favorable context, the country has deployed many efforts to move from a traditional energy model based on hydrocarbons consumption to a sustainable energy model based on multiple clean sources. These new approaches, in fact, require a high initial investment, detailed studies to determine the potential of each new energy source to ensure constant availability of natural resources involved and are in need of a constant management to address any risks for the territories involved.

Currently about 80% of green energy is produced by hydroelectric plants, which require great care to be inserted in harmonic way in the ecosystems where they are installed.







About 10% of energy is currently generated by geothermal plants, and the Government are working on opening new plants which can develop the great potential of this green energy, with loans from banks of different countries. The remaining 10% of renewable energy is provided by wind solar and biomass sources.

In particular, the country's plans are towards providing additional investment in biomass to use organic wastes for energy production. Today the Costa Rican Institute of Electricity (ICE) buys from the sugar factories the energy produced with mills waste of sugar cane during the harvest season. Agro-industries and farmers generating biomass power take advantage of electricity in their own plants, as a form of self-consumption. Different specialized institutes in Costa Rica, as the Tropical Agricultural Research and Higher Education Center (CATIE), the Costa Rica Institute of Technology are implementing interesting studies to produce energy from waste from different materials, such as wood, palm, pineapple, rice and coffee.

In September 2015 it was formalized the National Energy Plan 2015-2030 of Costa Rica in support of the country's energy policy. The Plan provides guidelines for improving energy efficiency, stimulating the development of distributed production and self-consumption of electricity, promote the sustainability of the electricity grid and improve socio-environmental regulations. As in other countries, the largest energy consumption in Costa Rica remain the hydrocarbons used for transportation of vehicles. For this reason the Plan provide efficient collective transport systems that are environmentally cleaner, using alternative fuels and reducing dependence on oil and the emission of polluting gases.

At the International Conference on Climate Change held in Paris in November 2015 in view of achieving a global agreement to reduce gas emissions causing the greenhouse effects, the Government of Costa Rica announced its commitment to achieve the goal of carbon neutrality by 2021. Costa Rica is a relatively small country, with its 5 million inhabitants, and rich in natural resources that can be harnessed to generate renewable energy. Its experience, however, represents an example of great international impact.

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