

Can we live with wind energy?

When people talk about electrical energy, it can be hard to tell fact from fiction. It starts in your own home. Which of all those savings tips will really make a difference? And which ones won't? It gets even harder when it comes to the future. Which alternative energy sources are there? Do windmills really provide enough power? Are solar panels feasible? Aqualectra faces these questions on a daily basis and can give you clear answers. Just like you, we strive for an environmentally conscious energy supply that is easy on your wallet, and based on clear factual information.

How is our electricity generated?

On Curaçao, electricity is generated mostly by burning fossil fuels, with various technologies like steam- and gas turbines and diesel engines. When we look at the development of the prices of these fuels, and at new developments in technology, we can conclude that alternative energy sources are seriously worth considering for Curaçao.

Which alternative energy sources are there on Curaçao?

Solar and wind energy are the most obvious alternatives for our island. Wind energy is obtained by windmills that convert wind into electricity. It is a flexible kind of sustainable energy, but the downside is its unpredictability. Since you can never predict how much wind there will be, you cannot predict how much energy a windmill park will generate. Also, you can't build a windmill park just anywhere. The right location requires constant average wind speeds at different heights during at least a year. Another issue is that some people feel that windmill parks ruin the landscape. Despite these objections, wind energy is still very interesting as an alternative energy source for Curaçao. The current windmill parks at Tera Kora and Playa Kanoa are already supplying 7% of the total demand.

Solar energy can be generated in two ways: with photovoltaic solar panels that convert sunlight to electricity or with thermal solar panels that absorb heat. The benefit of solar panels is that they take up very little space and are unobtrusive. A downside is that solar panels do not yet



provide the return on investment of other alternative energy sources. This is because part of the absorbed energy escapes in the form of heat, which is not exactly convenient on Curaçao. On top of this, the panel material is scarce and costly, causing this alternative energy source to be more expensive than conventional energy.

The future of alternative energy on Curaçao

Aqualectra will soon modernize and expand the two windmill parks at Tera Kora and Playa Kanoa. Both locations will be equipped with two new parks that will generate 15 Megawatt of electricity each. Aqualectra expects these new windmill parks to be operational in early 2011 and that they will supply 30% of the total demand for electricity. This means that more than a quarter of Curaçao's electricity supply will consist of sustainable alternative energy. Solar energy will remain in development before Aqualectra will apply it on a large scale, due to the low return on investment and the high initial costs. Aqualectra will keep doing extensive research on the development of and demand for alternative energy for the future.