## SOLAR PRO.

### Solar irrigation in Réunion

How can Reunion Island achieve energy autonomy?

Reunion Island aims to achieve energy autonomy and a 100% renewable electricity mix by 2030. Without policy support, the share of renewables remains at the 2008 reference level. The development of biomass, particularly energy cane, is economically interesting. Solar and marine energy need political and/or economic support to be developed.

#### Can geothermal energy be developed on Reunion Island?

Geothermal energy also presents significant potential for development, with an installed capacity of 30MW; however, the main problem for this resource on Reunion Island is its location in a protected natural area.

#### Is Reunion Island a renewable resource?

Hydroelectricity is the island's main renewable resource. It accounted for 17,2% of its total electricity production in 2015 (133,6MW of installed capacity), spread over six sites in the eastern part of the island. An additional capacity of 50MW should be deployed by 2030. Reunion Island's biomass potential is considerable.

#### Is biomass a viable energy source for Reunion Island?

The development of biomass on Reunion Island is economically more viable. By 2030 in the transition scenarios, electricity from biomass has advantageously replaced electricity from coal and represents slightly more than 50% of electricity generation.

#### Does Reunion Island need economic support?

The development of biomass, particularly energy cane, is economically interesting. Solar and marine energy need political and/or economic support to be developed. Reunion Island, a French overseas region located in the Indian Ocean, is facing a three-fold challenge combining demographics, the environment and energy.

#### Does Reunion Island use fossil fuels?

Whereas in the 1980s all of the energy produced on Reunion Island came from renewable hydroelectricity, the island has gradually become dependent on imported fossil fuels.

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By providing accurate predictions of solar irradiance, Reuniwatt helps energy producers and grid operators better plan and optimize the integration of solar energy into the island"s electricity mix.

Created in 2007 on Reunion Island, the Indian Ocean subsidiary today boasts a wide variety of solar farms. Here, it started the Group's first agrivoltaics plants, as well as the Aquanergie® technology and the first battery storage solutions which have given Akuo sound expertise in Non-Interconnected Zones (NIZ).

Given the varied potential of renewable resources that Reunion Island could deployed, such as wind, solar, biomass, ocean or geothermal energy, we analyze the impact on the electricity system of different focus expressing specific supports.

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In a solar-powered irrigation systems (SPIS), electricity is generated by solar photovoltaic (PV) panels and used to operate pumps for the abstraction, lifting and/or distribution of irrigation water. SPIS can be applied in a wide range of scales, from individual or community vegetable gardens to large irrigation schemes.

Agrivoltaics in Reunion: 15 years of protection from the vicissitudes of the weather. The island of Réunion has developed an ecosystem resilient to extreme weather phenomena (cyclones, storms and drought) that is a source of inspiration for regions affected by the consequences of ...

The 27,000 solar panels cover an area of 4.5 hectares, which generate an annual total of 10 GWh in local renewable electricity. This contributes to Reunion's energy strategy, by reducing dependence on imports, and ...

Reunion Island is endowed with many types of renewable energy sources (RES) such as solar, wind, geothermal, sea energy (ocean thermal energy conversion and wave energy), biomass and hydropower. However, reaching this 100% renewable electricity mix will involve many structural changes in electricity production in a short time-frame.

A network of automatic weather stations (Model-Enerco 295-11) each having six sensors (solar radiation, temperature, humidity, wind, rainfall and leaf wetness) was set up across the island of Reunion in December, 1983. Most stations provide data for rainfed and irrigated sugar cane research projects.

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The 27,000 solar panels cover an area of 4.5 hectares, which generate an annual total of 10 GWh in local renewable electricity. This contributes to Reunion's energy strategy, by reducing dependence on imports, and minimizing the share of fossil fuels and greenhouse gas emissions in the energy mix.

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Web: https://foton-zonnepanelen.nl

