



Renewable energies



BARDZOUR

ORIGIN OF THE PROJECT

Akuo Energy is a company working to place sustainable energies at the forefront of the energy transition. With this goal in mind, the company was awarded four groundbreaking projects from the solar and storage call for tenders launched by the Energy Regulation Commission (CRE) in 2012. In the wake of this successful bid, Akuo Energy has been conducting a project since late 2014 proving that transforming our energy model is not only necessary to assuage climate change, but that it is also within our reach. The "BARDZOUR" project, implemented at the Port detention centre in the Indian Ocean island of Réunion, demonstrates that sustainable energies can become part of existing grids on a major scale while actively contributing to the sustainable development of insular areas. This project, named "early dawn" in the Creole language of the island, involves two stages. Its primary objective is to enhance the island's energy autonomy. To do this, Akuo Energy has developed innovative technologies to store intermittent photovoltaic energy. Secondly, aware of the fact that building a major photovoltaic array could deprive an area of much-needed farmland, Akuo Energy has developed a photovoltaic greenhouse system that combines responsible farming with carbon-free energy production.

THE TECHNOLOGY

Akuo Energy's BARDZOUR project implements innovative technology combining ground-level and greenhouse rooftop photovoltaic arrays (Agrinerie®). This production unit includes a storage system with a capacity of 9 MWh, a worldwide first that points to the future of solar energy in isolated environments. The project also includes 6,000 m² of cyclone-proof photovoltaic greenhouses for market gardening (dual land use combining energy and food independence in isolated areas). In addition, the project also involves environmental and social dimensions. Environmental components include planting a 2-hectare arboretum featuring endemic plants, bee-keeping and sustainable farming education, and funding and renovating the island's Insectarium. Social components include detainee training and work, improving their living conditions in the detention centre and providing support to the associations.





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The project, which was commissioned in late 2014, feeds 12,000 inhabitants a year through this groundbreaking system based entirely on sustainable energies. In other words, the system implemented by Akuo Energy's BARDZOUR project provides an equivalent of 30% of the energy requirements of the island town of Port. It has a direct impact on the climate since it saves 8000 TEQ of CO2 every year compared to previous systems.

THE BENEFITS OF THIS PROJECT FOR TOMORROW'S CLIMATE CHALLENGES (GHG, GLOBAL REQUIREMENTS, ECO-INNOVATION)

The BARDZOUR project will have a significant impact on future climate issues for several reasons. Firstly, the project demonstrates the potential of sustainable energies, and solar in particular, to act as a vector for sustainable development. In addition, thanks to its storage technology, the project illustrates the ability of so-called intermittent sustainable energies to make a major contribution to our electrical power grids. This project shines the spotlight on a revolutionary demonstration that places sustainable energies at the forefront of the energy transition. In other words, Akuo Energy's project proves that transforming our energy model is not only necessary to assuage climate change, but that this revolution is also within our reach.

HOW THIS EXEMPLARY PROJECT PROVIDES AN OPERATIONAL SOLUTION WITHIN COP21

Limiting global warming to 2°C is one of the key targets of the Climate Change Conference to take place in Paris from 30 November to 11 December this year. Akuo Energy's Bardzour project, inaugurated in June 2014 by French Prime Minister Manuel Valls and winner of the "My positive impact" campaign held by the Nicolas Hulot Foundation, is perfectly in line with these goals. In addition to demonstrating that storing energy provides an opportunity for massive deployment of intermittent sustainable energies, the BARDZOUR project proves that solar technology can generate a whole set of positive spin-offs for a region and the preservation of its environment. In fact, the project works towards creating jobs and rehabilitation opportunities reducing social inequality. It results in motivating the project space to protect biodiversity through bee-keeping and market gardening activities, and the protection of rare endemic species thanks to the arboretum and insectarium. Equally noteworthy are respect for tradition through planting medicinal flora used in Réunion customs, support for a sustainable farming system and local solar grid, in addition to feeding detainees through a supply of organic vegetables, etc. The scope of the project is truly global.

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