Helioclim solar power plant - Heating network of the military defense base of Saint-Christol d'Albion (84)

by Fabrice DEMAREST / 2018-03-01 15:05:41 / France / 6328 / FR

Year of commitment : 2017
Address 1 - street : SAINT-CHRISTOL D'ALBION, France
CO2 Impact : Very positive (91% reduction in CO2 emissions thanks to solar-biomass synergy)

Green energies : Thermal solar, Energy Efficiency, Heat, Heat
Digital services : Smart metering, Safety, Other

350 000 €

Builder
HELIOCLIM

Manager / Dealer
IDEX

GENERAL INFORMATION

The Helioclim team is proud to announce the commissioning of a 560 kW turnkey thermal solar power plant at the Saint Christol military defense base in Albion (84).
This heat production system consisting of 750 m² of mirrors is the largest solar power plant in France for the supply of a heat network. The hybrid solar-biomass network, nearly 6 km long, is powered by 160 Heliolight4800 sensors and a wood boiler.

The solar power plant, representing an investment of € 350,000, was selected as part of a global solution based on cost and performance commitment criteria.

The heating network provides heating for 50 buildings with a total area of 88,800 m²: housing, catering, swimming pool, gymnasium, offices, cinema, technical areas and workshops (used by more than 1,000 people).

In summer, the network supply is 100% solar! The plant allows the injection of heat on the network at the regulated temperature of 90 ° C. The Helioclim installation automatically adjusts its power according to the need for consumption, thanks to its Helioclim Smart Track solar tracking system.

The centralized technical management system, connected by fiber optic, allows the site operator to measure and control in real time the operation of the installation.

Thanks to performance monitoring, financed by ADEME as part of an NTE program, this first installation will allow Helioclim to benefit from a rich feedback of experience over a whole year.

The studies and the first weeks of operation show the energy and economic relevance of solar-biomass coupling on a heat network.

This heat network, entirely powered by renewable energies, is an exemplary solution for achieving the objectives of the Paris agreements to divide by 4 the emissions of greenhouse gases between 1990 and 2050: a first that Helioclim hopes to duplicatevery soon !

Progress Status

Delivered

Data Reliability

Self-declared

Funding Type

Public

Website Enterprise / Infrastructure

http://en.helioclim.fr/

Sustainable Development

Attractiveness :

The Defense Infrastructure Service, Ministry of the Armed Forces, is strongly involved in this project and in sustainable development.

Preservation / Environmental Improvement :

The project reduces the impact on the environment by significantly reducing greenhouse gas emissions that contribute to global warming. Indeed, the system allows a 91% reduction in CO2 emissions thanks to synergy solar energy and biomass.

Resilience :

The materials and design of the Helioclim installation have been designed to guarantee a service life of over 20 years. The tracking system (tracking the sun's course) is operational up to winds of 70 km / h. The automatic safety position setting makes it possible to withstand winds up to 200 km / h as well as any inclement weather (rain, snow, hail), and to limit the fouling of the mirrors and absorber tubes. Moreover, this tracking system makes it possible to regulate the solar production, and to avoid the problems of overheating.

Testimony / Feedback

Governance

Service d'Infrastructures de la Défense (SID)

Holder Type : Consortium of companies

HELIOCLIM

Builder Type : Other

IDEX

Manager / Dealer Type : Private

SID has commissioned IDEX to present and propose a heat generation solution to supply its heat network. IDEX has integrated Helioclim solar field management into its existing service as the manager of the heating network and the biomass boiler at the Saint-Christol d'Albion base.

Sustainable Solutions

Heliolight4800

Description :

Our Heliolight4800 cylindro-parabolic collectors capture solar energy by concentrating the sun's rays on the absorber tube at the focal point of the dish. The pressurized water circulating in the absorber tube is heated to 200 ° C.

At Helioclim, we have invested heavily in the specific development of our products to achieve optimal performance, especially on three key components:

- vacuum absorber tube: to maximize the efficiency,
- composite cylindro-parabolic reflector with glass mirror (using our own patented manufacturing process): to optimize reflectivity and durability,
- solar tracking and safety systems: to maximize efficiency and manage all cases of safety, maintenance and cleaning.

All our products are designed and manufactured entirely in France, in our premises in Mandelieu.

- Energy/climate :
- Climate adaptation
- Renewable energies
- Low-carbon materials/ infrastructure

Company (es) Website :

HELIOCLIM

Contest

Reasons for participating in the competition(s)

Highlights of the Helioclim solar installation:

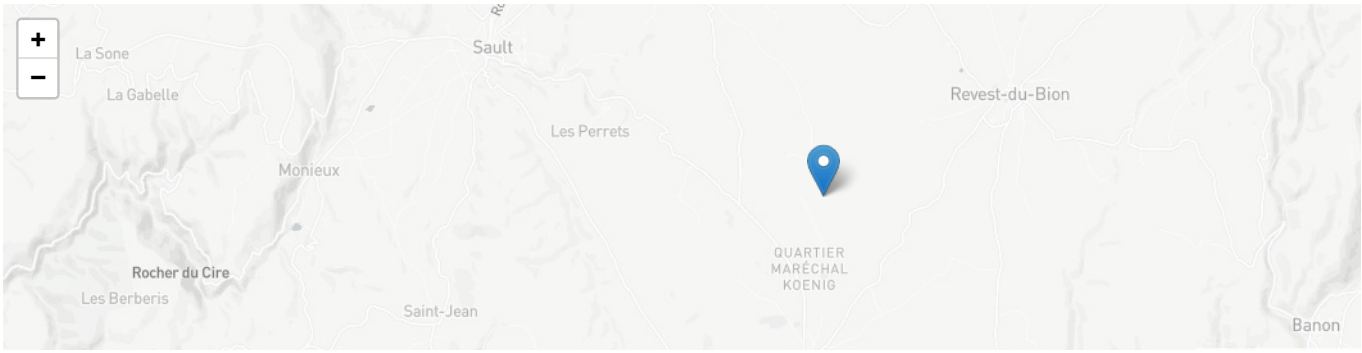
- 560 MWh / year of energy generated,
- Saving 40 tons of oil equivalent per year,
- 91% reduction in CO2 emissions thanks to the solar-biomass synergy,
- 71% decrease in the operating costs of the site's energy facilities,
- 100% French manufacturing in Helioclim workshops.

Building candidate in the category

Green Solutions AWARDS powered by Construction21.org

Coup de Cœur des Internautes

Grand Prix Infrastructure Durable



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