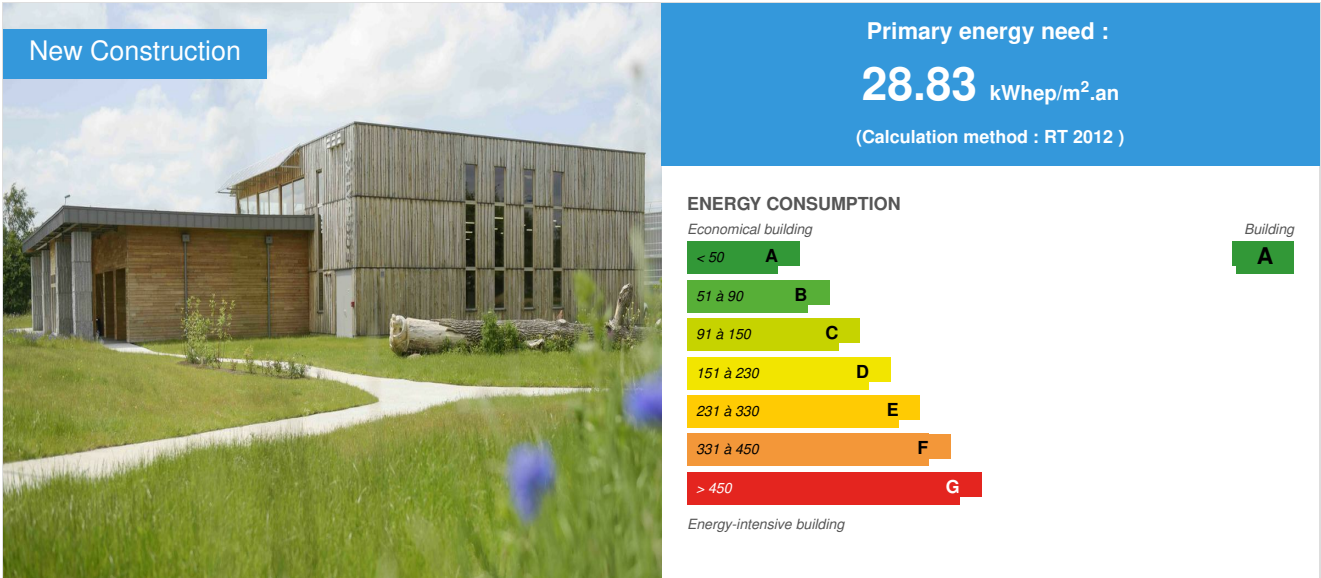


## Ecobatys

by Valentin PICCO / 2017-05-24 10:59:34 / Frankreich / 9240 / FR



**Building Type** : Other building  
**Construction Year** : 2014  
**Delivery year** : 2015  
**Address 1 - street** : ZA Saint Eustache 35460 SAINT ETIENNE EN COGLÈS, France  
**Climate zone** : [Cfc] Marine Cool Winter & summer- Mild with no dry season.

**Net Floor Area** : 301 m<sup>2</sup>  
**Construction/refurbishment cost** : 1 160 000 €  
**Number of none** : 4 none  
**Cost/m2** : 3853.82 €/m<sup>2</sup>

**Certifications :**



### General information

The result of an intense partnership between all the players in the territory, ECOBATYS, the Ecoconstruction performance center, is an exemplary building: carbon-efficient, using eco-materials and renewable energies. Passive level, it integrates the end of life of the building using 90% of recyclable materials.

Société Coopérative d'Intérêt Collectif, Ecobatys aims to develop actions dedicated to eco-construction, the energy transition and the move towards a more carbon and resource-efficient economy for the various players in the territory. These actions to strengthen and develop collective skills are defined by the implementation of training, support for territorial projects, linking, leasing of spaces and pooling of materials, communication and communication activities. 'event planning...

### Sustainable development approach of the project owner

In order to carry out this project, the Client wished to set up an innovative approach that would enable the design of the project in a collaborative mode (PCI

approach: integrated design process). 6 days workshops have been organized, bringing together all the actors to compare their ideas, their knowledge and their points of view which are different approaches of the same building: client, users, architect, Studies, companies ... According to the architect Sofia MELAH, the PCI method is probably the tool that will preserve the quality of the project by regaining this time of retreat, reflection and an overview, too often set aside in face of daily emergencies .

## Architectural description

Since 2008, the actors of the Pays de Fougères have been working around the same table, elected representatives, professional organizations, initial and continuing training organizations and research organizations to support the building sector. Ecobatys aims to develop actions aimed at the players in the territory dedicated to energy transition and the transition to a low-carbon and resource-based economy. The objective of the structure is therefore to demonstrate the performance of an eco-constructed building in an exemplary passive manner. To achieve this, it was necessary to redefine the design approach by using an innovative collaborative method to design the building and prepare its operation, involving all professionals, companies and future users. In order to optimize local resources and optimize the life cycle of the project, the second objective was the use of as many local and / or deconstructible materials (wood, straw, earth, granite ...) . It was also important to integrate the building as much as possible into its environment, preserving a biodiversity space, using the sun as the sole source of energy, and recovering rainwater for the environment, Autonomy of the toilet. In order for everyone to understand the building's mechanisms and its evolution over time, technical and construction systems (ventilation, electricity, insulation, etc.) are put forward in an educational way (visible networks, probes, explanatory panels, etc.).

## See more details about this project

<https://www.facebook.com/ecobatys/>

## Stakeholders

### Stakeholders

Function : Contractor

Coglais Communauté Marches de Bretagne

<http://www.coglais.com/>

Community of communes of Pays de Fougères

Function : Construction Manager

Ingénierie Associés

<http://www.ingenierie-associes.com/>

Economist and Master of Execution

Function : Designer

Atelier Loyer Architectes

<http://www.architecte-loyer.com/>

Subject mastery

Function : Assistance to the Contracting Authority

Wigwam Conseil

<http://www.wigwam-conseil.com/>

## Energy

### Energy consumption

Primary energy need : 28,83 kWhep/m<sup>2</sup>.an

Primary energy need for standard building : 77,00 kWhep/m<sup>2</sup>.an

Calculation method : RT 2012

Breakdown for energy consumption : 43% Lighting 26% Heating 14% Breakdown 11% Hot Water Sanitary 7% Information Technology

### More information

Visualization of consumption and productions online with the Connectibat device. So far, annual consumption has always been lower than the annual production of solar panels.

## Renewables & systems

## Systems

### Heating system :

- Wood boiler

### Hot water system :

- Wood boiler

### Cooling system :

- No cooling system

### Ventilation system :

- Double flow heat exchanger

### Renewable systems :

- Solar photovoltaic
- Wood boiler

## Environment

### Urban environment

Ecobatys is located in an industrial area in MAEN ROCH, 10km from Fougères. For the premises, there is a bus stop which serves the main surrounding villages. For vehicles, the pole is easily and quickly accessible by exit 30 of the A84 motorway linking Rennes (50km) to Caen (137km). Similarly, Ecobatys is located on the edge of Ille-et-Vilaine which makes it a strategic location at the crossroads of the regions of Brittany, Base-Normandy and Pays-de-la-Loire. A biodiversity space is built around the building. In hot weather it is not uncommon to see the workers of the surrounding companies settle down to eat.

## Products

### Product

Polycrystalline Panels Voltec Solar VSPS

Voltec Solar SAS

1 rue des Prés, 67190 DINSHEIM-SUR-BRUCHE, FRANCE

<http://www.voltec-solar.com/>

**Product category :** Table 'c21\_germany.innov\_category' doesn't exist SELECT one.innov\_category AS current,two.innov\_category AS parentFROM innov\_category AS oneINNER JOIN innov\_category AS two ON one.parent\_id = two.idWHERE one.state=1AND one.id = '3'

The photovoltaic plant is 5 kWc is composed of 20 polycrystalline solar panels made in Alsace. The direct current of the two 360 volt panel chains arrives through the cables in the three-phase SMA inverter, which is located in the cabinet.

It is transformed and then transported to the TGBT to be self-consumed. In case of surplus, it is resold. It is possible to retrieve data from the inverter on the building's internal network.

French product and ecological, very well received in a passive construction approach.



Pellematic Smart Boiler

OkoFEN

Agence ŌkoFEN Ouest - SARL Planète Claire La Tour d'ordre - 72150 LE GRAND LUCE - FRANCE

<http://www.okofen.fr/>

**Product category :** Table 'c21\_germany.innov\_category' doesn't exist SELECT one.innov\_category AS current,two.innov\_category AS parentFROM innov\_category AS oneINNER JOIN innov\_category AS two ON one.parent\_id = two.idWHERE one.state=1AND one.id = '18'

The Pellematic Smart is a multifunction wood pellet boiler. Its power is 8kW and the capacity of the buffer tank is 600L. The facility occupies 1.5 m<sup>2</sup> on the ground.

It produces instantaneous hot water, integrates all the hydraulics at the boiler output to reduce costs and is coupled to the solar collectors of the roof. Solar energy covers almost 40% of the year's heat requirements, the rest being provided by the burning of wood pellets, which automatically takes place when sunlight is not sufficient. Thus, the consumption of pellets is less than 1 T / year.

The boiler is also coupled to the double flow VMC.

Produced in accordance with the approach of a passive construction. No problem to report.

Costs

Carbon

### Life Cycle Analysis

Eco-design material : Mode constructif en caissons bois/paille Bardages châtaignier et chêne Parement en granit local Cloisons isolées en Métisse (acoustique)  
Cloisons en terre

Contest

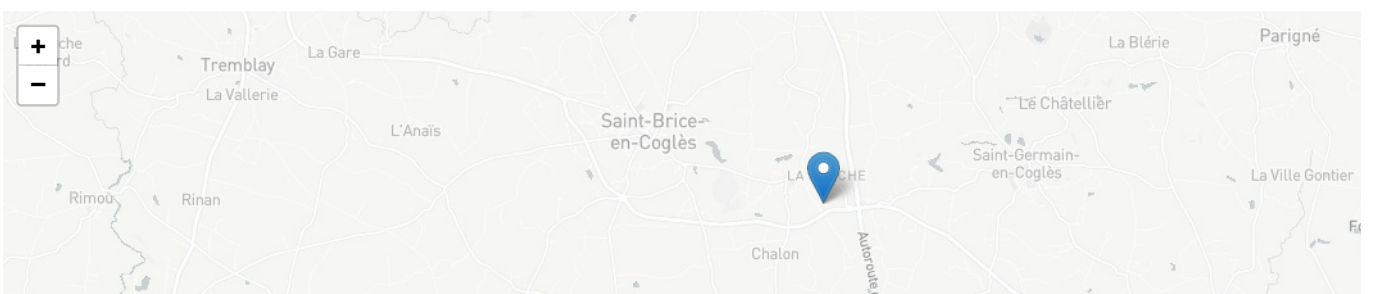
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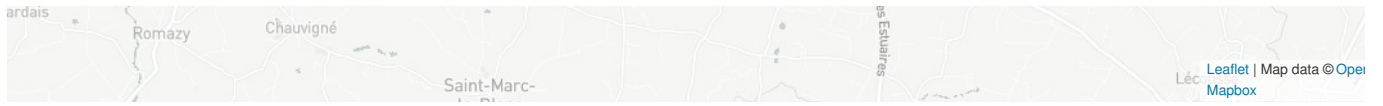


Bas Carbone



Coup de Cœur des Internautes





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