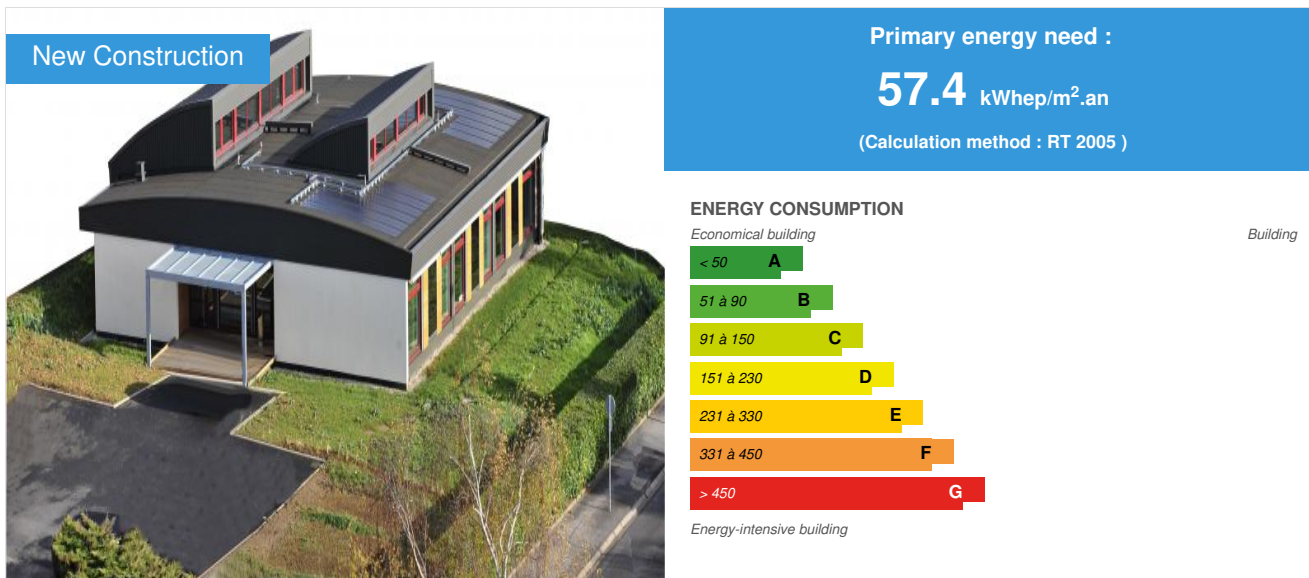


Offices and exhibition hall CNIDEP in Laxou (54)

by Marie-Laure Aubriot / 2014-06-24 00:00:00 / France / 4907 / FR



Building Type : Office building < 28m
Construction Year : 2009
Delivery year : 2009
Address 1 - street : 4 rue de la Vologne 54520 LAXOU, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 366 m² SHON
Construction/refurbishment cost : 786 000 €
Cost/m2 : 2147.54 €/m²

Proposed by :



General information

- Self-declared HQE® approach
- LQE (Environmental Quality in Lorraine) 2011 and PREBAT 2008 Prize winner

CNIDEP (National Innovation Centre for Sustainable Development and the Environment in Small Business) building is a permanent exhibition site for technologies for energy consumption control in buildings (structure, materials, heating and ventilation types).

The building is meant to receive students and professionals, as well as to host the CNIDEP headquarters offices. The contractor wanted a building with a HQE® approach and a 0 kWh energy balance. The operation is meant to be exemplary, repeatable and especially didactic.

Sustainable development approach of the project owner

- Self-declared HQE® program
- LQE 2011 and PREBAT 2008 Prize winner

CNIDEP (National Innovation Centre for Sustainable Development and the Environment in Small Business) building is a permanent exhibition site for technologies able to control energy consumption of a building in terms of structure, materials, heating and ventilation types.

The purpose of the building is to receive school population and craftsmen as well as the CNIDEP headquarters offices. The contractor wanted a building with a HQE® approach and an energy balance of 0 kWh. The operation is meant to be exemplary, repeatable and especially didactic.

Low environmental impact building site

- Waste reduction and sorting
- Upstream preparation of the wood building elements
- Noise pollution <85dB 10m
- Charter of green building site
- Choice of local craftsmen

Hygrothermic:

- Double-flow CMV for heating and ventilation.
- Solar protections

Acoustic comfort:

- Acoustic false ceilings

Visual comfort

- Use of devices to manage the risk of glare by daylighting

Architectural description

The building has 8 offices and a meeting room that can accommodate 40 people.

See more details about this project

http://www.lqe.fr/home/upload/fiches/FicheCNIDEP_LaxouDesREX.pdf

Stakeholders

Stakeholders

Function : Contractor

CNIDEP - Chambre de Métiers et de l'Artisanat de Meurthe-et-Moselle

Function : Assistance to the Contracting Authority

Vitalis architecture

<http://vitalis.architecture.pagesperso-orange.fr/>

Function : Designer

AUP Lorraine Jacky MONCUIT Benjamin FEDELI

Function : Structures calculist

Sédime

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

Function : Thermal consultancy agency

Energico

Function : Structures calculist

Omnitech

<http://omnitech-ingenieriedubatiment.sitego.fr/>

Function : Other consultancy agency

BET TECC

Function : Company

Adami Construction

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

Function : Company

Couvrétanche

Function : Others

APAVE Alsacienne

<http://www.apave.com>

Energy

Energy consumption

Primary energy need : 57,40 kWh/m².an

Primary energy need for standard building : 231,00 kWh/m².an

Calculation method : RT 2005

CEEB : 0.0002

Breakdown for energy consumption : Heating: 3.97 kWh FE / m².year

Ventilation: 3.74 kWh FE / m².year

Lighting: 14.55 kWh FE / m².year

Real final energy consumption

Final Energy : 22,00 kWh/m².an

Real final energy consumption/m² : 24,81 kWh/m².an

Envelope performance

More information :

- Wood -frame, -envelope and -joinery, metal cladding
- Perforated brick coated with lime
- Insulation of cork under a concrete floating screed
- Wall and sub-roofing insulation using cellulose wadding
- Walls insulation with of hemp wool
- Compact Building
- Internal insulation
- Triple glazing
- Shutters and awning to avoid overnight heat losses
- Passive Solar (South-facing offices), optimization of the south glazed parts

Renewables & systems

Systems

Heating system :

- Geothermal heat pump
- Solar thermal

Hot water system :

- Individual electric boiler

Cooling system :

- No cooling system

Ventilation system :

- Nocturnal ventilation
- Double flow heat exchanger

Renewable systems :

- Solar photovoltaic
- Solar Thermal
- Heat Pump on geothermal probes

Other information on HVAC :

The consumption monitoring can detect unjustified overconsumptions.

Environment

Urban environment

Land plot area : 366,00 m²

- Close to the Maison des Métiers which works with the CNIDEP
- Located in front of the Maison des Métiers, the new building does not suffer from scope shadow
- No problem caused by the bypass traffic.

Costs

Construction and exploitation costs

Cost of studies : 114 000 €

Total cost of the building : 786 000 €

Subsidies : 874 350 €

Health and comfort

Water management

- Reduction of drinking water consumption
- Rainwater infiltration on parking

Indoor Air quality

- Use of materials and interior furnishings with low VOC emission

Carbon

Life Cycle Analysis

Eco-design material : Wood; lime; liege; cellulose wadding; hemp wool

