



Allocation Fund Family Cotes d'Armor

by FRANCK BOUTTE CONSULTANTS / 2014-02-25 19:34:30 / France / 6205 / FR

Primary energy need :
71.63 kWh_{ep}/m².an
 (Calculation method : RT 2005)

ENERGY CONSUMPTION

Consumption Range (kWh _{ep} /m ² .an)	Grade	Building Grade
< 50	A	A
51 à 90	B	
91 à 150	C	
151 à 230	D	
231 à 330	E	
331 à 450	F	
> 450	G	

Economical building (Grades A-C) / *Energy-intensive building* (Grades D-G)

Building Type : Office building < 28m
Construction Year : 2013
Delivery year : 2013
Address 1 - street : Avenue des Plaines Villes - ZAC des Plaines Villes 22440 PLOUFRAGAN , France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 7 000 m² SHON
Construction/refurbishment cost : 12 200 000 €
Cost/m2 : 1742.86 €/m²

Certifications :



General information

The design team worked very early in the project to combine in a common sense approach an architectural quality, environmental quality and economy Project.

This approach leads to transverse processes that combine scales . A route from the general to the particular, we discuss the location, morphology, materiality, spatiality, systems and practices, and we will cross with HQE themes. In this process, we have sought to emphasize simple and coherent choices that attach to the intrinsic qualities of the building to handle a maximum of passive environmental requirements (Cref -50% effinergie label) instead of installing expensive investment and operating systems to register fully in a "sustainable" strategy.

The specificity of this project lies in the fact of having to meet closer to the expectations of project management, both in terms of energy and in terms of operating and maintenance costs, develop an alternative to ., double flow ventilation by natural ventilation system on solar chimney for much of the year

Sustainable development approach of the project owner

Aware of its responsibility in sustainable development and its duty to set an example, the Family Allowance Cotes d'Armor wishes to include the construction of its new headquarters in a pilot sustainable development. The building is located on the grounds of the ZAC Plains cities Ploufragan whose Layouts is enrolled in a demarche "sustainable neighborhood," according to ISO 14001, in order to reduce the damaging effects of the activities of this new neighborhood on the environment and to improve the environmental and energy performance. The ambition of the Caisse d'Allocations Family Cotes d'Armor was to design a copy Layouts his parcel, which meets the needs of the present without compromising those of future generations. The Family Allowance accordingly has aspired to make this building a successful union between economic, social and environmental. The will of the Family Allowances Fund of Cotes d'Armor, supported in this by the CNAF and UCANSS via their respective commitments for Sustainable Development, was to enroll in this initiative to the "tertiary Building Certification HQE" for his seat. The environmental performance objectives, specific to the operation, were determined by compiling the potential and constraints of the site, the expectations of interested parties and own specificities to the operation (budget planning). INTEGRATE the building has ZAC create landscapes and outdoor areas of pedagogical MASTER the operating costs of the building, with a view of exemplary management and energetics innovation, targeting the EFFINERGIE label (RT2005 '50%). ENSURE working conditions and home quality. GUARANTEE confidentiality between spaces. ENCOURAGE managers by setting 'When carrying out the selective sorting behavior.

Architectural description

The building acknowledges induced by the shape and topography of the plot directions. The heart of the project is symbolized by a triple height rotunda, lighted by a glass roof on its top. Three wings are secondary bati bodies radiate around it while espousing the land boundaries. The major space project features ground-floor lobby of the beneficiaries and the public services associated. The fully glazed facades of the rotunda highlight the volume. To the next level, south facade, a fishnet wood provides sun protection offices and points of entry space of the building street side. The wings are designed in order to offer a wide central circulation generously lighted by windows which distributes modular offices. The natural lighting workplace is an integral part of the project design. Traffic widens punctually way to offer areas of relaxation in double height. Volume located between the wings and the rotunda and articulate all host specific purpose of the project: the vertical distribution entirely open spaces of relaxation in conjunction with the glass roof and specific rooms to reunite. As a counterweight to the main space of the rotunda, each pinion of each wing hosts a characteristic area of the project: a logistics platform and delivery and double height spaces for cafeteria staff and the conference room.

See more details about this project

<http://www.anma.fr/FR/projet/CaissesAllocationsF>

Stakeholders

Stakeholders

Function : Contractor

Caisse d'allocations familiales des Côtes d'Armor

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

Function : Contractor

ANMA - Agence Nicolas Michelin Architectes

9 Cour des Petites Écuries 75010 Paris - Tél : 01 53 34 00 01

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

Function : Other consultancy agency

Franck Boutté Consultants

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<http://franck-boutte.com/>

Energy

Energy consumption

Primary energy need : 71,63 kWh/m².an

Primary energy need for standard building : 160,60 kWh/m².an

Calculation method : RT 2005

Breakdown for energy consumption : Heating = 6.43 kWh / m²Cooling = 3.59 kWh / m²Production DHW = 2.47 kWh / m²fans = 4.77 kWh / m²Lighting = 8.80 kWh / m²Auxiliary = 7.19 kWh / m²Photovoltaic = 5.48 kWh / m²

Real final energy consumption

Final Energy : 27,77 kWh/m².an

Envelope performance

Air Tightness Value : 1,74

Renewables & systems

Systems

Heating system :

- Geothermal heat pump
- Electric floor heating

Hot water system :

- Other hot water system

Cooling system :

- Geothermal heat pump
- Floor cooling

Ventilation system :

- Natural ventilation

Renewable systems :

- Solar photovoltaic

Renewable energy production : 16,00 %

Smart Building

BMS :

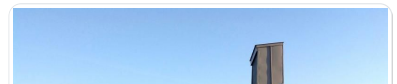
Monitoring of water consumption / heat / cold, Performance Monitoring of natural ventilation (opening / closing registers solar chimneys), Follow-up was comfortable with alarm overventilation.

Products

Product

Natural ventilation with solar chimneys

Product category : Génie climatique, électricité / Ventilation, rafraîchissement



Health and comfort

Water management

Recovery of rainwater for toilets. Total consumption (excluding maintenance and system) estimated at 4.26 m³ / d (0.0006 m³ / m²) with 2.63 m³/day of rainwater. Water circuit knew the park with basin management retention recovery of EP for watering.

Indoor Air quality

Limitation of pollution at source (quality of interior coatings), scanning effective parts

Carbon

GHG emissions

GHG in use : 3,00 KgCO₂/m²/an

Methodology used :

RT2005

Building lifetime : 50,00 année(s)

Contest



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