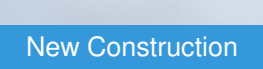



12 rue de l'Ermitage - 75020 - SIEMP

by [lionel mure](#) / 2015-06-18 13:30:15 / France / 15001 / FR

Primary energy need :
39.29 kWhep/m².an
 (Calculation method : RT 2005)

ENERGY CONSUMPTION

Economical building *Building*

< 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	

Energy-intensive building

Building Type : Collective housing < 50m
Construction Year : 2014
Delivery year : 2014
Address 1 - street : 12 rue de l'Ermitage 75020 PARIS, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 565 m² SHON
Construction/refurbishment cost : 1 448 036 €
Number of Dwelling : 8 Dwelling
Cost/m2 : 2562.9 €/m²

Certifications :



General information

Social housing composed of 8 units and delivered in 2014. The goal of zero energy for new construction operation after demolition of an unsafe building.

Sustainable development approach of the project owner

Siemp's approach of sustainability was initiated in 2004 with the signature of the "Charter for sustainable development in the production of social housing".

Architectural description

Adequacy, sensitive listening and generosity characterize this small urban part producing only few shadows on the environment. Atypical although perfectly integrating the rural landscape, the project proposes to Villa Hermitage a new threshold. The project, thought more like a big house than an apartment building, consists of the following: a volume dug north and south and then fragmented in its center

to offer common areas (corridors and stair) a visual relationship with environment.

For most unique in their partitioning, apartments open very differently to the outside depending on the situation. Thus, when smaller homes have two or three directions (except studios), some 4-room apartments enjoy up to six different orientations. In addition, each unit has been designed so as to appear larger than it is in truth.

Based on the recommendations developed by the Effinergie, the SIEMP considered an operation of 8 positive energy housing (producing more energy than it consumes). 67m² of photovoltaic panels and 12m² of solar thermal collectors were therefore carefully integrated to the terrace, so that technical solutions do not spoil the architectural harmony of the building. Thermal triple glazed low-emissivity joinery, natural lighting of common areas, collective condensing gas boiler, simple ventilation hygro-adjustable flow with air inlets planned in the masonry and reinforced insulation are also involved in the thermal performance of the building.

The building constructed today appears as a strange and familiar form, born of matching sense of place, urban rules, the maximum light and energy capture, but above all a desire to "Live Here" with others.

See more details about this project

Stakeholders

Contractor

Name : Elogie-Siemp

Contact : l.mure@elogie-siemp.paris

<https://elogie-siemp.paris/>

Construction Manager

Name : Raphaël Gabrion

Stakeholders

Function : Contractor

Siemp

Constance Meurisse (c.meurisse@siemp.fr) et Lionel Mure (l.mure@siemp.fr)

<http://www.siemp.fr>

The SIEMP manages some 11,000 homes, 400 industrial premises and 5,000 parking spaces for a half in Paris and the other half in the suburbs. Social landlord and builder of social housing, the SIEMP played a major role in PolitiQ

Function : Construction Manager

ARG

Raphaël Gabrion

http://www.lecourrierdelarchitecte.com/article_6386

Function : Thermal consultancy agency

BECT

http://www.bect.fr/1_01.htm

Function : Company

FARC

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

Type of market

Realization

Energy

Energy consumption

Primary energy need : 39,29 kWhep/m².an

Primary energy need for standard building : 123,63 kWhep/m².an

Calculation method : RT 2005

CEEB : 0.0001

Breakdown for energy consumption : In kWhep / m²SHON Heating = 16.7; Hot Water = 14.7; Lighting = 6.9; Auxiliary = 2.0 ; Ventilation = 3.0 ; Photovoltaic Panels = -47.8

Real final energy consumption

Final Energy : -4,50 kWh_{ep}/m².an

Envelope performance

Envelope U-Value : 0,31 W.m⁻².K⁻¹

More information :

EXTERNAL JOINERY: - wooden frame, thermal low-emissivity triple glazed with a double-blade argon-field glazed

EXTERNAL FACADES (depending the facade) - hydrated lime plaster on insulation PSE TH30 150mm plates. - Larch cladding insulation on 220mm PSE TH30 plates

WALLS ON NON HEATED LOCAL: - Plaster partition lining + Polyurethane insulation TH22 100mm

UNDER RAKING INSULATION: - Glass wool TH32 three crossed layers of 100mm or 300mm

Building Compactness Coefficient : 0,63

Indicator : n50

Air Tightness Value : 0,40

<https://www.construction21.org/france/data/sources/users/5376/cep-ubvat-deperd-ermitage-doe-140404.doc>

More information

The building has been delivered in late 2014, we have not yet returned to full consumption cycle (all the inhabitants did not arrive at the same time, have to wait until the 2015-2016 heating season to have coherent observations) .

Renewables & systems

Systems

Heating system :

- Condensing gas boiler

Hot water system :

- Condensing gas boiler
- Solar Thermal

Cooling system :

- No cooling system

Ventilation system :

- Single flow
- Humidity sensitive Air Handling Unit (Hygro B)

Renewable systems :

- Solar photovoltaic
- Solar Thermal

Renewable energy production : 110,00 %

Environment

Urban environment

Land plot area : 287,00 m²

Built-up area : 84,00 %

The plot located at 12 rue de l'Hermitage is located in the northern part of the 20th arrondissement of Paris, on the west of Belleville Park. Hermitage Street connects Pyrenees Street to Ménilmontant Street. The closest metro stations are Jourdain, Pyrenees (line 11) and Ménilmontant (line 2).

Located in the heart of the charming Hermitage neighborhood in the 20th arrondissement of Paris, the plot once occupied by tall trees and an old theater in ruins, is surrounded by routes on three sides: the Hermitage street to the West, The Villa of the Hermitage in the north and the impasse Louis Robert, a private street on the south with no direct view allowed. The housing project balances the urban planning rules, the spirit of Parisian villas and ambition of a positive energy

operation whose technical complexity knows how to be forgotten.

Products

Product

SUNPOWER photovoltaic solar panels

Sunpowercorp

0800 7867 6937

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

Product category :

In addition to an energy efficient building, the 38 photovoltaic panels, installed in the upper part of the south facade, help offset the buildings energy consumption and achieve zero energy. The system connected the 03/03/2014 produced 1245kWh during the first month.



The risk was to meet objections on landscape integration of this "black" facade. The ambitious objectives of the City of Paris in terms of renewable energy (Climate Plan 2007) helped to support this proposal and no reservations were made by local residents.

Solar thermal collectors DIETRISOL POXER

De Dietrich

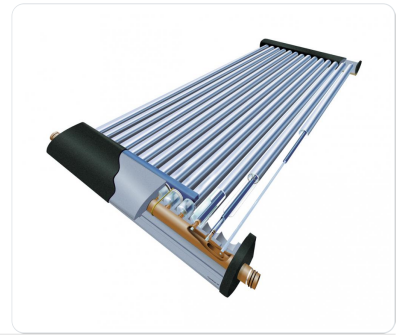
0825 33 82 82

http://pro.dietrich-thermique.fr/fr/produits/gammes_de_produits/installations_solaires/solaire_collectif

Product category : Génie climatique, électricité / Chauffage, eau chaude

The solar collectors positioned on the roof, providing a preheating of water which reduces the consumption of gas for the production of domestic hot water; they contribute to the weakness of the building's energy needs.

Solar tubes are located on the roof and are slightly visible. It is a solution implemented by SIEMP for several years.



Air inlets masonry ALDES MTC

ALDES

01 43 91 65 65

<http://testpro.aldes.fr/html/entrees-d-air-et-grilles-d-aeration-manchons-et-accessoires-manchons-traversee-de-mur-circulaire-mtc-acoustique-pour-entree-d-air.htm>

Product category : Génie climatique, électricité / Ventilation, rafraîchissement

The establishment of masonry air inlets can handle residential ventilation without weakening the thermal insulation of the frame exterior joinery. This allows a better management of acoustic and thermal insulation and a better control of the air tightness value of the building.

The air intakes require more polished masonry architectural treatment, because of their greater visibility compared to classical air inlets put on a carpentry.



Costs

Construction and exploitation costs

Cost of studies : 200 953 €

Total cost of the building : 2 179 543 €

Subsidies : 66 675 €

Carbon

GHG emissions

GHG in use : 6,70 KgCO₂/m²/an

Methodology used :

A carbon audit on the operational stage was completed in preliminary study phase (November 2011), using the © ADEME method.

Building lifetime : 50,00 année(s)

Only CO2 emissions in use were studied.

Contest

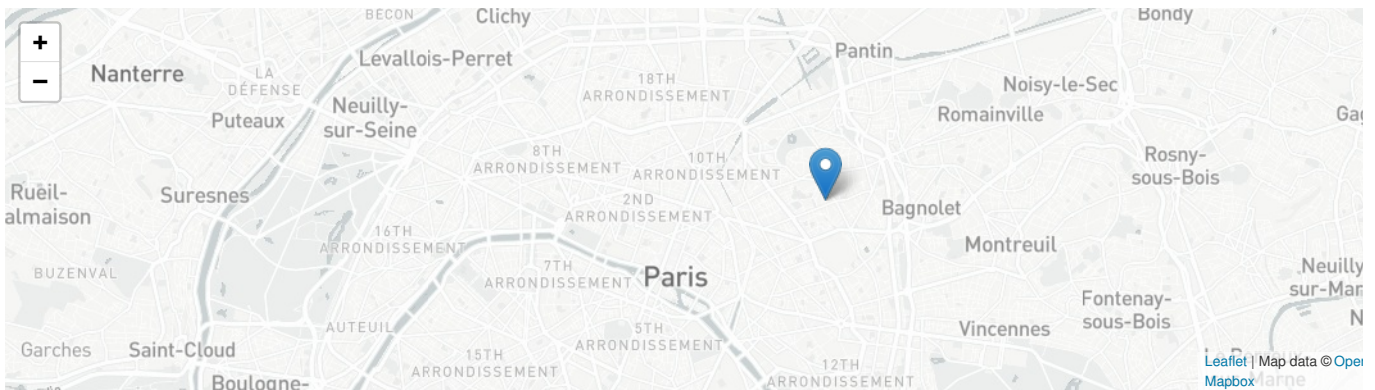
Reasons for participating in the competition(s)

- Effinergie + Label
- Photovoltaic and solar thermal for production of renewable energies greater than needs (110%)

Building candidate in the category



Bâtiment zéro énergie



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