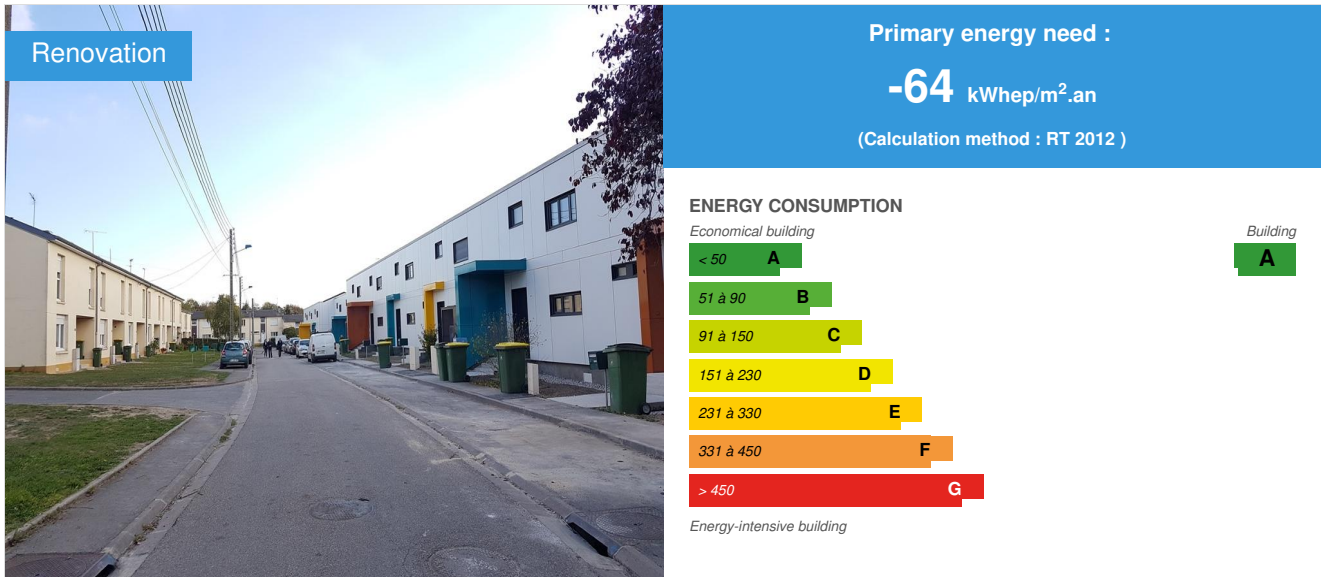


LONGUEAU E=0

by VIRGINIE CARCHIDI / 2019-06-07 10:02:18 / France / 7200 / FR



Building Type : Isolated or semi-detached house
Construction Year : 1965
Delivery year : 2018
Address 1 - street : 175-189 rue du Maréchal Joffre 80330 LONGUEAU, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 960 m²
Construction/refurbishment cost : 1 483 703 €
Number of Dwelling : 12 Dwelling
Cost/m² : 1545.52 €/m²

General information

Exemplary thermal renovation of 12 individual flats following an ENERGIESPRONG protocol developed by the Netherlands. Maintenance over 30 years is added to ensure the energy level = 0. This operation was the subject of a European grant.

Energy renovation with prefabrication of façade elements and efficient thermal systems. Energy expenditure is offset by photovoltaic electricity production

The strong points are:

- Energy performance 0 guaranteed over 30 years.
- Photovoltaic panels forming complete roofs
- Pre-fabricated facades with insulation to reduce construction time and produce less nuisance
- Compact and powerful energy modules
- Monitoring consumption by housing and use to check performance achievement
- Raising tenant awareness on good eco-gestures for 30 years
- Optimization of the time of works in occupied site.

Sustainable development approach of the project owner

ICF HABITAT NORD-EST is a social housing company. His constant attention is focused on the control of costs and rental charges. All our construction,

renovation or maintenance projects are seen in the light of the mastery of loads and maintenance as well as an ideal to be pro-active in the development of eco-energy model (solar, wood, etc. ...). In this sense the ENERGIESPRONG model developed by the Netherlands is an innovative approach that reduces both the costs of intervention and rehabilitation on existing buildings and to promote a significant reduction in energy costs for our tenants. ICF Habitat Nord-Est therefore wanted to join this first French experience that was supported by European funding. The stake is to reduce the time of rehabilitation in occupied environment and to respect a final commitment of an energy expenditure equal to 0 (Energy consumption = Energy production). The works contract is a supervision, with a 30-year maintenance to ensure the sustainability and viability of the E = 0 model.

Architectural description

12 individual units in strip with efficient insulation and wood chipboard cladding. Photovoltaic panels along the entire length of the two slopes form roofs.

Building users opinion

The return of the occupants a few months after the end of the work is positive. The feeling of well-being in housing is increased. It is necessary to wait another year of heating to have a complete return on the mastery of the energy charges. Individual coaching is done regularly either at the request of the lessor or at the request of the occupant on all energy uses of housing.

If you had to do it again?

Massification of this model will reduce both construction costs and response times. The contacts with the dealers beforehand are a necessity to make them apprehend the novelty and the necessary reactivity to these works.

Photo credit

ICF NORTHEAST HABITAT

Stakeholders

Contractor

Name : ICF HABITAT NORD-EST

Contact : Patrick Goeuriot - Directeur Patrimoine - patrick.goeuriot[at]icfhabitat.fr

Construction Manager

Name : ALTEREA (BET THERMIQUE) + RANSON-BERNIER (Cabinet Architecture)

Contact : M. Julien GASPARIK - RANSON BERNIER - Vincent TRIBOUT

Stakeholders

Function : Company

BOUYGUES CONSTRUCTION + DALKIA

M. Boris LEFEVRE - BOUYGUES - bo.lefebvre@bouygues-construction.com

Contracting method

General Contractor

Type of market

Realization

🔗 Conception-Realisation-Maintenance

Energy

Energy consumption

Primary energy need : -64,00 kWhep/m².an

Primary energy need for standard building : 164,00 kWhep/m².an

Calculation method : RT 2012

CEEB : 0.0002

Initial consumption : 289,00 kWh/m².an

Envelope performance

Renewables & systems

Systems

Heating system :

- Heat pump

Hot water system :

- Other hot water system

Cooling system :

- No cooling system

Ventilation system :

- Humidity sensitive Air Handling Unit (Hygro B)

Renewable systems :

- Solar photovoltaic
- Heat pump

Renewable energy production : 100,00 %

Other information on HVAC :

HEAT PUMP YUTACHI AIR / AIR

THERMODYNAMIC BALLOON ATLANTIC AQUACOSY ON AIR EXTRACT WITH VMC HYGROREGLABLE

PHOTOVOLTAIC PANELS QUANTUM CONSTITUTING ROOFS

Smart Building

BMS :

Monitoring and platform for the monitoring of thermal equipment to provide proof over 30 years of a final consumption = 0

Environment

Urban environment

pavillonnaire

Products

Product

ENERGIESPRONG

ENERGIESPRONG est un concept hollandais qui promeut une réduction des coûts de réhabilitation par la préfabrication des équipements (notamment façades) et une suivi énergétique performant.

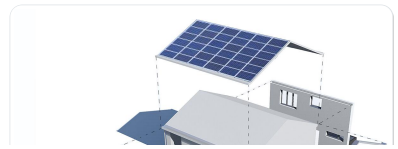
FACADES PREFABRIQUEE EN USINE par la société AMBOIS, sous-traitant de BOUYGUES CONSTRUCTION

Product category : Structural work / Structure - Masonry - Facade

The energy renovation covered the entire envelope. See ETH and DPE

- COMBLES, ISOLENE 25 cm
- FACADES, GLASS WOOL 30 CM
- MENUERIES TRIPLE GLAZING
- CAVE, flocking 15 cm

The ENERGIESPRONG project is a model of thermal rehabilitation that has been realized in design-realization-maintenance. As a result of this project, tenants benefit from lowering their charges and providing energy support for the use of housing throughout the E = 0 performance verification period.



Costs

Construction and exploitation costs

Global cost : 1 843 480,00 €

Renewable energy systems cost : 210 000,00 €

Global cost/Dwelling : 153623.33

Cost of studies : 200 000 €

Subsidies : 600 000 €

Carbon

GHG emissions

GHG in use : 4,00 KgCO₂/m²/an

Methodology used :

See thermal study and DPE

GHG before use : 63,00 KgCO₂ /m²

,ie xx in use years : 15.75

Contest

Reasons for participating in the competition(s)

La rénovation énergétique des bâtiments existants est une problématique majeure des années à venir et notamment du parc individuel. L'expérience portée par ce projet dans le contexte du logement social pourrait à terme baisser les coûts de réhabilitation thermique du parc individuel mais également collectif, par une massification du concept et donc une baisse des coûts de fabrication (façades notamment).

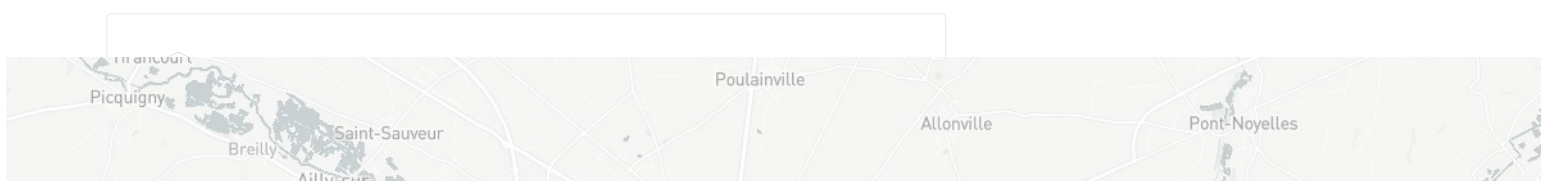
Building candidate in the category



Energie & Climats Tempérés

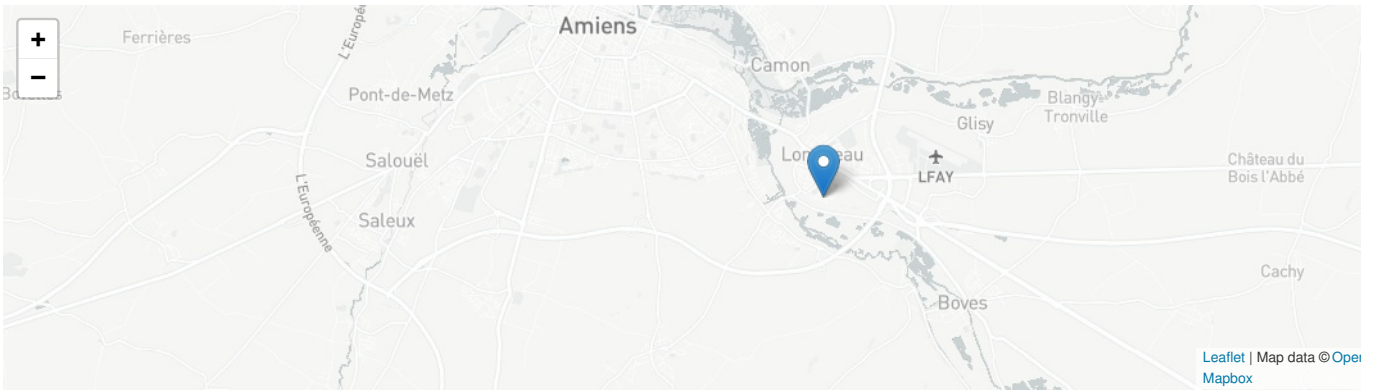


Prix du public





Prix des Etudiants



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