


60 st Albert condominium

by Eric Burgstahler / 2019-02-21 22:46:10 / Francia / 6068 / FR



Renovation

Primary energy need :
226 kWhep/m².an
 (Calculation method :)

ENERGY CONSUMPTION

Economical building *Building*

< 50	A	
51 à 90	B	
91 à 150	C	
151 à 230	D	D
231 à 330	E	
331 à 450	F	
> 450	G	

Energy-intensive building

Building Type : Collective housing < 50m
Construction Year : 1889
Delivery year : 2018
Address 1 - street : 75013 PARIS, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 1 462 m²
Construction/refurbishment cost : 434 575 €
Number of Dwelling : 48 Dwelling
Cost/m2 : 297.25 €/m²

General information

In 2008, given the condition of its facades, the condominium of 60 rue Albert was approaching a time when a renovation was necessary. In addition, apart from its damaged facades, the building reacted badly to the summer (the apartments quickly became very hot) and cold (condensation dripped on the interior walls of some apartments), and the prices of energy were increasing steadily and strongly.

The union council, already aware of the issue of global warming and the interest of improving energy buildings, discovered, on the occasion of the "Parisian Days of Energy and Climate", the existence of the program " Condominium Objectif Climat "which had just been set up. He then proposed to the GA of the condominium not to embark on a simple remodeling, but to take advantage of this program to perform an energy audit beforehand.

This event marked the beginning of the project:

- in 2009, the launch of the energy audit was adopted (unanimously)
- in 2010, the results were presented
- in 2011, the condominium voted (unanimously) an envelope to appoint a master builder responsible for preparing a file for energy renovation
- in 2012, a social study of the building was carried out (to launch adapted assistance files) and agreements were signed with the adjoining condominiums (to have their agreement to isolate the party walls)
- in 2013, the works were voted (unanimously).

-in 2014, work starts

-in 2015, the works are received - with reservations (bearing fortunately on secondary aspects) which, alas, the treatment will spread over 3 years.

The works carried out consisted of:

-isolate the entire building envelope (walls, attics, cellar ceilings, carpentry),

-create a VMC,

-switch to common economic lighting (LED),

-improve the only heating system that is a common part (the guardian's lodge), as an example and source of inspiration for the other flats (with a view to a possible 2nd phase, consisting of the improvement of heating systems).

At the end of this 1st phase of work, the condominium divided by more than 2 its energy consumption, from 491 kWh/m².year is the label "G" to 226 kWh/m² / year or the label "D" .

Sustainable development approach of the project owner

One of the motivations was to contribute to the fight against global warming by reducing the energy consumption of the building, and by improving the comfort of the occupants. For this, relying on a complete energy diagnosis, the condominium launched wholesale work aimed primarily at isolating the building envelope:

-insulation of the facades from the outside (rockwool R = 3.7)

-attic insulation lost (cellulose wadding R = 7)

-insulation of cellar ceilings (projected wool R = 3)

-replacement of joinery of all the voluntary co-owners (Uw w 1,3 / Sw > 0,3)

These insulation works were completed by the installation of a VMC simple self-adjusting flow. In addition, the lighting of the common areas have been replaced by LED lighting. The heating and hot water of the building being individual, they could not be treated (the opportunity to move to a collective system was nevertheless studied, but proved too complex and too expensive - at least for a first phase). Nevertheless, in order to serve as an example and to encourage the co-owners to switch to efficient individual systems, the housing equipment belonging to the co-ownership (the lodge of the guardian) has been reviewed: the convectors and the electric ball have been replaced by a system based on a gas condensing boiler.

Architectural description

The building of the condominium, dating from the late 19th century, consists of 2 buildings embracing an inner courtyard, and giving the back on a garden. It is built of terracotta bricks. The 2 buildings rise on 6 levels: a basement composed of cellars, a ground floor, and 5 floors. In each building, each floor has 4 studio or 2-room apartments, ranging in size from 26 to 37 m², and former common floor-level WCs. The main façades with carpentry are oriented West-South-West (street, courtyard) and East-North-East (rear facade, courtyard). Two unhooked and the connection between the two buildings has a North-North-West orientation. The architectural modifications (improvements) made during the energy improvement works were defined by exchanging with the Architects of Buildings of France, because the project is located in a perimeter of protection of the historical monuments. They consisted of:

-The re-creation of ribbons on the street facade, and the maintenance of the moldings

-The harmonization of joinery by adopting a unique model - with, on the street facade, the choice of wood joinery incorporating small decorative wood, and the installation of decorative profiles to recreate the projecting window sills

-The color of the street and interior façades in beige sediment, and the brick-back facade (so as to harmonize with neighboring buildings)

-Moving the guardrails of the street facade due to the addition of thickness of ITE

-Masking downspouts and downspouts

-The alignment of the upper limits of the storefronts of the two shops overlooking the street

Building users opinion

The occupants are satisfied with the works, which have improved their living conditions, reduced their costs, and added value to their property, all at a favorable cost thanks to the aid that the project benefited from (the cost was almost nil for co-owners with very modest incomes (according to the Anah criteria), and of the same order of magnitude as a simple remodeling for others).

If you had to do it again?

We would do it again without hesitation. Nevertheless, we would try to better choose the company in charge of the works. Indeed, these lasted much longer than expected: 325 days late, to which must be added the lifting of the reserves (which fortunately only concerned minor points) which has spread over more than 3 years. We would try to be more convincing with the few co-owners with modest resources who did not dare ask for the replacement of their windows because they did not believe that the help would cover their costs (which proved to be the case for those who believed in these helps).

See more details about this project

<https://paris.coachcopro.com/media/download/5196>

<https://paris.coachcopro.com/fiche-de-site/e3fbb9b8-6bbf-4d00-9e80-2448799192d7>

Stakeholders

Contractor

Name : Conseil Syndical de la copropriété 60 rue Albert 75013 Paris

Contact : Eric Burgstahler, président du Conseil syndical, xeb (a) free.fr, 06 17 52 84 89

Construction Manager

Name : Paziaud (groupe Nepsen), 20 rue Félix Faure 94300 Vincennes

Contact : Bruno Camelot, bruno.camelot (a) paziaud.fr, 06 17 61 53 61, 01 49 80 10 83

<https://nepsen.fr/agences/paziaud-sa/>

Stakeholders

Function : Thermal consultancy agency

ENERA Conseil

Olivier Perchet, olivier.perchet (a) enera-conseil.com, 06 63 42 67 04

<https://www.enera-conseil.com/>

Energy audit

Function :

SRC Bâtiment Dumez

<http://dumez-idf.fr/france/dumez-idf.nsf/web/qui-sommes-nous.htm>

General building company

Energy

Energy consumption

Primary energy need : 226,00 kWh/m².an

Primary energy need for standard building : 204,00 kWh/m².an

Calculation method :

CEEB : -0.0001

Breakdown for energy consumption : Forecast final energy consumption (kWh):

- Heating: 56,472 (- 66% vs situation before works)

- ECS: 53,324 (- 16% vs situation before works)

- Ventilation: 6101 (non-existent before works)

- Auxiliary generation: 33 (- 72% vs situation before works)

- Distribution auxiliary: 240 (- 46% vs situation before works)

- Lighting: 4157 (- 0.96% vs situation before works)

Initial consumption : 491,00 kWh/m².an

Envelope performance

Envelope U-Value : 0,63 W.m⁻².K⁻¹

More information :

U-bat before works: 1,61 m².K / W

ITE rockwool walls: R = 3.7m².K / W

Cellar insulation: R = 3 m².K / W

Attic insulation: R = 7 m².K / W

Wooden windows on street and PVC on courtyard with U_w = 1.3W / m².K

Renewables & systems

Systems

Heating system :

- Condensing gas boiler
- Individual electric boiler
- Individual gas boiler
- Electric radiator
- Electric heater

Hot water system :

- Condensing gas boiler
- Individual electric boiler
- Individual gas boiler

Cooling system :

- No cooling system

Ventilation system :

- compensated Air Handling Unit

Renewable systems :

- No renewable energy systems

Environment

Urban environment

Land plot area : 576,00 m²

The building is located on a one-way street in the 13th arrondissement of Paris.

Products

Product

STO mineral board 036 Type I Ecorock

Rockwool

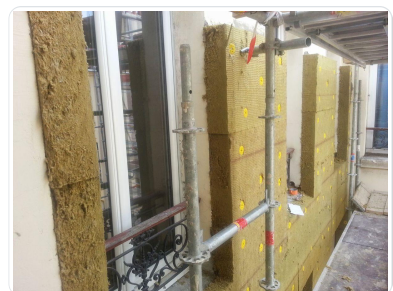
www.sto.fr

<http://www.sto.fr>

Product category : Table 'c21_spain.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 = '9'

Insulation panels, thickness 14 cm, R = 3.85

This rather classic product (mineral wool) was favored by the master builder, who feared a refusal by the town hall of a biosourced insulation type wood wool pattern "wood = fire risk" ...



Cellulose wadding

Soprema Univercell

<https://www.soprema.fr/fr/contact>

<https://www.soprema.fr>

Product category : Table 'c21_spain.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 = '9'

R=7

This product was ideal because the attics in which it was installed had irregular surfaces.



Isotherm Eurisol

Isotherm

info (a) eurisol.net

<https://www.eurisol.net/fr/produits/isotherm>

Product category : Table 'c21_spain.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 = '9'

R=3

The criterion that prevailed in the choice of this product was its insulating efficiency for a reduced thickness, which was necessary in view of the low ceiling height of the cellars in which it was projected.



Costs

Construction and exploitation costs

Cost of studies : 15 241 €

Total cost of the building : 434 575 €

Subsidies : 206 544 €

Carbon

GHG emissions

GHG in use : 18,55 KgCO₂/m²/an

Contest

Reasons for participating in the competition(s)

The thermal renovation carried out was ambitious and complete (floor - walls - roof - windows, VMC, lighting, and heating "witness / model" of the lodge of the guardian), especially as nearly a third of the co-owners have modest or very modest resources (according to Anah criteria). It was unanimously adopted.

Apart from improving the thermal characteristics of the building and thus reducing heating consumption during the cold period, the work has improved summer comfort, and eliminated the moisture problems that existed (condensation), while improving the aesthetics of the building.

At the end of the 1st phase of work the condominium divided by more than 2 its energy consumption, from 491 kWhep / m².year is the label "G" to 226 kWhep / m².year is the label "D" .

Building candidate in the category





Santé & Confort



Prix du public



Prix des Etudiants

