Novartis campus / Voyager

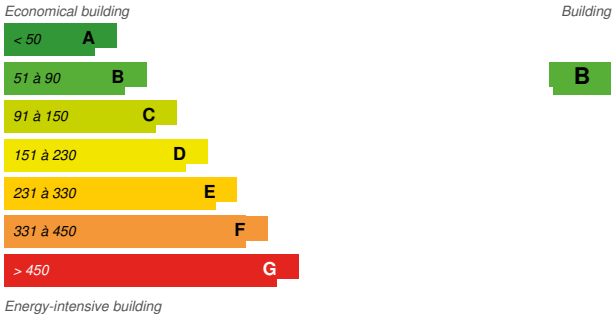
by Julien Wortrai / 2019-06-11 10:07:45 / Frankreich / 6094 / FR

Primary energy need :

55.8 kWhep/m².an

(Calculation method : RT 2012)

ENERGY CONSUMPTION



Building Type : Office building < 28m
Construction Year : 2016
Delivery year : 2019
Address 1 - street : 6-8-10 rue Henri Sainte Claire Deville 92500 RUEIL MALMAISON, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 42 000 m²
Construction/refurbishment cost : 130 000 000 €
Cost/m2 : 3095.24 €/m²

Certifications :

General information

The project is a real estate complex of offices located on a plot of 9,067 m² and develops a total of 42,000m² of floor area for a maximum workforce of 2,800 people. It comes from the meeting of two existing entities "Les Fontaines" and "Les Colonnades- Bât C". It has been developed to meet the planning rules both on the whole and for each of these parts.

The project is at R + 7 plus a level of technical premises.

It has a main reception area for office space and a secondary reception hall for the auditorium (ground floor and R + 1), with the ground floor a common eating area surrounding the patio. green and at R + 1 a fitness room. The R + 1 to R + 7 office trays are designed to operate in communication across the entire surface of both entities, with a division of 6 compartments per floor. Basements are developed on 1 or 4 levels, dissociated for each entity with each access ramp parking. There is a total of 870 vehicle parking spaces, with 10% dedicated to electric vehicles, including 3% equipped with charging stations.

Sustainable development approach of the project owner

The goal from the start is to obtain ambitious certifications / labels such as HQE exceptional, BREEAM premium and Effinergie +

Architectural description

The demolition-reconstruction project contributed to the revaluation of this office / activity area, former ZAC Sainte Geneviève.

The fairly typical architecture of the 1980s-90s, with low ceiling heights, as well as the new thermal regulations made these buildings less and less adequate to our time.

The reconstruction allowed to equip it with qualitative, rewarding, functional and particularly thermally efficient facades in order to achieve the Label Effinergie +

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Photo credit

Hervé ABBADIE / Video credit: Devisubox Thomas Castié

Stakeholders

Contractor

Name : BNP Paribas Immobilier Promotion Immobilier d'Entreprise
https://www.realestate.bnpparibas.fr/bnppre/fr/promotion/projets-phares/actualites/campus-novartis/campus-novartis-opportunite-immobilier-locatif-rueil-malmaison-p_1655605.html

Construction Manager

Name : QUADRIFIORE (Architecte de conception)
http://quadrifiore.fr/

Stakeholders

Function : Construction Manager

GEMO (Maîtrise d'oeuvre d'éxecution)

http://www.gemo-paris.com/nos-missions/maitrise-doeuvre-dexecution/

Contracting method

Off-plan

Energy

Energy consumption

Primary energy need : 55,80 kWhep/m^2.an

Primary energy need for standard building : 117,20 kWhep/m^2.an

Calculation method : RT 2012

Renewables & systems

Systems

Heating system :

- Condensing gas boiler

Hot water system :

- Condensing gas boiler
- Solar Thermal

Cooling system :

- Water chiller
- Radiant ceiling

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- Solar photovoltaic
- Solar Thermal

Renewable energy production : 4,00 %

Other information on HVAC :

Hot production by boiler gas (3 gas-fired boilers: 3x600 kW with 108% efficiency on PCI)
Cold production by GF with Dry cooler (3 GF water / water Comfort with EER of 4.1 and 1 Gf air / water Process with EER of 3.19)
DHW production in gas boiler + solar thermal booster (110 m²)
Installation of 300 m² photovoltaic solar panels with self-consumption (reinjected on TGBT)
Air handling by 6 CTAs (1 per office compartment), with 80% wheel recovery and G4 + F9 type filtration on fresh air
Flow rate of 33 m3 / h / person for offices and meeting rooms
CO2 probe installation in the meeting rooms
Terminal treatment of offices with 4-pipe / 6-way radiating ceilings

Environment

Urban environment

The project is located in the heart of the tertiary cluster of Rueil sur Seine. This buzzing dynamic district has many international companies such as SCHNEIDER, PSA and henceforth NOVARTIS

Products

Product

GTB

DISTECH / APILOG

https://www.distech-controls.com/

Product category : Table 'c21_germany.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 = '29'

GTB is scalable it works with multi-business boxes based on a BACnet IP protocol
The system is "Ready to service"

The GTB makes it possible to adapt building consumption (air exchange, hot / cold supply, dimming of lighting, presence detection, raising / lowering of occultations) to the needs of users at a given time.

Costs

Construction and exploitation costs

Total cost of the building : 130 000 000 €

Additional information on costs :

Costs per m²: 3095 € / m²

Carbon

GHG emissions

GHG in use : 2,60 $KgCO_2/m^2/an$

Methodology used :

Scope: heating, hot water production, cooling, lighting and auxiliaries Source: DPE

Contest

Reasons for participating in the competition(s)

The energy consumption of this building is one of its remarkable features. This level of performance is allowed in particular by:

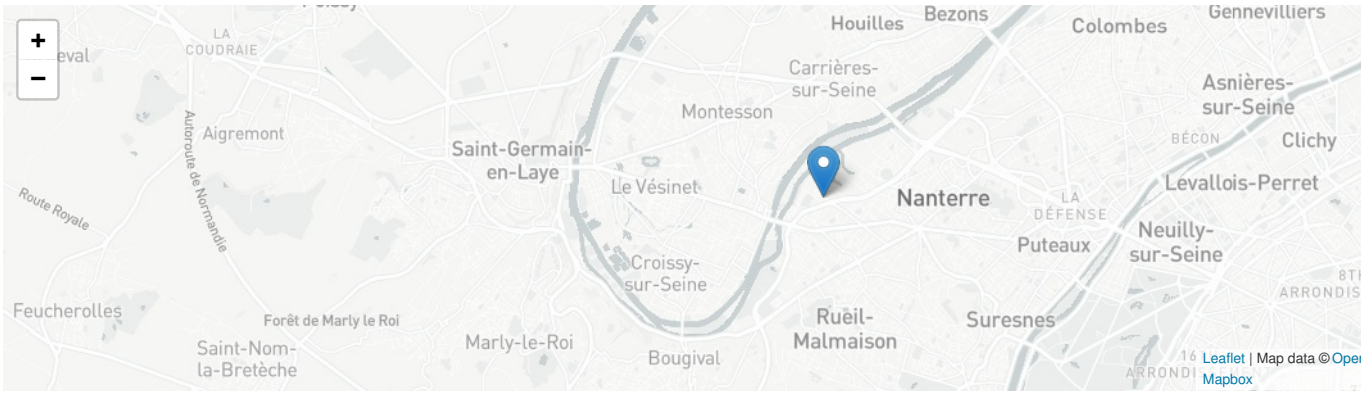
- the presence of photovoltaic panels and solar thermal tubes
- equipment in LED luminaires
- Evolutionary GTB based on a BACnet / IP protocol to adapt the supply of fresh air, hot / cold air and light to the needs of the building
- as well as a balance between the proportion of windows and piers

Building candidate in the category

Energie & Climats Tempérés

Prix du public

Prix des Etudiants

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Issy-les-
Moulineaux
Sèvres
Les Clayes-
sous-Bois
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LFPZ
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