CENTER PEREX

by Alessia VERZARO / 2019-06-19 09:07:03 / Belgique / 6759 / FR

Primary energy need :

26 kWhep/m².an

(Calculation method :)

ENERGY CONSUMPTION

Economical building *Building*

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

Energy-intensive building

Building Type : Office building < 28m
Construction Year : 2019
Delivery year : 2019
Address 1 - street : Rue Del'Grète 22 5020 NAMUR, Belgique
Climate zone : [Cbc] Mild, dry winter, warm and wet summer.

Net Floor Area : 7 884 m² Other
Construction/refurbishment cost : 9 509 725 €
Number of Work station : 150 Work station
Cost/m2 : 1206.21 €/m²

General information

Transformation and extension of the PEREX center in Daussoulx, the center of permanence and control of the motorways and waterways of Wallonia. This building is passive and NZEB. Alongside the choices related to the energy performance of the project, the design of this sustainable building also incorporates a set of design choices, **reducing its overall environmental impact** :

o Choice of building materials

o Water management

o Optimization of thermal comfort and well-being

Data reliability

Self-declared

Photo credit

Serge Brison

Stakeholders

Contractor

Name : FRANKI
Contact : Denis BOSSON - GSM : 0475/37.51.37 - MAIL : denis.bosson@franki.be
http://www.willemen.be

Construction Manager

Name : Sofico
Contact : Hélène RENARDY - GSM : 0471/86.21.41 - MAIL : helene.renardy@spw.wallonnie.be
https://sofico.org/fr/

Stakeholders

Function : Designer

Association momentanée : Atelier de l'Arbre d'Or - Altiplan

Cedric PONCELET - GSM : 0497/75.89.45 - MAIL : c.poncelet@arbredor.be

http://www.arbredor.be
Architecture

Function : Other consultancy agency

Bureau Greisch

Bruno BUSCH - GSM : 0477/43.63.01 - MAIL : bbusch@greisch.com

http://www.greisch.com
Stability / Special Techniques / Energy / Sustainable Development / Health Safety Coordination

---

Function : Company

IMTECH Belgium

Patrice TORDEUR - GSM : 0486/49.11.61 - MAIL : patrice.tordeur@imtech.be

http://www.imtech.be
Special technical subcontractors (HVAC & Electricity) and maintenance

Contracting method

Public Private Partnership

Architectural description

Intentions, starting point of the urban and architectural project:

o The main objective is to create a **specific place** at the Perex 4.0 center, in with Perex 1.0, in order to create a **coherent whole,** through a **qualitative landscape and urban planning approach** .

o The implementation of the new administrative building is defined in such a way as to make it **visible** and **accessible** from the public space, while taking full advantage of the **potential** of the site, in order to reinforce the existing landscape **qualities** and to **respect** the qualities of the related building. The main **lines of force** of the main roads and highways that make up the site are taken into account as part of this reflection.

o The various **constraints** related to the geographical location of the place, the specific program, the orientation, the visual perspectives or the goal of high environmental quality, are all **opportunities** to optimize the project and improve the immediate environment.

o The **singularity** of the program, located at the motorway **junction** of Wallonia, at the gates of its capital.

o The building is designed taking into account exterior **traffic** , accessibility and external mobility.

o Environmental and **sustainability specifications** are integrated at every stage of the design, from the definition of building **orientation** to details of construction, choice of materials, facilities and technical equipment.

Energy

Energy consumption

Primary energy need : 26,00 kWhep/m^2.an

Primary energy need for standard building : 65,00 kWhep/m^2.an

Calculation method :

Final Energy : 26,00 kWhef/m^2.an

Breakdown for energy consumption :
Heating: 12%
Lighting: 8%
Breakdown: 8%
Cooling: 16%
Humidification: 3%
Auxiliary: 1%
Office (DATA CENTER): 52%

More information :
26 KWHEP / M².AN only for extension.

Initial consumption : 200,00 kWhep/m^2.an

Renewables & systems

Systems

Heating system :
- Boiler fuel

Hot water system :
- Heat pump

Cooling system :
- Solar cooling
- Floor cooling

Ventilation system :
- Free-cooling
- Double flow heat exchanger

Renewable systems :
- Solar photovoltaic

Smart Building

BMS :
Based on the meters and sensors installed in the buildings, a program concerning energy monitoring of buildings will be proposed thereafter allowing to adjust the energy consumption during the first phases of exploitation (Commissioning) and to avoid by following all drifts of these consumptions (energy monitoring). The tools proposed for the verification of the energy performance of the project will therefore be as follows:

- Commissioning: Mission of assistance and advice for the regulation of the regulation parameters related to the energy systems present in the buildings, in operating conditions during the first year. This mission will be based on a monthly visit and a visit report including the energy balance of buildings and the adaptations and / or remarks to improve the regulation of the various systems. In addition, at the end of a full year of operation, an assessment of the real energy performance of buildings will be carried out, allowing a comparison of actual performance with those planned for design.

- Energy monitoring - M & V according to IPMVP: An energy monitoring according to the IPMVP protocol can be proposed thereafter. It will be based on a sensor / meter network placed within the building, and a computer platform for processing and analyzing data based on thermal simulations of the building. The objective is to provide a detailed, continuous and predictive analysis of the operation of the building (consumptions and comfort obtained). A service based on the skills of the design office will be proposed to advise and assist the client continuously based on the analyzes performed.

Environment

Urban environment

Homogeneity: by the perfect coherence of tones (white / gray), the play of simplified volumetrics and the assertion of the tower as connecting element, the **fusion** is perfect.

This perception is reinforced by **the complete covering of the perex 1.** 0 of a coating on insulation and its existing zinc cover.

The new center comes to take support on the ground, taking advantage of the differences of level to integrate the ground garden in a base.

On this base, the project comes to take support. The different slides between them to make the most of the resources they need.

Central place : motorway crossroads of Wallonia, the site has an important symbolism in the notion of control. We wanted to highlight this symbiosis between the site and the program.

Signal: The new control center proudly displays its central status.

Parking: We favored concentration rather than spreading, in order to optimize the landscape integration and the quality of the distributions.

1. A new 50-space car park (of which 36 reserved for the police) is created on the left of the project,

2. the current car park (in ground garden) and along the road is repacked in 55 locations.

3. The existing 15-seater pocket, located before the site, is maintained.

A total of 120 places (including 3 PRMs, in the immediate vicinity of the entrance).

Products

Product

Active floor

Giacomini

Yves ROEMEN - GSM : 0475/26.20.80

http://www.benelux.giacomini.com

Product category : Table 'c21_italy.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 = '19'

Optimal use of renewable energy sources
Complies with building sustainability certifications such as LEED, BREEAM and DGNB
Components largely maintenance free
Contribution to true sustainability.

Technique directly integrated into the building design.

Costs

Construction and exploitation costs

Total cost of the building : 9 509 725 €

Contest

Reasons for participating in the competition(s)

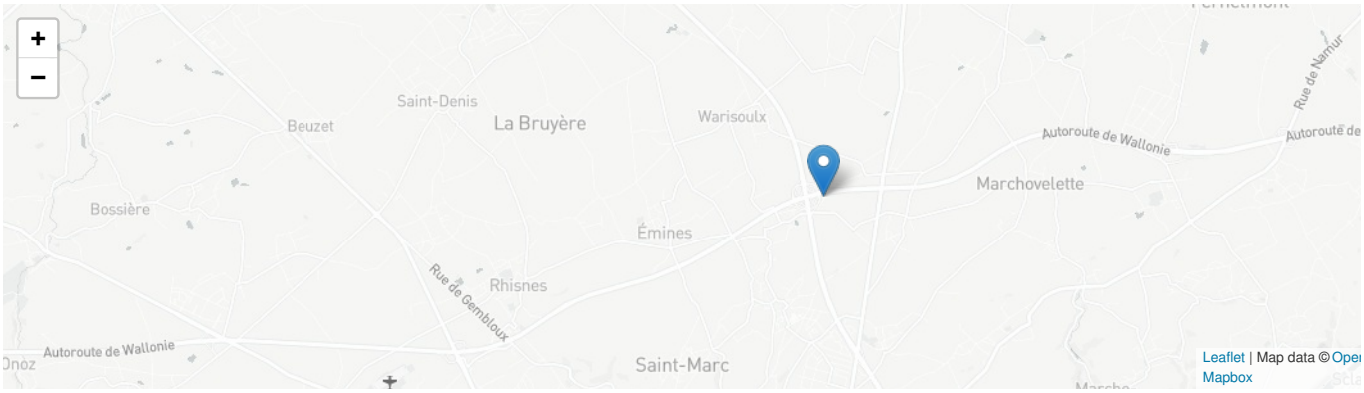
Sustainable, the innovative design choices of this building were designed to reduce the impact on the overall environment to obtain a passive building and beyond NZEB standards.
This resolutely contemporary project offers an identifiable architecture while meeting very demanding environmental and energy standards. It will also benefit from an optimal sun exposure mode thanks to the intelligent arrangement of the levels. High performance gives pride of place to new technologies.
Finally, the architecture will be simple and uncluttered to give free flow to the design and layout of spaces, while ensuring great flexibility of layout trays.

Building candidate in the category

Energie & Climats Tempérés

Smart Building

Prix du public



Date Export : 20230501175703