

Evaluation ENERBUILD-Tool – existing buildings [Nursery Crèche des papillons]



1 Basic information about the building

Name of the building	Crèche des Papillons
Address of the building	10 Allée du Rhin 38130 Echirolles, France
Owner/investor	Ville d'Echirolles
Year of construction	2009
Building type	Nursery
Building method	Wood frame, exterior insulation
Number of buildings	1
Number of levels above earth	1
Number of levels underground	0
Kind of the public use	Nursery for 20 children
Effective area for public use in m ² (net)	210
Additional private uses	0
Effective area for private use in m ² (net)	0
Total effective area in m ²	210
Source of energy for heating	District heating
Heating system	Radiator functioning with hot water
Water heating system	electric
Date of the building evaluation	18/12/2010

2 Execution of the building evaluation with the ENERBUILD tool

Responsible Organisation: Agence Locale de l'Energie et du Climat de l'agglomération Grenobloise

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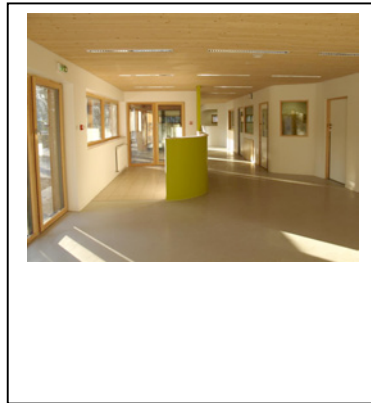
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Temperature for thermal comfort in summertime: 27 °C

Local limits for heating demand: 50 kWh/m²

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A		Quality of location and facilities		max. 100	96
A	1	Access to public transport network		50	46
A	2	Ecological quality of site		50	50
B		Process and planning quality		max. 200	90
B	1	Decision making and determination of goals		25	25
B	2	Formulation of verifiable objectives for energetic and ecological measures	M	20	0
B	3	Standardized calculation of the economic efficiency	M	40	0
B	4	Product-management - Use of low-emission products		60	10
B	5	Planning support for energetic optimization		60	30
B	6	information for users		25	25
C		Energy & Utilities (Passive house)		max. 350	350
C	1	Specific heating demand (PHPP)	M	100	100
C	2	Specific cooling demand (PHPP)	M	100	100
C	3	Primary energy demand (PHPP)	M	125	125
C	4	CO ₂ -emissions (PHPP)		50	50
D		Health and Comfort		max. 250	175
D	1	Thermal comfort in summer		150	150
D	2	Ventilation - non energetic aspects		50	25
D	3	Daylight optimized (+ lightening optimized)		50	0
E		Building materials and construction		max. 200	139
E	1	OI ₃ _{TGH+ic} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	139
Sum				max. 1000	850



4 Conclusions from the building evaluation with the ENERBUILD-Tool

a) Generally

Three stages are necessary for the evaluation of the building: collect the data and the information (written documents and exchange); redefine certain criteria of the assessment grid so that it is more coherent with the available data; complete the assessment grid. The longest part is the collection of the information; it is facilitated in this case because this building was a prize-winner for the call for projects Prebat (data easily available).

b) About the planning process

It seems more difficult to estimate a planning process when the building is already finished, initial objectives were able to evolve in the first phases of the project and the criterion B2 does not report this type of evolution of the objectives. For the evaluation of this planning the expected written documents are not always available

c) About the building itself

On the building, the number of points well reports a successful project on the energy sector (current labeling Passiv' haus) but which is also in phase with environmental considerations on the choices of materials and the management of the construction site.

d) About the evaluation process

For the energy part, the adaptation with the French statutory calculation must be clearly identified because at present only the values stemming from PHPP are considered in this assessment grid. For the criterion D3, it is centered on the acoustics of the installation and does not enough seem to report the quality of the ventilation.

5 Suggestions for improvement of the ENERBUILD-Tool

The ENERBUILD-Tool analyzes well aspects energetics and environmental but the criteria of evaluation are sometimes difficult to understand and require sometimes some adaptation.