

Evaluation ENERBUILD-Tool – existing buildings

Nursery of Chambéry le Haut



1 Basic information about the building

Name of the building	Pôle petite enfance Ferme de Julien
Address of the building	195, rue du Grand champ, 73 000 Chambéry, Savoie, France
Owner/investor	City of Chambéry
Year of construction	2010
Building type	Nursery
Building method	System mixed concrete/wood frame
Number of buildings	1
Number of levels above earth	2
Number of levels underground	0
Kind of the public use	
Effective area for public use in m ² (net)	618
Additional private uses	
Effective area for private use in m ² (net)	
Total effective area in m ²	618
Source of energy for heating	Heat network
Heating system	Heat network
Water heating system	Electric boiler
Date of the building evaluation	15-12-2010

2 Execution of the building evaluation with the ENERBUILD tool

Responsible Organisation: ASDER (Association de Développement des Energies Renouvelables),
Local energy agency

Contact person: Delphine Mugnier - Karine Le Diouron

Telephone: 04 79 85 88 50

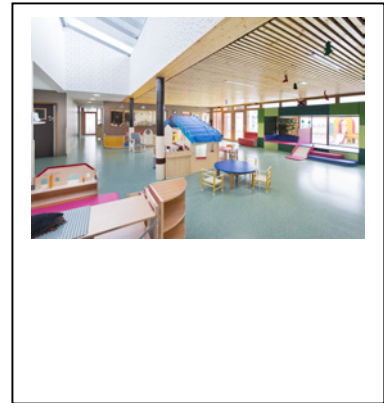
Email: delphine.mugnier@asder.asso.fr ;
karine.lediouron@asder.asso.fr

Temperature for thermal comfort in summertime: 28 °C

Local limits for heating demand: RT 2005 130 kWh/an/m²

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A		Quality of location and facilities		max. 100	68
A	1	Access to public transport network		50	18
A	2	Ecological quality of site		50	50
B		Process and planning quality		max. 200	145
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	60
B	5	Planning support for energetic optimization		60	60
B	6	Information for users		25	0
C		Energy & Utilities (Passive house)		max. 350	128
C	1	Specific heating demand (PHPP)	M	100	0
C	2	Specific cooling demand (PHPP)	M	100	100
C	3	Primary energy demand (PHPP)	M	125	0
C	4	CO ₂ -emissions (PHPP)		50	28
D		Health and Comfort		max. 250	200
D	1	Thermal comfort in summer		150	150
D	2	Ventilation - non energetic aspects		50	50
D	3	Daylight optimized (+ lightening optimized)		50	0
E		Building materials and construction		max. 200	140
E	1	OI ₃ _{TGH-IC} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	140
Sum				max. 1000	681



4 Conclusions from the building evaluation with the ENERBUILD-Tool

a) Generally

For the evaluation of this project, it was very difficult to get back the data because there was no good coordination between the persons and services which fixed the initial objectives and those who worked with the team the project manager. The building being delivered, it was even more complicated to get back the documents which justify decision-making, determination of the objectives, evolution of the project and solutions.

b) About the planning process

From the beginning of the project, the environmental objectives were clearly defined while the performances were not fixed. The evolution of the statutory context and a motivation of the project ownership and the project manager enabled developing the project towards a construction BBC. This process of planning was difficult to judge due to the lack of precise written documentation.

c) About the building itself

The result of the evaluation is rather coherent with the project and emphasizes the weak points of the project

- Lack of initial precise energy objectives
- The global performances are strongly improved by a renewable electricity production on the site (PV) and by a calculation and a local statutory context because there no maximum deductions of consumptions favored by this electricity production. On this aspect, the evaluation penalizes the project.

d) About the evaluation process

We had no access to the data needed for the criterion D2 (absence of technical data on the system of ventilation).

Concerning the criterion E1, the evaluation of the energy contents of a building is a laborious work, it is difficult to get back the data on materials used with the manufacturers.

The evaluation of the energy performances: need of heating and need in primary energy from PHPP is not still adapted to the local statutory tool. Difficulties remain to convert these data to keep a global coherence in the evaluations.

5 Suggestions for improvement of the ENERBUILD-Tool

Criterion A1: Access to public transport network access

Proposal to extend this criterion to other infrastructures valuing friendly transport (cycling and train station in particular).

Criterion B 4: management of the products of construction

Proposition to value the local origin of materials and to find a simpler tool of evaluation.

Criterion D2: ventilation Air quality

- Proposition to decompose this criterion into 2 sub-levels:
- Preservation of the criterion on the acoustic measures by softening and by simplifying the indicator criteria.
- Addition of a line on the quality of the ventilation, according to the activity of the building.
- Proposition to insist more on the evaluation of the air quality by an analysis of the air quality on site for example.