

## Evaluation ENERBUILD-Tool – Existing Building [New Gymnasium of Liceo Peano Tortona (AI)]



### 1 Basic information about the building

Name of the building	Liceo Peano New Gymnasium
Address of the building	Via Vittorio Veneto 3 Tortona (Alessandria)
Owner/investor	Provincia di Alessandria
Year of construction	2007
Building type	Laminated wood
Building method	Traditional
Number of buildings	1
Number of levels above earth	1
Number of levels underground	0
Kind of the public use	Gymnasium
Effective area for public use in m <sup>2</sup> (net)	275
Additional private uses	-
Effective area for private use in m <sup>2</sup> (net)	-
Total effective area in m <sup>2</sup>	275
Source of energy for heating	Methan
Heating system	Underfloor heating
Water heating system	Traditional
Date of the building evaluation	20/07/2011

## 2 Execution of the building evaluation with the ENERBUILD tool

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## 3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
<b>A</b>		<b>Quality of location and facilities</b>		<b>max. 100</b>	<b>87.5</b>
A	1	Access to public transport network		50	50
A	2	Ecological quality of site		50	37.5
<b>B</b>		<b>Process and planning quality</b>		<b>max. 200</b>	<b>115</b>
B	1	Decision making and determination of goals		25	25
B	2	Formulation of verifiable objectives for energetic and ecological measures	M	20	20
B	3	Standardized calculation of the economic efficiency	M	40	0
B	4	Product-management - Use of low-emission products		60	20
B	5	Planning support for energetic optimization		60	25
B	6	Information for users		25	25
<b>C</b>		<b>Energy &amp; Utilities (Passive house)</b>		<b>max. 350</b>	<b>10</b>
C	1	Specific heating demand (PHPP)	M	100	0
C	2	Specific cooling demand (PHPP)	M	100	10
C	3	Primary energy demand (PHPP)	M	125	0
C	4	CO <sub>2</sub> -emissions (PHPP)		50	0
<b>D</b>		<b>Health and Comfort</b>		<b>max. 250</b>	<b>152</b>
D	1	Thermal comfort in summer		150	52
D	2	Ventilation - non energetic aspects		50	50
D	3	Daylight optimized (+ lightening optimized)		50	50
<b>E</b>		<b>Building materials and construction</b>		<b>max. 200</b>	<b>182.80</b>
E	1	OI <sub>3</sub> <sub>TGH-ic</sub> ecological index of the thermal building envelope (respectively OI <sub>3</sub> of the total mass of the building)		200	182.80
<b>Sum</b>				<b>max. 1000</b>	<b>547.30</b>



## 4 Conclusions from the building evaluation with the ENERBUILD-Tool

Generally

ENERBUILD-Tool has been one interesting trans-national system for knowing many energy technicians and experts from other Countries, and also from different Italian Areas, and so for comparing the level of designing and working in Provincia di Alessandria.

Provincia di Alessandria has been involved in ENERBUILD-Tool / WP6 for 7 samples, 3 of which are about new public buildings. For these 3 buildings the planning process required by ENERBUILD-Tool is similar to that one used in common administration process in Italy.

ENERBUILD-Tool use has not been simple for Provincia di Alessandria, because technicians are involved in calculations with PHPP which has not known in our design and working studios.

In particular we have noticed strong differences between common Italian evaluations and C2, C3, C4 and E1 values provided by ENERBUILD-Tool.

ENERBUILD-Tool can't be generally used in our regions, with particular references to materials and ecological index catalogue by IBO BOOK which provides only for Austrian or German areas.

In particular LCA – Life Circle Assessment-, about which OI3 is evaluated, is only based over Austrian data basis.

## 5 Suggestions for improvement of the ENERBUILD-Tool

ENERBUILD-Tool could be an additional tool / not unique/ in evaluating public building – offices, schools, gymnasiums – towards local tools.

ENERBUILD Tool / Version 1.7 – 25 November 2010 – has already been studied for transnational uses, in each case with all limits before explained.