PROVINCIA DI ALESSANDRIA

Evaluation ENERBUILD-Tool – Existing Building
Polo Scolastico Ovada Lotto I

1 Basic information about the building

Name of the building	Polo Scolastico Ovada lotto I
Address of the building	Strada Voltri n. 27
Owner/investor	Provincia di Alessandria
Year of construction	2006-2007
Building type	Massive construction
Building method	Concrete framework and brick wall
Number of buildings	1
Number of levels above earth	3
Number of levels underground	0
Kind of the public use	Educational use: high school
Effective area for public use in m ² (net)	1960,00
Additional private uses	0,00
Effective area for private use in m ² (net)	0,00
Total effective area in m ²	1960,00
Source of energy for heating	Methane
Heating system	Methane boiler
Water heating system	Solar Panels
Date of the building evaluation	20 July 2011

2 Execution of the building evaluation with the ENERBBUILD tool

Responsible Organisation: **Environment Park S.p.A.**
Contact person: **Arch. Stefano Dotta / Arch. Chiara Bianco**
Telephone: **+39 011/2257262** Email: stefano.dotta@envipark.com / chiara.bianco@envipark.com

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A		Quality of location and facilities		max. 100	87,5
A	1	Access to public transport network		50	50
A	2	Ecological quality of site		50	37,5
B		Process and planning quality		max. 200	80
B	1	Decision making and determination of goals		25	15
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	20
B	5	Planning support for energetic optimization		60	20
B	6	Information for users		25	25
C		Energy & Utilities (Passive house)		max. 350	82
C	1	Specific heating demand (PHPP)	M	100	0
C	2	Specific cooling demand (PHPP)	M	100	82
C	3	Primary energy demand (PHPP)	M	125	0
C	4	CO2-emissions (PHPP)		50	0
D		Health and Comfort		max. 250	165
D	1	Thermal comfort in summer		150	65
D	2	Ventilation - non energetic aspects		50	50
D	3	Daylight optimized (+ lightening optimized)		50	50
E		Building materials and construction		max. 200	133
E	1	$OI3_{TGH-lc}$ ecological index of the thermal building envelope (respectively OI3 of the total mass of the building)		200	133
Sum				max. 1000	547,5

PROVINCIA DI ALESSANDRIA

Evaluation ENERBUILD-Tool
Polo Scolastico Ovada Lotto II

1 Basic information about the building

Name of the building	Polo Scolastico Ovada Lotto II
Address of the building	Via Voltri
Owner/investor	Provincia di Alessandria
Year of construction	2012 probably
Building type	Massive construction
Building method	Concrete framework and brick wall
Number of buildings	1
Number of levels above earth	3
Number of levels underground	0
Kind of the public use	Educational use: high school
Effective area for public use in m ² (net)	2253
Additional private uses	--
Effective area for private use in m ² (net)	--
Total effective area in m ²	2253
Source of energy for heating	Electric energy
Heating system	Heat pump
Water heating system	Heat pump + solar collectors
Date of the building evaluation	20 July 2011

2 Execution of the building evaluation with the ENERBBUILD tool

Responsible Organisation: **Environment Park S.p.A.**
Contact person: **Arch. Stefano Dotta / Arch. Chiara Bianco**
Telephone: **+39 011/2257262** Email: stefano.dotta@envipark.com / chiara.bianco@envipark.com

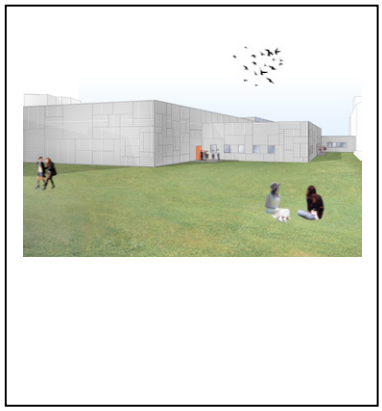
3 Results

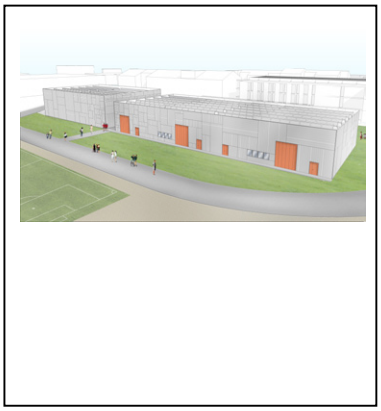
Nr.		Title	Must criteria (M)	max. points	evaluated points
A		Quality of location and facilities		max. 100	87,5
A	1	Access to public transport network		50	50
A	2	Ecological quality of site		50	37,5
B		Process and planning quality		max. 200	170
B	1	Decision making and determination of goals		25	25
B	2	Formulation of verifiable objectives for energetic and ecological measures	M	20	20
B	3	Standardized calculation of the economic efficiency	M	40	40
B	4	Product-management - Use of low-emission products		60	20
B	5	Planning support for energetic optimization		60	40
B	6	Information for users		25	25
C		Energy & Utilities (Passive house)		max. 350	97,5
C	1	Specific heating demand (PHPP)	M	100	10
C	2	Specific cooling demand (PHPP)	M	100	60
C	3	Primary energy demand (PHPP)	M	125	0
C	4	CO2-emissions (PHPP)		50	27,5
D		Health and Comfort		max. 250	75
D	1	Thermal comfort in summer		150	0
D	2	Ventilation - non energetic aspects		50	25
D	3	Daylight optimized (+ lightening optimized)		50	50
E		Building materials and construction		max. 200	172
E	1	$OI3_{TGH-lc}$ ecological index of the thermal building envelope (respectively OI3 of the total mass of the building)		200	172
Sum				max. 1000	602

Evaluation ENERBUILD-Tool – Building in planning phase

School Whole in Ovada (AL) – III share

Technical High School Workshops and Gym Buildings





1 Basic information about the building

Name of the building	Technical High School Workshops and Gym Buildings
Address of the building	Via Pastorino 12 – 15076 Ovada (AL) - Italy
Owner/investor	Provincia di Alessandria
Year of construction	Forecast 2012
Building type	Public school service annex
Building method	Precast concrete
Number of buildings	2
Number of levels above earth	1
Number of levels underground	0
Kind of the public use	Education, sport
Effective area for public use in m ² (net)	2.575,70
Additional private uses	None
Effective area for private use in m ² (net)	0
Total effective area in m ²	2.575,70
Source of energy for heating	Remote heating plant
Heating system	Underfloor low temperature
Water heating system	Solar heating 60% - Heating excanger
Date of the building evaluation	July 2011

2 Execution of the building evaluation with the ENERBBUILD tool

Responsible Organisation:

Contact person: Ing. Fabio Leccacorvi – Studio Associato Fraternali Quattroccolo Architetti

Telephone: 011-593302 Email: fraquarc@gmail.com

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A		Quality of location and facilities		max. 100	87,5
A	1	Access to public transport network		50	50
A	2	Ecological quality of site		50	37,5
B		Process and planning quality		max. 200	180
B	1	Decision making and determination of goals		25	25
B	2	Formulation of verifiable objectives for energetic and ecological measures	M	20	25
B	3	Standardized calculation of the economic efficiency	M	40	40
B	4	Product-management - Use of low-emission products		60	20
B	5	Planning support for energetic optimization		60	45
B	6	Information for users		25	25
C		Energy & Utilities (Passive house)		max. 350	71,5
C	1	Specific heating demand (PHPP)	M	100	23
C	2	Specific cooling demand (PHPP)	M	100	10
C	3	Primary energy demand (PHPP)	M	125	0
C	4	CO2-emissions (PHPP)		50	38,5
D		Health and Comfort		max. 250	145
D	1	Thermal comfort in summer		150	45
D	2	Ventilation - non energetic aspects		50	50
D	3	Daylight optimized (+ lightening optimized)		50	50
E		Building materials and construction		max. 200	85
E	1	$OI3_{TGH-lc}$ ecological index of the thermal building envelope (respectively OI3 of the total mass of the building)		200	85
Sum				max. 1000	569

Evaluation ENERBUILD-Tool – Existing Building

[Enlargement of Liceo “Peano” Tortona (Al)]

1 Basic information about the building

Name of the building	Liceo Peano
Address of the building	Via Vittorio Veneto 3 Tortona (Alessandria)
Owner/investor	Provincia di Alessandria
Year of construction	2006
Building type	Concrete structure
Building method	Traditional
Number of buildings	1 (school campus expansion, with 6 classrooms on three floors, 2 rooms per floor)
Number of levels above earth	3
Number of levels underground	0
Kind of the public use	High School
Effective area for public use in m ² (net)	313
Additional private uses	-
Effective area for private use in m ² (net)	-
Total effective area in m ²	313
Source of energy for heating	Methane
Heating system	Tradiotional with radiators
Water heating system	Methane boiler
Date of the building evaluation	20th july 2011

2 Execution of the building evaluation with the ENERBBUILD tool

Responsible Organisation: Collegio Costruttori ANCE Alessandria

Contact person: Claudio Mazzetto, Stefano Ponzano

Telephone:+390131265724 Email: area.tecnica@cce.al.it

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A		Quality of location and facilities		max. 100	87.5
A	1	Access to public transport network		50	50
A	2	Ecological quality of site		50	37.5
B		Process and planning quality		max. 200	104
B	1	Decision making and determination of goals		25	14
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
C		Energy & Utilities (Passive house)		max. 350	82
C	1	Specific heating demand (PHPP)	M	100	0
C	2	Specific cooling demand (PHPP)	M	100	82
C	3	Primary energy demand (PHPP)	M	125	0
C	4	CO2-emissions (PHPP)		50	0
D		Health and Comfort		max. 250	132
D	1	Thermal comfort in summer		150	52
D	2	Ventilation - non energetic aspects		50	50
D	3	Daylight optimized (+ lightening optimized)		50	30
E		Building materials and construction		max. 200	191.65
E	1	$OI3_{TGH-lc}$ ecological index of the thermal building envelope (respectively OI3 of the total mass of the building)		200	191.65
Sum				max. 1000	597.10

Evaluation ENERBUILD-Tool – Existing Building

[New Gymnasium of Liceo Peano Tortona (Al)]

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 ² (net)	275
Additional private uses	-
Effective area for private use in m ² (net)	-
Total effective area in m ²	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 ENERBBUILD tool

Responsible Organisation: Collegio Costruttori ANCE Alessandria

Contact person: Claudio Mazzetto, Stefano Ponzano

Telephone:+390131265724 Email: area.tecnica@cce.al.it

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A		Quality of location and facilities		max. 100	87.5
A	1	Access to public transport network		50	50
A	2	Ecological quality of site		50	37.5
B		Process and planning quality		max. 200	115
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
C		Energy & Utilities (Passive house)		max. 350	10
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	CO2-emissions (PHPP)		50	0
D		Health and Comfort		max. 250	152
D	1	Thermal comfort in summer		150	52
D	2	Ventilation - non energetic aspects		50	50
D	3	Daylight optimized (+ lightening optimized)		50	50
E		Building materials and construction		max. 200	182.80
E	1	$OI3_{TGH-Ic}$ ecological index of the thermal building envelope (respectively OI3 of the total mass of the building)		200	182.80
Sum				max. 1000	547.30

Evaluation ENERBUILD-Tool – Planned Building now in construction

[Alessandria's construction's building]

Palazzo dell'Edilizia

1 Basic information about the building

Name of the building	Palazzo dell'Edilizia – Designer : Arch Daniel Libeskind
Address of the building	Via Marengo, near of Napoleone's Platano
Owner/investor	Sistema Edile di Alessandria
Year of construction	2011
Building type	Terziary Building (offices and school)
Building method	Reinforced concrete frame and external insulation
Number of buildings	1
Number of levels above earth	4
Number of levels underground	1
Kind of the public use	Educational use, offices and conference rooms
Effective area for public use in m ² (net)	0
Additional private uses	-
Effective area for private use in m ² (net)	4.255,43
Total effective area in m ²	4.255,43
Source of energy for heating	Electric energy and geothermal energy
Heating system	Heat pump 277 kW
Water heating system	Heat pump
Date of the building evaluation	20/07/2011

2 Execution of the building evaluation with the ENERBBUILD tool

Responsible Organisation: Collegio Costruttori ANCE Alessandria

Contact person: Claudio Mazzetto, Stefano Ponzano

Collaborazione: arch. Daniela Demartini

Telephone:+390131265724 Email: area.tecnica@cce.al.it

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A		Quality of location and facilities		max. 100	**57,50**
A	1	Access to public transport network		50	20
A	2	Ecological quality of site		50	37,50
B		Process and planning quality		max. 200	**185**
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	40
B	4	Product-management - Use of low-emission products		60	20
B	5	Planning support for energetic optimization		60	55
B	6	Information for users		25	25
C		Energy & Utilities (Passive house)		max. 350	**230**
C	1	Specific heating demand (PHPP)	M	100	100
C	2	Specific cooling demand (PHPP)	M	100	0
C	3	Primary energy demand (PHPP)	M	125	85
C	4	CO2-emissions (PHPP)		50	45
D		Health and Comfort		max. 250	**175**
D	1	Thermal comfort in summer		150	75
D	2	Ventilation - non energetic aspects		50	50
D	3	Daylight optimized (+ lightening optimized)		50	50
E		Building materials and construction		max. 200	**132**
E	1	$OI3_{TGH-lc}$ ecological index of the thermal building envelope (respectively OI3 of the total mass of the building)		200	132
Sum				max. 1000	**779,50**