

Evaluation ENERBUILD-Tool – existing buildings

Kindergarten - Mazzé



1 Basic information about the building

Name of the building	Scuola Materna Comune di Mazzé
Address of the building	Via Castone, Mazzé
Owner/investor	Municipality of Mazzé
Year of construction	2011
Building type	School
Building method	Massive wood structure (XLAM)
Number of buildings	1
Number of levels above earth	1
Number of levels underground	0
Kind of the public use	School
Effective area for public use in m ² (net)	994
Additional private uses	-
Effective area for private use in m ² (net)	-
Total effective area in m ²	994
Source of energy for heating	Heat pump
Heating system	Radiant floor
Water heating system	Solar panels
Date of the building evaluation	2011

2 Execution of the building evaluation with the ENERBUILD tool

Responsible Organisation: Environment Park

Contact person: Andrea Moro

Telephone: +39 011 2257462

Email: andrea_moro@envipark.com

Temperature for thermal comfort in summertime: 26 °C

Local limits for heating demand: 16,5 kWh/m³

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A		Quality of location and facilities		max. 100	48
A	1	Access to public transport network		50	10
A	2	Ecological quality of site		50	38
B		Process and planning quality		max. 200	190
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	20
B	4	Product-management - Use of low-emission products		60	40
B	5	Planning support for energetic optimization		60	60
B	6	Information for users		25	25
C		Energy & Utilities (Passive house)		max. 350	94
C	1	Specific heating demand (PHPP)	M	100	30
C	2	Specific cooling demand (PHPP)	M	100	0
C	3	Primary energy demand (PHPP)	M	125	64
C	4	CO ₂ -emissions (PHPP)		50	0
D		Health and Comfort		max. 250	135
D	1	Thermal comfort in summer		150	75
D	2	Ventilation - non energetic aspects		50	30
D	3	Daylight optimized (+ lightening optimized)		50	30
E		Building materials and construction		max. 200	180
E	1	OI ₃ _{TGH-1c} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	180
Sum				max. 1000	647

Evaluation ENERBUILD-Tool – existing buildings

PUEEL



1 Basic information about the building

Name of the building	PUEEL (Prefabbricato uso Uffici Energeticamente Efficiente in Legno)
Address of the building	Corso Casale 476, Torino
Owner/investor	Regione Piemonte
Year of construction	2011
Building type	Office building
Building method	Wood structure
Number of buildings	1
Number of levels above earth	1
Number of levels underground	
Kind of the public use	Office
Effective area for public use in m ² (net)	150
Additional private uses	-
Effective area for private use in m ² (net)	-
Total effective area in m ²	150
Source of energy for heating	Heat pump + PV
Heating system	Radiant floor
Water heating system	Solar panels + Heat pump
Date of the building evaluation	2011

2 Execution of the building evaluation with the ENERBUILD tool

Responsible Organisation: Environment Park

Contact person: Andrea Moro

Telephone: 011 2257462

Email: andrea_moro@envipark.com

Temperature for thermal comfort in summertime: 26 °C

Local limits for heating demand: 21,5 kWh/m³

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A		Quality of location and facilities		max. 100	48
A	1	Access to public transport network		50	10
A	2	Ecological quality of site		50	38
B		Process and planning quality		max. 200	180
B	1	Decision making and determination of goals		25	15
B	2	Formulation of verifiable objectives for energetic and ecological measures	M	20	20
B	3	Standardized calculation of the economic efficiency	M	40	20
B	4	Product-management - Use of low-emission products		60	40
B	5	Planning support for energetic optimization		60	60
B	6	Information for users		25	25
C		Energy & Utilities (Passive house)		max. 350	213
C	1	Specific heating demand (PHPP)	M	100	88
C	2	Specific cooling demand (PHPP)	M	100	0
C	3	Primary energy demand (PHPP)	M	125	125
C	4	CO ₂ -emissions (PHPP)		50	0
D		Health and Comfort		max. 250	125
D	1	Thermal comfort in summer		150	75
D	2	Ventilation - non energetic aspects		50	25
D	3	Daylight optimized (+ lightening optimized)		50	25
E		Building materials and construction		max. 200	180
E	1	OI ₃ _{TGH-1c} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	180
Sum				max. 1000	746

Evaluation ENERBUILD-Tool – Building in planning phase

Torre Balfredo



1 Basic information about the building

Name of the building	Torre Balfredo
Address of the building	Località Torre Balfredo
Owner/investor	ATC Torino
Year of construction	2012
Building type	Residential
Building method	Concrete structure and brick walls
Number of buildings	2
Number of levels above earth	3
Number of levels underground	1
Kind of the public use	Residential
Effective area for public use in m ² (net)	1141
Additional private uses	-
Effective area for private use in m ² (net)	1141
Total effective area in m ²	1141
Source of energy for heating	Condensation Boiler
Heating system	Radiant floor
Water heating system	Solar panels
Date of the building evaluation	2011

2 Execution of the building evaluation with the ENERBUILD tool

Responsible Organisation: Environment Park

Contact person: Andrea Moro

Telephone: 011 22567462

Email: andrea_moro@envipark.com

Temperature for thermal comfort in summertime: 26 °C

Local limits for heating demand: 49,14 kWh/m²

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A					
		Quality of location and facilities		max. 100	48
A	1	Access to public transport network		50	10
A	2	Ecological quality of site		50	38
B					
		Process and planning quality		max. 200	150
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	20
B	4	Product-management - Use of low-emission products		60	30
B	5	Planning support for energetic optimization		60	30
B	6	Information for users		25	25
C					
		Energy & Utilities (Passive house)		max. 350	162
C	1	Specific heating demand (PHPP)	M	100	22
C	2	Specific cooling demand (PHPP)	M	100	0
C	3	Primary energy demand (PHPP)	M	125	90
C	4	CO ₂ -emissions (PHPP)		50	50
D					
		Health and Comfort		max. 250	85
D	1	Thermal comfort in summer		150	50
D	2	Ventilation - non energetic aspects		50	25
D	3	Daylight optimized (+ lightening optimized)		50	10
E					
		Building materials and construction		max. 200	150
E	1	OI _{3TGH-ic} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	150
Sum				max. 1000	595

Evaluation ENERBUILD-Tool – Building in planning phase

Polo Scolastico a Piazza



1 Basic information about the building

Name of the building	Polo Scolastico a Piazza
Address of the building	Piazza d'Armi – Mondovì
Owner/investor	Comune di Mondovì
Year of construction	2012
Building type	School
Building method	Concrete structure
Number of buildings	1
Number of levels above earth	2
Number of levels underground	1
Kind of the public use	School
Effective area for public use in m ² (net)	3397
Additional private uses	-
Effective area for private use in m ² (net)	-
Total effective area in m ²	3397
Source of energy for heating	Micro cogeneration and heat pumps
Heating system	Radiant floors and ceilings
Water heating system	Condensation boiler and solar panels
Date of the building evaluation	2011

2 Execution of the building evaluation with the ENERBUILD tool

Responsible Organisation: Environment Park

Contact person: Andrea Moro

Telephone: +39 0112257462

Email: andrea_moro@envipark.com

Temperature for thermal comfort in summertime: 26 °C

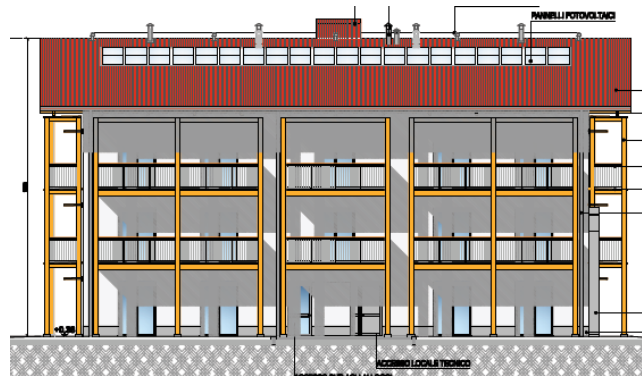
Local limits for heating demand: 72 kWh/m²

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A					
		Quality of location and facilities		max. 100	70
A	1	Access to public transport network		50	20
A	2	Ecological quality of site		50	50
B					
		Process and planning quality		max. 200	190
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	20
B	4	Product-management - Use of low-emission products		60	40
B	5	Planning support for energetic optimization		60	60
B	6	Information for users		25	25
C					
		Energy & Utilities (Passive house)		max. 350	185
C	1	Specific heating demand (PHPP)	M	100	10
C	2	Specific cooling demand (PHPP)	M	100	0
C	3	Primary energy demand (PHPP)	M	125	125
C	4	CO ₂ -emissions (PHPP)		50	50
D					
		Health and Comfort		max. 250	150
D	1	Thermal comfort in summer		150	75
D	2	Ventilation - non energetic aspects		50	25
D	3	Daylight optimized (+ lightening optimized)		50	50
E					
		Building materials and construction		max. 200	150
E	1	OI ₃ ^{TGH-ic} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	150
Sum				max. 1000	745

Evaluation ENERBUILD-Tool – Building in planning phase

Passive House for elderly persons



1 Basic information about the building

Name of the building	Passive House for elderly persons
Address of the building	Strada Case Sparse Battandero, Cirié (Torino, Italia)
Owner/investor	ATC Torino
Year of construction	2012
Building type	Residential
Building method	Concrete structure
Number of buildings	1
Number of levels above earth	3
Number of levels underground	-
Kind of the public use	Residential
Effective area for public use in m ² (net)	754
Additional private uses	-
Effective area for private use in m ² (net)	-
Total effective area in m ²	754
Source of energy for heating	Geothermal + Photovoltaic panels
Heating system	Heat pump
Water heating system	Heat pump
Date of the building evaluation	2011

2 Execution of the building evaluation with the ENERBUILD tool

Responsible Organisation: Environment Park

Contact person: Andrea Moro

Telephone: +390112257462

Email: andrea_moro@envipark.com

Temperature for thermal comfort in summertime: 26 °C

Local limits for heating demand: 53 kWh/m²

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A					
		Quality of location and facilities		max. 100	50
A	1	Access to public transport network		50	0
A	2	Ecological quality of site		50	50
B					
		Process and planning quality		max. 200	189
B	1	Decision making and determination of goals		25	24
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	60
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	91
C	3	Primary energy demand (PHPP)	M	125	125
C	4	CO ₂ -emissions (PHPP)		50	50
D					
		Health and Comfort		max. 250	85
D	1	Thermal comfort in summer		150	50
D	2	Ventilation - non energetic aspects		50	25
D	3	Daylight optimized (+ lightening optimized)		50	10
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	814