

Evaluation ENERBUILD-Tool – existing buildings

02 Secondary School Zams



1 Basic information about the building

Name of the building	Secondary School Zams (refurbishment)
Address of the building	Oberreitweg 26, 6511 Zams
Owner/investor	Gemeinde Zams
Year of construction	2007 - 2008
Building type	massive construction, timber frame construction
Building method	
Number of buildings	1
Number of levels above earth	3
Number of levels underground	1
Kind of the public use	school
Effective area for public use in m ² (net)	5.506 m ²
Additional private uses	-
Effective area for private use in m ² (net)	-
Total effective area in m ²	5.506 m ²
Source of energy for heating	oil
Heating system	Oil fired heating (existing heating)
Water heating system	Oil fired heating
Date of the building evaluation	2011

2 Execution of the building evaluation with the ENERBUILD tool

Responsible Organisation: Energie Tirol, Südtiroler Platz 4, 6020 Innsbruck

Contact person: DI Matthias Wegscheider

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Temperature for thermal comfort in summertime: 26 °C

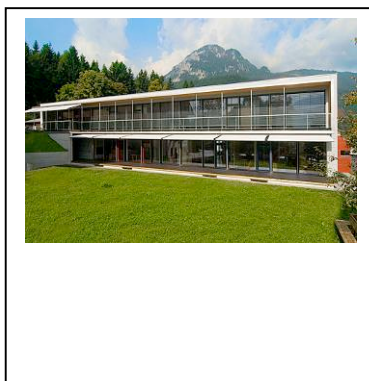
Local limits for heating demand: 46,88 kWh/m²
(limit OIB RL 6, HWB* umfassende Sanierung)

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	133
B	1	Decision making and determination of goals		25	18
B	2	Formulation of verifiable objectives for energetic and ecological measures	M	20	10
B	3	Standardized calculation of the economic efficiency	M	40	0
B	4	Product-management - Use of low-emission products		60	40
B	5	Planning support for energetic optimization		60	50
B	6	Information for users		25	15
C					
		Energy & Utilities (Passive house)		max. 350	194
C	1	Specific heating demand (PHPP)	M	100	100
C	2	Specific cooling demand (PHPP)	M	100	37
C	3	Primary energy demand (PHPP)	M	125	47
C	4	CO ₂ -emissions (PHPP)		50	10
D					
		Health and Comfort		max. 250	105
D	1	Thermal comfort in summer		150	50
D	2	Ventilation - non energetic aspects		50	25
D	3	Daylight optimized (+ lightening optimized)		50	30
E					
		Building materials and construction		max. 200	77
E	1	OI ₃ ^{TGH-ic} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	77
Sum				max. 1000	559

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04 Kindergarten Kramsach



1 Basic information about the building

Name of the building	Kindergarten Kramsach
Address of the building	Oberreitweg 26, 6511 Zams
Owner/investor	Gemeinde Kramsach
Year of construction	2007 - 2008
Building type	massive construction, timber frame construction
Building method	
Number of buildings	1
Number of levels above earth	2
Number of levels underground	0
Kind of the public use	Kindergarten
Effective area for public use in m ² (net)	1.106 m ²
Additional private uses	-
Effective area for private use in m ² (net)	-
Total effective area in m ²	1.106 m ²
Source of energy for heating	Natural gas
Heating system	Natural gas heating (existing system)
Water heating system	Natural gas heating
Date of the building evaluation	2011

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Temperature for thermal comfort in summertime: 26 °C

Local limits for heating demand: 44,65 kWh/m²
 (limit OIB RL 6, HWB* new building)

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A					
		Quality of location and facilities		max. 100	62
A	1	Access to public transport network		50	12
A	2	Ecological quality of site		50	50
B					
		Process and planning quality		max. 200	130
B	1	Decision making and determination of goals		25	25
B	2	Formulation of verifiable objectives for energetic and ecological measures	M	20	10
B	3	Standardized calculation of the economic efficiency	M	40	0
B	4	Product-management - Use of low-emission products		60	25
B	5	Planning support for energetic optimization		60	55
B	6	Information for users		25	15
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	37
D					
		Health and Comfort		max. 250	120
D	1	Thermal comfort in summer		150	65
D	2	Ventilation - non energetic aspects		50	25
D	3	Daylight optimized (+ lightening optimized)		50	30
E					
		Building materials and construction		max. 200	42
E	1	OI ₃ ^{TGH-ic} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	42
Sum				max. 1000	704

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03 Medical Center Ried im Oberinntal



1 Basic information about the building

Name of the building	Medical Center Ried im Oberinntal
Address of the building	Hauptstraße 51, 6531 Ried im Oberinntal
Owner/investor	-
Year of construction	2009-2010
Building type	massive construction (refurbishment), solid wood construction (new)
Building method	
Number of buildings	2 (existing + new)
Number of levels above earth	3 (ground, second, attic floor)
Number of levels underground	1
Kind of the public use	Medical center
Effective area for public use in m ² (net)	498 m ²
Additional private uses	Residential use
Effective area for private use in m ² (net)	238 m ²
Total effective area in m ²	736 m ²
Source of energy for heating	Electric energy and ground water
Heating system	Ground water heat pump
Water heating system	Ground water heat pump
Date of the building evaluation	2011

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Temperature for thermal comfort in summertime: 26 °C

Local limits for heating demand: 50,00 kWh/m² (limit reconstruction)

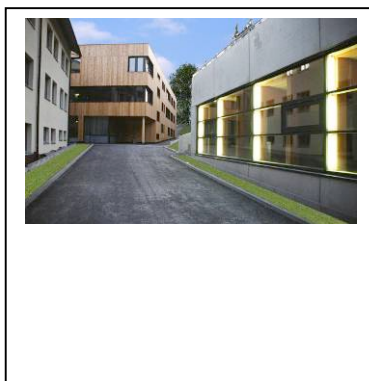
40,85 kWh/m² (limit new building)

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A					
		Quality of location and facilities		max. 100	
A	1	Access to public transport network		50	6
A	2	Ecological quality of site		50	50
B					
		Process and planning quality		max. 200	
B	1	Decision making and determination of goals		25	25
B	2	Formulation of verifiable objectives for energetic and ecological measures	M	20	15
B	3	Standardized calculation of the economic efficiency	M	40	0
B	4	Product-management - Use of low-emission products		60	25
B	5	Planning support for energetic optimization		60	55
B	6	Information for users		25	10
C					
		Energy & Utilities (Passive house)		max. 350	
C	1	Specific heating demand (PHPP)	M	100	82
C	2	Specific cooling demand (PHPP)	M	100	55
C	3	Primary energy demand (PHPP)	M	125	0
C	4	CO ₂ -emissions (PHPP)		50	0
D					
		Health and Comfort		max. 250	
D	1	Thermal comfort in summer		150	65
D	2	Ventilation - non energetic aspects		50	25
D	3	Daylight optimized (+ lightening optimized)		50	10
E					
		Building materials and construction		max. 200	
E	1	OI ₃ ^{TGH-ic} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	102
Sum				max. 1000	525

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01 Polytechnical School Landeck



1 Basic information about the building

Name of the building	Polytechnical School Landeck
Address of the building	Prandtauerweg 19, 6500 Landeck
Owner/investor	Gemeinde Landeck
Year of construction	2007 - 2008
Building type	massive construction, timber frame construction
Building method	
Number of buildings	1
Number of levels above earth	4
Number of levels underground	1
Kind of the public use	school
Effective area for public use in m ² (net)	3.700 m ²
Additional private uses	-
Effective area for private use in m ² (net)	-
Total effective area in m ²	3.700 m ²
Source of energy for heating	Wood pellets
Heating system	Wood pellet heating
Water heating system	Wood pellet heating
Date of the building evaluation	2011

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Temperature for thermal comfort in summertime: 26 °C

Local limits for heating demand: 37,05 kWh/m²
(limit OIB RL 6, HWB* new building)

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
A					
		Quality of location and facilities		max. 100	62
A	1	Access to public transport network		50	12
A	2	Ecological quality of site		50	50
B					
		Process and planning quality		max. 200	160
B	1	Decision making and determination of goals		25	25
B	2	Formulation of verifiable objectives for energetic and ecological measures	M	20	15
B	3	Standardized calculation of the economic efficiency	M	40	0
B	4	Product-management - Use of low-emission products		60	45
B	5	Planning support for energetic optimization		60	60
B	6	Information for users		25	15
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	41
D					
		Health and Comfort		max. 250	120
D	1	Thermal comfort in summer		150	65
D	2	Ventilation - non energetic aspects		50	25
D	3	Daylight optimized (+ lightening optimized)		50	30
E					
		Building materials and construction		max. 200	123
E	1	OI ₃ ^{TGH-ic} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	123
Sum				max. 1000	815