

Evaluation ENERBUILD-Tool – existing buildings

Festival Room Eppenstein



1 Basic information about the building

Name of the building	Dorfsaal Eppenstein
Address of the building	Eppenstein 6, A-8741 Eppenstein
Owner/investor	Gemeinde Eppenstein
Year of construction	2004
Building type	Multipurpose Hall
Building method	Main Building: Wood Construction, Wings: Massive
Number of buildings	3, Main Building, Cross Wing and Intermediate Wing
Number of levels above earth	1
Number of levels underground	1 for Wings
Kind of the public use	Meetings, Seminars, Events
Effective area for public use in m ² (net)	861,47
Additional private uses	can be hired, cooperation with local inn keeper
Effective area for private use in m ² (net)	861,47
Total effective area in m ²	1147
Source of energy for heating	Wooden Biomass
Heating system	District Heating
Water heating system	Decentral Water Heating
Date of the building evaluation	01.12.2011

2 Execution of the building evaluation with the ENERBUILD tool

Responsible Organisation: Energieagentur Obersteiermark

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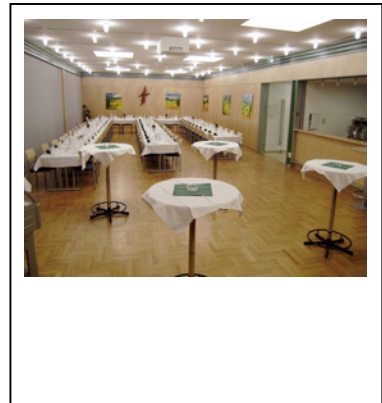
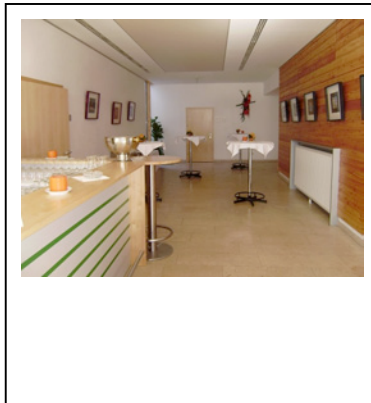
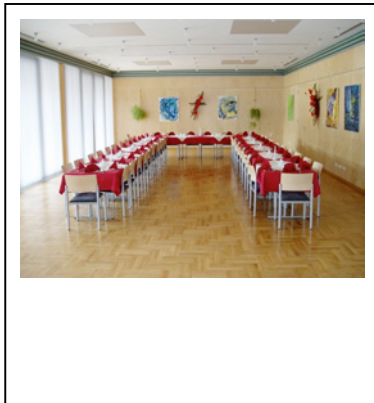
Email: office@eao.st

Temperature for thermal comfort in summertime: 26°C

Local limits for heating demand: 65 kWh/m²(at the year of construction)

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	168
B	1	Decision making and determination of goals		25	23
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	60
B	5	Planning support for energetic optimization		60	40
B	6	Information for users		25	25
C		Energy & Utilities (Passive house)		max. 350	193
C	1	Specific heating demand (PHPP)	M	100	10
C	2	Specific cooling demand (PHPP)	M	100	37
C	3	Primary energy demand (PHPP)	M	125	101
C	4	CO ₂ -emissions (PHPP)		50	45
D		Health and Comfort		max. 250	235
D	1	Thermal comfort in summer		150	150
D	2	Ventilation - non energetic aspects		50	50
D	3	Daylight optimized (+ lightening optimized)		50	35
E		Building materials and construction		max. 200	181
E	1	OI _{3-TGH-ic} ecological index of the thermal building envelope (respectively OI ₃ of the total mass of the building)		200	181
Sum				max. 1000	839



4 Conclusions from the building evaluation with the ENERBUILD-Tool

a) Generally

The building of the Dorfsaal (event hall) in Eppenstein was part of a greater reconstruction project that included the village square, the inn and its bowling alley in the basement. The event hall is adjacent to the municipal office building and said inn, the “Eppensteinerhof”. Together, they define the centre of the village.

b) About the planning process

The event hall was planned as multifunctional space that can be used for public events, seminars but also as additional guest room for the adjacent inn. The construction covers an area with a slope of 1.2 meters in northwest direction. The difference in height is negotiated by the use of separate building components. Event hall and village square were designed to fulfil the demand for a village centre.

c) About the building itself

The event hall is divided into three components. The main building is the wood construction of the hall itself. The cross wing is a massive construction that connects to the inn. It is completely built with cellar and contains in the basement the district heating transfer station and the ventilation station with heat recovery system as well as the wine cellar, which was formerly the bowling alley. Between cross wing and main hall stands the intermediate wing that is partially with cellar and emphasizes the separation between the components with glass partitions at the connections.

d) About the evaluation process

The redesign of the village centre in Eppenstein including the erection of a event hall and the creation of a village square has been recognized as a prestigious building project in the municipality. The evaluation of the event hall with the ENERBUILD-Tool however revealed a great potential for improvements considering Rational Use of Energy (RUE) and Renewable Energy Sources (RES) in planning and construction. The building was planned as a timber construction building, fired by biomass, but the thermal quality of the construction was planned in according to the building-law, but not as a passive house.

5 Suggestions for improvement of the ENERBUILD-Tool

The case of promoting the ENERBUILD-Tool would be effectively supported by info-material with prestigious demonstration buildings that received top values in the evaluation. This goes along with fighting the killer argument of monotonous energy efficient architecture. The impression we want to give is that passive houses and ESAP buildings are prestigious buildings because of their inherent value but also because of their appealing design.