

Project data

Calculation

	Project	Reference
Calculation type:	Main calculation	Data from measurements
Evaluation type:	New building	-

Building information

	Project	Reference
Project name:	Casa sul Parco	
Street:	Viale Gramsci 82	
Postcode/city/country:	43036/ Fidenza (PR) / Italy	
Building type:	Residential Multifamily House	
Year of Construction:	2017	

Owner/client information

	Project	Reference
Home Owner/client:	Montanari Costruzioni Srl	
Email/phone:	info@montanari-costruzioni.it / +39	

Architect information

	Project	Reference
Architect:	Studio del Boca + Partners, Milano-P	
Company:	Studio del Boca + Partners, Milano-P	
Email/phone:	info@delbocapartners.com / +39 05	

Mechanical engineer information

	Project	Reference
Engineer:	Montanari Costruzioni Srl	
Company:	Montanari Costruzioni Srl	
Email/phone:	info@montanari-costruzioni.it / +39	

Certification

	Project	Reference
Verified by:	Guenther Gantioler	

Active House tool

Active House calculation tool is designed by Danish Technological Institute for the Active House Alliance. Copyrights belong to Active House Alliance. Use of the tool require membership of the Active House Alliance and is on users own responsibility. Active House Alliance takes no responsibility for the use of the tool or for the results gained from it. Calculation is made in version 1.07

1.0 Comfort

Room definition

Room type	Area	Occupancy rate
Living room 1	73.4 m ²	0.149
Kitchen/dining 1	36.1 m ²	0.208

1.1 Daylight

Daylight factor

Room type	Project	Reference
Living room 1	5.12	0
Kitchen/dining 1	4.02	0

Daylight score:

	Project	Reference
Validated simulation program:	yes	yes
Daylight factor score:	1.2	Out of AH category

1.2 Thermal environment

Project

Room type	Max operative temp. score	Min operative temp. Score
Living room 1	1.0	1.0
Kitchen/dining 1	1.0	1.0

Reference

Room type	Max operative temp. score	Min operative temp. Score
Living room 1	Out of AH category	1.0
Kitchen/dining 1	Out of AH category	1.0

Thermal environment score

	Project	Reference
Dynamic simulation:	yes	yes
Project stage:	Planning (use of Active House Tool)	Planning (use of Active House Tool)
Thermal environment category:	best level	Out of AH category
Thermal environment score:	1.0	Out of AH category

1.3 Indoor air quality

Category, overall

Room type	Project	Reference
Living room 1	1.0	Out of AH category
Kitchen/dining 1	2.0	Out of AH category

Air quality score

	Project	Reference
Project stage:	Planning (use of Active House Tool)	Planning (use of Active House Tool)
CO2-concentration above outdoor:	≤ 750 ppm	> 1200 ppm
Indoor air quality score:	1.6	Out of AH category

2.0 Energy, Project

Space heating

Yearly energy demand	Energy demand	PE factor/COP (Heat pump)	PE demand
District heating:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Boiler (oil, gas, wood pillar etc.):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Electric heating:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Heat pump (space heating):	4.0 kWh/m ²	4.8	-
Total:	4.0 kWh/m²	-	0.0 kWh/m²

Yearly electricity consumption	Energy demand	PE factor	PE demand
Heat pump:	0.8 kWh/m ²	2.4	2.0 kWh/m ²
Pumps:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Others:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	0.0 kWh/m²	-	2.0 kWh/m²

Domestic hot water

Yearly energy demand	Energy demand	PE factor/COP (Heat pump)	PE demand
District heating:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Boiler (oil, gas, wood pillar etc.):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Electric heating:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Heat pump (space heating):	6.3 kWh/m ²	3.8	-
Total:	6.3 kWh/m²	-	0.0 kWh/m²

Yearly electricity consumption	Energy demand	PE factor	PE demand
Heat pump:	1.7 kWh/m ²	0.0	0.0 kWh/m ²
Pumps:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Others:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	0.0 kWh/m²	-	0.0 kWh/m²

Mechanical ventilation

Yearly electricity consumption	Energy demand	PE factor	PE demand
Fans:	2.4 kWh/m ²	0.0	0.0 kWh/m ²
Others:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	2.4 kWh/m²	-	0.0 kWh/m²

Cooling

Yearly electricity consumption	Energy demand	PE factor	PE demand
Colling unit:	7.3 kWh/m ²	2.4	17.7 kWh/m ²
Overheating:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Others:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	7.3 kWh/m²	-	17.7 kWh/m²

Control systems

Yearly electricity consumption	Energy demand	PE factor	PE demand
BMS, natural ventilation etc.:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Others:	17.1 kWh/m ²	2.4	41.0 kWh/m ²
Total:	17.1 kWh/m²	-	41.0 kWh/m²

2.0 Energy, Project

Lighting

Yearly electricity consumption	Energy demand	PE factor	PE demand
Total:	1.7 kWh/m ²	2.4	4.1 kWh/m ²

Electricity produced by renewable energy

Yearly electricity production	Energy demand	PE factor	PE demand
PV Cells (on site):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Windmills and others (on site):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Off-site renewable production:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Electricity grid:	44.5 kWh/m ²	1.0	44.1 kWh/m ²
Total:	44.5 kWh/m ²	-	44.1 kWh/m ²

Heat produced by renewable energy

Yearly heat production	Energy demand	PE factor	PE demand
Solar panel (space heating):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Solar panel (domestic hot water):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
District heating (Renewable part):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Boiler (Renewable part):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Electric heating (Renewable part):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Heat Pump (Renewable part):	7.8 kWh/m ²	2.4	18.7 kWh/m ²
Biofuels:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Biogas:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	7.8 kWh/m ²	-	18.7 kWh/m ²

General information

Heated floor area:	1178 m ²
--------------------	---------------------

2.1 Energy demand score

Space heating:	4.0 kWh/m ²
Domestic hot water:	6.3 kWh/m ²
Mechanical ventilation:	2.4 kWh/m ²
Cooling:	7.3 kWh/m ²
Control systems:	17.1 kWh/m ²
Lighting:	1.7 kWh/m ²
Total:	38.8 kWh/m ²

Energy demand score: 1.0

2.2 Energy supply score

Electricity produced by renewable energy:	44.5 kWh/m ²
Heat produced by renewable energy:	7.8 kWh/m ²
Total:	52.3 kWh/m ²

Energy supply score: 1.0

2.3 Primary energy performance score

Total:	10.3 kWh/m ²
PE performance score:	2.7

2.0 Energy, Reference

Space heating

Yearly energy demand	Energy demand	PE factor/COP (Heat pump)	PE demand
District heating:	0.0 kWh/m ²	1.0	0.0 kWh/m ²
Boiler (oil, gas, wood pillar etc.):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Electric heating:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Heat pump (space heating):	0.0 kWh/m ²	0.0	-
Total:	0.0 kWh/m²	-	0.0 kWh/m²

Yearly electricity consumption	Energy demand	PE factor	PE demand
Heat pump:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Pumps:	0.0 kWh/m ²	2.5	0.0 kWh/m ²
Others:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	0.0 kWh/m²	-	0.0 kWh/m²

Domestic hot water

Yearly energy demand	Energy demand	PE factor/COP (Heat pump)	PE demand
District heating:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Boiler (oil, gas, wood pillar etc.):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Electric heating:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Heat pump (space heating):	0.0 kWh/m ²	0.0	-
Total:	0.0 kWh/m²	-	0.0 kWh/m²

Yearly electricity consumption	Energy demand	PE factor	PE demand
Heat pump:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Pumps:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Others:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	0.0 kWh/m²	-	0.0 kWh/m²

Mechanical ventilation

Yearly electricity consumption	Energy demand	PE factor	PE demand
Fans:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Others:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	0.0 kWh/m²	-	0.0 kWh/m²

Cooling

Yearly electricity consumption	Energy demand	PE factor	PE demand
Colling unit:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Overheating:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Others:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	0.0 kWh/m²	-	0.0 kWh/m²

Control systems

Yearly electricity consumption	Energy demand	PE factor	PE demand
BMS, natural ventilation etc.:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Others:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	0.0 kWh/m²	-	0.0 kWh/m²

2.0 Energy, Reference

Lighting

Yearly electricity consumption	Energy demand	PE factor	PE demand
Total:	0.0 kWh/m ²	0.0	0.0 kWh/m ²

Electricity produced by renewable energy

Yearly electricity production	Energy demand	PE factor	PE demand
PV Cells (on site):	0.0 kWh/m ²	2.5	0.0 kWh/m ²
Windmills and others (on site):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Off-site renewable production:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Electricity grid:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	0.0 kWh/m ²	-	0.0 kWh/m ²

Heat produced by renewable energy

Yearly heat production	Energy demand	PE factor	PE demand
Solar panel (space heating):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Solar panel (domestic hot water):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
District heating (Renewable part):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Boiler (Renewable part):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Electric heating (Renewable part):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Heat Pump (Renewable part):	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Biofuels:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Biogas:	0.0 kWh/m ²	0.0	0.0 kWh/m ²
Total:	0.0 kWh/m ²	-	0.0 kWh/m ²

General information

Heated floor area:	m ²
--------------------	----------------

2.1 Energy demand score

Space heating:	0.0 kWh/m ²
Domestic hot water:	0.0 kWh/m ²
Mechanical ventilation:	0.0 kWh/m ²
Cooling:	0.0 kWh/m ²
Control systems:	0.0 kWh/m ²
Lighting:	0.0 kWh/m ²
Total:	0.0 kWh/m ²
Energy demand score:	Out of AH category

2.2 Energy supply score

Electricity produced by renewable energy:	0.0 kWh/m ²
Heat produced by renewable energy:	0.0 kWh/m ²
Total:	0.0 kWh/m ²
Energy supply score:	Out of AH category

2.3 Primary energy performance score

Total:	0.0 kWh/m ²
PE performance score:	Out of AH category

3.0 Environment, Project

3.1 Environmental loads score

Active House LCA tool:	yes	
Consumption type	Yearly consumption	Score
PE consumption:	<150 kWh/m ²	3.0
GWP:	<40 kg CO ₂ -eq/m ²	3.0
ODP:	<3.70E-06 kg R11-eq./m ²	3.0
POCP:	<0.0070 kg C ₂ H ₄ -eq./m ²	3.0
AP:	<0.075 kg SO ₂ -eq./m ²	2.0
EP:	<0.0085 kg PO ₄ -eq./m ²	3.0
Environmental loading score:	-	2.8

3.2 Freshwater consumption score

Minimisation of freshwater consumption:	36 %
Freshwater consumption score	1.7

3.3 Sustainable construction score

Category	Value	Score
Recyclabel content:	99 %	1.0
Certified wood (FSC, PEFC):	100 %	1.0
Verified EPDs:	0 %	4.0
Sustainable construction score:		2.0

3.0 Environment, Reference

3.1 Environmental loads score

Active House LCA tool:	yes	
Consumption type	Yearly consumption	Score
PE consumption:	>200 kWh/m ²	Out of AH category
GWP:	>50 kg CO ₂ -eq/m ²	Out of AH category
ODP:	>6.70E-06 kg R11-eq./m ²	Out of AH category
POCP:	>0.0085 kg C ₂ H ₄ -eq./m ²	Out of AH category
AP:	>0.125 kg SO ₂ -eq./m ²	Out of AH category
EP:	>0.0105 kg PO ₄ -eq./m ²	Out of AH category
Environmental loading score:	-	Out of AH category

3.2 Freshwater consumption score

Minimisation of freshwater consumption:	0 %
Freshwater consumption score	Out of AH category

3.3 Sustainable construction score

Category	Value	Score
Recyclabel content:	0 %	Out of AH category
Certified wood (FSC, PEFC):	0 %	Out of AH category
Verified EPDs:	0 %	4.0
Sustainable construction score:		Out of AH category

Results

Project

Comfort	Value	Category
1.1 Daylight:	4.8 %	1.2
1.2 Thermal environment:	best level	1.0
1.3 Indoor air quality:	≤ 750 ppm	1.6

Classification

Energy	Value	Category
2.1 Energy demand:	38.8 kWh/m ²	1.0
2.2 Energy supply:	52.3 kWh/m ²	1.0
2.3 Primary energy:	10.3 kWh/m ²	2.7

Classification

Environment	Value	Category
3.1 Environmental loads:	Good level	2.8
3.2 Freshwater:	36 % savings	1.7
3.3 Sustainable construction:	Better level	2.0

Classification

Reference

Comfort	Value	Category
1.1 Daylight:	0.0 %	-
1.2 Thermal environment:	Out of AH category	-
1.3 Indoor air quality:	> 1200 ppm	-

Classification

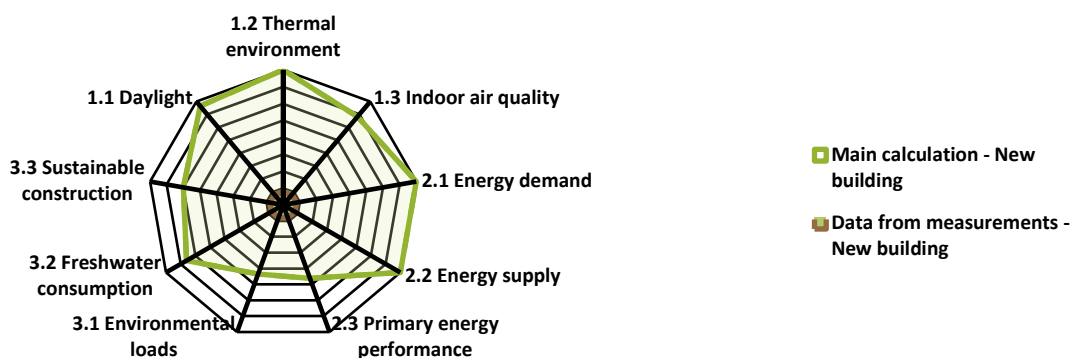
Energy	Value	Category
2.1 Energy demand:	0.0 kWh/m ²	-
2.2 Energy supply:	0.0 kWh/m ²	-
2.3 Primary energy:	0.0 kWh/m ²	-

Classification

Environment	Value	Category
3.1 Environmental loads:	Lowest level	-
3.2 Freshwater:	0 % savings	-
3.3 Sustainable construction:	Lowest level	-

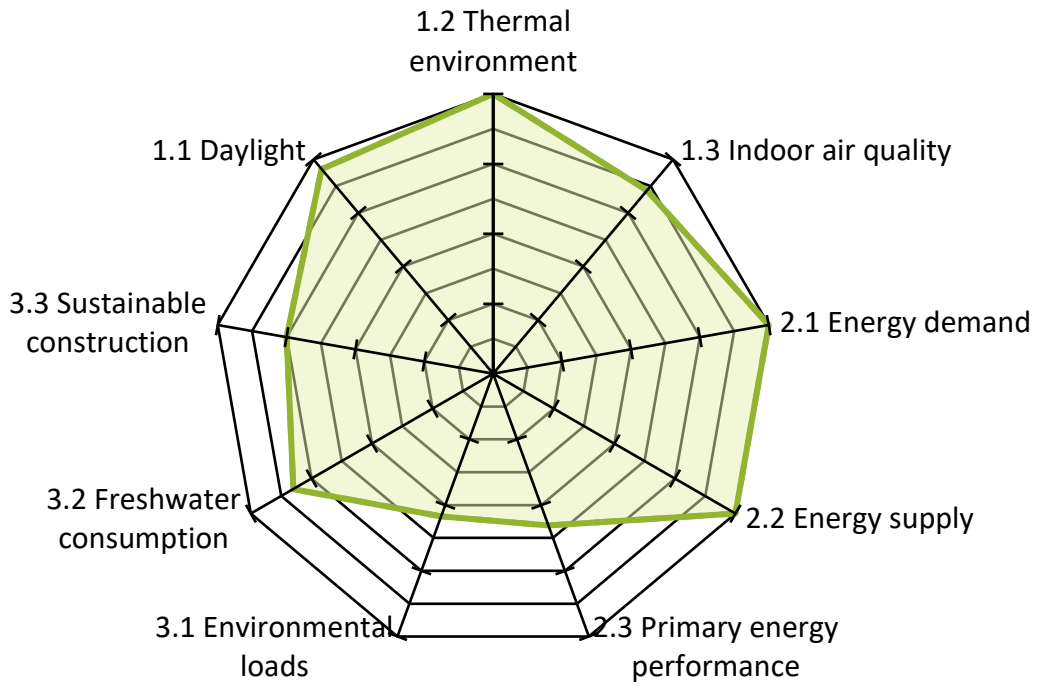
Classification

Radar



Radar

Project



Reference

