



Project information

Project type:	New eco-building
Address:	C/. Paseo de los Grillos, 17, Tudela
End construction year:	2010
Building type:	Public Building
Storeys:	3
Gross area BTA:	2088 m ²
Net area:	1288 m ²
Heated area:	1356 m ²
Additional costs* for eco-applications:	76.192 €
Total building costs*:	1.031.010 €

* Not included industrial benefits, overheads and taxes

Special ECO-technologies applied:

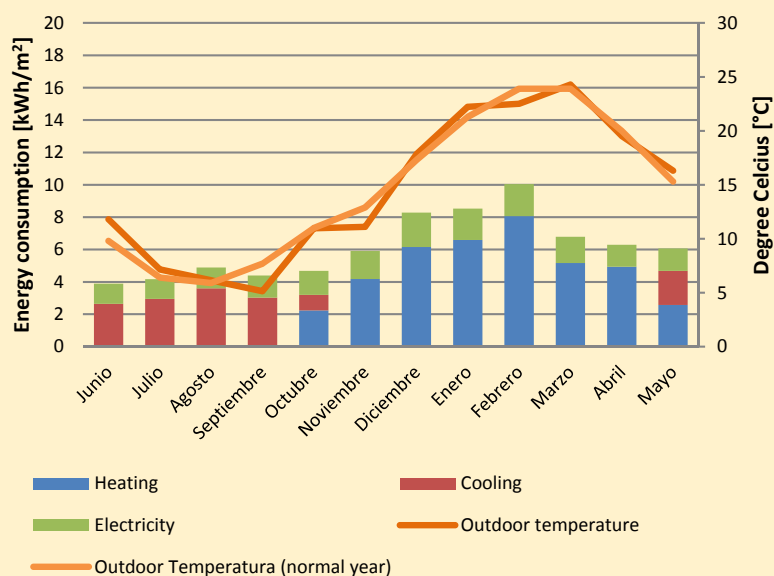
- Optimisation of window type
- Thermal bridges avoided
- Increased insulation
- Pipe/valve insulation on heating
- DHW pipes + boiler room
- Water savings fixtures
- Demand controlled circulation
- Individual metering
- Heat pump



Energy consumption

* National Regulations (2006)

Energy consumption 2011-2012



Heat trans.	Unit	National reg.*	Concerto spec.	Actual
Outerwall	W/m²K	0.66	0.17-0.22	0.4
Roof	W/m²K	0.49	0.2	0.28
Floor	W/m²K	0.49	0.25	0.35
Windows (north)	W/m²K	3	—	—
Windows (south)	W/m²K	3.5	—	—
Glazing	W/m²K	—	1.6	1.9
Vent. rate	h ⁻¹	1	0.5	0.5

Energy consumption	Unit	National reg.*	Concerto spec.	Actual 2011-2012
Heating	kWh/m²	67	36	39.9
Cooling	kWh/m²	25	17	15.3
Electricity	kWh/m²	45	34.6	18.7
Total	kWh/m²	137	87.6	73.9

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Lessons learned:

- The electrical consumption is relatively high when the building is unoccupied. This involves the need of a future energy audit.



Key figures

Heat trans.	Unit	Normal practice	Concerto spec.	Actual
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Floor	W/m ² K	0.49	0.25	0.35
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Glazing	W/m ² K	–	1.6	1.9
Vent. rate	h ⁻¹	1	0.5	0.5

Energy consumption	Unit	Normal practice	Concerto spec.	Actual 2011-2012
Heat	kWh/m ²			39.9
Pipe losses	kWh/m ²			Inc
Ventilation	kWh/m ²			Inc
Total heat	kWh/m²			39.9
Lighting	kWh/m ²			Inc
Cooling	kWh/m ²			15.3
Other	kWh/m ²			18.7
Total elec.	kWh/m²			34
Total	kWh/m²			73.9

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