

Project information

Project type:	New eco apartments
Address:	Bryggaregatan 32-34 Håkan Lundbergsg. 15-23 Struzen-Beckersgata 3-5
End construction year:	2008
Building type:	Multi family houses
Dwellings:	106
Storeys:	6-7
Persons in building:	289
Gross area BTA:	11073 m ²
Net area:	7460 m ²
Heated area:	9500 m ²
Window/door area:	1287 m ²
Total eligible costs:	50.7 €/m ²
Total costs:	1653 €/m ²

Special ECO-technologies applied:

- Optimisation of window type
- Passive solar
- Avoidance of thermal bridges
- Increased insulation
- Demand controlled ventilation
- Ventilation with heat recovery
- Balcony glazing
- Low energy domestic appliances
- Demand controlled circulation
- Solar heat
- Heat pump
- Comfort measuring system

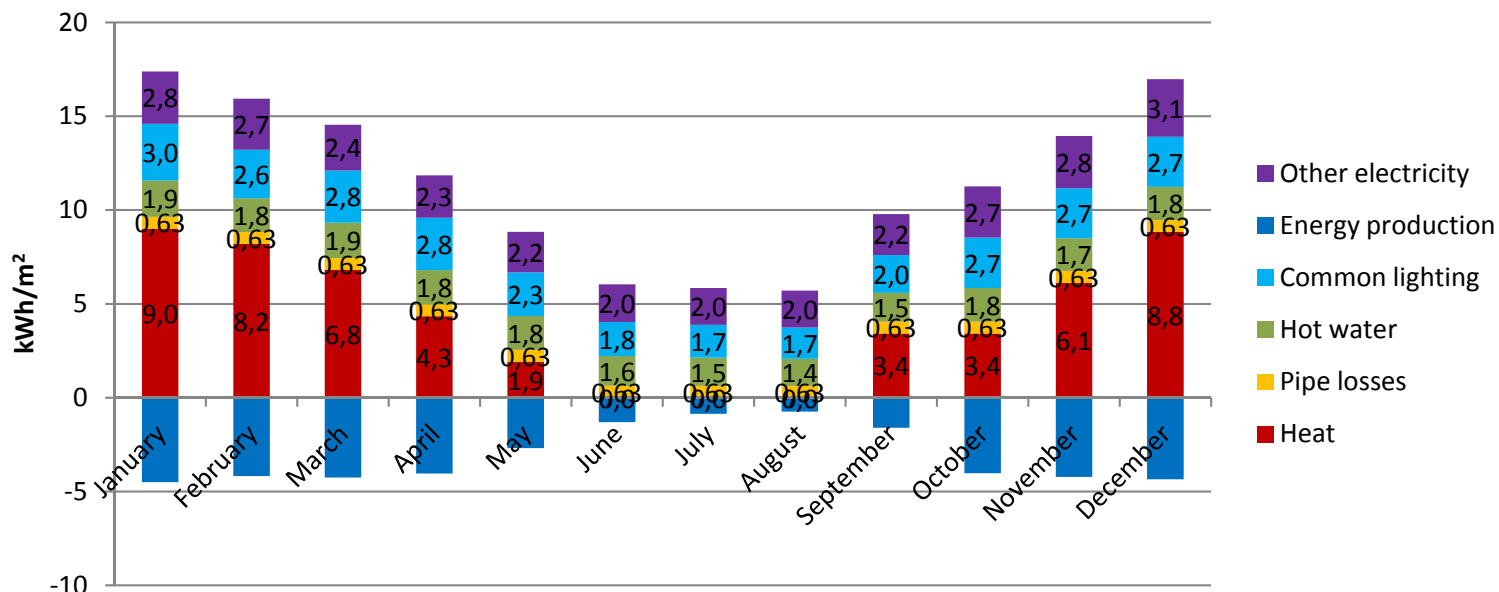
NOTE:

Extra electricity for lifts, laundry and car park is included in the total energy consumption.



Energy consumption

Energy consumption 2012 - Degree day corrected

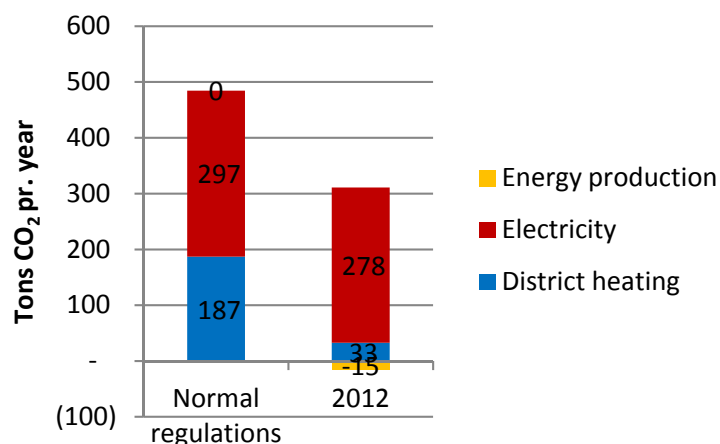


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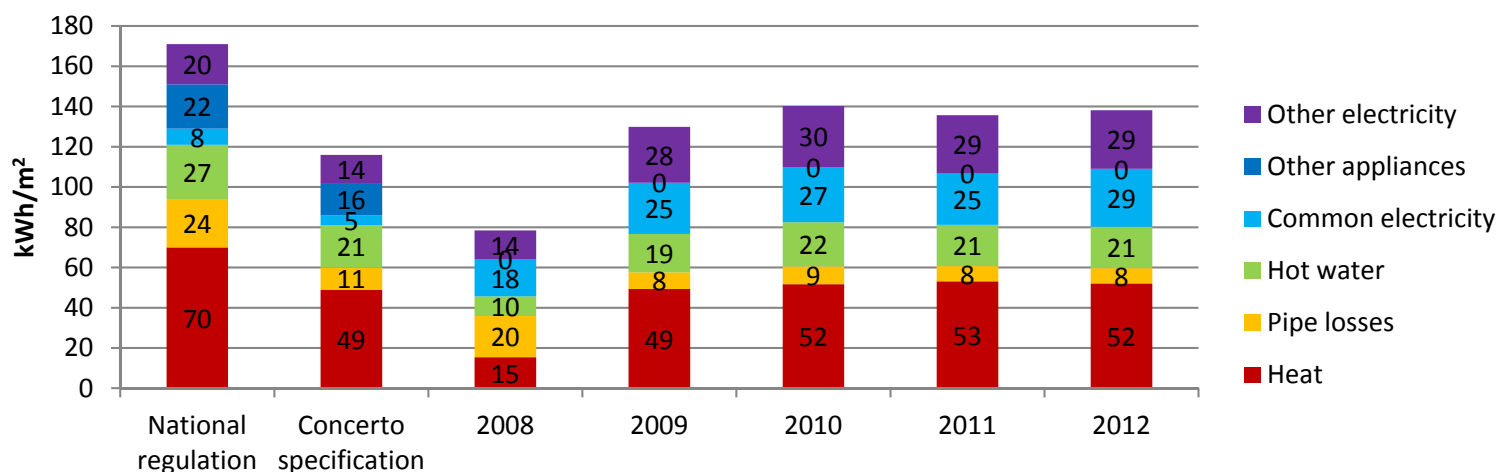
Lessons learned:

- A new user interface for metering, safety and communication system has been developed
- The solar collectors needed protection against vandalism
- The heat pump and solar system for DHW can be compared as alternative sources

CO₂ emission



Energy - specifications and consumption



Key figures

Heat trans.	Unit	Normal practice	Concerto spec.	Actual	Energy consumption	Unit	Normal practice	Concerto spec.	Actual 2011	Actual 2012
Outerwall	W/m²K	0.4	0.25	0.216	Heat	kWh/m²	96	49	53	52
Roof	W/m²K	0.25	0.2	0.257	Pipe losses	kWh/m²	24	11	8	8
Floor	W/m²K	0.3	0.25	0.154-0.244	Ventilation	kWh/m²	-	18	-	-
Windows	W/m²K	N.A.	1.1	1.19-1.28	Hot water	kWh/m²	27	21	21	21
Glazing	W/m²K	1.8	<1.1	0.9	Total heat	kWh/m²	147	99	81	80
Doors	W/m²K	-	-	1.4	Lighting	kWh/m²	50	21	25	29
Vent. rate	h ⁻¹	-	0.5	0.53	Other	kWh/m²	-	14	29	29
					Total elec.	kWh/m²	50	35	54	58
					Solar heat	kWh/m²	0	-21	-34	-37
					Total	kWh/m²	197	113	102	101

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