

Project information

Project type:	New eco-dwellings
Address:	Engelska Gangen 5-11 Tankegången 2-88
End construction year:	2007
Building type:	Multi level row houses
Dwellings:	64
Storeys:	2-3
Persons in building:	216
Gross area BTA:	6420 m ²
Net area:	5464 m ²
Heated area:	5706 m ²
Window/door area:	1358 m ²
Total eligible costs:	51.4 €/m ²
Total costs:	1527 €/m ²



Special ECO-technologies applied:

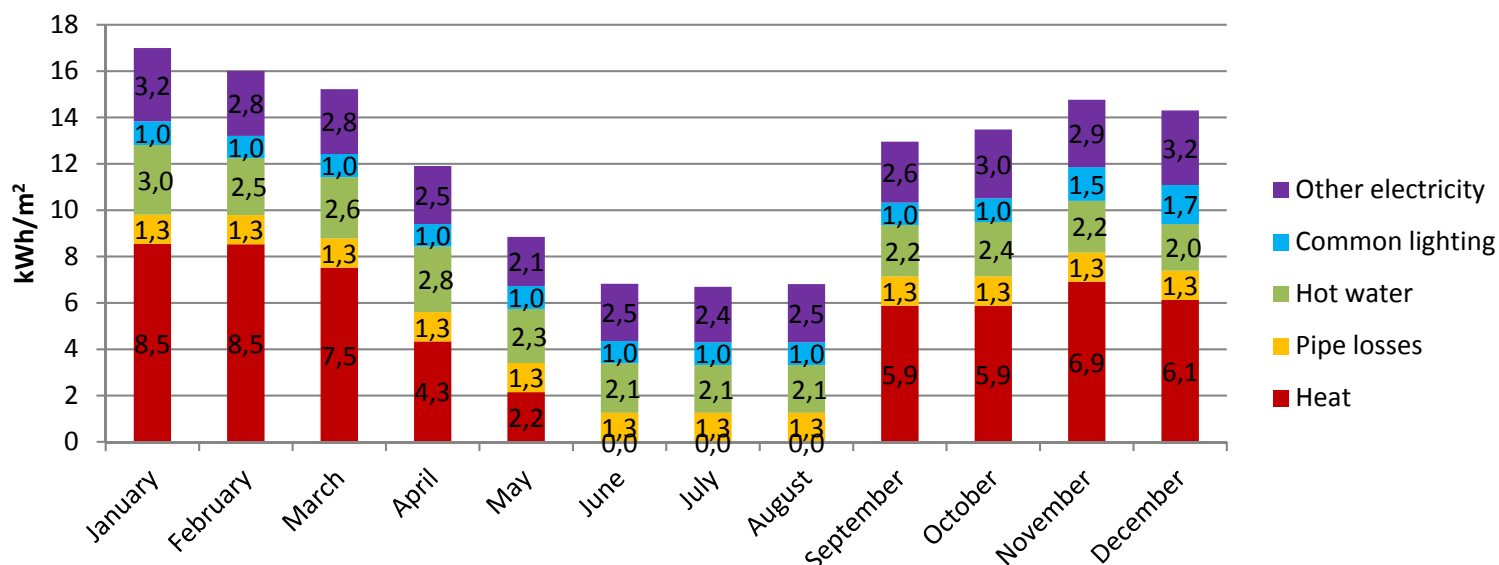
- Optimization of window type
- Passive solar
- Avoidance of thermal bridges
- Increased insulation in roof, floor and facade
- Demand controlled ventilation
- Ventilation with heat recovery
- Intelligent control system
- Individual measurement system
- Improved air tightness of building envelope

NOTE:



Energy consumption

Energy consumption 2012 - (Degree day corrected)

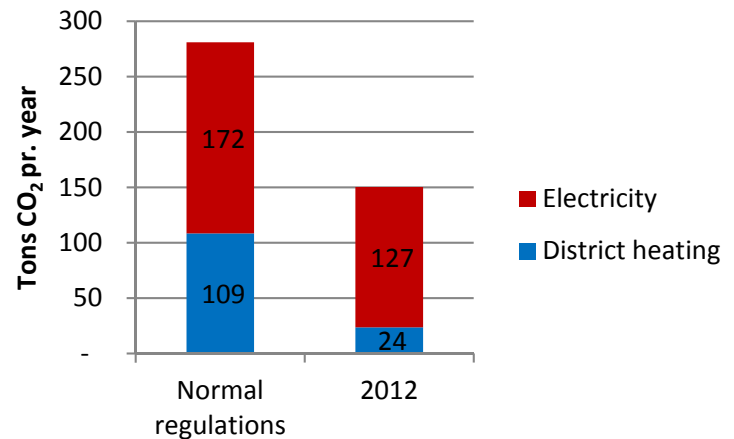


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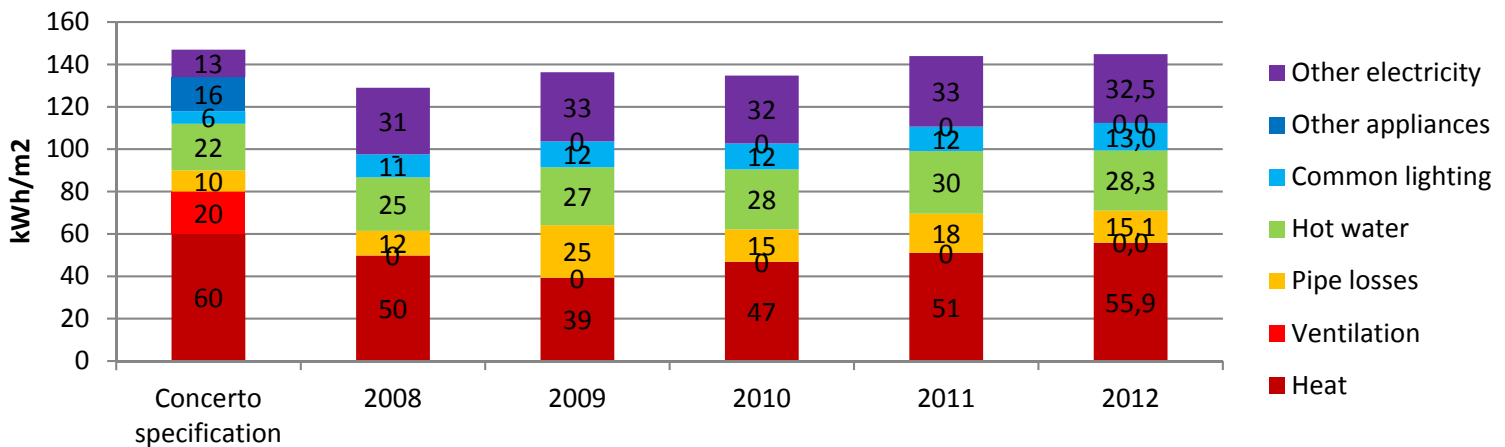
Lessons learned:

- The heat loss from the distribution pipes between buildings are very high due to lack of optimisation of internal district heating system!
- Dwellings with more levels have high infiltration losses due to stack effect
- Electricity consumption is relatively high due to high standard in appliances and the ventilation system

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/m ² K	0.4	0.25	0.18	Heat	kWh/m ²	96	80	51	56
Roof	W/m ² K	0.25	0.2	0.12	Pipe losses	kWh/m ²	24	10	18	15
Floor	W/m ² K	0.3	0.25	0.11-0.15	Ventilation	kWh/m ²	-	-	-	-
Windows	W/m ² K	N.A.	1.1	1.3	Hot water	kWh/m ²	27	22	30	28
Glazing	W/m ² K	1.8	<1.1	1.0	Total heat	kWh/m²	147	112	99	99
Doors	W/m ² K	-	-	1.0	Lighting	kWh/m ²	50	6	12	13
Vent. rate	h ⁻¹	-	0.5	0.52	Other	kWh/m ²	-	29	33	32
					Total elec.	kWh/m²	50	35	45	45
					Solar heat	kWh/m ²	0	0	0	0
					Total	kWh/m²	197	147	144	145

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