

# Salzburg: Model of ecological housing promotion

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The model is existing since 1993. This „point-model“ is part of the housing promotion system in Salzburg and was introduced in order to reduce the need of heating energy on the one hand, and to promote the use of renewable forms of energy on the other hand. Relevant for the number of energy-points is the point table for energy-saving constructions and the use of renewable forms of energy. Special measures (for example the installation of biomass heating systems, use of industrial waste heat, solar technology ...) are listed up in this table. Depending on the quality of the energy need of the house itself, the “LEK-value” you can get more or less energy-points. The more energy points you have the more subsidies you will get. Since March 2003 a second point table is relevant for other ecological measures like the ecology of the building materials, use of rain water, soil sealing, roof planting and so on.

## Energy-points Stand vom 09.02.00

Förder-Klasse	Gebäude -Klasse Energiekennzahl LEK - Wert ÖNORM B 8110-1 [ - ]	Energie - Punkte									Summe Zuschlag punkte
		Wärme- dämmung Bewertung	Errichtung einer Bioheizung heizung	Anschluss Biomwärme Abwärme- nutzung	Anschluss Fernwärme oder Nahwärme	Wärme- pumpe 2)	Sonnen- energie Aktiv aktiv <sup>3)</sup>	Heizungs- rücklauf < 40 °C	kontrollierte Wohnraum- lüftung mit WRG	Innovative Techno- logien	
1	<38 - 35	1	2	-	-	-	2	-	-	1	
2	<35 - 32	2	2	-	-	-	2	-	-	1	
3	<32 - 30	3	2	-	-	-	2	-	-	1	
4	<30 - 28	4	3	-	-	-	2	1	-	1	
5	<28 - 26	5	3	2	1	-	3	1	3	1	
6	<26 - 24	6	3	2	1	-	3	1	3	1	
7	<24 - 22	7	4	2	1	1	3	1	3	1	
8	<22 - 20	8	4	2	1	2	3	1	3	1	
9	<20 - 18	9	4	2	1	2	3	1	3	1	
10	< 18	16	-	-	-	-	33	-	3	1	

## Energy promotion in Salzburg – a real success story

Through energy-saving constructions respectively heat damming measures, the average heating-load dropped down from 62,7 to 37,4 W/m<sup>2</sup> gross floor area. That means a reduction of 40% in relation to the initial position 1991/92. The number of projects in the upper promotion classes (high number of energy-points) constantly increases. This system has developed to a levelling system too. People who want to buy a house or apartment know that a seven point house is better than a three point. So it has become a selling argument too.

Fig. 1: Development of LEK- Value

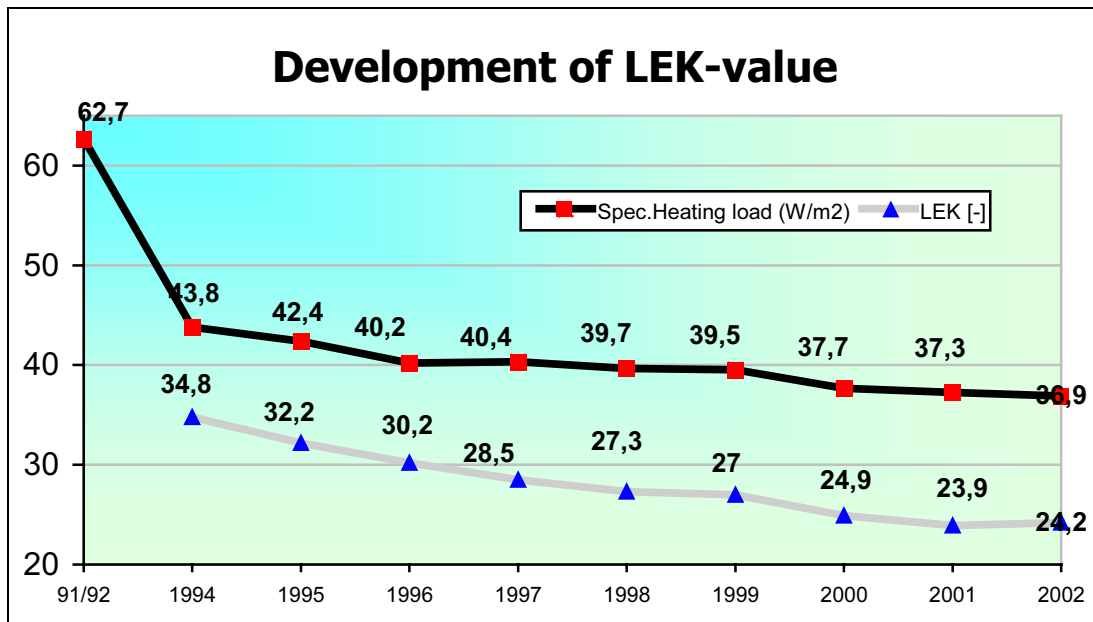
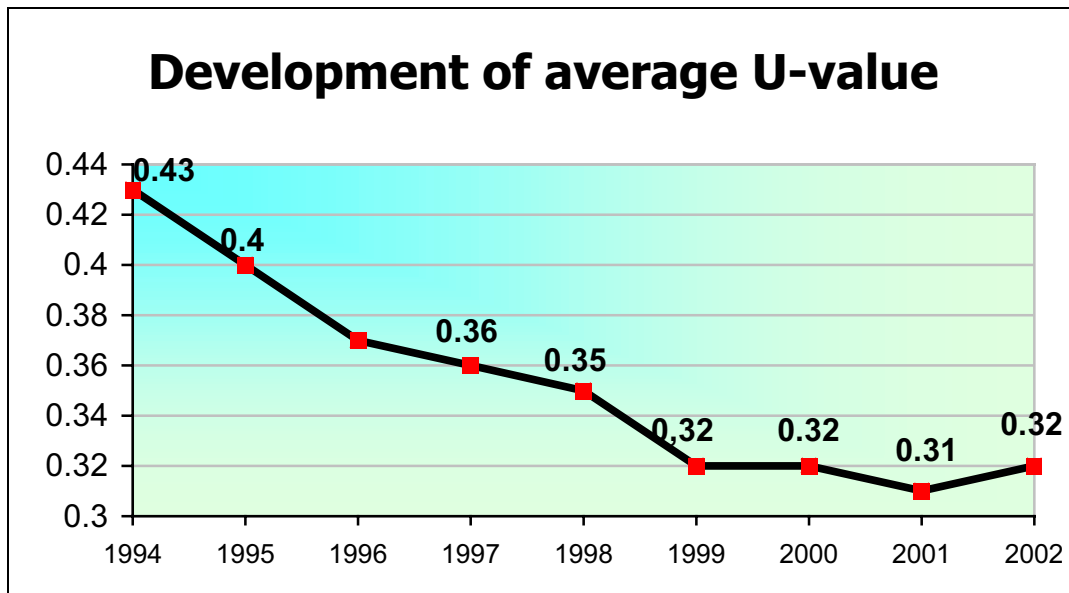
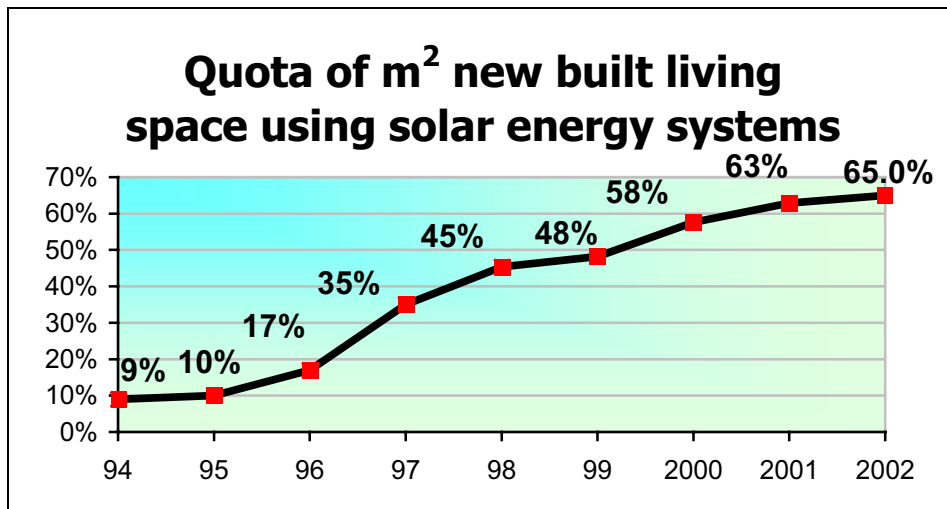


Fig. 2: Development of average U- value



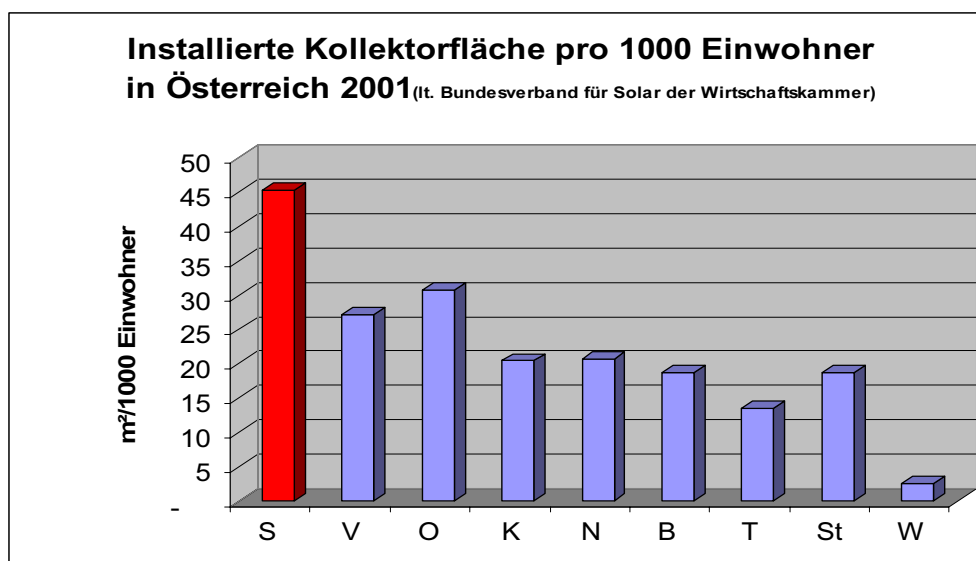
The characteristic value for the building cover (LEK-value) improved since 1994 from 34,8 to about 24. The average heat transition coefficient (U-value) dropped down from 0,43 to 0,31 W/m<sup>2</sup>K.

Fig. 3: Quota of m<sup>2</sup> new-built living space using solar energy systems:



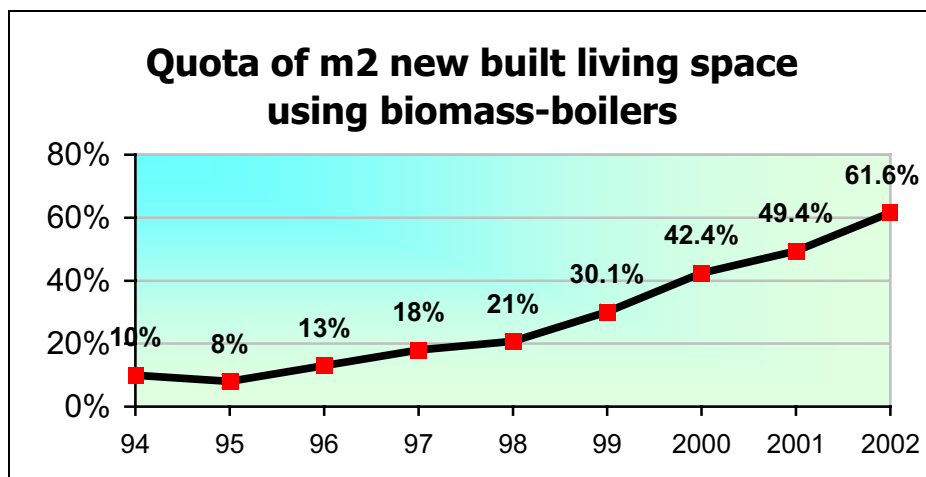
The use of solar panels for warm water heating has increased gigantic since the beginning of the new promotion system. The number of dwellings equipped with solar heating plants has risen from 9% to 65%. The reason for this boost is that the emplacement of solar plants is increasingly offered by big housing projects.

The low-temperature heating systems, which allow more efficiency in the use of solar heat, district heat and heat out of bas-boilers have become nearly standard now. All heaters which exhibit a return temperature under 40 degrees Celsius are classified as low-temperature heater. The rate is 88% by now.



The controlled housing ventilation with heat recovery (comfort ventilation) reduces energy need and improves room air quality which leads to a higher housing comfort as well. In super insulated houses (Houses with an energy need to a tenth of standard housing constructions) the air ventilation system is able to take over the function of common heating systems. The required warmth is transferred from a heat exchanger to the supply air. The warmed air circulates into the rooms. The big advantage consists in the abandonment or in the higher cost efficiency of common heating systems in super insulated houses. This and more arguments make super insulated houses more and more attractive and is the engine for further efforts in the thermal protection for buildings. In the year 2000 27% of the flats in Salzburg and in the year 2001 19,1% were equipped with comfort ventilation systems.

Fig. 4: Quota of m<sup>2</sup> new-built living space using biomass-boilers:



The use of biomass heat production for rooms has increased since 1995. In the year 2000, 42,4% of the applicants submitted an application for heat production out of biomass. 2002 there were already 61% of the dwellings heated with biomass.

In March 2003 the model was extended. Beside the energy points there are further **ecological points** to get. In particular there is higher financial support for using ecological building materials. These ecological points can be calculated depending on the OI3-Ic- Index, which considers following main components:

- Primary energy content (non renewables) PEI
- Global Warming Potential GWP
- Acidification Potential AP

Additional you can get more points, that means more subsidies for rain water collection, green roofs, water saving systems ....

This system increases the awareness of ecological criteria in the planning and building process.