



Kyoto-realisation program of Salzburg for the area: Thermal energy supply and heat protection

Report of the working group of the country, Summary 2004-01-20
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The Salzburg government has arranged after government decision a working group for the building of the Kyoto-implementation program for the efficient and secure attainment of the targets in the field of thermal energy supply and heat protection. The background had been the increasing CO₂ emissions.

The energy model 97 (scenario III), that was decided by the government, requires an extent of CO₂ reduction in the sector of living space warmth and hot water, that is about the same part-target of the Austrian climate strategy (minus 28% until 2010 opposite to 1990). Under consideration of the long lead times until the efficacy of measures (until 2010), there is little time to act and therefore only quick and consequent actions can have a chance to reach the CO₂ targets for the sector living space warmth and hot water of about 600.000 t CO₂ in the year 2010.

Independently of this realisation program, ambitious measures also in other sectors (especially the traffic) are of high urgency. Because of that the clear statement of the government for the targets of the climate protection and for the Kyoto-conform reduction of the greenhouse-effect (especially CO₂) for the actors of the heating and housing market an important signal. To that belongs also the decision of the present Kyoto-optional summary Salzburg (after corresponding adaption and actualisation) through government of Salzburg and state parliament.

The promise of the in the Kyoto-protocol agreed reduction-target of minus 13 % has been valid with the decision of the Council of the European Union from the 25th April 2002 (2002/358/EG) for the EU member states. If there is a lapse of the CO₂ target the European Court of Justice can incur a fine with suggestion of the European Commission. The extra expenses can be quantified in particular if not reaching the target after the Kyoto-protocol comes into force: If the CO₂ emissions of Austria in the first period of proof in 2008-2012 rest on the level of 1991 (25 % over the CO₂ target value of Austria), so this would implicate extra costs that would be the same as a retribution of 1.2 to 4.7 billion Euro, that would have to be paid by the countries.

The energetic standard of new buildings corresponds to the heat protection prescription of the Austrian best-values. Until the middle of 2005 the increase of the energetic minimum quality of about 10 % to 30 % will be noticed as functional. In spite of an innovative and effective furtherance system these measures only lead to a damming of the increase of CO₂ emissions. In contrast to the new building sector, in the sector of redevelopment there could be only obtained little reductions of CO₂. Because of that it is advised to raise the

rates for redevelopment (5.000 accommodation units¹). Buildings, that are not for living, that cause also 25 % of the CO₂ emissions at the living space heating and hot water sector, also have to be taken into account to the redevelopment strategy.

The opportunities to use a calorific value technology for the use of fuel oil and natural gas, and also to create incentives for the fortified installation of low temperature systems within the redevelopment measures should be used. For the secure reaching of the CO₂ targets until 2010 there are also necessary in addition massive deferrals with the used fuels, there are two options:

- variant A: 32,000 oil-heated, 8,000 natural gas heated and 2,800 coal heated flats have to be converted to heating systems with CO₂ neutral and CO₂ poor energy carriers.
- variant B: 32,000 oil heated and 2,800 coal heated flats have to be converted to a heating system that is CO₂ neutral and that uses CO₂ poor energy carriers. In addition there are implemented other measures through the Salzburg AG to the extent of the CO₂ reduction as the result of a convert of 8,000 flats that were heated with natural gas into CO₂ neutral and CO₂ poor energy carriers. (For example the long-distance heating of Hallein – Salzburg South, or the convert of the fuel supply of heating power stations).²

Analogue to that there has to be done something in the field of the dwelling houses, that are not for living. Seen as CO₂ neutral energy carrier there are: solar energy, bio mass, waste warmth systems, local heating and long-distance heating, as far as it is produced with biogenic energy carriers. Seen as CO₂ poor energy carriers there are: waste heat, local and long-distance heating, as far as produced with natural-gas or oil heated 'KWK' installations, and warmth that is coming from efficient water pumps.

Regarding the adherence of the emission-value limits for 'classical' pollutants (respectively the guidelines of the NEC directives of the EU), with urged use of bio mass, the executed analysis show, that if there is a suitable implementation of measures for the reduction of consumption, there is a lowering of the emissions of air pollution CO, NO_x, SO₂, NMVOC, and dust in the living space heating sector – although there is a raising of the market share of bio mass.

Apart from that the whole airborne pollutant balance with dust, NMVOC and NO_x is massively dominated from the emissions of traffic and industry. Emissions from the room heating play a comparatively little roll.

There has to be defined primacy areas for an efficient target attainment³, that understand a geographic delimitation of natural gas, local and long-distance heating and bio mass and allow a corresponding efficient orientation of the furtherance system. The allocation of means for the house construction furtherance for heating systems and buildings with heating systems (new building or redevelopment), that are not graded as CO₂ neutral or CO₂-poor, should be limited in the future only for the cases, in which the building isn't located in the primacy area for CO₂ poor or CO₂ neutral energy carriers and the respective whole system fulfils a raised energetic standard – expressed through a buildings' energy classification number.

In addition it should be limited for a time span of three years and there should be made financial incentives for the convert of CO₂ poor and CO₂ neutral heating systems. To provide the necessary means for the

¹ compared to that: in 2002 there have been furthered 157 comprehensive sanitations and 1.960 part-sanitations.

² There can't be "double counts" with already planned substitution measures in the area of coal and heating oil, and these "other measures" have to be allocated to the consumption segment 'living space warmth' and 'hot water'.

³ For example in terms of a voluntary agreement between the country Salzburg and the Salzburg AG. This should contain also concrete "other measures" of the Salzburg AG, and also the details for monitoring.

sanitation respective the change of the heating system, there have to be made corresponding restructures from the new building furtherance, and use the synergies from the climate protection program of the BMLFUW "klima.aktiv" (climate active), respective to aspire a close cooperation and coordination.

There should be integrated implementation of the EU-building guidelines into the representational implementation program. One implementing measure, that has very high importance for the necessary change of the fuel-mix, contains the inspection of the whole heating appliance, if they are over 15 years old and have a power rating of over 20 kW, and the creation of modernization suggestions. To be successful with this measure, it is necessary to couple and adapt it as strong as possible to the furtherance system (house construction furtherance, economic furtherance and "climate active"), whereby in particular in the field of non-living-houses, the "one stop shop" principal is a deciding factor for the acceptance of the real estate developer. The new founded "Umwelt.Service.Salzburg" (environmental service Salzburg) is respected as the suitable carrier for that.

Because of efficiency deliberations the sanitation and the convert of heating appliances to a great volume building should be focussed. But it will be required to implement the incentives for the convert of the hot water preparation with fossil energy carriers also in one-family houses and semidetached houses -in particular into the direction of stronger use of solar energy systems.

The required collateral measures are:

- monitoring and evaluation, in particular the implementation program
- self-obligation of the country Salzburg to build the houses with a high energetic quality for the use of CO₂ poor and neutral energy carriers as far as it is technically and economically possible.
- stronger support of the communities, that have to take over criteria of the self-obligation of the country within the framework of "energy active" and "e5-energy conscious communities", and – as far as it is legally possible – fixation of the allocation of means for the EU-equalization fund (GAF) for the fulfilling of the criteria of the self-obligation.
- agreement with the Federation to overtake the self-obligation of the country for its own buildings
- Upgrading of the supply of biogenic fuels, especially in cooperation with the "action program energy wood" (part program of "climate active"). Here it is attached particular importance for the building of a secure supply, suitable logistic and the minimizing of transport rails.
- target group specified formation of the consciousness, and information (for example training and extended vocational training for the real estate developer and the planner).
- creation of a administrative intern structure for a central coordination of the climate protection activities (like described in the Kyoto-optional-report Salzburg), the accompaniment of the implementation program, the monitoring and reporting to the government, and so on.

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