COOLREGION

WP 2 Description of the regional strategies
"Measures to support different regional actors"
SLOVENIA

Introduction

Slovenian EPBD regulation (expected 9/2007) will introduce also calculations of energy use for cooling. The minimum requirements will be exposed on ten level of final energy consumption with specific regulations for summer conditions. For residential buildings the calculations of maximum indoor temperature is considered and the building design must ensure summer thermal comfort without cooling devices. Consideration of energy demand for cooling will influence cooling demand on national level.

Summary of the results to date

It is expected that electricity consumption in Slovenia will increase in next period (5-10 years) due to increase in industrial production and residential sector too. Actual estimation is between 4 and 6% per year.

Regional assets and context

Efficiency of cooling system will increase due to better cooling devices, insulation (distribution of cold / cooling media) and higher level of knowledge about appropriate temperature levels. Cooling temperatures for indirect cooling systems will increase what also increase efficiency of cooling systems.

Type of cooling system depends on application of air-conditioning. Central cooling is used in big buildings and could be combined with cooling needed in industry. Split systems are predominantly used in residential sector and small business sector. A lot of split installations are also in commercial sector, but it is expected to be transferred to central cooling.

Passive cooling is rarely used in small applications. Free cooling is only possible in cooling systems with air distribution which are predominantly in commercial sector.

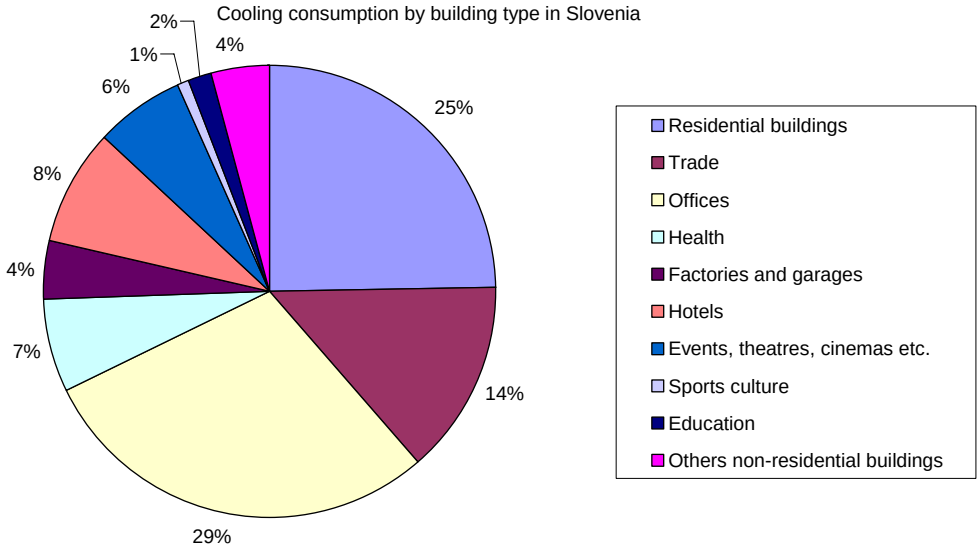

Figure 1: Cooling consumption by building type(Source: SDHK**)**

Proposition of objectives and regional strategies

In 2010 R22 will be prohibited in Slovenia. The first air conditioners used some R11 or R12 which had a very harmful impact on the ozone layer and on the greenhouse effect. Then, their use was prohibited and they were replaced by R22, which makes part of the family of the HCFC. This is a chance for implementation of new efficient technologies.

EPBD regulation (expected 9/2007) will enable calculation of cooling demand. The data may become an obligatory context of energy certificate for new buildings. Registration of cooling demand data (and planned technologies) based on building energy certificates enable for the first time to create a database for cooling demand. Benchmarks created on the basis of the above described data may use as a starting point in defining minimum requirements for cooling.

At the design level it is important to reduce cooling demand with passive measure at the architectural design stage. In spite of some innovative cases in general this is not the case. Problems occur more often in case of simple low cost design, where innovations penetrate slowly due to lack of confidence, knowledge, money and unfamiliarity with new technologies. Less demanding investors are an important target group for education in this field.

Clients – end users of the buildings – shall be informed about conscious behaviour in terms of building cooling. Users habits are an important source of energy consumption, especially since implementation of cooling devices is new and the people are not informed about impact on microclimate (health) and energy consumption (costs and emissions).