

## COOLREGION

### 1st Regional network meeting

#### General information

The information below was transferred to potential members of regional network during the first set of bilateral meetings in February 2007.

About the COOLREGION:

Especially in the temperate zones of the EU the increasing demand of cooling for buildings which concerns all sectors of the economy is often underestimated.

The increasing demand of cooling results from higher thermal load in buildings, large sized vitrification at facades and a higher demand for comfort among the users, especially in the trade, industry and public sectors. In public discussions and in the notice of decision makers this subject does not get enough attention so far. Not only for new buildings but also in the field of refurbishment the subject of “prevention of cooling and energy efficient cooling” has little priority. Apart from that, studies show that great potentials to save energy exist in the field of cooling in industry, trade and services

To make up for the lack of knowledge, it is necessary to address all relevant target groups and to provide practical solutions for the reduction of cooling systems demand in buildings. Experiences in other projects show that it is much easier and more effective to raise awareness of energy efficiency topics and reach decision makers on a local level through local activities and a regional network of actors. Therefore the activities in the project COOLREGION focus on local and regional levels (e.g. Upper Austria, part of North-Rhine Westphalia).

The project COOLREGION focus on the dissemination of knowledge about energy efficient cooling mainly for multipliers like architects, engineers and building owners through seminars, networks etc.

Therefore, the main objectives of COOLREGION are:

#### Short term

- to develop and to implement transferrable strategies and instruments in local action plans to reduce energy consumption for cooling in selected regions in the participating countries
- to raise awareness of energy efficiency matters and the reduction potential of cooling in buildings
- to implement a network of expertise in the field of cooling
- to transfer know-how to the relevant target groups
- the exemplary reduction of energy consumption for cooling in selected pilot buildings.

#### Long term

- reduction of energy consumption for cooling in selected regions of the participating countries by local action plans, and implementation of a European exchange of experience about energy efficient cooling in countries with moderate climate by a European network of experts
- initiation of a sustainable process to reduce energy consumption for cooling

## Short description

Overview of the contents of the project and invitation to participate:

The project is made of four parts:

### Regional cooling market and focus type of building

- Report about the cooling market in the participating regions,
- Development of a simple benchmarking for cooling in different types of buildings and detailed characterisation of 5 model buildings of different types,
- Definition of one thematic focal point for the region and proposal of a regional strategy development to decrease energy consumption for cooling.

### Best practice examples and guidelines

- Identification of best practices examples for energy efficient cooling for different types of buildings,
- Development of guidelines about “summer-sufficient planning and design of buildings and energy efficient cooling” for different types of buildings,
- Implementation of a regional information network “energy efficient cooling in buildings” in each region.

### Pilot building

- Selection of one pilot building in every region taking into account special selection criteria,
- Consultation of building owners and designers,
- Documentation of the consulting process of the pilot buildings,
- Editing of the results of the pilot projects for dissemination activities.

### Communication, dissemination and exchanges

- Publication of CDs with all project results,
- Publication of newsletters and press articles at European and regional levels.

## Background

In February 2007 we completed some interviews with relevant actors from Slovenia. Mainly these were bilateral discussions, that allowed better communication with the actors.

## Agenda

1. About COOLREGION
2. Experiences with cooling, preferences
3. Willingness to participate

## Results, follow-up

### **There are some results of interviews with manufacturers and fitters:**

**Menerga:** g. Gavez (telephone interview 15.2.2007)

In company Menerga offers technical support to design engineers, designing projects and they are delivering air-conditioning devices. They are assuring their customers servicing, maintenance equipments and education.

View of company Menerga on problems of reducing cooling energy in Slovenia:

Industry as largest consumer of cooling energy is notni subjected of reducing of consumption with heat recovery systems.

Tertiary sector is subjected of reducing of energy consumption for cooling with heat recovery systems, as a protection of building envelope too.

**Energoplus:** g. Zupančič (telephone interview 15.2.2007):

Energoplus offer performance of systems for heating, cooling and ventilation theirs costumers. They are assuring investors and designer's engineers' professional help over planning and choice of most optimal solutions considering available investment assets, having regard to time frameworks of project.

They are assuring their customers servicing, maintenance equipments and education. They organized professional educational meetings for maintenance staff.

Energoplus annually sells about 60 to 80 cooling generators powers between 20 and 100 kW and about 5 generators bigger than 200 kW.

Also Energoplus annually sells also around 3000 convectors. Increase of sale is not express because of increasing competition on market.

### **Results of interviews with contractors:**

**Energetika Ljubljana:** g. Škerl (telephone interview ; 16.2.2007):

Pilot study of district cooling was made in Ljubljana. Currently the system operates only in office of Energetika Ljubljana. The cooling power of the system is app. 550 kW. Another absorption cooling generator that is connected on district cooling (cooling power 350 kW) is located in near factory Lek.

A steam district cooling is in a preparation phase for a new paediatric clinic in Ljubljana

Project of district cooling will succeed with:

- greater government interest (help with subsidies) for initial investment to steam station and absorption generators,
- greater ecological awareness.

### Possibilities Of Introducing District Cooling System In Ljubljana

During the summer months the district heating system of Ljubljana has very low consumption of heat energy.

There is a question at very low consumption of heat energy whether still to use a combined heat and power production or to move over to separate production of heat in peak boilers. The solution is in bigger consumption of heat energy during summer time by introducing a district cooling system.

Research of district heating market has shown a possibility of a 50 MW enlargement potential of heat energy consumption that would be need to drive an absorption chillers. One to the specifics of operation of the district heating system in Ljubljana, a decentralized district cooling system with absorption chillers driven with steam or hot water is preferable. Such systems can be competitive with compression cooling systems if they are integrated in a combined heat and power production system and if the ratio between electric and heat energy costs is propitious.

### Results of interviews with others

**SDHK:** g. Janko Remec (meeting, telephone interview)

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.

Mr. Remec also provided as a lot of useful information for preparing a regional cooling market report.

Because of the short notice and agenda constraints, we had to make the first regional meeting in form of bilateral discussion with key actors, during February 2007.

More than 40 actors (see D10) declared they were interested in the COOLREGION program. We expect that hope that approx. 15 of them will join the next regional network and that 5-10 will co-operate with us as experts on cooling.

In the first network meeting (bilateral discussions), we presented the project COOLREGION, the regional market and discussed with the participants about:

- the best focus building types,
- the best examples in our region,
- how to find benchmarking data,
- ideas for a regional strategy.

To date, we've created good contacts and had interviews with different national and regional key actors which are summarised below.

### **Results of the interviews with users**

As an example, for new buildings, the public sector tries to avoid installing cooling systems, and to implement alternative energy efficient technologies.

For existing buildings, we found 2 cases :

- buildings without cooling systems : most of the users want to cool their buildings but without preliminary studies for alternative solutions.
- buildings with cooling systems : users often know which type of cooling systems they have, but they have no idea of their electrical consumption. For them, cooling is necessary and they don't think of reducing the cooling demand.

The environmental concern and the new policy for energy performances made the property developers aware of the cooling issues when planning new buildings. However, they can't consider giving-up cooling. Additionally, in Slovenia, schools and universities have holidays in July and August and don't need many cooling system, just some split systems.

### **Results of interviews with people working in the air-conditioning field**

- there is a lack of good craftsmen in the cooling systems industry, problems with knowing the new technologies and matching the systems (a lot is not the best),
- no information available for end users, nether for investors and decision makers,
- no benchmarks for cooling are known in the country, they are not systematically collected
- new thermal regulations for new buildings give calculation method but not also the min. requirements due to no information of actual energy use for cooling,
- benchmark values depend on climate conditions, building architecture and on comfort level which make difficult to compare the data.

### **Manufacturers and fitters**

We contacted the professional networks in cooling and ventilation. The market growth is good for them but they have to modify their production according to the Council Directive 92/75/EEC relating to energy labelling of household air-conditioners.

They are also working on the transposition of the regular mandatory inspection of air-conditioning systems in buildings : EPDB Article 9.

### **Planners and architects**

Most planners and architects have not enough time to find the best energy efficient solutions and there is often a lack of communication between these two professions.

However, in Slovenia, there are lots of ambitious planners and architects who try to prevent cooling systems in new buildings and to find low-budget solutions for old buildings refurbishment.

### **Further Information**

Next meeting planned for April – May 2007