



## Ecobuildings Recommendations

April 2009

The recommendations are derived from the 2<sup>nd</sup> Ecobuildings Workshop in Brussels on 5-6 March 2009. The workshop was attended by more than 80 participants, including policy makers from the European and national levels, researchers, industry representatives, architects, engineers and other stakeholder groups. For a complete documentation of the workshop, including all presentations, please visit [www.ecobuildings.info](http://www.ecobuildings.info).

### **1. Context and general recommendations – Meeting the European 20:20:20 obligations**

The planned reduction of greenhouse gases by 20% by the year 2020 will largely have to be achieved by improving energy efficiency in the building sector. Reductions in other sectors and the increased use of renewable energy will contribute to this policy objective, but the quickest, easiest and most cost-effective reductions will come from the building sector.

#### **Recommendation 1 – Energy efficiency is crucial**

Improvements in the energy efficiency of buildings is the most cost-efficient and easiest way of reducing greenhouse gas emissions on a large scale in Europe. The use of renewable energy sources should be supported as a complementary measure.

#### **Recommendation 2 – Sustainable construction**

Buildings should be designed and refurbished from a Life Cycle perspective and their overall environmental impact should be minimized rather than only taking the energy use of the building into account.

### **2. Renewal of European building stock**

Every year less than 1% of the existing European building stock is replaced by new buildings. Depending on the type of building and local regulations and subsidy schemes, the energy demand for heating and cooling of new buildings currently ranges between 7 and 100 kWh per square metre per year. On average, the next chance to improve wasteful new buildings will be only in 20 to 30 years, when they undergo major refurbishment for the first time.

#### **Recommendation 3 – Focus on refurbishment**

A strong focus should be placed on the refurbishment of existing buildings.

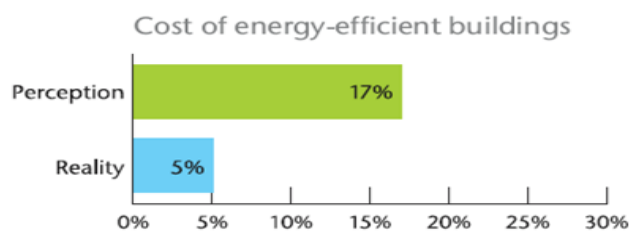
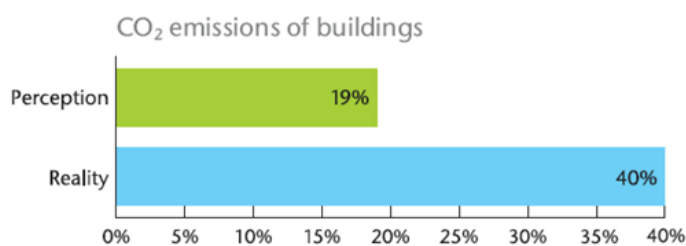
#### **Recommendation 4 – Strict standards for new buildings**

Mandatory standards for the energy efficiency of all new residential and office buildings in Europe should be introduced as quickly as possible.

### 3. The importance of dissemination and training

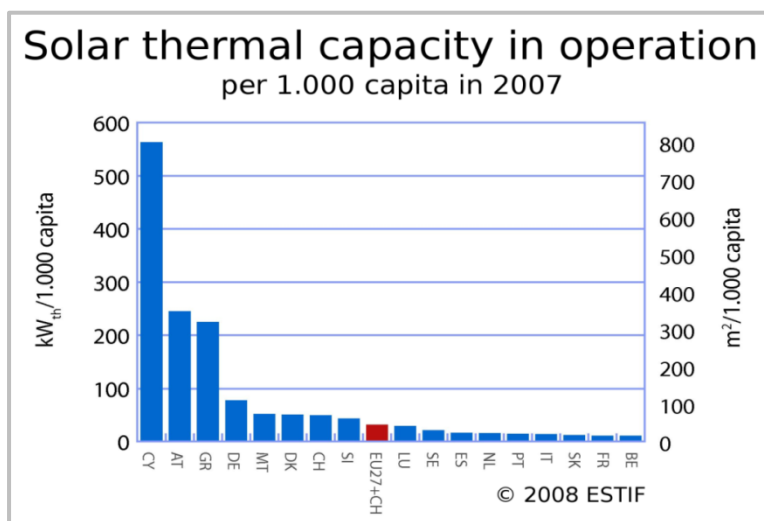
Most experts agree that the main obstacle to a breakthrough in energy efficiency in the European building sector today is not the lack of available technologies, but a problem of knowledge dissemination, coupled to a lack of proper incentive structures and efficient regulation.

**Example 1:** Even building sector professionals currently gravely underestimate the energy consumption of buildings and overestimate the costs of energy efficiency improvements.



Source: EEB Facts and Trends, August 2007. Workshop presentation by Constant van Aershot, Lafarge and WBCSD

**Example 2:** Solar thermal installations are commercially highly viable in Mediterranean countries. Nonetheless, they are hardly used in many of these countries and – even more surprisingly – even less than in certain more northern countries.



Source: ESTIF. Workshop presentation by Uwe Trekner, ESTIF.

### **Recommendation 5 – Dissemination**

Dissemination is an integral part of all research and demonstration projects and should be stakeholder-based, i.e. it is not sufficient to produce and distribute dissemination material, but actual **stakeholder mobilization** should be proven, for example by specific training activities.

## **3. The European Recovery Plan**

Within the framework of the European Economic Recovery Plan 500 million Euros are being earmarked by the European Union to finance Public Private Partnerships for increasing the energy efficiency of buildings. The funds will be used to support research and demonstration projects in the areas of technology, standardization and regulation and to set up a 'Public Procurement Network'. The following three recommendations for implementing the Recovery Plan were derived from the discussions at the workshop.

### **Recommendation 6 – New service models**

The 'demonstration of new service models' should include a focus on two hitherto unresolved problems; the first one, frequently referred to as '**cherry picking**', concerns the fact that energy companies are likely to concentrate on those buildings for new service models in which the greatest savings can be achieved in the most cost-effective manner. The second problem relates to multi-apartment **residential buildings with rented flats**, where a number of practical and legal issues with regard to new service models are still unresolved.

### **Recommendation 7 – 'Buildings as an active grid partner'**

This should allow for research into and demonstration of potential interfaces with the **transport system** (e.g. charging electric vehicles) and **energy storage** within buildings.

### **Recommendation 8 – Retrofitting/refurbishment**

The largest challenges for retrofitting are post-war residential block flats in the Old Member States and pre-fabricated block flats in the New Member States. **Integrated retrofitting solutions** should be sought combining thermal insulation and other system components (e.g. water pipes, ventilation shafts, electrical cables) with pre-fabricated components.