

MINERGIE – the successful Swiss building standard

The MINERGIE building standard stands for lower energy consumption at a higher level of comfort. In Switzerland, where the standard was developed, around 14,000 buildings are already certified to this voluntary standard.

A MINERGIE building consumes around 60 percent less energy than a conventional building. This energy efficiency is attained through an approach which considers a building to be an integral system. Only the amount of energy delivered to the site is relevant. A building can, therefore, compensate a not particularly optimal heating system by defining top values for its insulation, for example. Various measures can be taken to meet the standard:

- Compact building form
- Air-tight construction of the building shell
- Very good windows with coated double glazing
- Improved thermal insulation for walls and roof
- Heated and unheated parts of the building are always separated
- Controlled airing by means of fan-assisted, balanced ventilation
- Use of renewable forms of energy such as solar energy, wood heating, geothermal heat and waste heat
- Efficient household appliances and lighting

MINERGIE is continually being developed. Starting from the "basic" MINERGIE standard in 1998, the supplementary MINERGIE-P, MINERGIE-ECO and MINERGIE-P-ECO standards have been developed in 2007. They set new, exciting criteria for materials and energy efficiency. MINERGIE-P for example reduces the energy consumption by a further 20 to 30 percent compared with a normal MINERGIE building.

MINERGIE is designed to be economically competitive and therefore one of its rules is that the construction costs of new MINERGIE buildings should not be more than 10% higher than the average conventional building. The high number of buildings certified as MINERGIE, shows that this figure is feasible and that constructing energy efficient homes, *combined* with a higher level of comfort, is in fact affordable. To ensure the fulfillment of these high requirements, the MINERGIE standard has to be included into the planning from the very start.

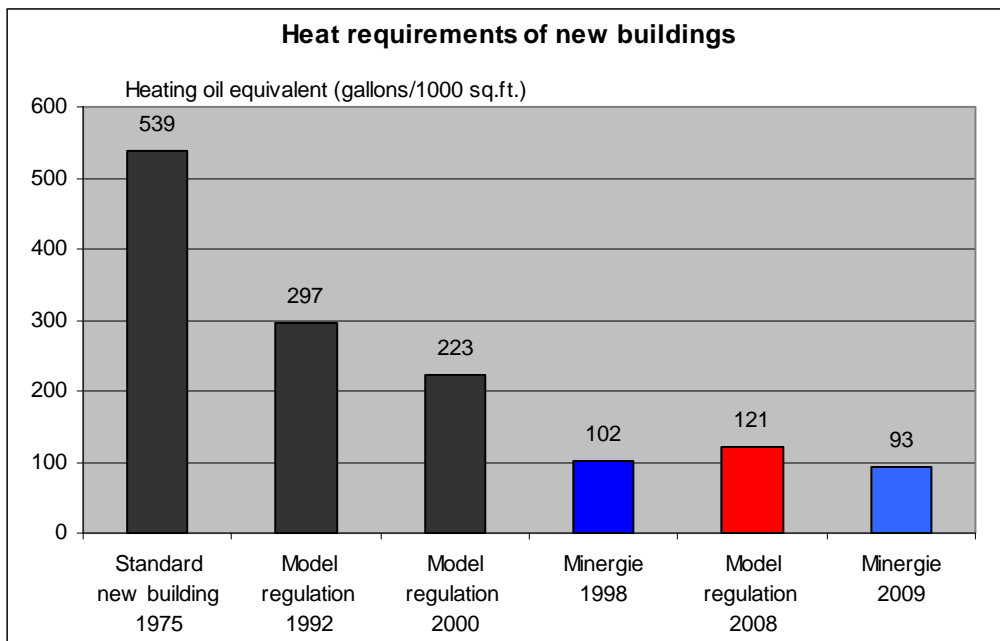
Compact structures, like apartment buildings, attain energy efficiency more economically and are therefore more likely to pay off their additional costs in the long run. However, with current energy prices most MINERGIE buildings and particularly MINERGIE single-family homes are not yet able to compensate for these additional investment costs through the gains from saving energy alone. This means that at the moment the popularity of MINERGIE buildings cannot be explained by the mere cost-benefits calculations of their energy savings. To understand its success one has to take a wider array of factors into account, one of which is the strong public-private partnership of MINERGIE with the Swiss economic sector, building industry and public agencies.

MINERGIE as a driving force in Swiss energy politics – reasons for its success

MINERGIE is a registered trademark owned by the non-profit MINERGIE Association (AMI) and enjoys strong legal protection. AMI counts 380 members, among those many architecture firms, building- and manufacturing companies, banks. Moreover, MINERGIE is in close contact with 900 local businesses, which are experienced in constructing according to the standard. A reason for this strong support by private companies is the positive, green image it provides for their customers. World renown companies like IKEA and Swiss Re are among its members and have decided to construct all their new buildings in Switzerland according to MINERGIE. Credit Suisse and local Swiss banks are offering MINERGIE credits to favorable conditions.

Also all 26 Swiss cantons (states) are members of the MINERGIE Association and 9 of them directly promote MINERGIE by offering subsidies for homeowners. The sums paid for a MINERGIE single-family home range from USD 1'360 to 9'090. Most cantons though, 19 out of 26, are opting to subsidize the even stricter MINERGIE-P standard. Here the subsidies are remarkably higher, averaging around 12'100 USD per new single-family home.

Since its launch in 1998, MINERGIE has progressed to be a most important factor in Swiss energy politics. Around 14,000 buildings in Switzerland and neighboring countries have already been certified according to this voluntary building standard. The MINERGIE certificate has been accorded to a wide variety of buildings, ranging from single-family homes, to shopping centers and even historically valuable buildings with landmark status. The impact of MINERGIE is also reflected in the fact, that the minimal requirements in Swiss cantonal building regulations have almost reached the level of the 1998 MINERGIE standard.



Source: Konferenz Kantonaler Energiedirektoren, 2009: <http://www.endk.ch/kantone.html>

Apart from the voluntary nature of the standard and the strong private and public sector support, there are several other important factors which can explain the success of the MINERGIE label. It focuses not only on energy efficiency but also strongly markets itself as a way of improving the indoor living environment: Thanks to good and consistent thermal insulation and a fan-assisted, balanced ventilation system MINERGIE guarantees a higher quality of life and increases the value of the building to a considerable degree. In addition, building clients, architects and planners are completely free in the design and their choice of materials and in the internal and external structure of their building - presumably one of the most important reasons for the wide acceptance of the standard.

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