



It is Hard to be Green

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Here is one definition of the term “green building”, given in 2007 by Prof Thomas Lützkendorf at the University of Karlsruhe in Germany: “The broad term ‘green building’ today covers many different ideas, as it has evolved from a combination of varying concepts and trends. In German-speaking areas, these concepts were influenced by ecological and biological trends in building and construction and can be circumscribed, among others, with strategies for energy saving, environmentally friendly construction and administration that conform to health standards. Such a building then more than meets the criteria for reducing energy costs and the resulting environmental effects in the utilisation phase: the complete lifecycle will be included.”

Although the first report of the Club of Rome in 1972 had already talked or warned about the limits of economic growth, it was only around the turn of the millennium that national and international climate policies started to make concrete demands on all areas of national economic activity in a way that increasingly affected the real estate economy. The relatively new concept of “green building” – which has taken on an increasing (theoretical) importance due to the higher energy costs that we are now experiencing – has started an intense debate about the technical and economic ways and means of improving energy efficiency and the environmental quality of buildings.

Efforts toward greater sustainability in real estate construction and use are alluded to by a number of market and marketing expressions like green building, sustainable real estate or zero-emission house. Sustainability, a term that originates from forestry, has advanced to a conceptual master plan and carries a strong content of individual interpretations and current events. It is a complex subject that has come to embrace political, social, economic and ecological dimensions.

There is no doubt that sustainability is a theme of the age. But what role should it play?

Should it be just an academic discussion of the place of sustainability in relation to the real estate economy? – ie “it seems to be green.” Or, in view of rising energy and commodity prices, should it be about the willingness of investors and tenants to implement sustainable concepts and accept the higher cost implications? – ie “it has to be green.” Or will the low energy price elasticity in the real estate sector dominate, so that higher costs do not necessarily lead to a different attitude – ie “it is hard to be green.”

Cost savings

Almost 40% of energy consumption worldwide goes in the construction and use of buildings. In relation to the total lifecycle of a property, the sector’s share of harmful greenhouse gas emissions is nearly the same; in cities, it goes up to 70%. The potential for energy saving in the area of buildings or to meet the requirements of international climate control goals, therefore, is huge. With planning, building and administration of sustainable property, this goal is pursued to realise objects with a high urbanity, design, functional and technical quality and also to take into consideration economic, ecological and social demands simultaneously and equally.

Location and proximity to transport networks are just as important for a property as its quality. When you consider that around half of the oil consumption worldwide is in the transport sector, an energy-efficient property needs to be located centrally or have an excellent connection to the public transport system.

The primary causes for the current thinking on sustainability in real estate are varied. A major role is played by increasing energy and commodity prices, due to advancing globalisation, as well as the increase in awareness of the finite nature of resources. That is accompanied by the numerous public regulations, particularly environmental laws and energy-related fiscal instruments that apply especially to buildings.

The assessment of energy efficiency of buildings in Germany is increasingly important. This is seen from the implementation of the European Union’s Energy Performance for Buildings Directive (EPBD, Directive 2002/91/EC), and the continuing development of energy-saving regulations, such as the introduction of energy identifications through Energy Performance Certificates, as well as the upcoming building certification

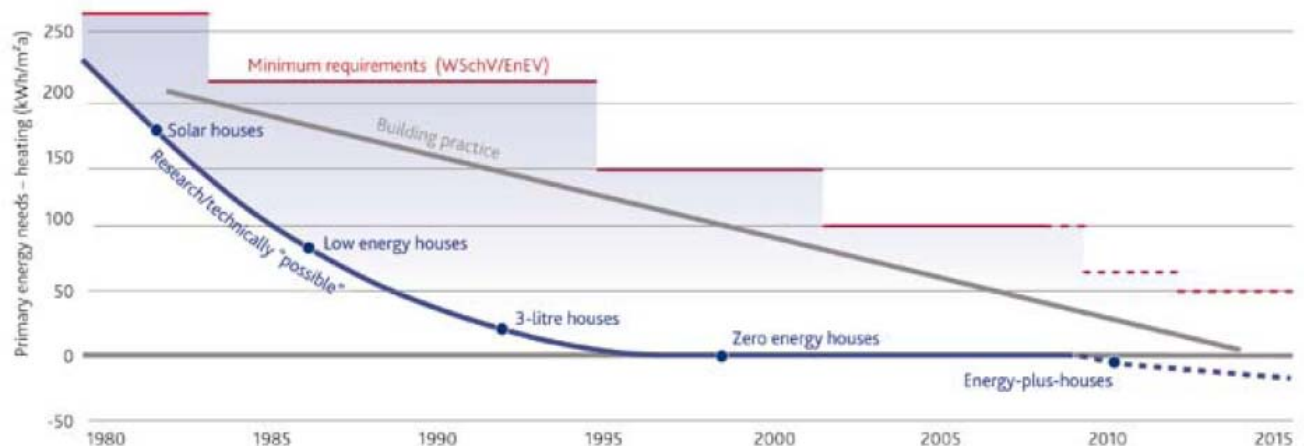


in the form of the DGNBGütesiegel (quality seal) (the DGNB is the Deutsche Gesellschaft für nachhaltiges Bauen or German Sustainable Building Council).

Permission for new buildings and major modifications to existing buildings in Germany will soon only be given if they are in accordance with the new energy-saving regulations. For non-residential buildings, the regulations are based on the DIN V 18599 standard that deals with the complex energy characteristics of commercial real estate and is, at the same time, the basis for the voluntary German quality seal for sustainable buildings.

Figure 1 below illustrates the development of energy-saving buildings as an answer to the more concrete energy-reducing measures and guidelines. According to this, the current building practice adopts the upper-middle course between the minimum requirements of the Heat Insulation Ordinance and the energy-saving regulations, even though it is a purely theoretical model.

Figure 1: The Development of Energy-saving Buildings



Sources: Fraunhofer Institut für Bauphysik, DEGI Research, 2008

Down in writing

Certificates are doubtless important for the implementation of sustainable real estate, not least to relay the subject, raise public awareness and establish media attention. Over the past few years, different assessment systems for green buildings have been developed worldwide.

The British standard, BREEAM, was established in 1990 and ranks as the oldest certification system for sustainable buildings. It is considered the model and basis for the US LEED standard and for the Australian Green Star system, each of which involved a continuation from BREEAM with a country-specific adjustment. LEED and BREEAM are the only internationally accepted standards among the approximately 15 assessment systems worldwide.

Many international investors are active in the German real estate market and bring with them their own certification systems, but Germany needs its own label, and this will become reality later this year in the form of the DGNB-Gütesiegel. This will be how the German real estate economy connects with the international certification systems for buildings that meet certain sustainability criteria. A certificate has to verify weight and consolidate all sustainability criteria in the awarding of a grade.

Foreign labels are being criticised extensively now, mainly because the evaluation does not take account of the complete lifecycle of a property. They often comprise of a simple checklist structure and do not look in-depth to check the sustainability of a property. Furthermore, the state or buildings regulations and the state of technology, as well as geographical and climactic conditions, vary between countries – a LEED certification can be achieved relatively easy in Germany. By way of contrast, the development of the DGNB-Gütesiegel – with its 60 criteria – comes through as a very sophisticated, compact system.



Far and few between

The incidence of green buildings in Germany has so far been an exception and far from standard, even though the real estate economy can offer technical innovations to bring about climate change solutions with economic success. The actual situation is also affected by the large proportion of problematic real estate assets – 60% of buildings are more than 25 years old and are in urgent need of substantial upgrading from an energy efficiency point of view. Complete refurbishment of Germany's property assets will take a long time.

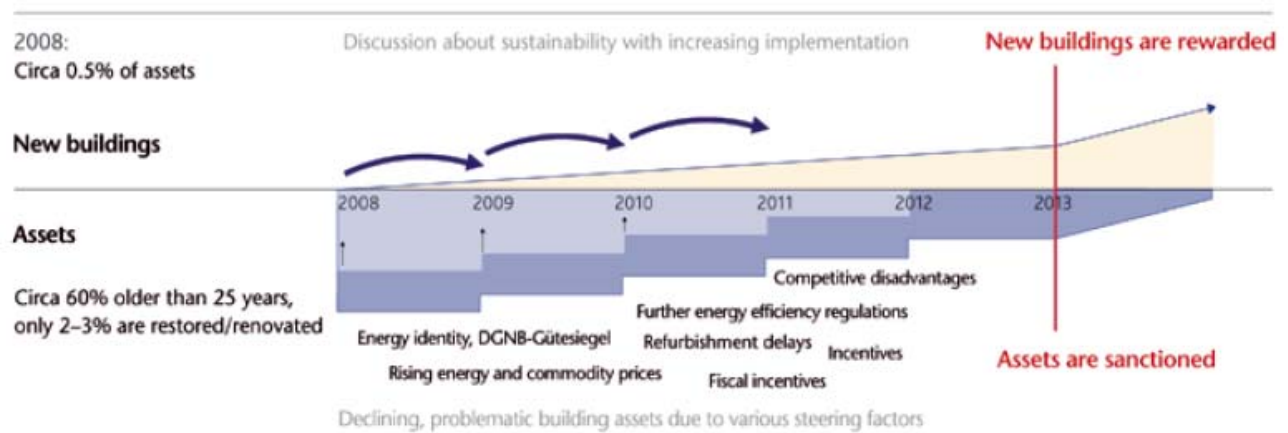
New, not necessarily sustainable, buildings account for only 0.5% of the building stock. The ownership structure is another challenge, as a small proportion of "professionals" (around 25%) is confronted by a large proportion of "hobbyist investors" (around 75%). Only the former can really play a leading role. Further obstacles include economic considerations, a lack of liquidity and a low willingness to invest on the part of property owners. It is partly a generational thing, but there are also uncertain business conditions, such as continuing discussions about bans and promotions, as well as excessive regulation resulting from tenancy legislation.

Although demand for buildings that meet the ecological requirements is increasing in Europe, users are not (yet) prepared to pay a higher price for them. The cost risk still seems to exceed the willingness and raised awareness. Now we have to wait and see when a stronger acceptance and implementation of green building standards will come.

Two new research studies in the US, in contrast to Europe, show that tenants as well as investors have factored in the advantages of green buildings. In an econometric analysis comprising 8,183 office properties, Eichholtz et al reached the conclusion that rents for green buildings are 6% higher than for comparable conventional buildings. The price for green buildings is, on average, US\$5.1 million higher than the price for comparable buildings. Another analysis, carried out by Fuerst and McAllister, looked at a total of 3,626 commercial properties; here, the results of the regressions show that rents for buildings with one Energy Star or a LEED Certificate were 11.8% higher than for non-certified buildings. The price effect was up to 31%, depending on the certification.

According to DEGI Research, penetration of the market by buildings that are energy-efficient strongly depends on external steering factors; this is illustrated in figure 2 below. It is evident that the focus on sustainable property is not only about cultivating an image, but also about concrete economic and long-term competitive advantages. Apart from rising energy and commodity prices, many sustainable set screw or energy efficiency regulations and incentives will lead to only a gradual reduction in the number of problematic building assets, as market participants will sanction undeveloped, non-refurbished assets for the medium term. Currently, only 2-3% of properties are renovated or restored each year.

Figure 2: Future Development of the Green Building Market in Germany



Source: DEGI Research, 2008



Even if – not least because of the delay in bringing buildings up to standard – it will take several years for sustainability as a quality standard to establish itself in new buildings as well as in existing assets, a “low level standard” in buildings has no chance in the long term. Technical innovations continue to influence the manner and extent of energy utilisation, even if they are established only gradually due to long investment cycles. That is why energy efficiency will continue to have influence over lending.

Pain and gain

The market is aligning itself afresh when it comes to sustainable property, as there are many reasons for undertaking energy-saving measures. Included among this is that the economic lifespan of buildings can be extended (value stability), the probability of vacancies reduced (risk avoidance), future maintenance costs minimised and profit potential increased with cost-effective refurbishment and restoration.

If market mechanisms have their usual effect, this will lead to higher rental income with lower vacancy risk and higher buying price multipliers in coming years. Medium- to long-term green buildings will achieve their market movement rate and price effectiveness with extraordinary yields, while conventional buildings will age even quicker, record decreasing yields and, above all, suffer a competitive disadvantage.

Increasingly, decisions of occupiers and investors are influenced by whether a commercial property can provide the relevant certificate or label. Despite the imminent introduction of the DGNBGütesiegel standard in Germany, DEGI Research considers a pan-European solution to be a better goal to aim for than national solo attempts by individual countries.

One of the main reasons for the cautious pace of investment in building assets is the lack of capital held by some decision-making groups. Private owners and smaller companies rely on external funds to finance energy-saving investments as a result of their own limited financial capacity. Furthermore, these two groups are often in competition with larger, more prominent companies. High price validity and uncertain price expectations by energy providers, especially regenerative ones, also lead to limited levels of investment.

Furthermore, findings from the energy building restoration undertaken so far, show that the amortisation period of up to 25 years is too long; and this gives no impetus to initiate broad investments. Against this background, it seems sensible to create tax incentives (eg in the form of low interest credits, contracting, start-up financing, increased amortisation) so that these investments have a payback period of 10 years at the most.

This calls for suitable management and information systems that support a higher investment return by using the sustainable quality of a property portfolio. The sector will in time pay more attention to green buildings, especially large companies in established locations. Property in larger cities will lead the way here – Frankfurt, where energy-reducing regulations for high-rise buildings have been introduced, is a good example.

The profitability of green buildings will become apparent – for investors as well as for occupiers – not least as more market transparency and professional data emerges. Those who will forego sustainable property investments and management practices will in future have to accept not only a loss of value and performance but also damage to their image and reputation. In the long term, economy and ecology will be equals: If it is not ecological, it will not be economic.

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