

**Research project:**  
**Systematic repair and modernization work in the dwelling stock**

While the construction of new houses in Germany has been steadily decreasing since 1995, more and more money is spent on the modernization and repair of residential buildings. Since 1995, expenditure has increased by 35 %; in 2000, the total amount of money spent on work in the dwelling stock exceeded that of constructing new houses, which reflects the immense importance of work in the existing housing stock.

However, in most cases, financial means are not used systematically. According to a survey carried out among large building associations, the dwelling stock is neither systematically documented nor is its technical state systematically assessed. As a result, long-term planning of repair and modernization works is possible only to a limited extent.

The present study focusses on questions of how to reduce energy requirements in the building stock. It shows that, by large-scale energy-saving modernization, the amount of heating energy could be reduced by between 30% and 40%. There is also a lack of precise data about the technical features of thermal protection in the housing stock. Similarly, apart from a few exceptional cases, the practical performance of energy-saving modernization measures is not monitored.

According to the survey, the technical conditions relating to the thermal insulation of dwellings or single-family houses are a minor consideration for people who want to buy or rent housing property. The demand for low-energy dwellings has not increased, even though a new regulation demands the assessment of energy requirements for new buildings and the introduction of an energy pass. To give owners and landlords an incentive for energy-saving modernization, it has been suggested to include the technical qualities of thermal insulation among the criteria for grading dwellings in current rent tables ("*Mietspiegel*").

Energy-saving modernization works can be combined with other repair or renovation works, or they can be carried out as so-called "isolated measures". Owners and building firms should be given more detailed information about the various ways of reducing energy requirements/consumption. Furthermore, it would be helpful to publish a collection of typical examples of modernization, which also supply information about financing and costs and about the success of particular energy-saving measures.

The procedure for granting financial support should be simplified. Grants should be focussed on specific constructional techniques, which are apt to reduce energy requirements at a particularly effective cost-benefit ratio.

The study describes various methods of assessing the cost-effectiveness of energy-saving measures. It is important not to consider energy saving independent of other factors that affect the value of a building. All those factors together must be taken into account; otherwise it can even happen that, after being modernized at great cost, residential buildings have to be demolished, because in certain areas there is no longer any demand for such dwellings.