

Success Factors for Advanced Housing Renovation

Examples and Possibilities for High Quality Renovation in
Austria

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Success Factors for Renovation

- Legal framework
- Financial incentives
- Services
- Raising Awareness – programmes, awards
- Innovation – Research Programmes and Demonstration Buildings

Success Factors: Legal Framework

- Introduction of the EPBD
 - energy performance certificate considered as market value
 - buildings with high energy consumption = little value
 - thermally refurbished buildings = high value

- Legislation concerning rented and owner occupied buildings (e.g. Act on Tenancy law – Mietrechtsgesetz)
 - Contribution for preservation and improvement of buildings adapted according to the age of the building stock, profit of energy savings given back to tenants, ...

- Increase of financial reserves for refurbishment, dedicated to energy-efficient refurbishment
 - private sector as well as housing investors

Success Factors: Financial Incentives

- Subsidies for sustainable refurbishment
 - Raising housing subsidies for renovation
Attention: only in relation with improvement of energy efficiency
 - „high quality renovation“ better than „high quantity renovation“

- Tax incentives
 - Option for shorter periods of tax depreciation
 - Special expenditures
 - Attractiveness for investors

- Income tax deduction
 - Aimed at single family houses

Success Factors: Services

- Energy performance contracting
successful in the public sector – to be introduced in the housing sector

Attention: Renovation of HVAC only is not enough!

- Implementation of „Refurbishment Managers“
new field for energy consultants, property developers, builders, managers
- More service for clients – offering „Refurbishment Packages“
offers of building industry to be established

Success Factors: Raising Awareness

- Accompanying campaigns
 - At the level of the State, the Federal States and Communities
 - Chambers and other lobbying groups

- Accompanying media activity

- Public sector as good example

- Showing Good Practice

Success Factors: Innovation

- Research Programmes
 - Building of Tomorrow
 - Building of Tomorrow Plus (starting in October 2008)
- Research Initiatives
 - BRAIN
- Climate and Energy Funds

Example: Raising Awareness

Programme “klima:aktiv wohnmodern”



- Programme for consulting building and housing companies
- in context of the climate protection initiative “klima:aktiv”
- Consultants making a rough analysis of certain buildings (energy data, housing technology, ...)
- On this basis proposals for refurbishment measures, estimation of costs and possibilities for subsidizing this measures are worked out
- Possibility of support in tenants’ meeting
- Showing Good Practice

Example: Raising Awareness State Award of Architecture and Sustainability



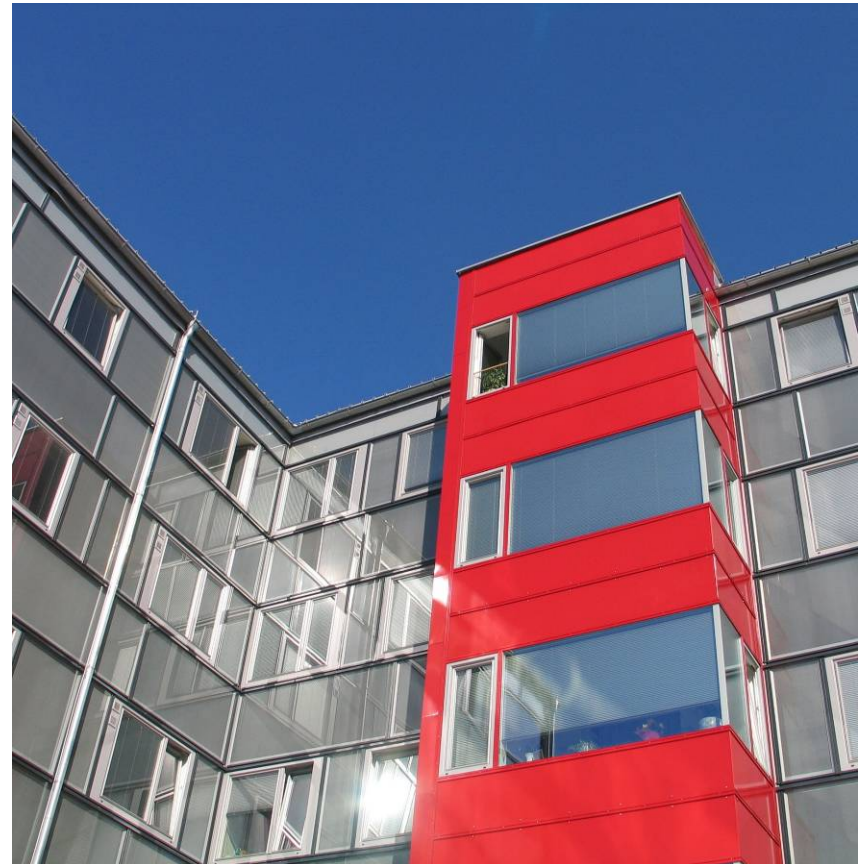
- award for outstanding and sustainable buildings in Austria
- in context of the climate protection initiative "klima:aktiv"
- awarded through the ministry of agriculture and forestry, environment and water management in 2006
- awarded in three categories: new building, refurbishment and innovation
- 14 nominated buildings selected through a jury of experts, 5 awards



State Award of Architecture and Sustainability Apartment Building Makartstrasse Linz



14,4 kWh/m²a • energy: solar facade, district heating • material: glass panels



Example: Innovation Research Programme "Building of Tomorrow"



- started in 1999
- five calls for tenders with over 610 projects submitted
- 250 projects supported with 25 million €
- 25 demonstration buildings, 14 new, 11 retrofitted



Overall aims of the research programme **Building of Tomorrow**

low energy solar house

passive house

ecological building materials and systems

renewable energy sources

energy efficiency

renewable raw materials, building ecology

user and service aspects

Haus der Zukunft

comparable costs

new buildings

refurbishment



Demonstration buildings

Mit Forschung zur Technologieführerschaft:
Österreichische Demonstrationsgebäude aus dem
Forschungsprogramm „Haus der Zukunft“



Leadership in research and technology:
Austrian demonstration projects within the
research programme "Building of tomorrow"



Building of Tomorrow: demonstration project single family house Pettenbach



The very first renovation of a single family dwelling to passive house standard in Austria.

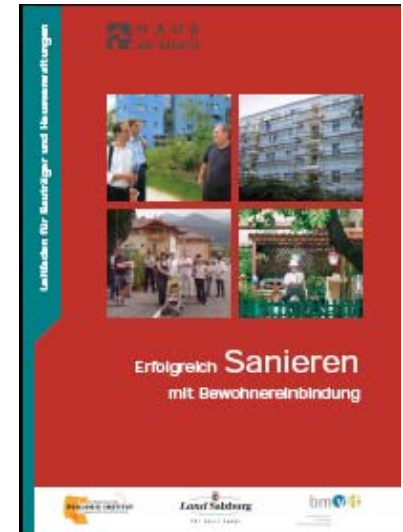
- **high occupational quality:**
good fresh air quality, improved daylight situation, considerably improved thermal comfort
- **very low energy requirement**
- **enhanced building quality**



Building of Tomorrow: participation in refurbishment



- renovation is an interference into existing structural and social systems and therefore requires an intensive co-operation between all acting participants
- professional communication and open information towards inhabitants are essential during the entire refurbishment process
- important points for the integration of sustainable aspects in the renovation: **cost efficiency** for the implementation and **saving effects** through the renovation, **user orientation** and **improvement of living comfort** for the residents
- an improvement of planning-, information- and decision-processes increases the acceptance of comprehensive and innovative renovations of residences



Example: Innovation Building of Tomorrow Plus



- Research Programme of the Austrian Ministry of Transport, Innovation and Technology to be started in October 2008
- running until 2011
- budget: 35 Mio. Euro
- “From zero-energy- to plus-energy-buildings”
- four areas:
 - key technologies
 - concepts
 - strategic studies
 - (large scale) demonstration projects
- with a focus on refurbishment

Example: Financial Incentives

Housing Subsidies (“Wohnbauförderung”)



- Special instrument in Austria to support social housing
- formal income limits, but high enough to cover a large part of the population
- Given by the Federal States in Austria (9 different regulations)
- Subsidizing of new buildings as well as refurbishment measures
- Grants and loans that have to be paid back in a certain time at low interest rates

Conclusions



Increasing the Rate of Advanced Renovation

=>several measures have to be taken

- Financial Incentives
- Legal Framework
- New Services / Offers from Building Industry
- Innovation

Success in climate protection => high quality, thermal refurbishment

=> change to non-fossil energy sources

Increase of renovation rate by means of „comprehensive refurbishment“

Thank you for your attention!

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