NRP 71

Households

Energy Reduction Potential of Elderly Households

Overview

Context

 The large population of the baby boomer generation, currently entering retirement age, will have a substantial influence on the demand for living space and thus for residential energy as they age

Aim of the Study

- Provide an in-depth understanding of the housing situation of the elderly and their residential energy consumption
- Analyse attitudes and age specific barriers towards energy efficiency and sufficiency measures. The main focus is on reducing living space requirements, on structural densification measures and on promoting energy efficient renovation
- Develop, evaluate and prioritise measures and incentives and calculate the potential energy savings

Research Questions

- How is the housing situation of elderly households? What influences their living space requirements and moving patterns?
- How large is the heat energy consumption of elderly households? Do they renovate/retrofit their dwellings? What are common obstacles?
- Are there positive examples regarding the three measures: (1) moving into smaller homes, (2) structural densification and (3) energy efficient renovation?
- What kinds of incentives are needed on the household level to promote the implementation of the three energy-saving measures? Will the measures be accepted by the target group? What can be done from a political point of view?
- How much energy can be saved due to the implementation of the measures?

Residential Segments for Case Studies and Focus Groups

Occupants/stakeholders	Possible courses of action			Case studies	Focus groups
	Renovation	Densification	Move		
Single-family-home owners	х	x	х	х	x ←
Commonhold owners	х	x	х	х	x
Tenants in privately owned properties and/or in housing schemes owned by institutions/pension funds			x		x
Tenants in housing associations			x	x	x
Tenants in special housing schemes (cross-generational schemes, etc.)			x	x	x
Landlords					
Major investors	х	x	х	х	x
Housing associations	х	x	x	x	x
Special housing schemes	x	x	x	х	×
¹ Formerly tenants in privately owned property or in housing scheme owned by institutions/pension funds ² Formerly owners of a single-family home					

Study Design Module 2 Examine attitudes and behavior of elderly Module 1 households Create of an information basis Method: Case studies (qualitative interviews) Housing conditions/living space requirements; energy consumption in elderly Module 3 Method: Desk research, analysis of Develop and evaluate measures and incentives to exploit energy efficiency secondary data material and sufficiency potentials Method: Focus groups Module 4 Module 5 Estimate of energy saving potentials Survey-based acceptance analysis, achieved through the investigated prioritisation of measures and recommendations Method: Data-based simulation model Method: Population survey Implementation Phase

Partners and Collaboration

Rütter Soceco **Project Team** hässig sustech Social research into old age, energy economics Consulting services for energy efficiency **Supporting Experts** Prof. em. Dr. phil. Heinz Gutscher Prof. em. Dr. François Höpflinger Consultation approach, methods, results **Advisory Group Partners** ETH Residential Forum (ETH-Wohnforum) Federal Office of Housing (BWO) Dr. Margrit Hugentobler Doris Sfar Center for Gerontology, University of Zurich General Building Cooperative of Zurich Hans Rudolf Schelling, Director Freelance Architect Martina Ulmann Dr. sc. ETH Mariette Beyeler Swiss Homeowner's Association (HEV) **Private Investors** Thomas Ammann, Michael Landolt Dr. Emil Kowalski, Bracher und Partner Industry knowledge, application-oriented collaboration Consultation on approach, methods, results

Energy Turnaround

Contribution to the Realisation of the "Energy Strategy 2050"

- The improved understanding of housing situations, energy consumption and investment behaviour of the growing elderly population will help to better estimate the potential of efficiency and sufficiency measures in residential energy consumption.
- These insights can subsequently be used as a basis to evaluate efficiency measures in different areas of society and the economy
- Energy savings can be realized either by reducing residential energy consumption in elderly households or by minimising the use of embodied energy in construction. The project will provide policy makers with recommendations for measures and incentives and therefore contribute to the goals of the "Energy Strategy 2050" as well as to the Convention on Climate Change

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