Executive Summary

DECLEAR - DECarbonsierung Lindert Energie ARmut - develops specific packages of measures and processes that simultaneously alleviate energy poverty and contribute to the decarbonization of heat supply in different building stock segments in urban, suburban and rural areas. Within the framework of the pilot project, an implementation of measures in 20 households in Vienna and Lower Austria was initiated and accompanied. Existing consulting services were further developed and working documents were elaborated for a broader application. Inhibiting as well as conducive conditions were identified in cooperation with stakeholder in order to present specific needs for action on the social, housing law, subsidy and construction level to accountable parties.

Methodology and procedure

Based on a compilation of existing data, those individual living conditions, building specifics, settlement structural qualities and housing law framework conditions were identified in which a clustered occurrence of energy poverty is to be expected. As a result, the methodological backbone of DECLEAR was developed: a matrix providing characteristic cases of energy poverty and an approximate frequency scale. Using this matrix, households were determined as exemplary cases and sought for consultation.

The initial effort required to identify energy-poor households and to integrate them into the project through consulting, was unexpectedly high. This changed abruptly with the high increase in energy prices and the emerging fear of supply shortages as a result of the Ukraine crisis. The demand for consulting services and the interest in participating in an accompanied process against energy poverty increased massively. Thus, 20 characteristically corresponding households, 10 each in Lower Austria and in Vienna, were won as project participants. In addition, two multi-apartment buildings were worked on. In three stakeholder workshops, a broad range of practical expertise was contributed to the project and the results achieved were critically reflected upon.

Findings and key messages

The identified favourable and inhibiting framework conditions can be summarized into 14 thematic areas that address different aspects of energy poverty.
This enables the derivation of specific recommendations for action.

In the following, a selection of the thematic areas is summarized.

Bundle of measures is necessary

Depending on the findings, different matters are affected: housing law, subsidy design, social security and technical issues. The challenges can only be met by bundling measures.

Energy poverty must be considered more broadly

So far, the focus has been on the financial overburdening of households with current energy costs. This does not include households that have financial or organizational problems in making the necessary investments in energy efficiency measures and in the conversion of heating systems. This concerns a much larger group of people, that is of great importance especially regarding the energy transition.

Switching to renewables often does not generate savings

The solely changeover to renewable energy sources does not usually bring any financial relief for households. It is therefore a matter of "combating energy poverty DESPITE decarbonizing the heat supply and not combating energy poverty BY decarbonizing the heat supply". Thermal refurbishment on the other hand reduces energy demand and therefore results in actual savings, both financially and in terms of greenhouse gas emissions.

An incentive to save energy must be maintained

Energy is used efficiently when waste behaviour hurts financially. This mechanism of action should be taken into account more seriously when designing subsidies (i.e. electricity price brake) and it also limits the potential of flat-rate (i.e. warm rents, or billing not by consumption but by m²) energy cost billing. At the same time, however, it is a social concern that every household should be entitled to a minimum level of energy consumption. The aim is to prevent "hidden energy poverty" by ensuring a minimum level of socially desirable heating consumption. Financial saving potentials can be seen in flat-rate billing in very well insulated houses, where meter reading is more expensive than the consumption itself. However, there is still a great need for research in this area.

Correct user behaviour is often decisive

Particularly in the case of low-income households, where thermal improvements and the conversion of heating sources are financially not feasible, measures for sensible user behaviour are of great importance regarding energy saving potential. For example, each degree of lowering the room temperature can save up to 6% of energy. If the living space is heated to 21°C instead of 24°C, 18% less energy is consumed.

Targeted advice on energy-saving tricks should reach everyone

High energy costs are partly caused by incorrect use of the existing heating system and inefficient use of thermal energy. Although efficient user behaviour is less effective than thermal renovation and heating conversion, the direct applicability of concrete energy-saving tricks is an opportunity to reduce energy consumption, from which especially low-income households can benefit. Everyone should know and be able to apply the most important energy-saving tricks (ventilate at regular intervals, no standby mode of electronical devices...).

The cheapest, cleanest and safest energy is the energy that is not consumed.

Therefore, it is urgent to lower the energy demand, in order to noticeably reduce the actual energy consumption and thus the financial load of particularly energy-poor households. The most effective measure to achieve reduction is thermal renovation.

Priority for thermal refurbishment

The undisputed goal is to sustainably improve the energy efficiency of buildings through investments. Thermal measures are intended to sustainably reduce energy demand while the remaining energy requirement is to be met as ecologically as possible by converting the heating system. The significant reduction in energy demand resulting from thermal refurbishment also allows a much more compact dimensioning of technical systems for heating and cooling, thus enabling financial savings both in acquisition and operation.

In the future energy poverty will additionally be concerned with the affordability of technical cooling, therefore it is crucial to take proactive appropriate passive measures to avoid overheating, in particular the equipment of buildings with an external sun protection.

Legal measures

The user-investor dilemma arises in Austria mainly in the area of private rental housing, especially in the full application of the Tenancy Act, because the tenancy law framework does not provide an optimal cost allocation of decarbonization investments in proportion to the benefits (cost savings, living comfort) between the investor (apartment owner) and users (tenants). This dilemma cannot be solved without housing law reforms. The needed solution is a political decision, but the goal is undisputed: strong incentives for decarbonization investments are needed without the cost sharing of tenants reaching problematic levels for energy-poor households. Possible measures range from mandatory conversion to financing through new contracts.

Adjustment of subsidies

For a long time, the costs of household energy were not socially cushioned. Any heating cost subsidies were financed from the social budgets of the provinces and were not assigned very targeted. Housing subsidies do not cover energy costs, demand-orientated minimum income and social welfare provide only insufficient amounts within the coverage of housing needs. The situation has only become virulent in the recent past with the skyrocketing energy prices and corresponding initiatives by the federal and state governments. From today's perspective, an expansion of income-tested subject subsidies for energy costs seems inevitable. However, the thermal refurbishment of buildings must be advanced at the same time (e.g. via tax incentives, object subsidies, obligations), so that the energy saving potential increases sustainably. The adaptation of the "Clean Heating for All" subsidy for rented apartments, as well as systems of subsidized renovation support, especially for private homes, should be advanced quickly.

Social measures

More emphasis should be placed on outreach and, if possible, preventive counselling, especially for those affected by energy poverty. It would be desirable to expand an offer of craft support for renovation measures regarding energy-saving measures (hanging thermal curtains, sealing doors and windows, etc.).

Local information campaigns and events are also needed for property managers and homeowners, as well as apartment owners, to provide targeted information about opportunities for thermal renovation and heating conversion, as well as funding opportunities.

Although the demand for energy consulting has increased massively with the beginning of the Ukraine crisis, the capacities of consulting institutions have not adjusted yet; in fact, many are reaching their limits. A sensible approach would be to offer proactive consultations on a territory-by-territory basis for a few people together (events) and, if needed, only afterwards in a follow-up 1:1 constellation.

Instant information on saving potentials of technical measures

A clear comparative presentation of the possibilities and potential difficulties of different options of conversion to renewables facilitates decision-making within the framework of the existing possibilities. For example, appropriate forecasts of financial and greenhouse gas emission savings potentials can provide clarity for decision-makers and offer incentives to switch to renewable energy sources.