GdW Statement

Statement Within the Scope of Consultation on the Green Paper "A 2030 Framework for Climate and Energy Policies"

June 2013

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GdW welcomes the consultation within the scope of the Green Paper "A 2030 Framework for Climate and Energy Policies". Through the regulatory frameworks developed since the mid-1990s for energy efficiency, climate protection and the utilisation of renewable energies within the EU, all participants have gained experiences than can be passed on to the EU within the scope of this consultation. The housing enterprises represented by GdW can contribute their experiences from 30 years of energy-related modernisation within the scope of integrated housing industry action.

The statement of GdW focuses on the following three questions:

1. Which lessons from the 2020 framework and the present state of the EU energy system are most important when designing policies for 2030?

2. Which targets for 2030 would be most effective in driving the objectives of climate and energy policy?

3. Which measures could be envisaged to make further energy savings most cost-effectively and how should specific measures at the EU and national level best be defined to optimise cost-efficiency of meeting climate and energy objectives?

The German housing industry has the mandate of ensuring a good, safe and socially responsible supply of housing for large segments of the population. The efficient and environmentally friendly provisioning of energy in residential buildings has played a crucial role in the housing industry organised by GdW since the 1970s. These long-term experiences with energy efficiency within the scope of integrated housing industry measures were most recently summarised in the GdW Strategy for Implementing Energy Transition and in the GdW Energy Forecast 2050 (please see www.buildup.eu/publications/33140 and www.buildup.eu/publications/36348).

1. Which lessons from the 2020 framework and the present state of the EU energy system are most important when designing policies for 2030?

The previous fields of action were focussed primarily on individual buildings and heat consumption. Experience shows that the notion of achieving greater climate protection and greater energy efficiency through increasingly strict requirements on the modernisation of buildings has reached its economic and social limits. This is especially the case because the housing industry not only has to take the interests of energy savings and climate protection into consideration, but also because the integrated development of agreeable and resource-conserving neighbourhoods is necessary. Furthermore, economic viability for the building owners and social compatibility for the tenants are decisive parameters that define the framework within which any and all modernisation processes must be realised.

According to current experience, the economical implementation of building-specific energy saving measures alone leads to an increase in gross warm rents. Consequently, the landlord/tenant dilemma is evolving into a social dilemma, at least in Germany. Although the framework conditions of German rent law permit an increase in the cold rent after energy-related modernisation to the extent necessary for economically viable implementation of such measures, it nevertheless leads to increases in rents that are no longer tenable for the tenants. This applies to the gross warm rent, as the energy costs saved are wholly inadequate to compensate for the requisite increase in cold rent (see example in Fig. 1).

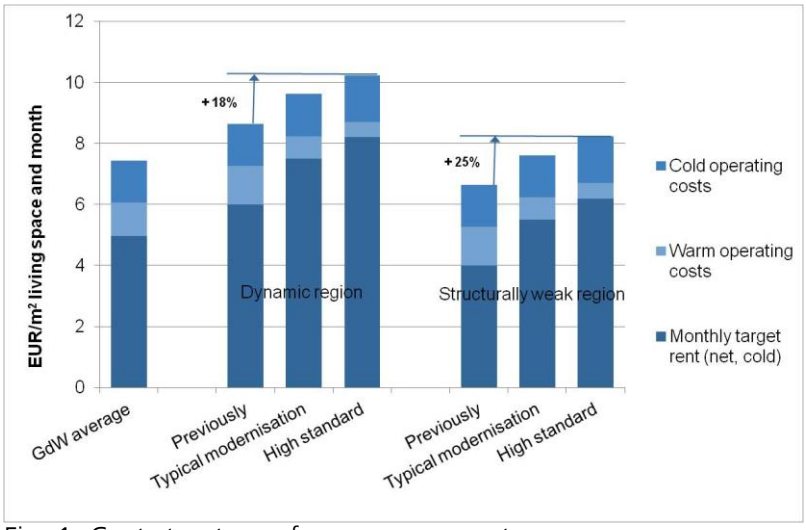

Fig. 1: Cost structure of gross warm rent

Focussing exclusively on the extensive energy-related rehabilitation of buildings consequently harbours the danger that political climate protection objectives cannot be fulfilled, especially on account of a lack of social compatibility. What is needed is an integrated approach to the building and the heating system, user behavior and control technology, use of renewable energy and power generation in the building context. There are still significant obstacles.

2. Which targets for 2030 would be most effective in driving the objectives of climate and energy policy?

GdW does not consider further energy efficiency objectives in addition to the existing objectives for CO_2 to be feasible. This is justified as follows:

A continuous decrease in end-use energy consumption for heating and hot water of approx. 1 % to 1.5 % per year has been recorded in the portfolios of GdW, see Fig. 2.

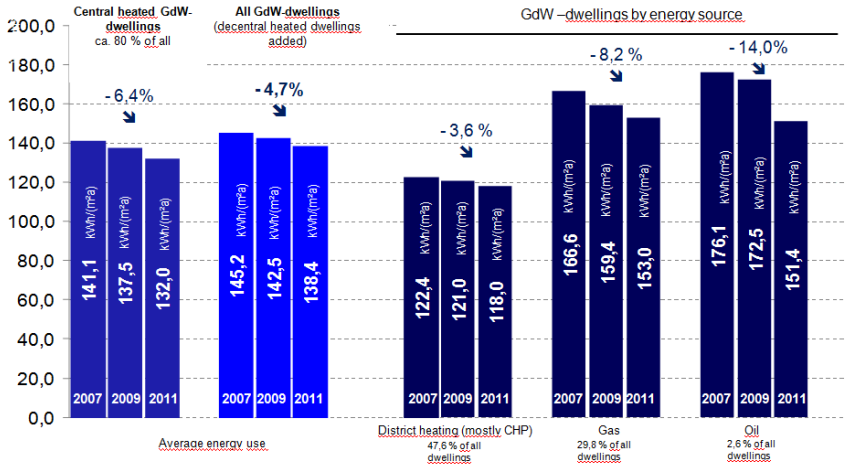

Fig. 2: Development of energy consumption among GdW enterprises

According to its energy forecast, GdW assumes that roughly 42 % of end-use energy can be saved in an economical and socially compatible manner in the period from 2005 to 2050, and even almost 57 % in the period from 1990 to 2050.

If the requirements on new construction, e.g. passive building standards, were to be defined immediately and without regard for economic and social concerns, and subsequently eased again in future, this would yield:

- 2 % more of end-use energy savings by 2050.

If the requirements on extensive portfolio modernisation measures were to be defined immediately and without regard for economic and social concerns in such a way that additional savings of 33% could be achieved, and subsequently eased again in future, this would yield:

- 4 % more end-use energy savings by 2050.

The additionally attainable energy savings, however, would be associated with significantly higher investment and modernisation costs, which would in turn be reflected in increases in rents for new housing and gross warm rents. If the corresponding ability to pay rent is not given (a situation that is foreseeable for households with low to average incomes), new construction and modernisation measures would not be feasible in this segment, i.e. for the majority of rental tenants.

If the energy infrastructures of just 0.5 % of the properties in the dynamic markets alone could be extensively or partially modernised to meet typical current standards, this would yield:

- 9 % increase in end-use energy savings by 2050.

However, the pressure on the number of buildings to be modernised would result in a "stress scenario." Consequently, additional buildings would have to be modernised in terms of energy infrastructure for reasons of climate protection, which would conflict with portfolio planning and the modernisation cycle. As these buildings display significantly lower repair requirements, if any, such a situation would lead to either above-average rent increases after modernisation or, in the event of a lack of ability to pay rent,

inefficiency on the part of the measures, which could then not be realised by the enterprises.

The objective is to provide affordable, resource-conserving and high-quality housing for large segments of the population.

The forecast 42 % savings in end-use energy attainable from 2005 are considerable, as these would be achieved in addition to the measures already implemented since 1990. More far-reaching political requirements would only lead to an insignificant improvement in the result. However, an increase in the number of buildings modernised on the basis of the current requirements would improve energy savings considerably. Above all, it can be concluded from this that the framework for energy-related modernisation must be improved.

An initial study has confirmed that a regenerative supply for heating and hot water of as much as 100 % is possible if the end-use energy can be reduced in total by 35 % to 50 %.[1]

Against this background, an objective that solely defines energy efficiency would not be expedient. Energy efficiency and renewable energies must be appraised together. This integrated appraisal already takes place in the CO_2 objective.

3. Which measures could be envisaged to make further energy savings most cost-effectively and how should specific measures at the EU and national level best be defined to optimise cost-efficiency of meeting climate and energy objectives?

Housing enterprises are only able to realise measures pertaining to existing portfolio buildings and new construction measures when these can be presented as being economical. The important criteria when deciding to make an investment are not only the usual profitability analysis (return on equity), but simultaneously also the financial appraisal (positive operating cash flow) and the business appraisal (positive annual results in the profit and loss account). The decision concerning measures for the portfolio of buildings is made on the basis of portfolio aspects and in association with the overall further development of a property or a district. Furthermore, from the perspective of housing enterprises, no solitary calculation of the profitability of energy-related measures alone can take place.

[1] Hans-Martin Henning, Andreas Palzer: 100% RENEWABLE ENERGIES FOR ELECTRICITY AND HEATING IN GERMANY. Fraunhofer Institute for Solar Energy Systems ISE, 2012.

A functioning competitive environment and cost transparency on the energy markets are decisive framework prerequisites for ensuring a reliable and efficient supply of energy for the portfolios at affordable prices. Such a situation would be facilitated by greater system competition in heating systems, greater transparency of district heating prices and easier control of abuse. Requirements such as compulsory connection and usage, or compulsory requirements for using specific energy sources (also in the case of renewable energies) are counter-productive, because the respective best solution should be determined in the overall environment of system competition.

Research and development, as well as financial support, play a decisive role in achieving greater energy efficiency in buildings. In recent years, extensive research funding and promotion have been geared towards renewable energies. For the efficiency of buildings and neighbourhoods, the housing industry has identified a considerable need for more extensive research, more cost-effective and efficient products and processes, and socially compatible solutions with higher levels of energy savings.

At the same time, energy efficiency at the socially desirable high standards requires considerable additional financial support, particularly in the case of households with low and medium incomes. This support must be guaranteed and suitable for planning purposes in the long term, as some of the planning processes cover periods of several years. This would allow the realisation of planned actions within the scope of maintenance cycles with significant energy-related improvements.

We are assuming that energy-related improvements to building envelopes and technical building systems that conflict with maintenance cycles can be neither financed through funding, nor realised in an economically or socially compatible manner.

Furthermore, GdW also recommends that greater efforts and resources be invested in the research into building efficiency. The housing industry can currently save up to 20 % of the energy consumption of buildings with comparatively little in the way of financial means, i.e. an order of magnitude of EUR 10 EUR/m². This has been demonstrated by the ALFA® Projects[2] of member associations.

Reductions in the use of fossil fuels of up to 50 % and more can also be realised with the allocation of very high levels of funding involving several hundred EUR/m². (In other cases, very little energy can be saved through high levels of investments.) However, possibilities of saving larger volumes of energy with manageable investment levels are wholly lacking. In this context, energy savings must consequently also lead to savings in energy costs, see Fig. 3.

[2] ALFA® Allianz für Anlageneffizienz (Heating System Efficiency Alliance), projects in the Federal Länder Berlin/Brandenburg (ALFA), Hamburg, Mecklenburg-Western Pomerania, Schleswig-Holstein (ALFA North), Thuringia (ALFA Thuringia)

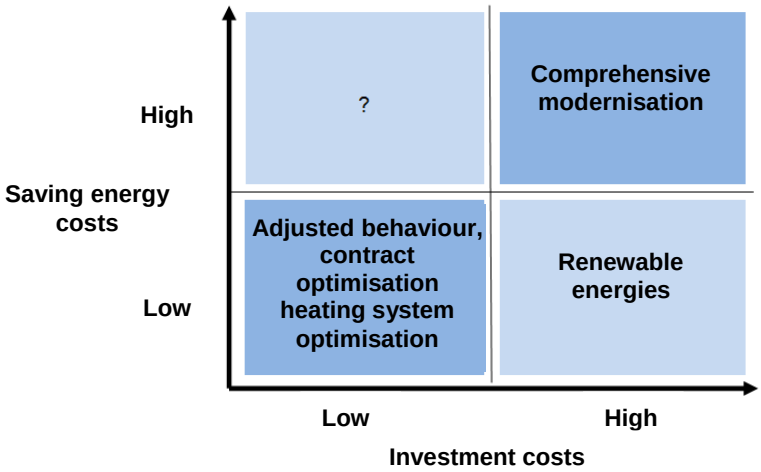

Fig. 3: Fields of action for saving energy and energy costs

Consequently, policymakers are strongly advised to undertake all efforts to ensure that:

- Political measures do not become obstacles to energy-related modernisation measures,
- Means are created for the economical implementation of all high and low-expenditure investments in the fields of heating and electricity (Energy Efficiency Business Model),
- No new obstacles are created and existing obstacles are eliminated,
- More properties can be made eligible for energy-related modernisation (good plannability),
- Research and development render energy-related modernisation and the use of renewable energies easier and less expensive in relation to the quantity of energy saved,
- Research and development enable the decarbonisation of the grid-bound energy sources district heating and gas,
- Adequate support is made available for the unprofitable parts of the investment, and
- Opportunities are created for those who actively support the objectives.

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