The Renovation Wave as planned in the Green Deal – GdW statement

The success of the Renovation Wave depends on the ability and right of property owners in many different situations to choose for climate-friendly modernizations. These modernizations can neither be determined nor stipulated. Instead, as many obstacles as possible should be removed. In this paper, GdW sets out propositions on how to design the Renovation Wave in order to create a reliable framework for climate-friendly modernizations of rented apartments.

1. Allow sufficient funding without requiring state aid notification

Further energetical modernization of the housing stock serves, among other issues, as a basis for reaching climate neutrality in Europe. The activation of the renovation wave calls for simple and sufficient subsidies – in terms of intensity as well as total volume. This applies especially to the energetical modernization of buildings for lower and medium income households. The renovation wave's funding should not fall under state aid rules.

Funding on the basis of de minimis rules does not make sense for housing companies with a real estate portfolio, as the exemption limit of EUR 200,000 within a 3-year period will be reached with just one energetical modernization of a large multi-family home.

Funding within the framework of the GBER limits the amount of buildings per time unit, as the aid intensity is calculated individually in this case. What is more, subsidy volumes of up to 50 % of the total costs of the redevelopment, which are necessary for affordable housing, are not allowed according to GBER. This means that particularly tenants in need receive less help than private owner-occupiers.

In the case of Germany, the BGB (German civil code) stipulates that subsidies and other funding for energetical modernization must be passed on to the tenants in their totality, which means that the company itself does not benefit from them. This is another reason why funding of energetical modernization should not be considered as state aid. If funding, including subsidies, for energetical modernization is not exempted from state aid, it will be to no avail for German housing companies and the energetical modernization of rented apartments will remain blocked.

2. Look at the burden of housing costs, not only at energy poverty

In order to create affordable climate-friendly housing, it is not enough to combat energy poverty with energetical modernization. The total housing costs as well as a possible overburden rate need to be considered.

The costs for housing comprise the net rent, the operating costs and the costs for heating and hot water. The perspective on how to avoid energy poverty reflects a limited perspective. Investments that aim at avoiding energy poverty must necessarily be refinanced. If the costs are not covered by the state, the only remaining option for refinancing is to add them to the rent. This has often led to a rise of the total housing costs after energy-saving measures have been carried out. Thus, while these measures have increased energy affordability, they have also decreased housing affordability as such.

Many buildings and apartments come closer to a situation of the housing cost overburden rate or would surpass such a rate after energetical modernization. As a consequence, these climate-protecting measures are not taking place.

In Germany, representatives of property owners and tenants, GdW and the German Tenants' Union, together with the German Association for Housing, Urban and Spatial Development, are searching for solutions for affordable housing, c.f. joint paper on how to reach the climate targets in a way that is socially responsible (in German), and presentation on the financial allocation for energetical modernization of buildings (in German).

We assume that for rented buildings alone, EUR 10 bn. of state subsidies on top of the current investments are necessary in order to meet the climate targets in Germany without creating social upheavals.

However, even if a higher rate of energetical modernization was supported by sufficient funding, the path towards climate neutrality would still not be smooth. It is crucial to fund measures for digital user support and for building automation to the same extent as energetical modernization and the use of renewable energy. Without user support, neither will the greenhouse gas reduction be realised that are targeted with the energy saving measures, nor will the potentials of buildings be used, where extensive measures cannot be realised yet. Moreover, the building and construction industry will only build sufficient capacities permanently if the funding is perpetuated in a legally secure way.

We find it especially unfortunate that there is a political consensus in Germany saying that legal standards must not be financially supported. This regularly leads to intense discussions about the level of the required standard.

3. Support, but not obstruct, district solutions that reduce greenhouse gas emission

The reduction of greenhouse gas emission of buildings will be partially realised by using renewable electricity. Buildings offer excellent opportunities to install photovoltaic systems on the roof, on the façade, or in the residential quarter (on garages, wash houses etc.). In combination with CHP plants and storage, this could create district solutions that manage electricity, heating and electric vehicles in a climate-friendly and network-supporting way, if it was not for fundamental obstacles.

The generation of local electricity in buildings, neighbourhoods and districts is extremely complicated when it comes to energy law, taxes, measuring technology and funding. In Germany, tenant electricity (landlord-to-tenant electricity supply) is on the one hand subject to the full EEG levy, and on the other hand funded by a small subsidy. If the general system is not simplified, district solutions will remain an exception. This leads to the following questions: Why is electricity that is locally generated as well as used, treated as part of the liberalised energy market? Even though it is neither fed, nor directed, nor marketed. Why it is not considered to fall under rental law and consumer protection? Why local electricity is not considered as an additional service to tenants?

It has become clear that self-consumption by energy communities described in the Renewable Energy Directive cannot be applied to apartment buildings with tenants. This is because tenants rarely invest in renewable energy systems, since they only live in the building for a limited amount of time. Specific regulations for prosumer solutions that property owners transpose to the benefit of the tenants are necessary. A solution for financing the electricity system (i.e. grid) costs must be found as well.

4. Address the user

The user and energy consumer need to be included in the efforts to meet the efficiency targets as well. For this, a new approach is necessary. Advice and information on consumption have proven insufficient in practice. According to consumption data, they have not led to a fundamental change in user behaviour. Therefore, additional inexpensive digital control technology or building automation that supports the consumer is necessary. It would heat the rooms according to their usage profile and controls the technical parameters of the heating system and its own operating status. Besides enhancing efficiency, it can also fulfil multiple functions and be used to give support in other situations, such as housing for the elderly and enhancing security in apartments.

This requires the implementation of tolerance obligations for users concerning the installation of this technology and for anonymous analysis of the collected data, as well as funding of these low-investment measures.

5. Control indicator for greenhouse gas emissions in EPBD

In view of the social objective to reduce greenhouse gas emissions, we deem it necessary to use an according control indicator. This necessity is highlighted by the fact that a carbon price for fuels is being introduced, for the moment only in Germany. Everyone in the buildings sector must be able to know and evaluate the emissions of a building.

Instead, the EPBD determines two efficiency indicators, namely primary energy and transmission heat loss. The indicators should be reduced to one efficiency indicator and completed with the control indicator for greenhouse gas emissions.

The efficiency indicator could depict the transmission heat loss, as even low-carbon or carbon-neutral energy supply requires energy-efficient buildings. The heat requirement of a building must be kept so low that the building can be heated by a low temperature heating system, e.g. a heat pump or a low temperature heat network. This is first ensured by a customized (not maximized) energetic quality of the building envelope (c.f. 1+2). However, the ultimate goal is to reduce greenhouse gas emissions down to zero, by

- using more and more renewable electricity (for domestic electricity and heat pumps) from the grid or the neighbourhood (c.f. 3),
- more and more reducing the greenhouse gas emissions of district heating and local heating networks, and by
- decarbonising gas networks.

6. Annexe

Examples for district solutions (There are annexes to each example; unfortunately, the majority of them are only available in German)

6.1 Berlin Lichterfelde Süd

Affordable housing with energetical modernization and local renewable energy supply:

- Solar thermal energy with geothermal storage
- Heat pump with geothermal heat storage as heat source
- Exhaust air heat pump
- Photovoltaic systems covering a share electricity used by the heat pump

When renewable energy is used, thermal insulation that is 12 to 14 cm thick does not require additional insulation from a primary-energy perspective. In this project, the size of the photovoltaic area was designed smaller than would have made sense, because of economic reasons due to national regulations.

Annexes: Berlin_Lichterfelde_Sued.pdf
Energiewende_Studie.pdf

6.2 Potsdam Drewitz

Affordable housing with energetical modernization and partly renewable district heating supply:

- Energetical modernization: efficiency house 70 instead of efficiency house 55
- Regenerative share in district heating

In total, the housing costs for the tenants as well as the greenhouse gas emissions are lower than they are for energetical modernization of the more cost-intensive standard efficiency house 55 combined with the use of conventional district heating.

Annexes: Drewitz_kurz_English.pdf
Drewitz_lang_deutscjh.pdf

6.3 Integrated energetic district concept ‚Obstallee' in Berlin Spandau

Extracts from the concept:

"The district Obstallee is the central part of the large housing estate Heerstraße Nord, which … was built on the western border of West Berlin at the end of the 1960s. 15,500 people live in 7,500 apartments in this district; it is a residential town for the metropolis Berlin and is of considerable size and importance."

"The rent is relatively low compared to the rents in the district and corresponds to the simple, peripheral location as well as to the redevelopment level that is below that of other large housing estates in Berlin. The social structure of the inhabitants only allows the property owners to make small investments in their housing stock so as not to drive out certain inhabitants."

"From the perspective of the property owners, the districts can only be energetically modernised, if the investment costs can be refinanced by increasing rental income or state funding. However, the range to raise net rents is very small when the social situation of the district is being considered. Socially acceptable modernization could be realised if the necessary rent increase was compensated by lower energy costs for the tenants.

It is estimated that a large-scale energy efficient upgrade of the district requires investment costs of more than EUR 250 million. At the same time, the current annual heating costs are around EUR 12 m. and the possible energy cost savings are at about EUR 6.5 m. This cost saving would amount to savings in the total rent (rent and bills) of € 0.25 to € 1.90 per m^2 and month. The amount of the savings depends on the current energetic status of the building as well as on the energy sources that are used. The savings would be at their highest if the energetic strengthening of the buildings was combined with an elimination of the power-operated night-storage heaters.

There have been discussions with the large property owners about approaches for determining the capital costs of a complex energetic redevelopment of the buildings. Besides energy issues, these approaches also include further measures. These are the relevant figures:

- Investment costs: 800-1,200 €/m^2 living space
- Current interest rates: 0.5-2.0 %
- Return on equity: 3.0-5.0 %

- Time period for refinancing: 20-30 years

This leads to capital costs ranging from 1.80 €/m² to 4.50 €/m² and month. They are considerably higher than the energy cost savings mentioned above. From the point of view of the property owners, comprehensive energetic redevelopment can therefore not be realised in a socially acceptable way."

Source: Gaudig, Matthias; Del Pianta, Pamela; Hunger, Bernd; Weidemüller, Dagmar; Lopitz, Sebastian: Integriertes Energetisches Quartierskonzept ‚Obstallee' in Berlin-Spandau. Berlin, März 2020. Not yet released.

6.4 PV in districts:

"The use of photovoltaic systems can lead to a situation where (nearly) the whole electricity demand of town districts with numerous apartment buildings can be met, as is shown by the two demonstration projects Bad Aibling and München Lilienstraße."

"The use of photovoltaic systems can lead to a share of renewable energy in the districts' electricity supply of more than 50 %."

Source: Erhorn-Kluttig, Heike; Erhorn, Hans: Energetische Bilanzierung von Quartieren, Ergebnisse und Benchmarks aus Pilotprojekten – Forschung zur energieeffizienten Stadt. Schriftenreihe Eneff.Stadt, Bonn 2016.

6.5 Research

An excellent compilation of the level of knowledge and the challenges and problems related to the urban energy transition can be found in the final report of the dena project Urban Energy Transition: https://www.dena.de/urbane-energiewende/
A number of practical examples were also compiled, such as InnovationCity Ruhr, "The city as an energy store", the EU's largest power-to-heat facility, and CO2-neutral district heating in Munich: https://www.dena.de/fileadmin/dena/Dokumente/Landingpages/Urbane_Energiewende/urbewi11_Praxisbeispiele_im_Detail.pdf

Research for energy-optimised buildings and neighbourhoods:
https://projektinfos.energiewendebauen.de/landing/;
https://projektinfos.energiewendebauen.de/en/topics/urban-districts-and-cities/

Energy-efficient Urban Redevelopment Programme: Tapping the potential of neighbourhoods!
https://www.energetische-stadtsanierung.info/;
https://www.energetische-stadtsanierung.info/en/energy-efficient-urban-redevelopment/

Efficiency House Plus
https://www.zukunftbau.de/effizienzhaus-plus/modellvorhaben/effizienzhaus-plus-wohnbauten/

Europe-wide: Sustainable Plus Energy Neighbourhoods syn.ikia
https://cordis.europa.eu/project/id/869918

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Dr. Ingrid Vogler