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Feedback from Passivhaus Institute

On energy efficient buildings: Revised methodology for the calculation of minimum energy performance requirements (delegated act)

The Passivhaus Institute welcomes the opportunity to provide feedback on the revised methodology for calculating the minimum energy performance requirements.

The Passivhaus Institute is an independent research organisation that has been working on highly energy-efficient construction and refurbishment for over 30 years. The PHI not only analyses theoretical considerations on passive house concepts, it also successfully implements these concepts from the outset. The institute's employees develop quality assurance concepts that are based on current measurements and experience.

Based on our experience in the field of building energy efficiency, we consider it a sensible approach to revise the method of calculating minimum energy performance requirements. We welcome the very sensible approach of aligning the assessment more closely with the changing energy supply systems of the future. The inclusion of renewable primary energy sources and the consideration of external costs are important and overdue steps towards making the assessment system more realistic and more system-orientated.

In addition, we would like to suggest that greater consideration be given to the temporal decoupling between space heating requirements and the generation of solar energy. Energy generation from photovoltaics occurs particularly in the summer months, while the demand for heating naturally occurs in the cold season. This seasonal shift makes electricity particularly valuable in winter - a fact that is not yet adequately reflected in the current valuation approach. One possible way to make this differentiation is to use the Primary Energy Renewable (PER) approach (https://passipedia.org/basics/energy_and_ecology/primary_energy_renewable_per). This method allows a differentiated valuation, for example by valuing heating electricity - depending on the climate - with a factor around 40 % higher than household or hot water electricity.

On the other hand, we are critical of the currently envisaged credit for self-used electricity. In its current form, this principle can lead to false incentives. One example is the situation of a building whose photovoltaic system produces electricity at times when large-scale ground-mounted systems in the region also deliver high feed-ins - i.e. at times when there is an oversupply of electricity in the grid anyway. In such cases, self-consumption is seen as particularly advantageous, even though the electricity consumed often has a low systemic value. This can already be seen today in the strongly fluctuating electricity prices. Another example illustrates the problem of technical disincentives: a building that has its own hydrogen storage system and thus stores the PV electricity it generates for later use, would be favoured according to current logic. In practice, however, this approach requires a considerably higher energy input - around two to three times the amount of PV electricity is required compared to a system that primarily feeds the electricity into the grid and organises the hydrogen storage on the grid side according to system requirements. Such systems are therefore not ecologically or economically efficient, but would nevertheless be favoured by the current charging logic.

We expressly support the proposal to make the calculation of the life cycle greenhouse potential - i.e. the consideration of energy consumption and emissions during the manufacture of construction products - an *optional* instrument. In our view, the impact of this manufacturing energy on the

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overall balance is comparatively small. In addition, the methodological recording is very complex and involves considerable effort. The option of voluntary application allows committed building owners or research institutions to include this data if required without placing a general burden on all projects.

Finally, we would like to point out that the calculation horizons of 20 and 30 years are too short. The actual useful life of buildings and their main components is significantly longer. An excessively short observation period leads to distorted assessments and can penalise durable and sustainable construction methods in particular. A more realistic assessment over longer periods would better reflect the actual service life of buildings and could strengthen investments in sustainable efficiency measures.

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