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## Home Energy Model: replacement for the Standard Assessment Procedure (SAP)

### Consultation response from The Housing Forum

#### **Response submitted by:**

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#### **About The Housing Forum**

The Housing Forum is the UK's cross-sector, industry-wide organisation that represents the entire housing supply chain. Our growing membership drawn from over 150 organisations across the public and private sectors and includes local authorities, housing associations, housebuilders, architects and manufacturers. All share our determination to drive quality in the design, construction and decarbonisation of UK homes. They have a commitment to partnership working and share in our vision of 'A Quality Home for All'.

In order to achieve this, we have advocate for policy change needed for everyone to live in a good quality, sustainable and affordable home. Our key [Housing Solutions](#) set out how we think this can be achieved.

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## Response to consultation

We have responded in full to the Future Homes Standard consultation. For this consultation on the Home Energy Model many of the questions are of a technical nature and we are not best placed to comment on them. We do, however, offer some high-level input into the new Home Energy Model.

### The need to replace SAP

**We welcome the new Home Energy Model** as a replacement for SAP, which has become outdated compared with other modelling software available across the industry and is no longer adequate for assessing the energy usage of homes, especially those using modern designs and technology.

The *Home Energy Model* is a clearer term than Standard Assessment Procedure and should be more clearly understood as relating to energy usage in the home. A new name is also helpful to signify that this is more than just an update on SAP but a new model.

*The Home Energy Model: FHS assessment* is not very clear as it appears to conflate the process of assessing the HEM with the HEM itself. We would suggest *The Home Energy Model: For newbuild homes* (as we assume the need here is to distinguish it from the reduced-data version used for assessing existing homes).

It is likely that HEM will be updated in the future, as our energy sources change and new technologies and systems for modelling improve. We would therefore recommend adding either a “v1” or “2025” to it.

### A new home energy modelling ecosystem:

There is support for the new **open-source methodology** as it should help make the HEM adaptable to incorporate new technologies in a more dynamic way, as well as making it more transparent and consistent across the industry. We are, however, aware of concerns about the **level of computing skills** needed to fully engage with it (requiring python expertise) mean that it is not accessible to as many people as would be ideal. The sector would appreciate clarity on **training and upskilling** required, and government support with this.

We are aware of concerns about how easy it will be to use the new modelling system. The sector has grown used to SAP over the last 20 years, and appreciates the instant calculations that can be produced. There is concern that HEM may be inaccessible, require complex computing skills, or that there may be delays in calculating it, which will inhibit industry from innovating and finding the best ways to reduce energy usage in new homes. It is **vital that the new HEM can calculate instantly**, to support the sector in making calculations across different build-standards and across different areas.

Using local weather data is useful, but developers and manufacturers may also need access to a **“worse case” local weather scenario**, in order that they can develop products and house designs that meet the desired targets and regulatory compliance on efficiency when used anywhere across the country.

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The Housing Forum would be happy to share information about possibilities for collaboration with our members, and/or to host an event for those interested in collaboration to engage with developing the codebase.

## The new Home Energy Model – an overhaul

The **increased time resolution** offered by the Home Energy Model is a vital component of the new HEM and needs to be used to model the impact on peak load as well as overall energy use, which will become increasingly important as we move to renewable energy sources and home heating via electricity.

It is **important that the model is updated** as the energy sources used to supply the grid move to renewable energy over the coming years. This will affect the carbon savings from elements such as PV panels (which will decrease as the grid itself decarbonises) and future developments in pricing for electricity as the usage of battery storage and market mechanisms for encouraging off-peak usage develop.

The Future Homes Standard is predicated on using HEM to accurately model the energy usage of new homes. **It is therefore essential that the HEM is fully operational before the new regulations are introduced.**

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