MEASURING HOW SOCIAL HOMES REALLY PERFORM





A SMETER pilot collaboration for the social rented sector

Winter 2026/27

Healthy Homes Hub

aico

KNAUF ENERGY solutions

Department for Energy Security & Net Zero

WHY WE ARE DOING THIS

Almost every social home in the country has an EPC. Very few have a measurement of how the home actually performs once someone is living in it.

This pilot sets out to close that gap for a meaningful number of homes over the coming winter, using technology that is already installed. Landlords unlock more value from data they already hold, allowing investment to be targeted where it will do most good and making measurement scalable at low cost.

The Department for Energy Security and Net Zero (DESNZ) would like evidence at scale on the difference between modelled and measured thermal performance. The evidence base at present rests on studies of tens or low hundreds of homes. That is enough to confirm a performance gap exists. It is not enough to describe how that gap varies across EPC bands, property archetypes and tenures, which is what decisions on standards, retrofit targeting and investment planning increasingly depend on.

WHAT SMETER MEANS

SMETER stands for Smart Meter Enabled Thermal Efficiency Rating.

A SMETER assessment combines half hourly smart meter energy data with in home temperature and environmental sensor readings taken across the heating season, and uses that data to calculate a measured Heat Transfer Coefficient, or HTC, for the property. The HTC describes how much heat the home loses.

The value lies in the comparison.

- An EPC will produce a modelled HTC based on assumed construction and performance.
- A SMETER assessment produces a measured HTC of the building itself. The data is gathered while residents go about their normal lives, and the method then accounts for the effects of occupant behaviour and weather so that what remains is a clear signal of the intrinsic heat loss of the home

This is what makes the approach interesting. Earlier methods such as co-heating tests achieved a similar isolation of fabric performance, but only by emptying the home of its residents for the duration of the test. SMETER delivers a comparable measurement in occupied homes, with very little disturbance to the household.

Setting the two side by side shows landlords where homes are performing better or worse than expected. At portfolio scale, it helps identify which homes and archetypes warrant further investigation, target retrofit investment more effectively, and assess whether improvements deliver the intended outcomes.

DESNZ is developing a certification scheme for SMETER providers, supported by a technical working group covering data quality, sensor placement, algorithm performance and compliance, GDPR compliance and the Smart Energy Code.

WHO IS INVOLVED

This is a collaboration of different organisations coming together to test new methods, learn what works best and build evidence to help the Government consider future policy development.

DESNZ
Collaborating department. Provides the evidence questions, supporting SMETER policy and pilot development.

Healthy Homes Hub
Convenor and coordinator. Brings the parties together, supports engagement with housing providers, and maintains the rhythm of the programme.

Aico
Measurement provider.

Knauf Energy Solutions
Measurement provider.

Participating housing providers
Provide the homes, the stock data and the resident relationship.

WHAT WE EXPECT TO GET OUT OF IT

1. A dataset describing how the performance gap is distributed across EPC bands and property archetypes, rather than a set of individual case studies. Alongside basic property type information, this gives a first view of what measured HTC would mean for EPC outcomes at portfolio and national scale.

2. Practical evidence on whether existing sensor estates can support SMETER assessment, and what would be needed for them to do so.
(Most environmental sensing in social housing was installed for damp and mould monitoring rather than energy performance. If that existing estate can contribute to SMETER outputs, the cost of measuring at scale falls sharply. The pilot will test how far current installations can go and where they fall short of the requirements set out in the DESNZ assurance and certification framework.)

3. Practical understanding of how resident consent for this kind of measurement is best sought.
(Environmental sensing data is generally collected on a legitimate interest or public task basis. Smart meter data requires explicit informed consent from the occupant under the Data Access and Privacy Framework. Bringing the two together at scale raises real questions about the most effective and least burdensome time to ask, for example alongside a retrofit sign up or an alarm upgrade visit. The pilot will surface those questions and test some answers.)

A note on tooling. Producing the distribution described in point 1 means translating measured HTC results into EPC impacts. That requires a SAP based tool, such as the one offered by Infoshareplus, to receive HTC outputs and calculate the resulting EPC effect. We are flagging this early so that any implications for cost, licensing or data flow can be worked through before the season starts.

1. DATA SHARING IN OUTLINE

In addition to an aggregated dataset as described under 1 above, if possible DESNZ would like access to pilot data: UPRN[1], the measured HTC, and the EPC calculated HTC. A separate data sharing agreement is being drafted.

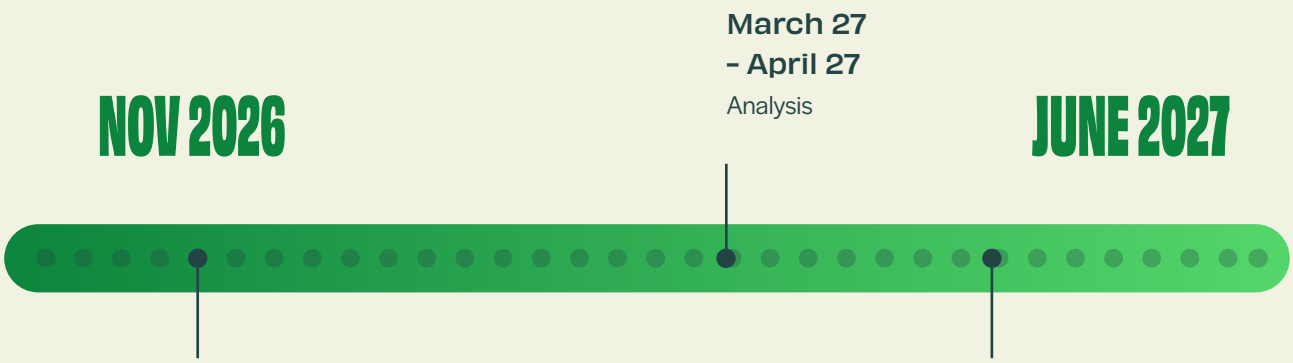
1. [1] An alternative to sharing UPRNs would be to link to relevant publicly available data about the home (e.g. EPC data) and then share in anonymous format

WHY THIS GROUP, AND WHY HAND SELECTED

Aico and Knauf Energy Solutions were invited because of the SMETER work they have already done with DESNZ.

The housing providers have been hand selected. This is a small group working directly with a government department on something that has a good prospect of changing how homes in this country are measured.

TIMELINE



November 26
- February 27
Measurements – including consent, installation (if required) and collection of data

May 27
- June 27
Reporting

WHAT HAPPENS NEXT

For landlords joining the group, there are four immediate steps.

1. To confirm participation.
2. Agree the number of properties taking part and check they meet the eligibility criteria.
3. Support resident engagement with a clear process explaining the new use of temperature data and the smart-meter data being requested, so that households understand what is being measured and give informed consent for their data to be used.
4. Confirm the key dates for the season.

There is no cost commitment attached to taking part in this project.

A kick off workshop hosted by DESNZ will bring the full group together in person on Friday 9th October, 11.00-15.00 at Whitehall Place, giving everyone the chance to meet, to set out the challenges from a landlord perspective and to agree how the season will run. A monthly update call of 30 minutes will then keep all parties current on progress and allow the group to learn from each other as the winter goes on.