

Considerations for policy makers

The ideas presented here provide an initial set of considerations for policymakers assessing potential pathways for SMETER integration into UK policy. They illustrate early, exploratory options for incorporating for example measured HTC_s in a way that enhances policy effectiveness while maintaining a balanced and proportionate approach.

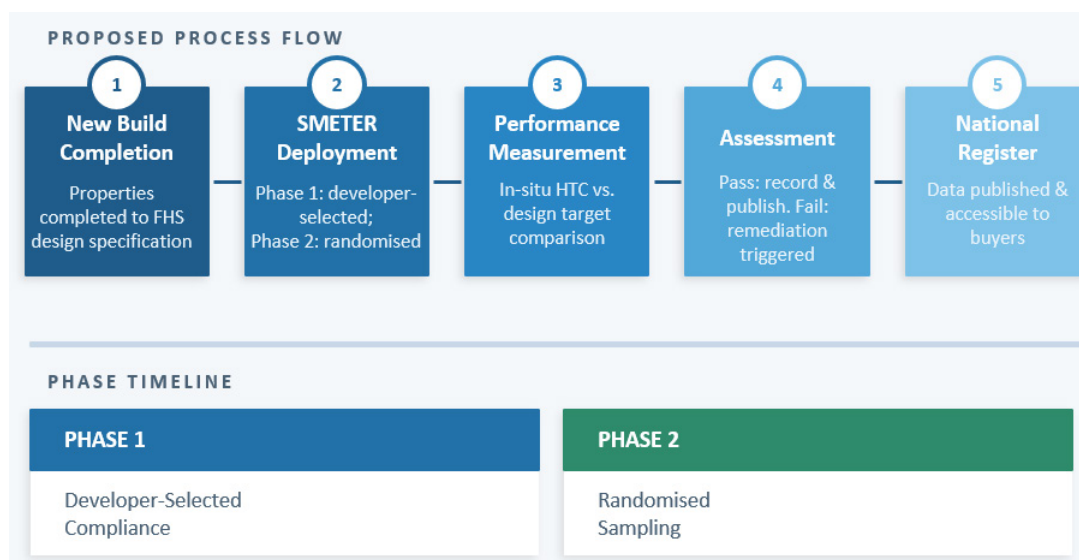
FUTURE HOMES STANDARD

The Future Homes Standard offers a generational opportunity to reset expectations for housing delivery in England. New homes built under the Standard should not simply meet design targets on paper—they should be demonstrated to meet them, and to sustain that performance over time. A home requiring significant retrofit within a decade of construction falls short of what a future-focused standard should deliver.

SMETERs offer a route to stronger accountability in newbuild delivery. We propose a phased approach that builds industry confidence while generating meaningful evidence:

- **Phase 1 – Selfselected compliance:** Government could invite housebuilders to deploy SMETERs in a proportion of new homes—around 10%—with builders initially selecting which properties are monitored and audited. Where monitored properties fall short of minimum thresholds, a remediation framework could outline expectations for addressing shortfalls.
- **Phase 2 – Random sampling:** As familiarity grows, government could transition to independently randomised sampling, generating a more representative picture of sectorwide delivery quality.
- **Phase 3 – Owner requested assessment** Once a new home is sold, a homeowner or landlord will be able to commission a SMETER assessment on request.

Results would be submitted to a national newbuild performance register accessible to the public. Parallels exist with platforms such as heatpumpmonitor.org, where monitored installations demonstrate higher seasonal performance than the ‘average’ install⁹, suggesting that transparent reporting could drive higher quality newbuild delivery. Making SMETER data available to purchasers at point of sale could strengthen market incentives and empower buyers.



ALTERNATIVE POLICY OPTIONS

- **Performance bonds:** Developers could be required to lodge a bond - set per dwelling, held in escrow - as a condition of planning consent or building regulations sign-off.
 - The bond is released once SMETER monitoring confirms the property meets its design HTC within an agreed tolerance. Where it falls short, the bond is retained pending remediation; if the developer fails to act, proceeds fund corrective works on behalf of the homeowner.
 - The bond value could scale with the degree of underperformance to create a direct commercial incentive for quality.
 - A dispute resolution process and independent data verification would be needed to make the scheme workable.
 - Government may wish to pilot this through the Phase 1 self-selected compliance pathway before considering wider mandate.

BUYING & SELLING PROPERTY

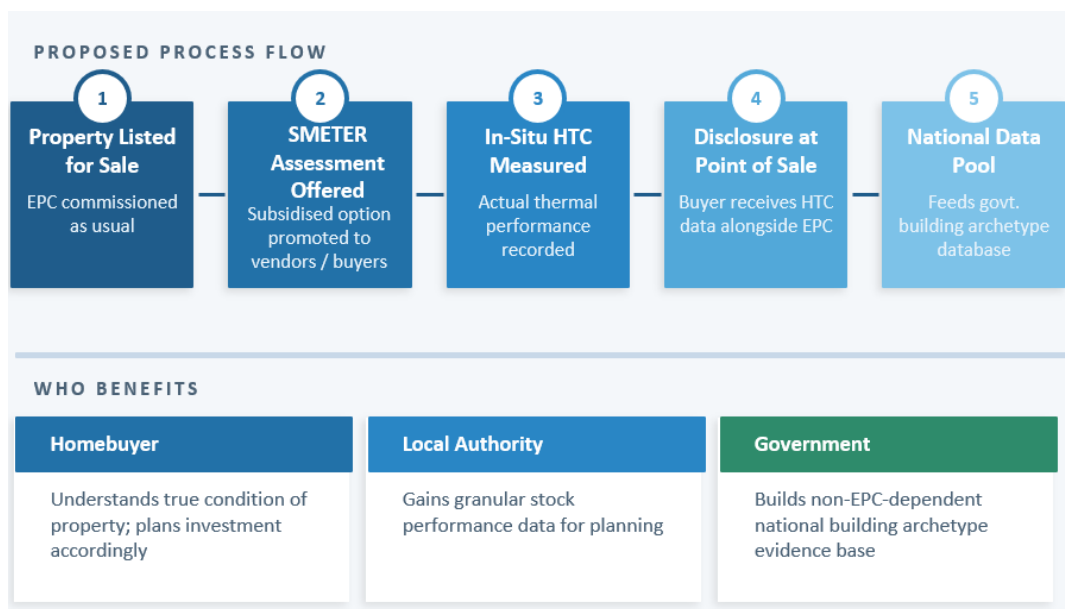
At the point of sale, Energy Performance Certificates are currently the primary means of informing prospective buyers about a property's energy characteristics. However, EPCs have wellknown limitations: they are modelled rather than measured and provide limited insight into realworld thermal performance.

Introducing SMETER measurement at the point of sale-either as an extension of current arrangements or as a subsidised, promoted option-could meaningfully improve consumer information and market transparency. For a fraction of the cost of many subsequent works, a measured HTC value would give buyers a robust, evidencebased picture of what they are purchasing: likely bills, possible improvement measures, and how the property compares to similar archetypes.

For government, the data opportunity is also substantial. A transaction dataset enriched with insitu performance data would support analysis of underperforming archetypes, identification of priority retrofit geographies, and the localised evidence that authorities will increasingly need as they assume greater coordination responsibilities.

ALTERNATIVE POLICY OPTIONS

- **Stamp duty incentive:** A partial reduction for buyers commissioning a SMETER assessment prior to completion could drive uptake without creating mandatory requirements.
- **Estate agent signposting:** Encourage estate agents to present SMETER data alongside EPCs where available and to signpost buyers to subsidised assessment options.



BOILER UPGRADE SCHEME

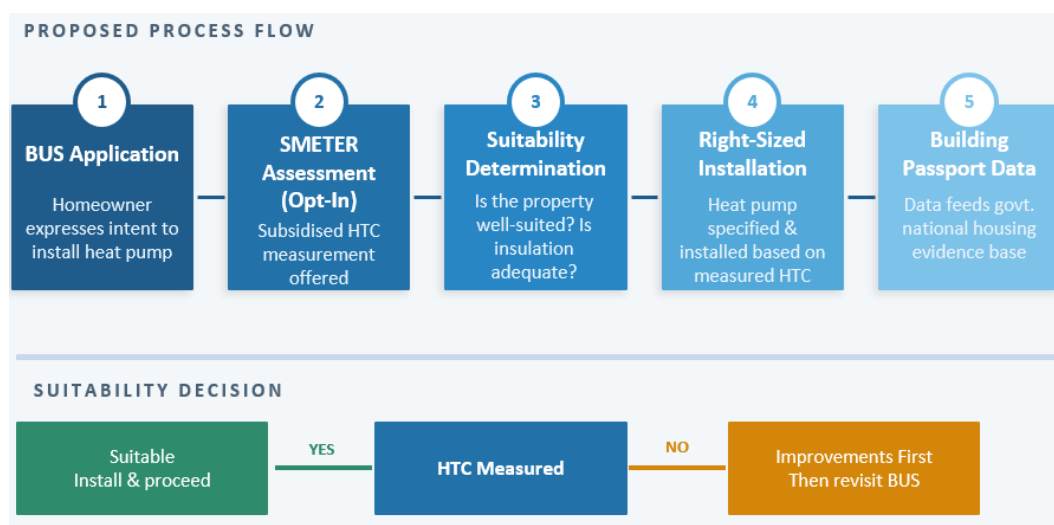
The Boiler Upgrade Scheme is the largest demandside driver of heat pump deployment in England and Wales. Without careful management, however, poor installation quality risks undermining confidence in the wider heat pump market. Heat pumps that are poorly installed or installed in homes that are poorly insulated or otherwise unsuitable, are far more likely to underperform - raising bills, reducing comfort, and undermining public confidence in the technology.

We propose:

- **A pre-installation optin pathway:** BUS applicants could opt in to a subsidised SMETER/HTC or equivalent assessment before installation, providing performance data to inform system sizing and suitability, with results feeding into the emerging building passport system.
- **A promoted EPC alternative:** Where EPCs are no longer a BUS requirement, government could actively promote HTC measurement as a more informative alternative for installers and homeowners

ALTERNATIVE POLICY OPTIONS

- **Installer competency:** Incorporating SMETER literacy into MCS accreditation to ensure installers can interpret and apply performance data.



SOCIAL HOUSING

Social housing tenants are disproportionately exposed to the consequences of poor building performance, and often least able to advocate when retrofit falls short or lowcarbon systems produce unexpected costs. Ensuring retrofit investment genuinely delivers is both a social equity priority and a matter of policy effectiveness.

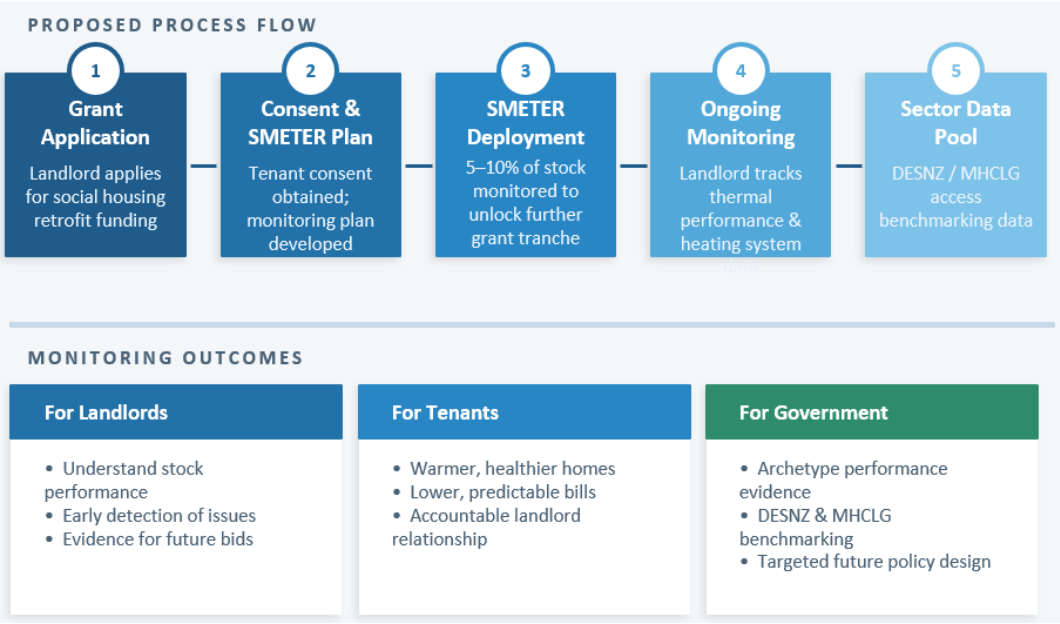
A durable performancemonitoring system-one that helps landlords understand their stock, detect underperformance early, and respond appropriately-would protect public investment and tenant welfare.

We propose making SMETER deployment eligible for capital funding under social housing programmes. To support this, government might consider:

- **Proportionate installation targets:** For example, requiring SMETER deployment across 10% of funded stock to unlock further tranches of grant.
- **Tenant consent as a core principle:** With landlords developing clear, accessible consent processes.
- **A sectorwide dataset:** Aggregated SMETER data could support benchmarking and help surface systemic issues across archetypes and geographies, informing DESNZ, MHCLG, local authorities and others.
- **Tenant data access:** Tenants could be enabled to request SMETER performance data for their home, supporting transparency and informed engagement.

ALTERNATIVE POLICY OPTIONS

- **Crosstenure data sharing:** A shared national SMETER dataset spanning social housing, private rental, and owneroccupied properties could offer government an increasingly representative view of stock performance over time.



PRIVATE RENTED SECTOR

The Private Rented Sector presents some of the most persistent challenges in housing energy performance, shaped by split incentives and a concentration of hardertotreat stock¹⁰. MEES sets a regulatory floor, but EPCs are an imperfect mechanism for determining whether that floor is met in practice. SMETERs could provide a more credible and robust tool for verifying realworld performance in the PRS.

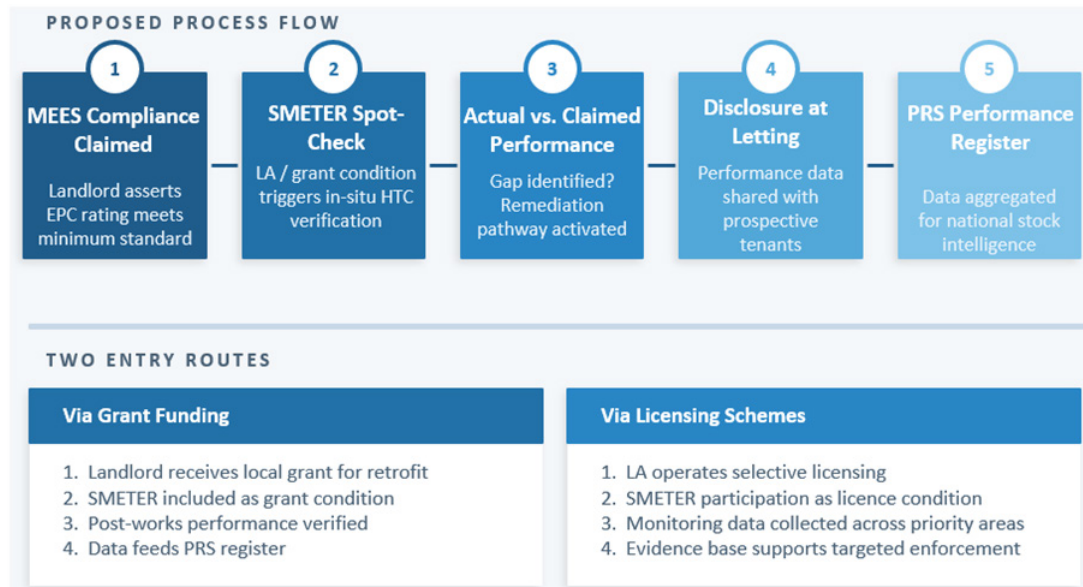
Government may wish to explore:

- **A PRS performance register:** Drawing on SMETER data gathered through local authority compliance activity to identify and target the worstperforming properties.
- **Embedding SMETERs in retrofit support:** Where landlords receive grant funding, requiring them to make measured performance data available to prospective tenants could support a more transparent rental market.

ALTERNATIVE POLICY OPTIONS

- **Licensing scheme integration:** Incorporating SMETER participation into selective or additional licensing schemes, using existing local regulatory levers to encourage uptake.
- **Tenant requested assessments:** A mechanism enabling tenants to request a SMETER assessment where thermal performance concerns arise-costs potentially contributing to the PRS MEES cap or being subsidised.

Retrofit assurance certification: A voluntary postretrofit certification scheme in which SMETERverified HTC improvements unlock a quality mark, providing reputational incentives for landlord



EMPTY AND VACANT PROPERTIES

England has around 265,000 long-term empty homes - properties that have been unoccupied and unfurnished for more than six months (In 2024 720,000 homes were unfurnished and standing empty¹¹). Standard SMETER assessment is not feasible while a property is unheated and disconnected, but reoccupation offers a practical window to establish a thermal baseline before or alongside refurbishment works. Government may wish to consider:

Post-reconnection assessment trigger. Where a long-term empty property is brought back into use through local authority intervention, a subsidised SMETER assessment could be offered once utilities are reconnected and the property is actively heated - generating a baseline HTC to inform subsequent retrofit investment.

Integration with empty homes grant funding. Making SMETER assessment an eligible use of empty homes grant funding would help direct refurbishment towards the most significant thermal deficiencies and begin to build a dataset of reoccupied stock performance that currently does not exist.

11 BBC. 2024. Empty homes are on the rise. So why aren't they being used to solve the housing shortage?. [Source](#)

EPC REFORM – MEASURED U-VALUES:

Energy Performance Certificates are the primary tool through which government, landlords, buyers, and tenants understand a building's energy characteristics. Yet the fabric inputs that underpin them - U-values for walls, roofs, and floors - are derived almost entirely from lookup tables based on a visual assessment of construction type and age. Analysis of past field trials shows that the uncertainty in estimating a U-value for a known construction type is at least 45%, and for some constructions exceeds 100% - sufficient to move a property from one EPC band to another in nearly all cases studied.

The SEA welcomes the white paper by Build Test Solutions, the University of Salford, and Elmhurst Energy¹² proposing the formal inclusion of in-situ U-value measurements as an allowable input to energy models including RdSAP, HEM, SAP, and BS EN12831. Where retrofit funding, heat pump sizing, MEES compliance, and EPC-linked financial products all flow from modelled fabric assumptions, inaccuracy in those assumptions propagates systemic error across the entire policy stack. The case for reform is reinforced by the European Commission's guidance accompanying the recast EPBD (EU 2024/1275), which explicitly recommends that member states introduce tools allowing building users to override assumed EPC inputs with measured values - recognising that divergence between calculated and actual performance is a systemic issue requiring a structural response, not merely better communication..

The SEA proposes:

- **Updating RdSAP conventions** to formally allow U-value measurements carried out in line with ISO 9869, with appropriate quality assurance requirements attached. This is a short-term action requiring only minor alterations to the existing conventions, and the SEA sees no justification for further delay.
- **Establishing a competent persons scheme** for in-situ U-value measurement, or expanding existing schemes, to provide the governance framework needed for measured data to be accepted with confidence across the industry.
- **Integrating measured U-values into retrofit programmes:** where grant funding is being deployed through the Warm Homes Plan, BUS, or MEES compliance activity - measured fabric data should be an eligible and promoted input to both pre-works assessment and post-works verification.

ALTERNATIVE POLICY OPTIONS

- **Lodging measured data alongside assumed values:** The SEA recommends requiring or incentivising assessors to submit measured U-values to a central register where available, rapidly building a national evidence base and supporting progressive refinement of lookup table defaults.
- **Dispute resolution:** Measured U-values can provide clear, objective evidence of underperformance to support dispute resolution and guide remedial works. Government should formalise this by recognising measured U-values as admissible evidence in MEES enforcement and retrofit warranty claims. The European Commission's guidance¹³ similarly recommends that member states provide mechanisms for building owners and tenants to query or object to EPC results where observed performance diverges from the asset rating - a principle the UK would do well to embed in its own reform.
- **EPC reform:** As government reviews the EPC framework, the SEA's position is that measured U-values should be recognised as a higher-evidential-tier input, with ratings derived from measured data clearly distinguished from those based on assumed values.

¹² Build Test Solutions, University of Salford and Elmhurst Energy. 2026. Better Data, Better Buildings: Using Measured U-Values to Drive Performance and Compliance. [Source](#)

¹³ European Commission. Energy performance certificates (Articles 19-21, Annex V) and independent control systems (Annex VI). [Source](#)

WALES:

OPTIMISED RETROFIT PROGRAMME

Wales is leading the way among the UK nations: the Optimised Retrofit Programme represents the first national policy requiring performance monitoring across a social housing stock. However, while the programme's current monitoring infrastructure is encouraging, it has so far captured predominantly environmental data; thermal and heatrelated performance metrics remain largely absent. As Wales seeks to build its national building databank, this gap represents a clear opportunity - one that the country is wellpositioned to act on, with the infrastructure already in place to support rapid and effective rollout.

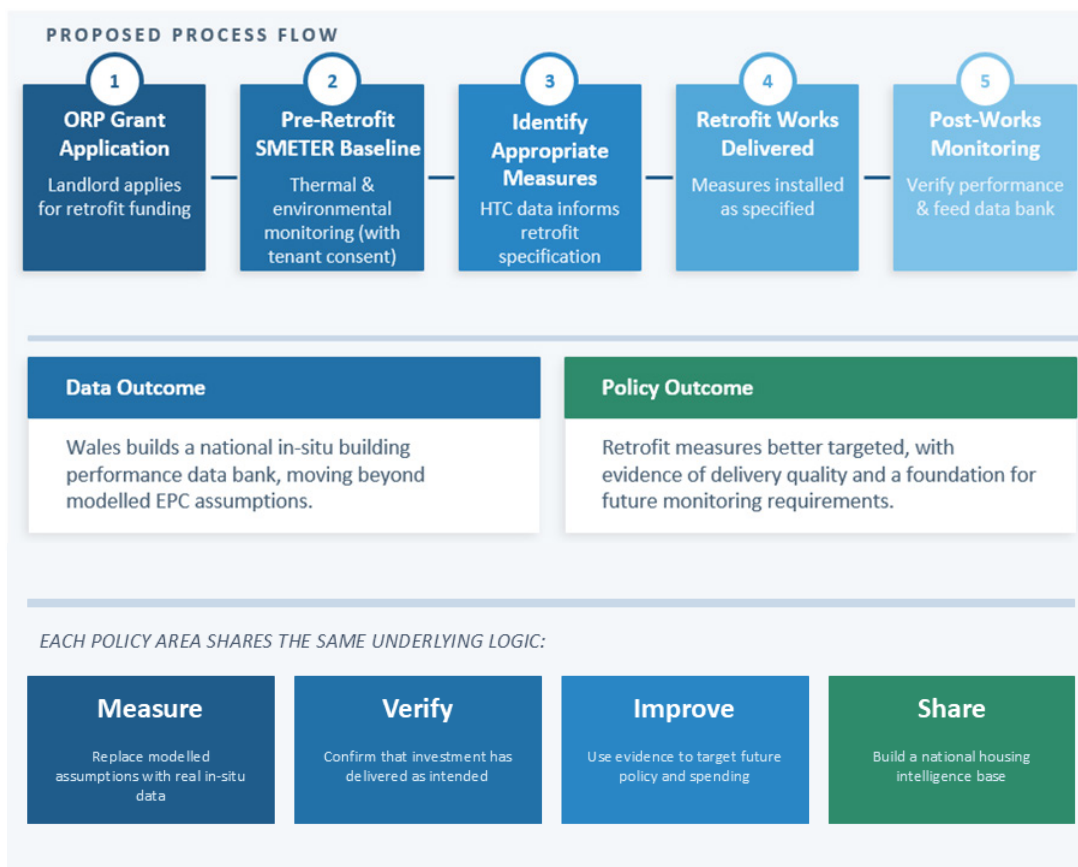
Where measures are delivered under the ORP, SMETER deployment could be funded within the existing 10% discretionary envelope (Test & Learn). This would be a targeted and proportionate first step: not a blanket requirement, but a pragmatic use of existing flexibility to start capturing the performance data Wales needs to understand whether its retrofit investment is delivering as intended.

FROM A POLICY DESIGN PERSPECTIVE, GOVERNMENT MAY WISH TO EXPLORE:

- **Pre-retrofit baselining:** With tenant consent, SMETER measurements could provide a preretrofit performance baseline for a proportion of social housing stock, generating the insitu evidence needed to inform the most appropriate measures for individual properties.
- **Lighttouch incentives:** Attaching modest incentives to pre-retrofit monitoring participation could support voluntary uptake and help build a pipeline of qualityassured data ahead of intervention.
- **Random sampling:** Introducing a random sampling approach for a subset of ORP-funded properties could provide a statistically useful dataset without creating undue administrative burden.

ALTERNATIVE POLICY OPTIONS

- **Tiered data requirements:** A model in which monitoring depth scales with the size and value of the grant - smaller grants supporting energy monitoring, larger grants requiring SMETER deployment.
- **Landlord data portals:** Requiring or inviting social landlords receiving ORP funding to submit SMETER data to a central Welsh Government portal to enable crossportfolio analysis and longitudinal tracking.
- **Retrofit assurance certification:** A voluntary postretrofit certification scheme in which SMETERverified HTC improvements unlock a quality mark, providing reputational incentives for landlords.



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