



Action for Warm Homes

National Energy Action (NEA)'s response to Ofgem's draft Forward Work Programme [2018-19]

About NEA

NEA works to end fuel poverty and tackle exclusion in the energy market both locally and nationally. NEA undertakes key research, national and local advocacy and works directly with partners from local and national government, industry and the third sector to deliver practical solutions to improve the quality of life for those living in cold homes. To achieve this we aim to improve access to energy and debt advice, provide training, support and promote energy efficiency policies, local projects and co-ordinate other related services which can help change lives¹.

Background to this response

Last year (2017-18) NEA, alongside other consumer groups, worked with Ofgem to secure some key improvements in the treatment of domestic customers, particularly those living on low incomes or whose vulnerability can be exacerbated by the current functioning or arrangements in the energy market. These key improvements include:

- Following the Competition and Markets Authority (CMA) inquiry, a new cost cap for Pre-Payment Meter (PPM) customers was introduced
- Ofgem extended the aforementioned price protection, via a new safeguard tariff, for more vulnerable customers from this winter
- Ofgem responded to calls for the vulnerability principle to be strengthened with utilities now required to identify and respond appropriately to their customers' enhanced needs
- Ofgem went ahead with a proposals to end high and inconsistent warrant charges for vulnerable energy consumers
- Working with network companies and energy suppliers, Ofgem helped improve the Priority Services Register (PSR)
- Ofgem proposed actions to improve performance from suppliers to identify, respond to and prevent vulnerable consumers from falling into further debt
- Ofgem issued a consultation on protecting consumers who receive back bills

Whilst these reforms are to be welcomed and should help make a real difference to disadvantaged energy consumers, as noted below, some key actions on these areas are still outstanding. Many of these areas were also not cited in the draft work plan and overall this is disappointing given the clear progress which is being made. Within Ofgem's response to the workplan consultation we therefore urge the regulator to promote this vital work and provide further clarity on when key remaining actions will be undertaken in the coming months and year.

Maintaining progress on enhancing price protections

NEA has supported Ofgem's work to introduce a new targeted price cap to protect more low income and vulnerable customers from unexpected price rises than the existing PPM capⁱⁱ. This has now been acted upon and NEA welcomed Ofgem's recent safeguard tariff. Including the PPM cap, overall five million people are now protected from unexpected price rises (the majority are low income and vulnerable). The new safeguard cap is however currently limited to those who receive the Warm Home Discount (not those that are eligible). Smaller suppliers that don't offer the WHD are also not required to provide the new safeguard tariff. NEA has therefore highlighted concern that customers with smaller suppliers won't be protected from unexpected price rises and NEA estimates that over half a million eligible households will miss out on £260 of energy bill savings this winter.

Subsequently, Ofgem have consulted on how to extend the new safeguard tariff and the UK Government has also now come forward with new proposals to amend the Digital Economy Act to provide new data-sharing measures that would enable vulnerable consumers receiving certain benefits to automatically be protected by the extended cap. NEA are encouraged by this recent progress but Ofgem and BEIS must now show real urgency to act on the new data sharing powers so that all low income and vulnerable customers that are eligible for the Warm Home Discount are put on the new safeguard tariff (critically, including those with smaller suppliers) as soon as possible. Without responding to the latter point re small suppliers, NEA is also increasingly concerned about our ability to promote switching to the 'cheapest deals' or promoting community based switching initiatives. Separately, NEA also continues to urge both the Department for Business, Energy and Industrial Strategy (BEIS) and Ofgem to ensure smaller suppliers are required to provide the Warm Home Discount.

Enforcing the vulnerability principle

As noted above, NEA supported adding a broad vulnerability principle to the domestic Standards of Conduct that clarifies to suppliers that to uphold their obligation to treat all domestic customers fairly, they need to make an extra effort to identify and respond to the needs of those in vulnerable situations. However, concerns are mounting about the capacity Ofgem have to adequately monitor these requirements, especially given the increasing number of smaller suppliers. There are also increasing concerns about the failure of some suppliers to join up their mandated obligations to improve services for their most vulnerable customers.

One illustrative concern is that as engineers visit homes as part of the smart meter roll-out they will have to turn off any unsafe gas or electrical appliances as part of the roll-out. Whilst it is welcome that qualified engineers condemn unsafe appliances one risk to health and safety can be replaced by another if there is no guidance or support available to fix or replace these appliances in low income homes. NEA are not clear there is an adequate policy to close this worrying gap in support or the extent to which suppliers are routinely referring eligible vulnerable households onto existing related support like free gas safety checks or new boilers under the Energy Company Obligation (ECO).

Following through on improving debt and back billing practices

As noted above, Ofgem recently issued a consultation on protecting consumers who receive back bills. NEA welcomed and strongly supported Ofgem's proposal to implement a licence obligation to prevent suppliers from backbilling consumers for gas and electricity consumed over 12 months ago when the consumer is not at fault. A 'shock' bill is a core reason why low income households are pushed into debt. This debt can then spiral out of control, causing further hardship and, in the most severe cases, suicide. Ofgem concluded in its latest social obligations reporting that suppliers needed to do more to tackle high levels of debt and that suppliers' own actions should not exacerbate existing vulnerable situations or create new ones. We believe this prescriptive rule is necessary to guarantee the highest level of customer service in an area where customers should expect absolute accuracy.

While supporting Ofgem's proposal, the response to this consultation is still pending as is the response to further proposals to improve performance from suppliers to identify, respond to and prevent vulnerable consumers from falling into further debt. As noted above, it is critical that these key actions are introduced with urgency and more generally suppliers (regardless of their size) are doing all they can to spot debt problems early and intervening with appropriate services.

In this context, NEA notes a need to ensure debt advice or debt advice referrals are offered when customers are put onto a Fuel Direct repayment plan. NEA also believes Ofgem should be extending efforts to ensure coverage of wider protections in this area. NEA specifically refers to the "Energy UK Safety Net" initiative. Currently some of Energy UK members have pledged to never knowingly disconnect a vulnerable customer at any time of year, where for reasons of age, health, disability or severe financial insecurity, that customer is unable to safeguard their personal welfare or the personal welfare of other members of the household. In addition, the Safety Net provides enhanced measures that are integrated into all suppliers' debt management processes, an agreed universal definition of a potentially vulnerable customer, improved communication with support agencies, a range of debt management and repayment options and follow-up procedures to support vulnerable customers. Whilst this good practice is welcome, the value of this model is increasing being challenged by a number of new entrants who may not be aware of the initiative or do not feel it is relevant for their customers. This is resulting in an unacceptably large variance in the different services being delivered across different energy suppliers depending on their size and capacity.

Ofgem's role in making the most of the smart meter roll-out

NEA has a long-standing interest in smart meters and their roll-out in Great Britain and Northern Ireland, particularly with regard to their impact on vulnerable consumers. Ofgem's role of monitoring and enforcing minimum standards under the Smart Meter Installation Code of Practice (SMICOP) is also fundamental to the success of the roll-out. However, as noted above, concerns are mounting about the capacity Ofgem have to adequately monitor these requirements, especially given the increasing number of smaller suppliers.

Elsewhere NEA has recently highlighted our concern that the smart meter roll-out is now significantly back-loaded. This means that most households have less opportunity to enjoy the benefits of smart (and any resulting financial savings) in the years up to 2020. One of the simple ways Ofgem could help improve this is through E-Serve's quarterly reporting. At the moment there is little information about how or when individual suppliers are rolling this technology or the approaches they are taking to engage vulnerable consumers to ensure they too capture the benefits of more accurate billing and greater control of their energy use.

NEA contests that this information is not commercially sensitive and would allow NEA (and other organisations) to be able to offer bespoke advice to customers about when they can expect to benefit from smart from their respective suppliers. NEA also stresses data protection should also not be held up as a key reason why more geographic specific information cannot be put into the public domain regarding the deployment of smart meters. By developing a GIS based map of where smart meters have been installed this would support external organisations to follow up installations to amplify the benefits by providing more extensive behaviour change advice and support.

NEA also remains concerned that the duration of the new (and welcome) PPM price cap is still too closely linked to the smart meter roll-out. Whilst NEA hopes the benefits of smart will mean suppliers should come forward with cheaper tariffs (due to the reduced cost to serve these customers), this outcome is by no means guaranteed. Nor is it known whether the quantum of the passed through cost reductions smart could prompt will be parable with the level of reductions customers currently enjoy as result of the PPM cap. These issues need to be resolved by Ofgem well before 2020 because when SMETs 2 PPM meters are deployed before 2020, they won't benefit from the cap. Even before the advent of SMETs 2 smart PPMs, this is already having an impact on access rates (and therefore deployment costs).

Maximising network companies role in tackling fuel poverty

The efficiency and cost effectiveness of both gas and electricity distribution networks play a key role in either mitigating or exacerbating fuel poverty levels. Typically distribution charges accounts for about 15% of the overall electricity and gas bill, costing a fuel poor household c. £400 per year. NEA is reliant on Ofgem to assess value for money and our main focus is supporting the current outputs of RIIO so they lead to tangible outcomes for low income and vulnerable households.

NEA recently responded to the proposed change to the Fuel Poor Network Extension Scheme (FPNES) to remove the eligibility criterion that the household must "reside within the 25% most deprived areas, as measured by the government's Index of Multiple Deprivation (IMD)". NEA provided insight on this issue from working collaboratively with the gas distribution network (GDN) companies to deliver fuel poverty related programmes under both GDRP5 and RIIO-GD1.

NEA recognises the merits of improving targeting of the FPNES scheme, delivering better value for money for existing and future gas customers and better integrating the criteria to reflect national and Great Britain (GB)-wide energy efficiency schemes. However, the merits of better targeting notwithstanding; NEA remains concerned about the pace of Ofgem's proposed changes. NEA also agreed with Ofgem that GDNs should also adopt new and innovative approaches to identify and target fuel poor customers and not rely solely on the IMD criterionⁱⁱⁱ. In order to maximise this opportunity (and respond to some of the key challenges of removing the IMD criteria), NEA notes that data sharing powers under the Digital Economy Act must help GDNs to identify fuel poor customers directly. Within the response to this consultation NEA requests far greater clarity on how Ofgem are working proactively with BEIS to facilitate this outcome as further information sharing is essential if GDNs are to more effectively identify and help fuel poor non-gas homes.

In making these points, NEA's notes that the role of the FPGNES may also be constrained or removed all together in RIIO 2. Whilst recognising environmental imperatives, it should be stressed that non-gas homes contain some of the poorest, coldest and most vulnerable members of our communities. They rely on more expensive fuels such as electricity to heat their homes, are vulnerable to detriment in unregulated markets such as oil and are more likely to live in the most energy inefficient and expensive-to-treat properties. Targeting these homes will help UK Government deliver its statutory fuel poverty targets and also meet aspirations contained in the Clean Growth Strategy to upgrade all homes to EPC Band C by 2035. NEA therefore hopes Ofgem will consult BEIS and wider stakeholders early on its plans to adjust the role or extent of the FPGNES well in advance of RIIO2.

In terms of the role of Distribution Network Operators (DNOs), within ED-1 NEA has also been encouraging a new approach to managing grid constraints and identifying energy efficiency improvements in contrast to network reinforcement and trailing new Time of Use (ToU) tariffs^{iv}. From this practical work NEA stresses the opportunity for the next price control to put in an incentive framework that mainstreams the former set of approaches. There has also been a huge amount of encouraging work to refresh and promote the Priority Services Register (PSR). Despite this good practice, NEA stresses the importance of ensuring the PSR leads to more joined up services overall, not just act as a contact list during power outages. The RIIO framework must also be sufficient for DNOs to prioritise demand reduction projects as BAU and suggests further weighting be given to demand reduction projects and Demand Side Response (DSR) initiatives that have a direct social benefit as opposed to a narrow (or sole focus) on implementing commercial DSR solutions. This could be achieved during this price control or in RIIO 2 by adjusting the criteria of the Network Innovation Allowance, adjusting the current 'share factors' and/or reforming the current stakeholder incentives in favour of domestic projects^v.

Ofgem's wider direct role in addressing distributional impacts

NEA has previously stated that, alongside BEIS, Ofgem have a key role in addressing the distributional consequences of the functioning or arrangements in the retail energy market. NEA recently responded to the Helm Review. As well as the UK Government, NEA believes Ofgem also has a key role to play in implementing the recommendations. Whilst tax funding decarbonisation policies is the most progress option overall, this was out of scope within the review and Ofgem's remit. One of the other main proposals Helm came forward with was to provide relief via a similar exemption for households in fuel poverty that exists for energy intensive users. Again, this falls outside the scope of Ofgem's remit and whilst this outcome would be desirable, it could also have negative distributional impacts for those that are on the margins of fuel poverty. As a result, NEA urges Ofgem to work with BEIS to focus on how the cost burden on low income households can be lifted or ameliorated via removing policy costs from an initial block of usage for vulnerable consumers and reinvestigating the perennial idea of rising block tariffs^{vi}.

In the short to medium term, Ofgem could also do far more by reinvestigating the setting of and recover of network costs within standing charges. In particular, NEA would like Ofgem to focus on reforming how Distribution Use of System (DUOS) charges are recovered and the re-profiling of the level of DUOS charges. It is not right that low income consumers that use very little energy and have negligible impacts on the use of the system pay the same DUOS as higher usage customers. Proportionate reforms in this area could lead to a much more progressive outcome than is currently the case.

In this context, NEA also highlights a concern about the haste by which Ofgem and BEIS are introducing half hourly electricity settlement. Whilst NEA supports these moves in principle, the adoption of customers choosing to provide half hourly data to their supplier once they have a smart meter has been minimal to date and we are concerned that the mandating of half hourly electricity settlement will also prompt the proliferation of time-of-use pricing. Currently the mechanisms to ensure this doesn't impact unfairly on vulnerable consumers are not sufficiently developed. NEA is concerned that, alongside loosening licence requirements regarding tariff numbers and product information, some vulnerable customers with inelastic energy usage (that may need to maintain high demand at peak periods) is not being fully considered. NEA therefore expects Ofgem to be proactive in monitoring the impact of the aforementioned changes to relevant licence requirements and more generally, work with suppliers to ensure changes to half hourly settlement do not penalise vulnerable households.

The extent of regulatory duties

NEA notes the section in the draft workplan concerned with deregulation. NEA supports effective regulations and notes this can drive innovation as well as enhancing protections for consumers. As a result, instead of reducing the extent or breadth of regulation for its own sake, NEA insists there may be scope for widening Ofgem's influence in some key areas. For example, whilst NEA welcomes the real progress there has been over the last year in the regulated energy sectors to protect the most vulnerable from unexpected price rises, for customers reliant on non-regulated fuels (such as Oil, LPG and District Heating) there is still no protection or suitable regulation.

NEA has previously stated that Ofgem must ensure that, as a minimum, these unregulated sectors can offer the Priority Services Register (alongside the related non-financial services) and move towards a similar Principle Based Regulation (PBR) model so the most vulnerable benefit from the current protections now enjoyed by all electricity and gas customers. This could be followed up in the future with moves to implement proportionate price regulation where this is deemed appropriate. NEA acknowledges that this new approach would require changes to Ofgem's remit via Parliament but this should now be considered a priority and the findings of the current CMA investigating into the District Heating industry may provide the opportunity to make this case. In addition, NEA believes another near-term priority for Ofgem should be to enhance tenants' knowledge of the rights to switch, choose their payment type and benefit from smart meters and protect tenants from the on-selling of sub-metred electricity and non-regulated fuels via their landlords.

Responding to the opportunities and risks of Brexit

It is welcome that the work plan set out that Ofgem will be investigating the impact Brexit may have on energy consumers. Whilst the most compelling drivers for action on cold homes are based on domestic legislation (Warm Homes and Energy Conservation Act 2000^{vii}, Climate Change Act^{viii}, Housing Act^{ix}, Fuel Poverty Targets^x and minimum energy performance standards in the private rented sector^{xi}) and related UN Sustainable Development Goals^{xii} Brexit could have a profound impact on domestic consumers. Whilst there are some clear opportunities created^{xiii}, NEA believes that unless certain forthcoming EU targets are met, some limited legislation continues to be transposed domestically or additional domestic actions are taken, the UK leaving the EU could have a negative impact on the UK economy, strain the UK's trade balance (via needless importation of fossil fuels and other raw materials) as well as badly impact the people who struggle to keep their homes adequately warm. NEA believes the greatest opportunity to enhance national competitiveness in the energy sector is to reduce energy demand. The extent to which the UK can insulate itself from import dependency for all fuels (and other raw products such as steel to build new power stations or over headlines) will have a clear impact on the UK's trade balance. In responding to these risks, the Department for Business, Energy and Industrial Strategy and the regulators Ofgem and Northern Ireland Authority for Energy Regulation (NIAER) should run their own call for evidence to clarify the impact and opportunities of Brexit in the energy sector^{xiv}.

Supporting BEIS to deliver fuel poverty commitments

Finally, it was disappointing that (with the exception of small section on the services provided via E-serve) the work plan was silent on how Ofgem can support the Government to meet its fuel poverty commitments. NEA recently warmly welcomed both the UK Government's Clean Growth Strategy and the National Infrastructure Commission's (NIC) interim National Infrastructure Assessment. The Clean Growth Strategy re-commits the UK Government to meeting the energy efficiency based fuel poverty targets. NEA also said the UK Government must also support the strong case for the re-introduction of adequate central investment, where appropriate. NEA also welcomed the publication of the National Infrastructure Commission's (NIC) interim National Infrastructure Assessment (NIA) which rightly identifies the need to urgently address the energy wastage^{xv} in UK homes and states dramatically enhancing energy efficiency must be a key national infrastructure priority. Again this could help unlock much needed funding from central Government.

NEA believes Ofgem must fully recognise the scale of this opportunity to reduce energy demand. The UK Energy Research Centre (UKERC) and Centre on Innovation and Energy Demand (CIED) have recently underlined the scale of the cost-effective potential. The recent report "*Unlocking Britain's First Fuel: The potential for energy savings in UK housing*"^{xvi} noted that one half of the energy currently used in UK housing could be saved by investing in a mix of current energy saving technologies. In addition, cost-effective investments to 2035 could save around one quarter of the energy currently used, an average saving of £270 per household per year at current energy prices. This saving is approximately equivalent to the output of six nuclear power stations the size of Hinkley Point C. Using Treasury guidance for policy appraisal, this investment has an estimated net present value of £7.5 billion. NEA therefore urges Ofgem to encourage NIC to ensure domestic energy efficiency is retained as a key priority within the final infrastructure assessment (which will be published this July) and work with the UK Government to meet fuel poverty commitments. This includes supporting the strong case for the re-introduction of adequate central investment, where needed. Whilst a public intervention is not anticipated, NEA hopes Ofgem will make these points with the same vigour as its current outspoken support for the deployment of smart energy solutions.

ⁱ Throughout 2016-17, NEA awarded £18 million of grants to support new & innovative approaches to tackling fuel poverty in local communities, helping to deliver 44 Projects in 2166 households. We have trained a massive 5325 people who will cascade their knowledge to an estimated 1.34 million people. Through Warm Zones we have also delivered energy efficiency measures to 4303 households. NEA also provides the secretariat for the All-Party Parliamentary Fuel Poverty & Energy Efficiency Group to raise awareness of the problem of fuel poverty and the policies needed to eradicate it. For more information visit: www.nea.org.uk.

ⁱⁱ NEA's comment on extension of the safeguard tariff can be found here: <http://www.nea.org.uk/media/news/nea-comments-extension-safeguard-tariff/>. It was also covered in the Independent. NEA was also quoted in the BEIS press release launching the consultation on data sharing and quoted in the Mirror: <https://www.mirror.co.uk/news/politics/five-million-low-income-families-12002870>. For more information on this issue also see NEA's oral evidence to the BEIS select committee: <https://www.parliament.uk/business/committees/committees-a-z/commons-select/business-energy-industrial-strategy/inquiries/parliament-2017/pre-legislative-scrutiny-of-draft-tariff-cap-bill-inquiry/> and NEA's recent response to the Ofgem consultation on extending the Safeguard Tariff http://www.nea.org.uk/wp-content/uploads/2018/01/NEA-Response_Ofgem-Consultation_Providing-Financial-Protection-More-Vuln...pdf.

ⁱⁱⁱ NEA is currently working with Northern Gas Networks (NGN) on 'Connecting Homes for Health'. This project is a pilot which aims to measure the health and wellbeing impacts of a gas grid connection and first time gas central heating system in households vulnerable to ill-health from living in a cold home. NEA therefore underlines the potential for the FPGNES criteria to be adapted so GDNs can expand their work to deliver a wider set of health, environmental and economic benefits to deprived communities and vulnerable households.

^{iv} Solent Achieving Value from Efficiency (SAVE) Led by Scottish and Southern Energy Power Distribution (SSEPD) in the Solent and surrounding area. For more information visit: <http://www.energy.soton.ac.uk/save-solent-achieving-value-from-efficiency/>. Less is More Western Power Distribution partnered with the Centre for Sustainable Energy to help communities reduce their electricity demand, especially at peak times so that less money was spent on upgrading substations, to cope with rising demand. For more information visit: <http://www.lessismore.org.uk/>. The Power Saver Challenge project with Electricity North West aimed to extend the life of existing network assets by working with customers to reduce the amount of electricity they use, in return of a reward. The aim was explicitly to test the feasibility of avoiding investment in an urban primary substation and extend the life of the existing asset. For more information visit: <http://www.powersaverchallenge.co.uk>.

^v NEA is currently in the process of engaging with both the networks, Ofgem and the UK Government on the future of the next price control. NEA is developing a short paper which could be used to strengthen the aforementioned partnership work and support any future engagement and we hope our thinking will be reflected in the final price control.

^{vi} As part of this work Ofgem and government will be required to identify how to mitigate impacts of any reforms for low income households who have unavoidably high consumption, and may be worse off under rising block tariffs. Whilst these households would need to be protected, it is not a reason not to move forward with the aforementioned reforms overall.

^{vii} Warm Homes and Energy Conservation Act 2000: <http://www.legislation.gov.uk/ukpga/2000/31/section/1>

^{viii} The Climate Change Act 2008: <http://www.legislation.gov.uk/ukpga/2008/27/contents>

^{ix} Housing Act 2004: <http://www.legislation.gov.uk/ukpga/2004/34/contents>.

^x In England, the statutory target is to ensure that as many fuel poor homes as is reasonably practicable achieve a minimum energy efficiency rating of Band C, by 2030. This is supported by interim milestones. For more information see Cutting the cost of keeping warm:

A fuel poverty strategy for England, UK Government, March 2015.

^{xi} From April 2018, landlords will not be able to rent out properties with energy efficiency ratings below EPC Band E (exemptions apply).

^{xii} UN Sustainability Goals (SDGs) apply to all nations. The most relevant from a fuel poverty perspective are Goal 1: No poverty: Goal to end poverty in all forms and dimensions by 2030. This involves targeting the most vulnerable and increasing access to basic resources and services; Goal 7: Affordable and clean energy: Note this is mainly focused on affordable and universal access to electricity by 2030. Focus on investing more in clean energy sources e.g. solar, wind etc. So relevant to FP debate re extent to which policies are funded through levies on consumer bills and how governments tease out tensions between affordable and clean components of goal; Goal 7 does have sub goal to double the global rate of improvement in energy efficiency by 2030 so nice links between 1 and 7 re targeting most vulnerable if apply to ee policy and Goal 10: Reduce inequality within and among countries including sub goal by 2030 progressively achieve and sustain income growth of the bottom 40% of the population at a rate higher than the national average. Report here: https://sustainabledevelopment.un.org/content/documents/1684SF_-_SDG_Universality_Report_-_May_2015.pdf.

^{xiii} Brexit presents several opportunities for domestic energy consumers: The ability of the UK to set its own VAT levels and reflect the fact energy is an essential item of household expenditure, HMT can work with HMRC, Ofgem and the Department for Business, Energy and Industrial Strategy (BEIS) so that suppliers do not recover VAT that is currently applied on top of network and/or environmental charges and the ability of the UK to remain part of the EU ETS but create a domestic Modernisation Fund to finance actions which improve the UK's national competitiveness and future-proofing our economy.

^{xiv} NEA recently provided evidence to the EU Energy and Environment Sub-Committee's Brexit: energy security inquiry. For more information visit: <http://www.parliament.uk/business/committees/committees-a-z/lords-select/eu-energy-environment-subcommittee/inquiries/parliament-2017/brexit-energy-security/>

^{xv} Historic deployment of conventional energy efficiency measures is also still benefiting the UK and the economy and the UK Government's own analysis states that between 2000 and 2009, energy consumption per UK household fell by 17 per cent. This was mainly driven by a reduction in household consumption for space heating. Had no improvements been made in home insulation and more efficient heating systems since 1970, household energy consumption would have almost doubled. In addition, the average new home built in England requires about half as much energy per square meter as the average existing home and two thirds of the 2050 UK housing stock are expected to have been homes built before 2009.

^{xvi} Unlocking Britain's First Fuel: The potential for energy savings in UK housing, Sep 2017.