

National Energy Action (NEA) response to The Future Homes Standard: changes to Part L and Part F of the Building Regulations for new dwellings



Action for Warm Homes

About National Energy Action (NEA)

NEA¹ works across England, Wales and Northern Ireland to ensure that everyone in the UK² can afford to live in a warm, dry home. To achieve this, we aim to improve access to energy and debt advice, provide training, support energy efficiency policies, local projects and co-ordinate other related services which can help change lives.

Background to this response

Living in cold, damp and unhealthy homes continues to cause shocking levels of unnecessary hardship and premature mortality. Across the UK, on average more than 10,000 people die each year due to living in a cold home³. The number of needless deaths is the 'tip of the iceberg' and many more people are suffering with poor physical and mental health and resulting impact on health services costing the NHS between £1.4bn and £2bn every year, in England alone. As well as the devastating impacts cold homes have on their occupant's lives, this problem extends to all of us; needless health & social care costs⁴, queues at GPs and A&E as well as delaying the discharge of the most vulnerable patients from hospital⁵. NEA believes dramatically improving domestic energy efficiency levels remains the most enduring solution to addressing energy affordability. In this context, NEA welcomes the policy intent within this consultation to reduce the carbon emissions arising from new homes and critically the UK Government's complementary commitments⁶ to invest £6.3 billion to improve energy efficiency in existing homes of people living in social housing as well as private tenure fuel poor households.

As the people that we represent largely cannot afford to buy new homes and depending on assumptions about how many new homes are built, around 80% of existing homes will still be in use by 2050, the majority of our advocacy is focused on retrofitting the existing stock as the best way to bring people out of fuel poverty. However, a subset of those who struggle to pay their bills will live in housing built under the regulations set out in this consultation, but generally only where this housing is part of a social housing scheme. Our focus in this consultation response is therefore mainly on how the proposed Future Homes Standard and changes to Part L and Part F of the Building Regulations will affect social housing new build.

Summary of our response

As we move towards decarbonising the whole economy, a crucial element of reducing emissions are homes. Currently existing homes are improved via the Energy Company Obligation (the only GB wide home energy efficiency programme), the Private Rented Sector Minimum Energy Efficiency Standards (PRS MEES) and social housing standards under the Decent Homes Standard. As well as reducing emissions, these policies are designed to contribute to both the England only statutory fuel poverty target (to ensure that all fuel poor households in England have an Energy Performance Certificate of Band C or above by 2030, alongside interim milestones) and the overall aim set out in the 2017 Clean Growth Strategy for all UK homes to reach EPC Band C or above by 2035. Upgrading the UK's existing buildings to meet these targets comes with multiple co-benefits. The BEIS Select Committee identified several of these in their 2019 report on energy efficiency:

- **NHS Savings:** Reduced NHS costs of roughly £1.4 billion each year in England alone. The health service is estimated to save £0.42 for every £1 spent on retrofitting fuel poor homes.
- **Economic Growth:** This 'cost-effective' approach would require an estimated £85.2 billion investment but would deliver benefits (reduced energy use, reduced carbon emissions, improved air quality and comfort) totalling £92.7 billion—a net present value of £7.5 billion;
- **Optimises infrastructure investment:** Energy efficiency can prevent expensive investments in generation, transmission and distribution infrastructure and reduce reliance on fuel imports—with a present value of avoided electricity network investment of £4.3 billion; and
- **Competitiveness:** The UK is a net exporter of insulation and energy efficiency retrofit goods and services.

NEA has identified further areas that should be explored with regards to the value that energy efficiency schemes could present, but have not yet been assessed:

- The direct value of reductions in bills and energy arrears for households, and how this would increase spending within poorer communities;
- The avoided cost of reducing carbon emissions or improving air quality via alternative actions;
- The avoided costs of investment in non-efficient forms of embedded power generation which can increase local air pollution;
- The value of reductions in rent arrears, void periods for landlords⁷ and higher stamp duty yields to HMT;

- Uplifts in VAT yields to HMT for energy efficiency measures compared to the lower rates applied to VAT on gas and electricity;
- The positive impact of reducing inflation, gas imports and the effect on the UK's balance of payments;
- The extent of the creation of a healthier workforce and jobs from a more buoyant energy efficiency industry;
- The value to the UK economy of wider benefits such as up-skilling the workforce;
- The value of avoided costs to energy consumers of reducing network reinforcement by Distribution Network Operators⁸. In turn, the positive impacts of also reducing civil utility works taking place in UK streets;
- More comfortable internal temperatures in homes will lead to fewer premature winter deaths and despite being unpalatable premature mortality has a clear cost⁹;
- The reduced costs to mental health and social care as reductions in bills can reduce stress and improve mental health for occupants and keep people living in their homes longer; and
- The cost effectiveness of zero-capital interventions such as advice which can also create less damp and mould growth within homes, in turn reducing respiratory problems at little or no cost.

Whilst it is imperative to upgrade the existing housing stock to a higher standard of energy efficiency, NEA also believes any new housing stock should be built a high standard so that more costly retrofitting can be avoided. As result, NEA is extremely supportive of the overall aims of this consultation to halve energy use of new homes by 2030 and option 2 for a 31% reduction in emissions in 2020, albeit with a caveat that we would prefer this to be achieved with a higher insulation performance than option 2 currently contains instead of focussing on microgeneration to achieve carbon reductions. NEA also stresses that all new homes built after new Building Regulations are approved must be built to whichever standards are then current, and not those which were active previously.

Alongside creating the new standards, the Government must consider how such standards will be enforced to ensure that they are effective. NEA supports:

- Greater levels of inspection and stricter enforcement of building standards, alongside stiffer penalties for non-compliance.
- The introduction of a New Homes Ombudsman to help homebuyers obtain redress where housebuilders fail them.
- The introduction of a property inspection to be carried out after completion to ensure compliance with the energy performance promised at the outset.

NEA also believes that there is a case for updating the building regulations for water consumption. The current building regulations approach of a mandatory minimum standard and higher optional standard for areas of water stress is ineffective, nor do we feel the targets are stretching enough. At a minimum, we recommend the current optional standard of 110 litres should become the mandatory standard for all areas of the UK, and, if possible, this is stretched further to align with existing campaigns.

The introduction of a scheme, similar to EPC, to provide information on how water efficient a home is, along with advice to reduce water consumption and save money would be welcome. This will allow customers to make informed choices and can result in significant environmental and financial benefits. This should be supported by a wider awareness-raising campaign and which shows how water and low-cost energy saving measures can complement each other.

Our response to this consultation

Question 1 -Do you agree with our expectation that a home built to the Future Homes Standard should produce 75-80% less CO2 emissions than one built to current requirements?

a. Yes

b. No – 75-80% is too high a reduction in CO2

c. No – 75-80% is too low a reduction in CO2

If no, please explain your reasoning and provide evidence to support this.

Yes, we support a future homes standard that reduces the emissions of a home by 75-80% compared to a one built under the current requirements. As innovation will undoubtedly allow greater reductions to become more cost effective, it is important that this standard is reviewed in due course, both before it is put in place, and after, to ensure that it is the right standard for 2025, and that it remains fit for purpose once it has been put in place. Whilst this would provide a 'moving target' for housebuilders to hit, the proposed reduction would give a signal of the level of ambition in the short to medium term.

Question 2 - We think heat pumps and heat networks should typically be used to deliver the low carbon heating requirement of the Future Homes Standard. What are your views on this and in what circumstances should other low carbon technologies, such as direct electric heating, be used?

The number of options to heat homes is likely to increase in the near future given the likely innovation that will take place in order to meet the 'decarbonisation of heat' challenge. It would therefore be a sensible policy to allow alternative heating technologies within the standard, to ensure that it remains fit for purpose and that the most cost-effective solutions to meeting the challenge can be implemented within the rules. Any alternative, however, would need to meet a set of criteria so that future residents do not end up paying the price for housebuilders cutting costs. Such criteria should include a requirement to demonstrate that the alternative would:

- a) Not be more expensive than a heat pump or a heat network to install in the property; and
- b) Not be more expensive than a heat pump or heat network for future residents to use in order to keep the accommodation at a pre-determined reasonable temperature (e.g. 18°C).

Such criteria would guard against actions that reduce the cost of housing, but increase the cost of keeping the home warm, reducing exposure to unintended consequences that the standard makes a negative contribution to meeting the 2030 fuel poverty target to ensure that all fuel poor homes are at EPC C. Another option is to set a minimum EPC standard for new builds.

A pre-requisite for the mainstreaming of heat networks in new builds is adequate oversight and regulation of the companies that run the schemes. We were delighted to see that BEIS had considered the CMA report on heat networks and "agree with the majority of its conclusions" including that "a statutory framework should be set up that underpins the regulation of all heat networks", "the regulatory framework should be designed to ensure that all heat network customers are adequately protected. At a minimum, they should be given a comparable level of protection to gas and electricity in the regulated energy sector." And that BEIS "share the CMA's view that there are good reasons for Ofgem to take on the role of sector regulator". This is something that we have campaigned for and is needed by current heat network users and any future users, especially if heat networks are to be greatly expanded.

We were, however, concerned to see that this move to regulation will move so slowly, with no formal commitments to next steps outlined, just "seeking input from a wide range of stakeholders over the coming months". We firmly believe that action needs to be taken sooner rather than later to ensure that customers currently connected to heat networks are afforded protections in line with the electricity and gas markets. This is especially true if the expansion of heat networks is to be accelerated through encouraging them within new build developments.

Question 4 – When, if at all, should the government commence the amendment to the Planning and Energy Act 2008 to restrict local planning authorities from setting higher energy efficiency standard for dwellings?

a. In 2020 alongside the introduction of any option to uplift the energy efficiency standards of Part L

b. In 2020 but only in the event of the introduction of a 31% uplift (option 2) to the energy efficiency standards of Part L

c. In 2025 alongside the introduction of the Future Homes Standard

d. The government should not commence the amendment to the Planning and Energy Act

D – Local actors are best placed to understand local issues, including the need for higher standards and the ability to deliver on them. NEA therefore does not support the Government commencing the amendment.

Although the proposed new standard is fairly ambitious in its reduction of carbon emissions from buildings, and implicitly in energy bill savings, the ambition shown by local authorities in their own plans to tackle the climate emergency and fuel poverty is highly variable. LAs are well placed to make some decisions based on their enhanced

local knowledge. This is a principle repeatedly reflected in UK (within the ECO scheme and the national policy planning framework), Scottish (within Scottish energy efficiency policies) and Welsh (within the Welsh fuel poverty strategy) policy. If LAs were not able to continue to go above and beyond the central government framework, existing or newly planned higher local standards may invite legal challenges by developers.

Question 5 - Do you agree with the proposed timings presented in Figure 2.1 (displayed in Chapter 2) showing the Roadmap to the Future Homes Standard?

- a. Yes
- b. No – the timings are too ambitious
- c. No – the timings are not ambitious enough

Yes. NEA agrees with the timeline proposed in the document and would strongly disagree with any delay to implementation of the 2020 deadline. Ensuring a higher standard of energy efficiency in new buildings is paramount to meeting upcoming carbon budgets, as has been stressed by the Committee on Climate Change in their most recent progress report. Any delay in implementation is to the detriment of householders, meaning higher costs to heat homes and ultimately increasing the challenge of meeting the fuel poverty strategy.

Question 6 - What level of uplift to the energy efficiency standards in the Building Regulations should be introduced in 2020?

- a. No change
- b. Option 1 – 20% CO2 reduction
- c. Option 2 – 31% CO2 reduction (the government's preferred option)
- d. Other

Whilst Option 2 has a higher reduction in CO2, this is heavily reliant on solar panels, which will have a lifetime of approximately 20 years. What happens after that will be down to the householder. If they cannot afford to replace the solar panels, they will likely face a dramatic increase in their energy bill.

Option 1, whilst lower in both CO2 and cost energy bill reduction, is reliant on high thermal efficiency. This is a relatively longer lasting solution to reductions in energy bills, with some technologies lasting for up to 80 years.

NEA in principle supports the higher CO2 reduction presented in option 2, but also believes that the Government should reconsider the level of energy efficiency present in this option. A balance between the two options, with the outcomes of option 2, met with at a minimum the insulation standards in option 1, would be our desired result.

Question 9 – Do you agree with the proposal to set a minimum target to ensure that homes are affordable to run?

- a. Yes
- b. No Please explain your reasoning

Yes, if not used as a primary metric. The future homes standard will be a failure if it allows for solutions that are more costly for householders. This proposal mitigates the risk that housebuilders rely on low Capex, high Opex heating solutions which only serve to increase the cost on householders over the lifetime of the measure. This has the greatest impact in the rented sector, as costs are borne directly by the tenant.

Question 10 - Should the minimum target used to ensure that homes are affordable to run be a minimum Energy Efficiency Rating?

- a. Yes
 - b. No
- If yes, please suggest a minimum Energy Efficiency Rating that should be achieved and provide evidence to support this.
- If not, please suggest an alternative metric, explain your reasoning and provide evidence to support this.

As mentioned previously, a minimum EPC rating would help to ensure a minimum level of the affordability of energy bills in new homes, in a similar way to which EPCs are used within the private rented sector minimum energy efficiency standards, and more generally, in the fuel poverty strategy, to ensure greater affordability of homes.

A downside to using EPCs is that they are linked to the price of fuel, and therefore give an affordability rating at a single point in time, without consideration for fluctuations in the future. On balance, however, given the intention to move away from fossil fuels, and the carbon constraints that will be placed on new builds, this should not be an issue if the buildings have high thermal efficiency.

Question 18 - Do you agree with the proposal that heating systems in new dwellings should be designed to operate with a flow temperature of 55°C?

- a. Yes

b. No – the temperature should be below 55°C

c. No – dwellings should not be designed to operate with a low flow temperature

d. No – I disagree for another reason If no, please explain your reasoning and provide evidence.

Yes – this gives new dwellings the best chance of having heating systems operating at the most efficient level. There is, however, a requirement to ensure that householders understand the benefits of a 55°C flow temperature, as historically this has not been the most common temperature used in heating systems. For some people. This could be done with simple leaflets explaining the reasoning behind such a design. For other, more vulnerable groups, face to face explanations would be significantly more useful, as has been found in NEA's Health and Innovation Programme¹⁰. We found that face to face visits are significantly more beneficial than leaflets when instigating behaviour change, and that multiple face to face visits can present good value when compared to a single visit. This will be an important consideration of this standard design is to be implemented. Where higher in-home temperatures are required because of certain medical conditions, a 55°C flow temperature will still be sufficient to achieve this.

Question 19 - How should we encourage new dwellings to be designed to operate with a flow temperature of 55°C?

a. By setting a minimum standard

b. Through the target primary energy and target emission rate (i.e. through the notional building)

c. Other

A minimum standard would be the best mechanism to delivering a 55°C flow rate.

Question 21 - Do you agree with the proposal to adopt the latest Standard Assessment Procedure, SAP 10?

a. Yes

b. No

Yes

Question 22 - Do you agree with the proposal to update the source of fuel prices to BEIS Domestic energy price indices for SAP 10.2?

Yes.

¹ For more information visit: www.nea.org.uk.

² NEA also work alongside our sister charity Energy Action Scotland (EAS) to ensure we collectively have a UK wider reach.

³ Over the last 5 years, there has been an average of 35,562 excess winter deaths each year across the UK. NEA estimates that approximately 30% of these are attributable to the impact cold homes have on those with respiratory and cardio-vascular diseases and the impact cold has on increasing trips and falls and in a small number of cases, direct hyperthermia. This is in line with estimates made by the world health organisation - http://www.euro.who.int/__data/assets/pdf_file/0003/142077/e95004.pdf

⁴ In 2016 BRE released its revised Cost of Poor Housing (COPH) report, which estimated the cost of poor housing to the NHS based on EHS and NHS treatment costs from 2011 and includes treatment and care costs beyond the first year. It also includes additional societal costs including the impact on educational and employment attainment. Finally, it provides information in terms of QALYs (Quality adjusted life years) as well as cost benefits, and to compare with other health impacts. The report estimates that the overall cost of poor housing is £2bn, with up to 40% of the total cost to society of treating HHSRS Category 1 hazards falling on the NHS. Overall, the cost to the NHS from injuries and illness directly attributed to sub-standard homes was estimated at £1.4billion, and the total costs to society as £18.6 billion.⁶ Research by the BRE in 2013 suggested that if all of the English housing stock with a SAP below the historic average of 41 was to be brought up to at least the current average of 51 through heating and insulation improvements, the health cost-benefit to the NHS would be some £750 million per annum.⁶ Other estimates put the costs to the NHS of energy inefficient housing at £192 million (£35 million of which was in the private rented sector). Use of the BRE category 1 calculator put the estimated private rented sector costs to the NHS at between £37 and £674 million depending on SAP rating and occupancy level.

⁵ Elliot AJ, Cross KW, Fleming DM. Acute respiratory infections and winter pressures on hospital admissions in England and Wales 1990-2005. J Public Health (Oxf). 2008 30(1):91-8.

⁶ As made in the December Queen's Speech and in the Conservative party manifesto

⁷ "Touching the voids report: The impact of energy efficiency on landlord income and business plans The report is available here: <http://www.sustainablehomes.co.uk/touching-the-voids-report>.

⁸ In 2015, NEA and Agility ECO produced a report investigating the possibility to divert budgets currently allocated to load-related network upgrades into local schemes that improve energy efficiency. In the report this concept is explained fully and is referred to as Alternative Investment Strategy (AIS). Specifically, the report looks to analyse the "Size of the Prize" on Northern Power Grid's network, the economic feasibility of investment in local energy efficiency and how this compares to conventional network reinforcement and practical feasibility. To read the report visit: <http://www.northernpowergrid.com/downloads/1704>.

⁹ For example burial fees and exclusive rights to burial in a particular plot, cremation fees, including the cost of the doctor's certificate, funeral director's fees, flowers, coffin travel to arrange or go to the funeral, the costs for moving the body within the UK. An indication of the scale of these to a surviving family member or society are that a direct cremation costs c. £1,600, a cremation using a funeral director £3,214 and a burial using a funeral director costs £4,136. Whilst some costs are covered for low-income households via a state Funeral Payment, often this is paid for on credit or often loans from a more affluent family member. This in turn inhibits a low-income families spending.

¹⁰ For more information, please see <https://www.nea.org.uk/hip/>