

National Energy Action (NEA) response to the Department for Business, Energy & Industrial Strategy (BEIS)'s Call for Evidence - A future Framework for heat in buildings



Action for Warm Homes

Background to this response

The energy efficiency based Fuel Poverty (England) Regulations 2014 are a legal requirement the UK Government is bound by¹. NEA welcome that these commitments are reaffirmed in this call for evidence, the most recent Conservative Manifesto² and the Clean Growth Strategy³. As a result, the UK Government is still dedicated to ensuring all fuel poor homes in England achieve a minimum energy efficiency rating of Band C by 31 December 2030 - broadly the same energy efficiency performance as a modern home⁴. The UK Government also recently noted it is unacceptable that people living on a low income should do so in properties that cannot be kept warm at reasonable cost⁵. Despite these welcome statements, currently over 4 million UK households are still unable to keep themselves or their families warm and well.

Living in expensive to heat, damp and unhealthy homes continue to cause shocking levels of unnecessary hardship and premature mortality. At least 9,700 people die each year due to a cold home, the same as the number of people who die from breast or prostate cancer⁶. 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 costs⁷, queues at GPs and A&E as well as delaying the discharge of the most vulnerable patients from hospital⁸.

About NEA

NEA⁹ work across England, Wales and Northern Ireland to ensure that everyone in the UK¹⁰ 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. Our subsidy Warm Zones is a not-for-profit Community Interest Company that also aims to work in partnership in various locations across the country to deliver integrated packages of energy efficiency measures, benefits and energy advice¹¹. This practical insight is crucial to the authenticity and insight within NEA's advocacy. NEA also provide 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 it¹².

Summary of this response

Prolonged loss of space heating detrimentally impacts low income and vulnerable household's health and wellbeing, especially during a harsh winter and amongst occupants with poor health¹³. A broken or unsafe heating appliance is also likely to prompt a loss of hot water, poor

sanitation and a reliance on the use of secondary heating appliances. Using electric portable heaters is recognised as one of the most expensive forms of heating¹⁴. Alternatively, alongside poor ventilation, use of combustion room heaters such as LPG and solid fuel fires can significantly increase carbon monoxide (CO) exposure risk¹⁵. Furthermore, older and unsafe boilers are less energy efficient¹⁶, increase carbon emissions¹⁷ and lead to heightened risks for nearby neighbours also as a result of CO poisoning¹⁸ or potentially, in extreme situations, fires and explosions¹⁹. Whilst the call for evidence focuses on gathering insights to phase out high carbon fossil fuel heating in new and existing buildings during the 2020s, NEA believes these wider issues are just as pressing and require a much more urgent policy response. NEA's response therefore makes the case for many pressing risks to be addressed during this Parliament and calls for immediate policy opportunities to be seized.

➤ Key gaps in support must be addressed urgently

In the short-term, NEA is very worried that over 140,000 of the poorest households in England, in the deepest fuel poverty, could be left without any way of heating their homes if their oil-fired heating breaks down. If the Government confirms the ending of support for heating oil boilers from September this year, we stress it must be accompanied by a commitment to enhance access to other policies that can provide suitable alternative forms of heating (via the Renewable Heat Incentive). We hope this renewed²⁰ commitment will be a prominent part of the Government's response to this call for evidence and further details of this reformed policy will be fully developed by the end of this year. NEA stresses our hope that this is a realistic outcome and we underline that we have been highlighting the need to address this issue for many years. In particular, out of the current RHI budget, NEA has urged DECC and now BEIS to provide an annual ring-fence for fuel poor households off the gas network who cannot afford the upfront costs of renewable heat technologies since the policy was introduced. As with the better targeting of the Energy Company Obligation (ECO) policy²¹, this recommendation was also made by the Climate Change Committee (CCC)²² in their advice to the UK Government on how to meet carbon budgets and mitigate impacts on fuel poverty levels. In 2016, the UK Government also committed to targeting the RHI on fuel poor households but has so far failed to deliver on this pledge²³. This is despite this approach being more cost-effective overall and it being a much more balanced and reliable way for these differing programmes (ECO²⁴ and RHI) to directly secure one of the key aims of the recent Clean Growth Strategy²⁵.

➤ **Beyond the RHI and ECO further resources can be found**

As well as continuing to highlight the need to reform the RHI and ECO policies, NEA also notes other sources of support could be used help low income home owners meet any new requirements to fund and install new, more expensive forms of heating system and related controls etc. For example, if the RHI is not reformed urgently, a "Rural Challenge Fund" could be developed using some (or all) of the resources that BEIS still makes available via the National Concessionary Fuel Scheme. Remarkably, given the stated policy intent noted for ceasing support for heating oil boiler repairs/replacements, the NCFS still pays for former coal workers to receive a coal allowance every four or five weeks, depending on where they live. This funding, or alternatives²⁶, could therefore be spent supporting more innovative ways of reducing off-gas energy costs and addressing the wider challenges these households currently face.

Alongside re-purposing existing support, NEA also recommends that the Government use public infrastructure capital to co-fund area-based energy efficiency schemes to systematically improve the quality of UK housing in every part of the country. In this context, NEA has warmly welcomed the publication of the National Infrastructure Commission's (NIC) interim National Infrastructure Assessment (NIA). The interim NIA rightly identifies the need to urgently address the energy wastage in UK homes and states dramatically enhancing energy efficiency must be a key national infrastructure priority. NIC have also stated that reducing energy demand will help to reduce the cost of decarbonising domestic heating. To help cultivate this positive ambition, NEA is an active member of the Energy Efficiency Infrastructure Group who has set how this can be achieved²⁷. This approach is also currently supported by a growing number of Non-Departmental Public Bodies, academics, industry and NGOs²⁸. There is also strong cross-party consensus highlighting why improving domestic energy efficiency must be a priority; no other form of investment can deliver so much. This approach will however need to be developed alongside other key steps noted in this response to urgently re-establish local authority capacity and skills.

➤ **More clarity on current requirements is needed before more stringent obligations on landlords can be introduced**

NEA also notes the call for evidence frequently references a determination to use new or enhanced regulatory levers to phase out high carbon fossil fuel heating in new and existing buildings. Whilst NEA believes social landlords already have a welcome track record of improving this tenure²⁹; clarity on how private landlords will respond to existing or pending requirements in the Private Rented Sector (PRS) is not yet clear. In this context, NEA highlights we recently agreed with and support the removing of the current 'no upfront cost' caveat to the existing PRS regulations but we urged the Government to ensure landlords are required to pay up to £5,000 per property to meet basic energy efficiency standards. Whilst this level would still not be sufficient to fund the majority of alternative heating solutions, clarity on these current or pending requirements is still an urgent priority as the minimum energy performance standards came into force in April this year³⁰. NEA also notes that the recent consultation on ECO also underlined the limited support³¹ this policy is likely to make to improving conditions in the in the short-term. Given the clear absence of support via ECO, a lower cap would mean less than half of F and G rated privately rented homes in England and Wales could be assisted by 2020, containing over 50,000 children left in the deepest fuel poverty and in unacceptable housing conditions. As a result, NEA believes other complimentary actions³² are also needed to improve the PRS and the social rented sector. This will require closer co-operation with the Ministry of Housing, Communities & Local Government³³ and HM Treasury, again within this Parliament.

➤ **Cultivate the opportunities for energy efficiency improvements to be prioritised by network companies**

As well as cultivating action by landlords and energy companies, NEA also highlights opportunities for energy efficiency improvements to be prioritised by network companies. This too would help reduce energy demand and therefore reduce the cost of decarbonising domestic heating. Alongside supporting the networks to develop new interactive mapping solutions to identify off gas grid homes³⁴, NEA last year reviewed progress toward meeting the 2021 gas connection targets. The report "In from the Cold"³⁵ underlined the value of First Time Central Heating (FTCH) as a key measure to address fuel poverty³⁶ and decarbonise heating in the longer-term but at the halfway point, slower progress across England had been made compared to the other GB nations in the delivery of Fuel Poverty Network Extension Scheme (FPNES) targets.³⁷

The constrained funding landscape for in-house measures was identified as a primary reason for this slower progress. This initially prompted the UK Government's £25m Central Heating Fund and more recently the £150 million National Grid Warm Homes Fund and better incentives for FTCH within the new phase of ECO from September 2018. NEA has also championed the need for revisions to the Digital Economy Act to allow local authorities, public sector health bodies and energy network companies to undertake direct data matching process with the Department for Work and Pensions (DWP), independent of licensed gas and electricity suppliers³⁸. TAs well as improved targeting, this would provide an opportunity for these parties to leverage energy supplier support in a more precise and consistent manner.

NEA is now in the process of engaging with both the networks, Ofgem and the UK Government on the future of RIIO 2. We hope the final RIIO 2 framework will build on and strengthen this positive partnership work. In this context, NEA welcomes both BEIS and Ofgem recognising the key opportunity for networks to be more directly engaged in facilitating and funding improvements in energy efficiency in the near future. Through-out the current price controls, NEA has worked hard to cultivate new models that identify energy efficiency improvements in contrast to conventional network reinforcement (or defer it) or provide alternatives to electric or gas heating. If fully captured in the near-future, this approach could help achieve collective goals; reduce the cost consumers will pay within RIIO 2, help decarbonise heating and end fuel poverty, support a successful industrial strategy³⁹, support small business growth in every region, help to achieve carbon emissions reductions⁴⁰, improving local air quality⁴¹, reduce health & social care costs⁴² whilst providing real benefits to households who are struggling financially. As NEA notes below, whilst the early adoption of these alternative investment strategies has been encouraging, NEA states that if BEIS and Ofgem are to dramatically enhance the role of networks delivering energy efficiency, further incentives and models need to be adopted which can complement the future role of both DNO/Distribution Systems Operators (DSOs) and GDN. We argue these goals could be achieved without increasing costs to energy consumers by reforming current share factors, the current losses incentive and adjusting current outputs of the FPNES. The latter would still require GDNs to continue to deliver direct assistance to fuel poor households via a reformed FPNES mechanism however instead of solely providing new gas connections, GDNs should be given some flexibility to deliver alternative actions which lead to equivalent heat cost savings.

NEA also highlights the wider need for networks to respond to the enhanced needs of people in vulnerable situations, this is particularly acute in the case of GDNs. For example, NEA believes GDNs should be required to identify and provide direct support to vulnerable households when they have to disconnect gas supply at properties as the boiler is deemed to be unsafe. Our current research to date shows this removes one hazard with another (living with an unsafe gas appliance to having no access to essential heating, hot water etc). If this situation is not quickly resolved, as noted in the introduction, this can prompt multiple issues, particularly for more vulnerable residents unable to afford to replace the affected boiler/space heaters. Where the property is either privately rented or social housing, tenants could be required to notify their landlord that the gas leak or Carbon Monoxide (CO) risk has been identified by a gas engineer and it can be some time until the gas appliance is either repaired or replaced. Again, NEA highlights how these key negative outcomes can be avoided and the opportunity for these points to be triggers to the wider adoption of alternative forms of heating.

NEA's submission also aims to highlight the need for BEIS to influence Ofgem to ensure future innovation funding under RIIO 2 is appropriately targeted. This more focused approach to RIIO innovation funding would help NEA and other organisations to build on the findings of our Technical Innovation Fund (TiF)⁴³. These innovation projects included testing air to air heat pumps; air source heat pumps; domestic multi-fuel stoves; ground source heat pumps; gas absorption heat pumps; micro CHP; electric storage heating and different forms of electric heating. This helped not only demonstrate the potential for innovative approaches to heating to have direct benefits to low income and vulnerable people but also underlined the need to address and mitigate key risks from the outset. We hope future innovation funds under RIIO 2 can complement this learning and other tax funded research, via research councils and independent universities as it is critical in situ performance is improved and there is a greater understanding of the challenges to adapting customers' heating systems, behaviours, and comfort levels before imposing additional costs or reductions to the responsiveness of their existing systems. BEIS also need to bring relevant research together to avoid the risk of research duplication and ensure research gaps can be identified and addressed.

➤ **The UK Government must monitor and address distributional impacts and enhance co-ordination and co-operation across local authorities and the UK nations**

In making the points above, NEA seeks to ensure there is much better liaison and co-ordination between local and national government, regulators and policy makers across the UK nations. In the main response, NEA also highlights key opportunities to replicate good practice from across the nations and in different localities. NEA also highlights the other UK nations also still have statutory fuel poverty eradication targets based on the 10% indicator⁴⁴. As a result, NEA welcomed the recent Clean Growth Strategy committed to assessing the impacts the individual policies outlined in the Strategy⁴⁵ could have on fuel poverty as part of its implementation. This commitment must be honoured in the context of decarbonising heat. NEA also notes the potential for negative distributional impacts are already evident and some key major barriers must be addressed. For example, last year, NEA asked Maxine Frerk of Grid Edge Policy and Dr Keith MacLean, Providence Policy to undertake some new research into heat decarbonisation and social equity⁴⁶.

The headline results were staggering; over 90% of today's homes will still be in use in 2050 and major programmes will be needed to decarbonise the way we consume energy if are to meet both fuel poverty and national carbon targets. Decarbonising domestic heating will also require retrofitting an average of 20,000 properties each and every week for 20 to 25 years. The costs could be socialised across energy bills and/or taxation however if the additional total costs from heat decarbonisation are recovered evenly across 20 years through additional levies on energy bills this could create an extra 0.6 million to 2.6 million fuel poor households in GB (based on the 10% measure)

In addition, the research revealed all main options to decarbonise heat have very different cost profiles (i.e. the mix of up front and on-going costs), these considerations in turn raise different equity concerns (i.e. there will be considerable variations in the upfront grants needed or on-going subsidy) depending on which decarbonisation options are prioritised. There are also no clear "winners" at the present time with all low carbon heat solutions requiring considerable investment, changes to customers' heating systems in their home which may in turn impact on comfort factors or be less responsive compared to their existing heating system. This means that end consumer engagement will be even more important than it is now but in the short-term NEA notes the importance of preserving existing telephone based services such as the Energy Saving Advice Service and develop opportunities to enhance face to face advice provision. Location and type of property are also critical; the optimal solution will be highly dependent on the location and type of property. In turn, this points to a greater role for local authorities in heat strategy development, the re-introduction of strategic energy planning guidance and access to financing and funding for feasibility studies as is the case in Scotland for example. The report also concluded that consumers' interests are best served at this point by prioritising opportunities to reduce space heating demand and ensuring the Government deliver early win-wins by delivering the aims in the Fuel Poverty Strategy.

➤ **New consumer protection will be required as well as expansions to Ofgem's current duties**

NEA's research also highlighted that some domestic consumers will require new consumer protections. In this context, it endorses the findings of a recent Citizens Advice report⁴⁷ which recommended the Government should publish details of the number and location of heat networks across Great Britain. This should be publicly available information. It also states all district heating suppliers should ensure that customers are billed in a clear and transparent way to ensure they understand how their bill is calculated, know what period their bill covers and how much of their bill is made up of standing charges. It also rightly notes all heat suppliers should have minimum efficiency standards and a regular maintenance and inspection regime in place. This should include checking all heat meters at least once every two years to make sure users are being billed for the right amount of heat. It also argues that all heat suppliers should, as a minimum, maintain a list of vulnerable customers (a Priority Services Register) and ensure that these customers are treated as a priority during periods of system downtime (both anticipated and unanticipated). NEA also believes bespoke and targeted advice and support will be required to provide assistance in helping consumers controlling their heating and understanding their billing. The report also recommended that the Competition & Markets Authority should launch an investigation into the heat sector with a view to assessing the need for price regulation in the heat supply market. Given the existing CMA process is now on-going, in the interim, where district heating is already being supported under existing provisions within the ECO or FPNES or Heat Networks Investment Project (HNIP) the scheme should at least be a member of the Heat Trust and ensure all heat suppliers are applying relevant good practice.

Finally in this section, NEA highlights there may be scope for widening Ofgem’s influence in this area. 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, 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 little or no protection or suitable regulation in place. 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 there should be moves 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 if this is deemed appropriate.

Key recommendations made in this response

- I.** Key gaps in support must be addressed urgently. NEA hopes the Government will renew its commitment to target the RHI on fuel poor households as part of the Government’s response to this call for evidence, with further details of this reformed policy being fully developed by the end of this year.
- II.** If the RHI is not reformed urgently, a “Rural Challenge Fund” should be developed using some (or all) of the resources that BEIS still makes available via the National Concessionary Fuel Scheme. NEA also hopes that alongside re-purposing existing support, the Government will use public infrastructure capital to co-fund area-based energy efficiency schemes to systematically improve the quality of UK housing in every part of the country.
- III.** More clarity on current requirements in the PRS is urgently needed before more stringent obligations on landlords can be introduced. The UK Government should ensure private landlords are required to pay up to £5,000 per property to meet basic energy efficiency standards.
- IV.** NEA believes other complimentary actions are also needed to improve the PRS and the social rented sector. This will require closer co-operation with the Ministry of Housing, Communities & Local Government⁴⁸ and HM Treasury, again this Parliament. BEIS and MHCLG should also ensure there is greater oversight of how CIL/S106/off-set funds are invested locally and encourage local councils to use these resources to support energy efficiency initiatives that make homes warmer and healthier and in turn encourage economic growth.
- V.** BEIS and Ofgem must cultivate the opportunities for energy efficiency improvements to be prioritised by network companies. As well as reforms to the delivery of Fuel Poverty Network Extension Scheme (FPNES) targets, further incentives and models need to be adopted within RIIO 2 so that both DNO/Distribution Systems Operators (DSOs) and GDN act on this opportunity.
- VI.** Revisions to the Digital Economy Act should allow local authorities, public sector health bodies and energy network companies to undertake direct data matching process with the Department for Work and Pensions (DWP), independent of licensed gas and electricity suppliers.
- VII.** BEIS should ensure future Ofgem innovation funding under RIIO 2 is appropriately targeted in order to build on the findings of our Technical Innovation Fund to not only investigate the potential for new energy technologies but enhance a real life understanding of the challenges to adapting customers’ heating systems, behaviours, comfort levels before imposing additional costs or reductions to the responsiveness of their existing systems. The removal of national telephone based service providing advice on energy efficiency must also be addressed urgently.
- VIII.** The UK Government must monitor and address distributional impacts and enhance co-operation across the nations. In particular, the recent Clean Growth Strategy committed to assessing the impacts the individual policies outlined in the Strategy⁴⁹ could have on fuel poverty as part of its implementation must be honoured in the context of decarbonising heat.
- IX.** New consumer protection for non-gas homes are required as well as expansions to Ofgem’s current duties. In the interim, where district heating is already being supported under existing provisions within the ECO or FPNES or Heat Networks Investment Project (HNIP) the scheme should at least be a member of the Heat Trust and ensure all heat suppliers are applying relevant good practice.
- X.** In the longer-term customers reliant on non-regulated fuels (such as Oil, LPG and District Heating) may require price regulation however in the short-term Ofgem must ensure that, as a minimum, these unregulated sectors can offer the Priority Services Register (alongside the related non-financial services) and there should be moves 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.

Response to the consultation questions

Chapter 2: A pathway to regulation?

Question 1. Do you agree that the policy framework should focus initially on enabling the market to drive the transition away from high carbon fossil fuels, and in the longer term on helping consumers and industry to comply with regulations?

Whilst the call for evidence focuses on gathering insights to phase out high carbon fossil fuel heating in new and existing buildings during the 2020s, NEA believes the pressing risks facing fuel poor households require a much more urgent policy response. NEA's response therefore sets out how we believe these issues can be addressed during this Parliament and we call for these immediate policy opportunities to be seized.

Question 2. How should government best engage with existing and emerging heating markets, consumers and other stakeholders, to ensure regulations are designed in a way that works for everyone?

The Government should consider segmenting which consumers are most impacted by existing and emerging heating markets. This can be done in a number of ways but the main categories of interest to NEA would be; early domestic adopters of alternative heating; working or inactive fuel poor households (either on Mean Tested Benefits or not), fuel poor and non-fuel poor on/off the gas network, the fuel poor and non-fuel poor in different tenures (with more or less engaged private or social landlords), households living either inside a Local Authority area that have an engaged energy or public health teams/officers and those that don't. In reference to segmentation by tenure; the Government frequently referenced a determination to use new or enhanced regulatory levers to phase out high carbon fossil fuel heating in new and existing buildings. Whilst NEA believes social landlords already have a welcome track record of improving this tenure⁵⁰; clarity on how private landlords will respond to existing or pending requirements in the Private Rented Sector (PRS) is not yet clear. In this context, providing clarity to private landlords on these current or pending requirements is an urgent priority as the minimum energy performance standards came into force in April this year. NEA also notes additional support will be needed to help low income home owners meet any new requirements to fund and install new, possibly more expensive forms of heating system and expensive controls etc.

In relation to emerging heat markets, the Government should also publish details of the number and location of heat networks across Great Britain. This should be publicly available information. All district heating suppliers should ensure that customers are billed in a clear and transparent way to ensure they understand how their bill is calculated, know what period their bill covers and how much of their bill is made up of standing charges. All heat suppliers should also have minimum efficiency standards and a regular maintenance and inspection regime in place. This should include checking all heat meters at least once every two years to make sure users are being billed for the right amount of heat. All heat suppliers should also, as a minimum, maintain a list of vulnerable customers (a Priority Services Register) and ensure that these customers are treated as a priority during periods of system downtime (both anticipated and unanticipated), bespoke and targeted work is required to provide assistance in helping consumers controlling their heating and understanding their billing. In the interim, where district heating is already being supported under existing provisions within the ECO or FPNES or Heat Networks Investment Project (HNIP) the scheme should at least be a member of the Heat Trust and ensure all heat suppliers are applying relevant good practice.

Finally, NEA highlights there may be scope for widening Ofgem's influence in this area. 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, 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 little or no protection or suitable regulation in place. 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 there should be moves 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 if this is deemed appropriate.

Question 3. How could a firm end date for high carbon fossil fuel installations be delivered through regulations? How much time do manufacturers, suppliers and installers trading in high carbon fossil fuels need to prepare for a firm end to new installations?

The answer to this question relies on how quickly the Government respond to the risks and opportunities highlighted through-out this response however we note that the premature introduction of regulation is likely to lead to further concerns like those raised above. i.e that over 140,000 of the poorest households, in the deepest fuel poverty (just in England), could be left without any way of heating their homes if their oil-fired heating breaks down.

Chapter 3: Cleaner heating technologies for off gas grid properties

NEA has recently trialled a range of new or alternative heating technologies through its Technical Innovation Fund (TiF) these included air to air heat pumps; air source heat pumps; domestic multi-fuel stoves; ground source heat pumps; gas absorption heat pumps; micro CHP; electric storage heating and different forms of electric heating. Through TIF, NEA provided grants to help install these measures as well as a wider range of other innovative technologies. Up to £5.1 million was made available to meet the capital and installation cost of high cost (large) and low cost (small) in-home measures in fuel poor and vulnerable households across England and Wales, with the aim of reducing the cost of heating their homes and addressing the underlying causes and symptoms of fuel poverty⁵¹. Instead of relying on individual household contributions, the cost effectiveness of the programme was secured by leveraging £2.5m additional match and/or gap funding, securing 49p for every £1 of TiF funds spent. This was in turn reinvested to increase the number of households assisted.

Technologies

-  **Heating:** air to air heat pumps; air source heat pumps; domestic multi-fuel stoves; ground source heat pumps; gas absorption heat pumps; micro CHP; electric storage heating; electric heating
-  **Insulation:** including external wall insulation, non-traditional cavity wall insulation, park home insulation
-  **Controls:** including smart controls and TRV/Zoning
-  **Energy storage:** PV battery storage, thermal storage, solar thermal
-  **Complementary measures:** flue gas heat recovery, heating enhancement devices, ventilation, heated seat covers, Voltage Power Optimisation

Our TIF programme has also provided other detailed and high-level insight into the challenges and opportunities when deploying innovative technologies in vulnerable households, and our evaluation reports set out a number of high-level recommendations:

Policy practitioners

- There should be further support by way of incentives for social and private housing to stimulate innovation and the application of new technologies.

- Many of the technologies installed under TIF had not gone through the testing process required for inclusion in RdSAP methodology, which can prevent local authorities and social landlords from investing in innovation where no SAP improvement is possible.
- It is essential that innovation can bring about equitable opportunities for all consumers regardless of circumstances. Policy-makers should help to create and stimulate the right market conditions to encourage private and social landlords to deploy innovative domestic technologies.

Manufacturers

- There is huge potential for new technologies to provide solutions for fuel-poor households, however more robust monitoring and evaluation is needed. Further trials would help to inform future product development and improve end user experience.
- Manufacturers should ensure communication channels, formats and guidance materials are tailored to the needs of vulnerable consumers.
- Manufacturers should provide more hands-on support to social landlords and their contractors when technologies are installed.

Local authorities and social housing providers

- The pace of technological development is creating real opportunities to improve domestic energy efficiency. Innovation should be embraced but deployed with caution. Trials provide an opportunity to learn about the suitability of each technology and instil further confidence before investing in wider deployment.
- Additional time and resource should be factored in to support vulnerable consumers through the installation process and beyond.
- There should be a dedicated point of contact between delivery partners and contractors.
- Local authorities and social housing providers should actively share and disseminate the outcome of trials, encouraged by go-to housing bodies such as the National Housing Federation.

Looking forward, during the remainder of 2018, NEA will be disseminating the individual product and project results to ensure all programme insights and lessons are shared to help improve future programme delivery.

Chapter 4: Enabling uptake of clean heating

Question 22. Please provide views and evidence on how different obligation approaches could be used to drive the transition to clean heating during the early 2020s? Are there any areas worth specifically targeting? Are there situations in which obligations would be counter-productive? Do you have any views on other short term regulatory options that could be pursued, besides those considered above?

NEA's response to this question mainly relates to Example 2 – Funding for energy efficiency of homes and Example 3 – A role for Distribution Network Operators (DNOs) or Gas Distribution Networks (GDNs) in supporting the take-up of clean heating. In reference to example 2, the levy funded Energy Company Obligation (ECO) is currently the only remaining domestic energy efficiency delivery mechanism in England and the limited GB resources ECO can deploy are declining⁵². NEA believes there are therefore clear and well-articulated limitations to relying solely on this mechanism to meet the UK Government's legal commitments in England⁵³ or the extent it can support fuel poverty eradication targets elsewhere in GB⁵⁴.

These limitations have been clear for many years⁵⁵, however, following the Fuel Poverty Strategy for England in 2015⁵⁶, previous⁵⁷ and current Ministers assurances⁵⁸ (and a delay due to the current 18-month ECO transition period⁵⁹); NEA now hopes the UK Government will at least meet their commitment to ensure the entirety of ECO is targeted on those in or at most risk of fuel poverty, without further delay. Without greater ambition beyond this market-based policy, NEA estimates that based on the proposed policy option, only c.10,580 fuel poor households in the worst Energy Performance Certificate (EPC) F & G bands will be supported by 2020⁶⁰. This is inclusive of those supported in the Private Rented Sector (PRS)⁶¹. In England, this could leave an estimated 240,000 fuel poor households in F & G rated homes long after the first 2020 milestone has been missed and therefore, based on the proposals within the consultation, it is clear additional policies to ECO will be needed to meet the UK Government's commitments.

In the short-term, NEA is very worried that over 140,000 of the poorest households in England in the deepest fuel poverty, could be left without any way of heating their homes if their oil-fired heating breaks down. As a result, if the Government seeks to end support for heating oil boilers from September this year, we stress it must be accompanied by a commitment to enhance access to other policies that can provide suitable alternative forms of heating (via the Renewable Heat Incentive). We hope this renewed⁶² commitment will be a prominent part of the Government's response to this call for evidence and further details of this reformed policy will be fully developed by the end of this year. NEA also stresses our hope that this is a realistic outcome and underlines that we have been highlighting the need to address this issue for many years. As with the better targeting of the Energy Company Obligation (ECO) policy⁶³, this recommendation was also made by the Climate Change Committee (CCC)⁶⁴ in their advice to the UK Government on how to meet carbon budgets and mitigate impacts on fuel poverty levels. In 2016, the UK Government also committed to targeting the RHI on fuel poor households but has so far failed to deliver on this pledge⁶⁵. This is despite this approach being more cost-effective overall and it being a much more balanced and reliable way for these differing programmes (ECO⁶⁶ and RHI) to directly secure the aims of the Clean Growth Strategy⁶⁷.

As well as continuing to highlight the need to reform the RHI and ECO policies, NEA also notes other sources of support could be used help low income home owners meet any new requirements to fund and install new, more expensive forms of heating system and related controls etc. For example, if the RHI is not reformed urgently, a "Rural Challenge Fund" could be developed using some (or all) of the resources that BEIS still makes available via the National Concessionary Fuel Scheme. Remarkably, given the stated policy intent noted for ceasing support for heating oil boiler repairs/replacements, the NCFS still pays for former coal workers to receive a coal allowance every four or five weeks, depending on where they live. This funding, or alternatives⁶⁸, could therefore be spent supporting more innovative ways of reducing off-gas energy costs and addressing the wider challenges these households currently face.

In reference to Example 3 - A role for Distribution Network Operators (DNOs) or Gas Distribution Networks (GDNs), NEA welcomes BEIS recognising how networks could assist in supporting the take-up of clean heating. Throughout ED1 and GD1, NEA has worked with Ofgem and the network companies to cultivate deliverable propositions for vulnerable households, especially for low income households off the gas network⁶⁹. As well as directly supporting the delivery of ED1 and GD1, NEA has also ensured network companies are playing a key part in the delivery of the UK Government's Fuel Poverty Strategy. Alongside supporting the industries' efforts to develop new interactive mapping solutions for off gas grid homes⁷⁰, NEA undertook a review last year of progress toward meeting the 2021 gas connection targets. The report "In from the Cold"⁷¹ underlined the value of First Time Central Heating (FTCH) as a key measure to address fuel poverty⁷². The report also found that at the halfway point, slower progress across England had been made compared to the other GB nations in the delivery of FPNES targets.⁷³ The constrained funding landscape for in-house measures was identified as a primary reason for this slower progress. This initially prompted the UK Government's £25m Central Heating Fund and more recently the £150 million National Grid Warm Homes Fund and better incentives for FTCH within the new phase of ECO from September 2018. However, despite this investment, NEA believes it will still not be adequate to meet the economic potential for central heating. NEA has also championed the need for revisions to the Digital Economy Act to allow local authorities, public sector health bodies and energy network companies to undertake direct data matching process with the Department for Work and Pensions (DWP), independent of licensed gas and electricity suppliers⁷⁴. Finally, NEA is now in the process of engaging with both the networks, Ofgem and the UK Government on the future of RIIIO 2. We hope the final RIIIO 2 framework will build on and strengthen this positive partnership work.

➤ *The role of DNOs/DSOs in delivering energy efficiency*

As noted in the introduction to this response, NEA welcome BEIS and Ofgem recognising the key opportunity for networks to be more directly engaged in facilitating and funding improvements in energy efficiency. In 2012, NEA developed a scoping study with Ofgem to explore how well placed network companies are to deliver social action cost-effectively and support the alleviation of fuel poverty. A key focus was how to develop a new role for network companies to encourage reductions in energy use by consumers in order to reduce future investment in energy networks. Throughout ED1, NEA has worked with several DNOs to trial new approaches which have had a positive social impact at the same time as proving alternatives to conventional network reinforcement (or deferring it). NEA has

been encouraged by many of the DNO's appetite to develop these new approaches to manage grid constraints in contrast to network reinforcement, some the projects NEA is aware of are:

- ❖ The 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>.
- ❖ TOU trials within Energywise which involved low income households in East London who took part in trialing two different ToU tariffs. One trial was British Gas's free Saturday energy and the other is a Prepayment Critical Peak rebate (essentially PPM customers get sent a text asking them to avoid peak use on certain days and then they are given a rebate for the amount of energy they don't use within these periods based on historic consumption).

NEA and Agility ECO also 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 feasibility⁷⁵. The report highlighted the cost effectiveness of a variety of AIS investment types. These were calculated in terms of cost per household, for each kW of demand reduction at peak time⁷⁶. The report also included an adjustment for "confidence level", which reflects the certainty placed in the various energy efficiency measures to achieve the peak load saving, in the context of a diverse population of customers. The number provided is based on industry research⁷⁷, and calculated by considering average engagement levels of households in a population⁷⁸, their receptiveness to a change of behaviour⁷⁹, the ability and desire to use technology to best effect and any rebound effect⁸⁰ likely in that population⁸¹. This research highlights the variables which impact the ability of permanent demand reduction to contribute to peak reduction. By using the steps below, it would be possible for DNOs (or BEIS and Ofgem) to identify the following opportunities in a given part of a particular distribution area (or across all distribution areas)⁸²:

- I. Identify ahead of time load related 'reinforcement hotspots' within a geographic territory
- II. Obtain a forecast from the DNO of the business as usual reinforcement costs
- III. Ofgem could then establish an alternative cost-benefit analysis indicating which 'other actions' could be taken to either defer or mitigate the reinforcement need in an area entirely (through permanent electricity demand reductions, not demand shifting).
- IV. This would require working with supportive agents to simultaneously assess the scale of electricity demand reduction potential within that area of the network and aggregate this potential
- V. It would then be possible to grade the potential aggregation of electrical demand reductions
- VI. Ofgem or BEIS could then evaluate if the AIS met the 'Golden Rule' test set out below

It is also important to note that in order for these alternative energy efficiency projects to occur, first they must be located in similar locations to those places where the DNO/DSO is planning to invest in network reinforcement alongside areas with relatively high population density, high deprivation and high penetration of electrically heated housing. This means the opportunity to invest in these projects will not be evident in every instance and this 'convergence' will not always occur in a planned reinforcement a DNO's may be planning on their network. Another critical challenge for these alternative investments (and the key for delivering value to all energy customers, not just the direct beneficiaries of these measures) is that the contribution by the DNO to the cost of these projects would always have to be lower than the cost of the business as usual network reinforcement (the so-called 'Golden Rule' referenced above).

Where the 'Golden Rule' criteria is met this would ensure the investment in energy efficiency is more cost effective than reinforcement; benefiting all energy consumers on that network whilst also providing a direct social outcome for the recipients of the energy saving measures. NEA also highlights that this model, or the losses incentive model below, could also be reconfigured or used to extract a contribution via the TSO, who instead of contracting for new interconnectors, could be encouraged to invest these funds in demand reduction projects.

Despite the positive progress in trialing these approaches and its potential value in the future (either for the companies, the direct beneficiaries of the energy saving measures or customers in general), NEA notes that the relative "hassle factor" of aggregating domestic properties means that DNOs will invariably focus on larger non-domestic energy uses to secure these outcomes. The preference to contract for commercial DSR opportunities (or default to conventional reinforcement) should be considered by Ofgem to be a form of market failure and we highlight a continued reliance on the current generic share factors will not be sufficient to avoid Business As Usual (BAU). As a result, NEA stresses the opportunity for a weighting to be given to domestic DSR or demand reduction projects that have a direct social benefit as opposed to focusing on commercial DSR projects.

As noted above, NEA also states that if Ofgem are to dramatically enhance the role of DNOs/DSOs in delivering energy efficiency, a further incentive could also be adopted by reconfiguring the current losses incentives, so that the equivalent energy savings that currently realised via reducing line losses instead delivered in domestic properties via the upgrading of white goods, lower cost appliances or upgrades to inefficient electric heaters. Again, the priority should be targeting this assistance to low income household with little or no disposal incomes, as they can't currently benefit from improved product standards, despite potentially benefiting the most from these energy efficiency gains. As with the model above, where the 'margin of feasibility' is tight DNOs/DSOs would also be encouraged to identify complementary energy efficiency activity that is already being planned or developed within an area. This is where the potential exists to 'piggyback' a DNO investment alongside 3rd party fund instead of making the investment entirely independently (albeit with the same intention of avoiding an unnecessary reinforcement of the network) making this activity complimentary to current EE schemes.

➤ *The role of GDNs*

In addition to the key opportunity for Ofgem and the DNO/DSO/TSOs to do far more to cultivate the aforementioned electricity-led demand reduction models, NEA also underlines the value of assistance currently provided by GDNs under the FPNES. NEA stresses it is imperative that RIIO 2 ensures GDNs continue to build on this valuable support they provide to fuel poor households. As noted above, NEA's report last year, "In from the Cold"⁸³ underlined the value of First Time Central Heating (FTCH) plays in addressing fuel poverty⁸⁴ and the successful delivery of the UK Government's statutory fuel poverty targets or the near-term milestones in England⁸⁵ (as well as similar targets elsewhere in GB). However, whilst NEA believes GDNs should continue to provide some gas connections under the RIIO 2, GDNs are rightly being changed to improve targeting of the *Fuel Poor* Network Extension Scheme (FPNES) scheme⁸⁶.

In addition, GDNs must be challenged to maximise the affordability outcomes FPGNES provides by ensuring cost effective insulation measures are installed as well as primary heating and they provide much more adequate advice⁸⁷ to maximise the benefits of the new energy saving measures can prompt. In addition, whilst NEA believes GDNs should continue to deliver direct assistance to fuel poor households via a reformed FPNES mechanism however instead of solely providing new gas connections, GDNs should be given some flexibility to deliver alternative actions which lead to equivalent heat cost savings. As well as improving the delivery and targeting of the FPGNES scheme for off-gas customers, there is also currently a big gap in provision for low income or vulnerable consumers who cannot afford to repair or replace their heating system. Throughout the winter, NEA highlighted that if a household faces financial barriers to repairing or replacing their faulty heating appliance, there is virtually no support provided nationally⁸⁸ and no repairs have been undertaken to gas boilers under Energy Company Obligation (ECO) since April last year. The prolonged loss of space heating in particular has the potential to detrimentally impact on a household's health and wellbeing, especially during the recent harsh winter and amongst occupants most vulnerable to living in a cold home.

As noted in the introduction, a broken or unsafe heating appliance is also likely to prompt the use of secondary heating appliances. Using electric portable heaters is recognised as one of the most expensive forms of heating⁸⁹. Alternatively, alongside poor ventilation, use of combustion room heaters such as LPG and solid fuel fires can significantly increase carbon monoxide (CO) exposure risk⁹⁰. Furthermore, older and unsafe boilers are less energy efficient⁹¹, increase carbon emissions⁹² and lead to heightened risks for nearby neighbours also as a result of CO poisoning⁹³ or potentially, in extreme situations, fires and explosions⁹⁴. As a result, NEA recommends that the incentives already in place to raise awareness of the risks of Carbon Monoxide (CO) poisoning should directly link to these areas and simultaneously address the equally life threatening risk of being in fuel poverty.

NEA also believes these steps would also be greatly enhanced in if as part of RIIO 2, Ofgem built on the vulnerability principles that are already in place for energy suppliers and ensure DNOs and GDNs uphold their obligations to treat their customers fairly and respond to the enhanced needs of those in vulnerable situations⁹⁵. NEA highlights how this can be achieved; by communicating the support that is available via the networks in a more consistent and assessable format, consistently provide adequate referral and advice and ensure any contractors highlight how other forms of supplier-led assistance can be accessed if the most vulnerable fail to benefit from energy saving measures under the RIIO 2 framework⁹⁶. As well as highlighting the opportunity to reform the current FPGNES and CO outputs and incentives, NEA has also been involved in some limited trials of innovative technologies that can help address future challenges⁹⁷, particularly the decarbonisation of heat. As noted in the following questions on innovation, NEA believes that while the FPGNES could provide further flexibility to incentivise these approaches directly⁹⁸, any innovation funding and incentives should also be used in this context to support consumers in the transition to a low-carbon future, particularly those in or most extreme risk of fuel poverty.

Question 23. What do you think about the options set out above for an obligation? Do you have any evidence as to potential impacts, burdens or unintended consequences?

NEA highlights the opportunities above do not create additional burdens for energy consumers. BEIS should also ensure they too seek to address any wider regressive impacts of recovering significant revenues from fuel bills to pay for any new obligations. NEA continues to believe tax funding decarbonisation policies is the most progressive option overall. In the short to medium term BEIS and Ofgem could also mitigate wider distributional impacts by reforming the setting of and recovery of network costs within standing charges⁹⁹.

Question 24. What further options for short term regulation exist that we have not considered in this call for evidence? Do you have any evidence as to the associated impacts or burdens of any further options suggested?

As noted above, NEA notes the major short-term opportunities are to ensure ECO and the RHI are better targeted, provide clarity in the PRS introduce new bespoke policies which urgently address key gaps in provision.

Question 25. How can DNOs or GDNs take a leading role in deploying clean heating? Question 26. How can we encourage and unlock private sector finance in the absence of a subsidy? And Question 27. If there was some targeted subsidy, such as for low income or vulnerable households or for building local supply chains, what would this need to look like? Do you have any evidence that subsidy is necessary?

NEA welcomes the Government highlighting the need for *targeted subsidy to support low income or vulnerable households*. As noted above, NEA notes the major short-term opportunities are to ensure ECO and the RHI are better targeted, or introduce new bespoke policies which urgently address key gaps in provision. In reference to how DNOs or GDNs take a leading role in deploying clean heating, please also see above response to question 22 and question 23.

Question 29. What could be done, apart from subsidies, to encourage new approaches? Are there any approaches that have worked particularly well in other countries and that could be replicated in the UK?

NEA believes it is paramount to improve the accessibility and simplify the 'offer' current energy assistance schemes provide. In this context, NEA not only highlights the opportunity to radically simplify the RHI scheme but in our recent response to the ECO 3 proposals we highlighted how this outcome can also be achieved through this policy; by communicating the support that is available through ECO in more consistent and assessable formats¹⁰⁰, provide adequate advice¹⁰¹ to maximise the benefits of the energy saving measures being installed and ensure any contractors highlight how other forms of supplier-led assistance can be accessed if the most vulnerable fail to benefit from energy saving measures under the scheme¹⁰². In addition, customers that benefit from ECO must be made aware how they can seek redress where the installation fails to deliver the anticipated or promised outcomes. Without adding unreasonable additional costs, NEA believes these steps would radically improve the customer journey for low income and should be set out in a Code of Practice or included as part of the proposed accreditation of the Quality Mark¹⁰³. As a minimum, the need for obligated suppliers to uphold their obligations to treat their customers fairly and respond to the enhanced needs of those in vulnerable situations must be reflected within the final ECO Guidance.

NEA also notes that improved heating systems should improve the capital value of a property and there is also solid evidence that energy efficiency improvements help to reduce rent arrears and void periods for landlords in social housing¹⁰⁴. This finding was included as part of detailed research report with twenty-five landlords managing over 500,000 homes in England and Wales which investigated whether energy efficiency improvements to homes that reduce energy bills provide any reduction in voids, rent arrears and other costs faced by landlords. The results are very promising and have helped quantify the following impacts:

- ❖ There is a correlation between the energy efficiency of the homes and the number of void days. As homes become more energy efficient they are void for a shorter length of time - on average band B properties remained void for 31% less time than those in bands E and F;
- ❖ Administration costs are considerable for voids. Landlords with more energy efficient stock are spending less on refurbishing void homes, less on repairs and less on staff time to manage voids
- ❖ The levels of rent arrears experienced by landlords ranged between 3.5% and 28%, with an average of 14% and there is a correlation between length of time in arrears and energy efficiency of homes
- ❖ Colder homes, especially those in band F, have on average two weeks more rent arrears than the rest of the bands each year. The highest performing band A properties spent 30% less time in arrears compared with the worst performing homes
- ❖ An analysis of further costs incurred shows that time spent seeking overdue rent payments, legal costs and court costs decline by around 35% for more energy efficient homes

Whilst this research was limited to the social housing sector, this demonstrates that there can be a strong business case for landlords investing in their stock, particularly the least efficient homes. In addition, given the need for both social and private landlords to meet their responsibilities for financing energy saving measures themselves (and not rely on tenants to fund these measures through their energy bills), NEA urges the Government to urgently clarify the Pay As You Save funding option should not be deployed in the privately rented sector to meet the EPC band E standard. Despite the wider demise of the Green Deal, if the Government feels it should still be permitted for tenants to be targeted for PAYs, this should not be allowed if a property has not been served or is subject to a statutory enforcement order through the housing health and safety rating system (HHSRS) procedure.

Even where the property is free from a category 1 or 2 hazard, PaYs should only be used for insulation measures or where the landlord is prepared to pay the PaYs charge or the energy bill is covered by the rent. As well as reinforcing existing responsibilities on landlords¹⁰⁵, this will ensure highly cost effective ways of reducing carbon emissions and creating energy savings are not made more costly and less attractive and less effective to deploy.

Question 30. What could be done to support a whole-house approach of combining interventions and technologies?

NEA highlights a pressing live concern that the Energy Saving Advice Service (ESAS), provided by the Energy Saving Trust, will shortly cease to operate a telephone service and this support will be entirely web-based in the near future. This is the only remaining national phone number that provides energy efficiency advice following the loss of the Home Heat Helpline in 2016 which also provided an important service offering free help and advice for those struggling to pay their energy bills since it launched in 2005. According to Ofcom, around 13% of adults in the UK do not currently go online¹⁰⁶ and these customers are at risk of being excluded from information about how to heat their homes more affordably or access cheaper deals and information on other services that may be beneficial to them.

As well as telephone services, NEA also highlights the importance of timely advice delivered, in home, at the same time as energy efficiency interventions. This too has been widely acknowledged as essential by practitioners¹⁰⁷ and researchers¹⁰⁸, as well as by the energy regulator Ofgem¹⁰⁹, and more recently by the UK Government with the Bonfield Review¹¹⁰ which addresses energy efficiency consumer advice and protection, standards and frameworks for enforcement. Face to face advice not only helps to ensure that beneficiary households can effectively use any new technology, it can also help to ensure that beneficial behaviours are adopted and any energy-related problems or challenges can also be addressed. This finding was reinforced in a recent evaluation of NEA's own Health and Innovation Partnerships (HIP) programme¹¹¹. Under HIP, each grant funded project was required to deliver energy-related advice – in relation to the specific intervention being made. The types of advice provided included those related to energy practices, health and wellbeing, market engagement and financial wellbeing. Access to energy-related advice included the following forms of support:

- The importance of keeping warm and well at home
- The importance of ventilation and how to avoid condensation and damp problems
- Energy bill and switching advice
- How to use new heating controls, existing or new heating systems
- Managing fuel debt, benefit advice and income maximisation
- Advice on further energy related grants or energy supplier support such as the Warm Home Discount (WHD) and Priority Service Register (PSR)

As a result, HIP helped deliver considerable improvements in how households experience their home heating, including aspects such as control over heating systems and ease of use but also thermal comfort and energy bill affordability. In addition, over half of households who received large measures and almost half of small measures households, associated changes in their pre-existing health conditions to the receipt of their HIP interventions¹¹².

Question 31: How can government best tap into and support community and local authority efforts? Are there any successful examples that can be build upon?

The Home Energy Conservation Act of 1995 (HECA) placed a duty on local authorities with housing responsibilities to produce strategies for improving energy efficiency in all housing tenures and to report on their progress with on-going strategy implementation. The intention was to encourage actions that could address both fuel poverty and climate change. The former Department for Energy and Climate Change required all relevant English authorities to submit a report setting out the energy conservation measures that they considered practicable and cost-effective for their local areas. The last year for which progress reports were required was 2017 and thereafter by 31 March 2019 up to 31 March 2027. The 2004 Housing Act also introduced measures for ensuring minimum standards in housing. These included the Housing Health and Safety Rating System (HHSRS) and the requirement for the licensing of Houses in Multiple Occupation (HMOs). The HHSRS lists 29 hazards, with the most severe being classified as Category 1 hazards. Excess cold is included within the list of Category 1 hazards. Local authorities have a duty to inspect properties suspected of containing Category 1 or 2 hazards, and they are obliged to take appropriate action in relation to Category 1 hazards. Whilst landlords and owners must pay for the cost of any measures or actions taken, local authorities can make reasonable charges to recover expenses incurred when serving an improvement notice or taking emergency remedial actions. Often authorities will attempt to resolve issues informally (providing clear explanations of likely enforcement actions and steps required to implement them) to give owners the chance to resolve issues before a formal enforcement notice is issued. Barriers to improving properties with excess cold under the HHSRS include the heavy burden of licensing HMOs and limited resources within local authorities.

In Northern Ireland, the Affordable Warmth Scheme is a statutory area-based programme (introduced in 2014) which is thought to be improving the energy efficiency of around 500 fuel-poor households annually (though the previous Warm Homes Scheme was thought to help up to 9,000 each year). Changes to the programme mean a stricter income-based eligibility criteria and a whole-house approach is being taken. For households not eligible for the Affordable Warmth Scheme there is the Northern Ireland Sustainable Energy Programme (NISEP), which is funded by a customer-based levy. Scotland designated energy efficiency as a National Infrastructure Priority in 2015, and is set to roll out Scotland's Energy Efficiency Programme (SEEP) over a 15-20 year period from 2018 (with a promised £500 million of public funding over the first four years). 'Pathfinder Funds' are currently delivering pilot projects in high fuel poverty risk areas in order to inform wider delivery of the programme. In the meantime, the Scottish Government is funding the Home Energy Efficiency Programme for Scotland (HEEPS), which provides a mixture of area-based schemes, a reactive funding scheme for individuals, and loan schemes. 124 The Welsh Government is similarly delivering its Warm Homes Programme, with £26 million in funding committed until 2021, and an estimated 25,000 households expected to receive assistance. Energy efficiency improvements are additionally delivered to households through NEST (targeted at eligible privately owned and privately rented properties), which is due to incorporate low-income groups with respiratory or circulatory conditions into its eligibility criteria in 2018. The area-based scheme 'Arbed' also delivers energy efficiency measures to low-income communities.

Other forms of non-recurrent funding have been used to galvanise relevant activity via the health sector. The Warm Homes Healthy People Fund (WHHP) operated between 2011-12 and 2012-13 with the aim of supporting local authorities and partner organisations to reduce the health impacts of cold homes in England. The successful programme saw many areas pilot new ways of reducing excess winter illness, and the establishment of a number of local partnerships. Some areas were able to continue their delivery following the closure of the Fund by bidding into the then ring-fenced local public health budgets. Evaluation of the project found that a greater emphasis on sustainable and long term funding sources, which would allow for a year-round approach to planning and commissioning to be taken was required. More recently, there have been significant moves to integrate health and social care at a local level in order to improve patient outcomes. This has involved the creation of the Better Care Fund, which requires local health bodies and local authorities within a health and wellbeing board catchment area to pool existing funding and to develop service integration plans. The idea is to enable adult social care to support the health sector by reducing hospital pressures, reducing emergency admissions and readmissions and reducing delayed transfers of care.

Despite some areas being able to use the fund effectively to deliver such actions, it has been noted that delivery under the Fund has been deeply flawed to date. The National Audit Office concluded that a key assumption of the Fund, that funding could be transferred from the health sector to social care without adverse impact on the NHS, has proved not to be the case because the health service itself is under financial pressure. The House of Commons Committee of Public Accounts (2017) also concluded that whilst the Better Care Fund did increase available health and social care funding for local authorities in 2015-16 for example, this was mainly used to plug gaps created by cuts to local authority budgets in a context of rising demands for care. NEA also notes current available evidence is and has been enough to engender official recognition of the problem by health-related bodies such as the National Institute for Health and Care Excellence (NICE), Public Health England (PHE), and wider health based institutions such as the Royal College of General Practitioners (RCGP), Royal College of Nursing (RCN), Royal College of Midwives and Faculty of Public Health (FPH). Cold-homes have also been shown to impact upon excess winter morbidity and mortality; cardiovascular and respiratory disease; mental health; and other health conditions. These health conditions can affect and have different detrimental impacts on all age groups and, as such, are cross-generational. However the national policy recognition and support has not been reflected in the development of consistent cross organisational work programmes at a scale sufficient to deliver the necessary improvements.

If a more widespread implementation and replication of good practice is to happen across the energy, housing and health sectors, it is important to both identify the mechanisms through which engagement has successfully taken place locally, and understand the reasons why (and how) local health and public health teams have supported actions to tackle cold homes. Recognising that localities and contexts vary, there are certainly learnings around what other areas are doing that can be implemented elsewhere. There are existing toolkits available¹¹³ which have been designed to enable local authorities and other organisations to successfully engage health sector and health-related bodies.

Question 32. What could be done to drive action from local planning? What are the pros and cons of approaches that rely on local planning? What evidence is there that such approaches produce desired outcomes?

Previously the UK Government used over-arching planning documents (policy statements) to direct local planning authorities. PPS1 was very favourable to Combined Heat and Power (CHP) and District Heating for example. PPS1 and PPG22 (guidance on planning decisions involving renewables) were merged in 2010 and revised. Despite this, the streamlining of PPS1 supplement and PPS22 continued to contain positive statements and a clear direction to local authorities to plan for, and encourage wider actions, in particular the creation of local decentralised energy installations. However, PPS1 supplement and PPS22 were then ultimately dropped when the Government reformed local government reporting requirements and planning guidance.

Another key opportunity, already being acted upon a few London Boroughs¹¹⁴ is to influence how Section 106, contributions to the Community Infrastructure Levy (CIL) and "Allowable Solution" funds from new zero carbon development is used to help improve existing homes. Planning obligations under Section 106 of the Town and Country Planning Act 1990 (as amended), commonly known as s106 agreements, are a mechanism which make a development proposal acceptable in planning terms, that would not otherwise be palatable. S106 agreements are often referred to as 'developer contributions' and are now paid into a CIL. Under the CIL regulations there is a wider range of opinions regarding what funds can be spent on locally. Whilst some local councils are using s106 agreements or their CIL funds to help deliver valuable local projects (like local energy efficiency projects), often it is not clear how councils spend the incomes collected from CIL and it is absorbed into the council's capital programme in order to subsidise the services they deliver.

Previous research from Consumer Focus found that on projected rates of house building, Allowable Solution funds could also have provided around £190 million pa nationally, enough to improve the energy efficiency levels of 397,000 low income households' homes, up to EPC C by 2025. NEA therefore seeks to ensure there is greater oversight of how CIL/S106/off-set funds are invested and encourage local councils to use these resources to support energy efficiency initiatives that make homes warmer and healthier and in turn encourage economic growth.

Question 33. Do local approaches provide a possible model for delivering a firm end to fossil fuel installations through regulation? For example, by establishing oil free zones starting where it is most deliverable, and joining them up over time.

As noted in response to question 3, the answer to this question relies on how quickly the Government respond to the risks and opportunities highlighted through-out this response however we note that the premature introduction of the idea of oil free zones is likely to lead to further concerns like those raised above. i.e that over 140,000 of the poorest households, in the deepest fuel poverty (just in England), could be left without any way of heating their homes if their oil-fired heating breaks down.

Question 34. How can we increase consumer awareness and interest in clean heating technologies?

As noted in response to question 30, NEA highlights a pressing live concern is that the Energy Saving Advice Service (ESAS), provided by the Energy Saving Trust, will shortly cease to operate a telephone service and this support will be entirely web-based in the near future. As well as telephone services, NEA also highlights the importance of timely advice delivered, in home, at the same time as energy efficiency interventions. This too has been widely acknowledged as essential by practitioners¹¹⁵ and researchers¹¹⁶, as well as by the energy regulator Ofgem¹¹⁷, and more recently by the UK Government with the Bonfield Review¹¹⁸ which addresses energy efficiency consumer advice and protection, standards and frameworks for enforcement. Face to advice not only helps to ensure that beneficiary households can effectively use any new technology, it can also help to ensure that beneficial behaviours are adopted and any energy-related problems or challenges can also be addressed.

Question 40. What intervention would make the biggest difference ahead of any regulation?

NEA hopes that alongside re-purposing existing support, the Government will use public infrastructure capital to co-fund area-based energy efficiency schemes to systematically improve the quality of UK housing in every part of the country. In this context, NEA has warmly welcomed the publication of the National Infrastructure Commission's (NIC) interim National Infrastructure Assessment (NIA). The interim NIA rightly identifies the need to urgently address the energy wastage in UK homes and states dramatically enhancing energy efficiency must be a key national infrastructure priority. They have also stated that reducing energy demand will help to reduce the cost of decarbonising domestic heating. To help cultivate this positive ambition, NEA is an active member of the Energy Efficiency Infrastructure Group who has set how this can be achieved¹¹⁹. This approach is also currently supported by a growing number of Non-Departmental Public Bodies, academics, industry and NGOs¹²⁰. There is also strong cross-party consensus highlighting why ending cold homes and reducing needless emissions via improving domestic energy efficiency must be a priority; we believe no other form of investment can deliver so much.

Chapter 5: New build

Question 44. What would be the most cost-effective and affordable measures to decarbonise new buildings? Please make reference to specific forms of clean heating or futureproofing measures.

The ending of the Zero Carbon Homes policy and the winding down of the Code for Sustainable Homes has badly hindered the delivery of new, sustainable, highly energy efficient homes. Despite the appetite of some cities¹²¹ and local authorities to continue to improve the quality of new builds in their areas, which can include requiring higher environmental standards for buildings on their land, this activity is now very piecemeal. As noted above, the loss of the Zero Carbon Homes policy was also a big blow to local councils who were aiming to improve existing homes with funds from the related 'Allowable Solutions' provision.

¹ The Fuel Poverty (England) Regulations 2014: <http://www.legislation.gov.uk/uk/si/2014/3220/made>

² The Conservative and Unionist Party Manifesto 2017, Forward, Together: Our Plan for a Stronger Britain and a Prosperous Future, 'Fair Energy Markets', page 60.

³ The Clean Growth Strategy, Leading the way to a low carbon future, HM Government, page 77.

⁴ EPC certificates compare current ratings of properties to see which are more energy efficient. They help tenants, landlords or home owners find out how they can save energy and money by installing improvement measures. The EPC certificate shows how much the average household would spend in this property for heating, lighting and hot water. It's graded from A to G, with A meaning an energy efficient, well-insulated, probably modern home, and G meaning a draughty old building where the wind rattles the walls. Typically, an older property with no retrofitted energy-saving technology will be around a D grade and an A-C rated home, the average new home built in England, requires about half as much energy per square meter as the average existing home. Previous research from Consumer Focus also found that on projected rates of house building, the previous Allowable Solution fund could have provided around £190 million pa nationally, enough to improve the energy efficiency levels of 397,000 low income households' homes, up to EPC C by 2025.

⁵ Energy Company Obligation (ECO 3) 2018 – 2022 consultation, BEIS 2018, page 9.

⁶ NEA's recent joint briefing with E3G highlighted the UK has the sixth-worst long-term rate of excess winter mortality out of 30 European countries. Over the last five years there has been an average of 32,000 excess winter deaths in the UK every year. Of these, 9,700 die due to a cold home – the same as the number of people who die from breast or prostate cancer each year. The new analysis was released on Fuel Poverty Awareness Day the national day highlighting the problems faced by those struggling to keep warm in their homes. To read the press release and the full copy of the report visit: <http://www.nea.org.uk/media/news/230218/>.

⁷ 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 £1.4 billion, and the total costs to society as £18.6 billion.⁷ 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.⁷ 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.

⁸ 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.

⁹ For more information visit: www.nea.org.uk.

¹⁰ NEA also work alongside our sister charity Energy Action Scotland (EAS) to ensure we collectively have a UK wider reach.

¹¹ For more information visit: <http://warmzones.co.uk/>.

¹² For more information visit: www.nea.org.uk/fpeeg/about-fpeeg/

¹³ Whilst there are issues with the fragmented nature of the evidence base around cold homes and health to date, current available evidence is and has been enough to engender official recognition of the problem by health-related bodies such as the National Institute for Health and Care Excellence (NICE), Public Health England (PHE), and wider health based institutions such as the Royal College of General Practitioners (RCGP), Royal College of Nursing (RCN), Royal College of Midwives and Faculty of Public Health (FPH). Cold-homes have been shown to impact upon excess winter morbidity and mortality; cardiovascular and respiratory disease; mental health; and other health conditions. These health conditions can affect and have different detrimental impacts on all age groups and, as such, are cross-generational. However the national policy recognition and support has not been reflected in the development of consistent cross organisational work programmes at a scale sufficient to deliver the necessary improvements.

¹⁴ Ofgem noted earlier this year that there are around 1.8m electric heating households in England (8%) with higher proportions in Scotland, 0.3m (13%), and lower proportions in Wales, where there are less than 100,000 (5%), homes using electric heating. A substantial minority (0.5m) use direct-acting heating systems without storage functionality, which instead generate heat instantly when needed, and use electricity at that time. The majority of these are electric room heaters which are high energy inefficient. Households that use electric heating tend to be of lower income. In England, around a third have incomes of less than about £14,500. This combined with higher costs of heating, means these households are more likely to be fuel poor.

¹⁵ Carbon monoxide (CO) is a poisonous gas that in homes is caused by unsafe or the misuse of gas, oil and solid fuel appliances, along with poor ventilation. Limited research (e.g. Ezratty et al., 2011, Kokkarinen et al., 2014) suggests that those on low incomes and who struggle to afford heating costs may be more vulnerable to CO poisoning. Between 2015-2017 NEA worked with the Gas Safety Trust and GDNs to further investigate this relationship between CO exposure risk and household vulnerability. NEA would be happy to share the findings of our most recent report; "Understanding Carbon Monoxide Risk in Households on Low Incomes and in Vulnerable Situations".

¹⁶ In a typical semi-detached home, upgrading heating controls and replacing a gas boiler that is around 80 per cent efficient (D rated) with a new boiler will save around £85 a year, whereas replacing a boiler that is 70% efficient (G-rated) could save over £300 a year. (This is based on a 70 per cent or below efficient boiler with no heating controls being replaced by an at least 90 per cent efficient boiler with heating controls.) Households which have the worst performing boilers could save even more than this. Heating and hot water accounts for about 60 per cent of what a household spends in a year on energy bills, so an efficient boiler makes a big difference, especially to those households which are struggling to pay their energy bills.

¹⁷ Replacing a boiler could save between 0.3 and 1.5 tonnes of CO₂ each year depending on the efficiency of the boiler being replaced. 1.5 tonnes of CO₂ is the equivalent of a return flight from London to San Francisco. Boiler replacement will also have a positive impact on air quality.

¹⁸ The National Health Service estimate that every year in the UK, more than 200 people go to hospital with suspected carbon monoxide poisoning, which leads to around 50 deaths.

¹⁹ For example an old disused back boiler can explode if they are left unused and empty. *Woman's coffee table saves her from being chopped in half when central heating boiler explodes like a bomb*, 14 January 2015.

²⁰ The Government committed to reforming the renewable heat incentive and the energy company obligation to focus more on those most in need, who are those in fuel poverty, in 2016. It is therefore very disappointed that the recent Regulations related to the new RHI Scheme - which were debated by MPs in April - have failed to reflect provide any enhanced access to this policy or respond to the recommendations of the CFP or CCC. In the words of the House of Lords Secondary Legislation Scrutiny Committee, which examined the policy merits of secondary legislation: "It is clear that the Department's commitment to reforming the RHI scheme needs to be rigorous and on-going if the deficiencies of the past are to be redressed".

²¹ The levy funded Energy Company Obligation (ECO) is currently the only remaining domestic energy efficiency delivery mechanism in England. It also plays a key role in reducing fuel poverty levels across the rest of Great Britain. In Wales and Scotland, ECO is supported by other key national energy efficiency schemes. Given the reduced notional 'spend envelope' of £640m per annum is defrayed across the whole of GB - it is clear this policy alone will not provide the required investment necessary to meet statutory fuel poverty targets or the near-term milestones in England.

²² CCC, Energy prices and bills - impacts of meeting carbon budgets, March 2017 noted that if the insulation and low-carbon heat installations required to meet the carbon budgets can be successfully targeted at the fuel poor then around three-quarters can be lifted out of fuel poverty by 2030.

²³ On the 24 Mar 2016, The Secretary of State noted the Government were reforming the renewable heat incentive and the energy company obligation to focus more on those most in need, "who are those in fuel poverty".

²⁴ In addition, from September 2018, it is hoped that ECO resources should be used to provide targeted insulation improvements to these households to ensure they have access to the RHI policy. The latter will be made even more feasible when enhanced data sharing is introduced which can reduce policy costs and help the most vulnerable households access this support. Without responding in this manner, the proposal in the recent ECO consultation will leave a big gap in provision for low income or vulnerable consumers who cannot afford to repair or replace their heating system.

²⁵ NEA refers to the aim to meet fuel poverty targets.

²⁶ Further in this response NEA notes the opportunity to use funding Ofgem have earmarked for innovation within current price controls or RII0 2

²⁷ NEA has helped produce a new report by Frontier Economics which recommends a comprehensive Buildings Energy Infrastructure Programme to achieve major energy savings across the UK. Key recommendations include introducing a new target for all low-income households achieving a C rating by 2030 and subsidies for all low-income home-owners to make energy efficiency renovations to their properties.

²⁸ A range of organisations have noted this key opportunity; Better Homes: Incentivising Home Energy Improvements, Hall and Caldecott 2016, p27; Too Hot to Handle? How to decarbonise domestic heating, Howard and Bengherbi 2016, p.14; A report on initial positions, Committee on Fuel Poverty 2016, p4; After the Green Deal: Empowering people and places to improve their homes, recommendation 5, Rosenow and Sagar 2015; Effective Policy Efficient Homes, Confederation of British Industry (CBI) 2015, p2 and CCC, Meeting Carbon Budgets - 2016 Progress Report to Parliament, June 2016. More recently that investment in energy efficiency targeted at fuel poverty must double.

²⁹ Social housing properties are typically much more energy efficient compared to other tenures. This is very clear from the tables within NEA's response which are taken from respective housing data from across all of GB. Across Wales and England, this was due to a significant tax-paid investment via the Decent Homes programme which (in a very welcome way) has meant social housing is now considerably more energy efficient compared to other tenures. As a consequence, this also means there are also fuel poor households in social housing. This is most evident in England where the LIHC definition applies. This isn't simply true of the headcount of fuel poor households but also the fuel poverty gap. This is lowest for the social rented sector (housing association and local authority), which are substantially below the average fuel poverty gap for England. The fuel poverty gap sits around the average for households in the owner occupied sector; with the highest depth of fuel poverty seen for private rented households (£410). Whilst NEA acknowledges that social housing tenants are more likely on a low income, their housing costs have not risen to such an extent. As a result, where ECO is now such limited resource given it has been reduced by ½ compared to what it was initially, we have had to make some hard choices about who we say should be prioritised with this assistance. In deciding these priorities, NEA stresses that we hope the gap this may create for social tenants can in part be offset by their social landlords who receive funding to maintain these properties. We have therefore been trying to also highlight the business case for social landlord investing in their own stock themselves to improve the capital value of the property. We have been involved in research which has found for example that energy efficiency improvements help to reduce rent arrears and void periods etc.

³⁰ From April 2018, landlords will not be able to rent out properties with energy efficiency ratings below EPC Band E (exemptions apply). The regulations apply to the domestic private rented sector in England and Wales. This is defined in section 42 of the Energy Act 2011 as properties let under an assured tenancy for the purposes of the Housing Act 1988, or a tenancy which is a regulated tenancy for the purposes of the Rent Act 1977. A high percentage of fuel poor households also live in the worst properties in the deepest fuel poverty are renting from private landlords, they must be prioritised for assistance.

³¹ BEIS ECO 3 Consultation Stage Impact Assessment, page 10 notes only around 8,000 privately rented homes below EPC Band E are expected to be treated during the ECO 3, the majority of which would be expected to occur during 2019 across GB.

³² One of the key recommendations in NEA's recent response to the PRS regulations was the reintroduction LESA. LESA was introduced by the UK Government in Budget 2004, with the aim of encouraging landlords to improve the energy efficiency of let residential properties by providing a maximum tax allowance³² of £1,500 per dwelling which landlords could claim against the costs of buying and installing cavity wall, loft, solid wall, floor and hot water system insulation and draught-proofing. It ended in April 2015 and whilst LESA had very low take-up, combined with these new regulations and a higher tax relief threshold, (reflecting the £5,000 cap) this could be a powerful incentive.

³³ NEA's recent response to the Domestic Private Rented Sector minimum level of energy efficiency consultation highlighted the need to build capacity of local authority environmental health officers (EHO) to enforce the Housing Health and Safety Rating System (HHSRS); Introduce a nation-wide mechanism that enables local authorities to specify how many improvement notices under HHSRS have been served to landlords for category one and two hazards and for what reasons (e.g. excess cold); consider a central resource for an 'EHO of last resort' which would act as a backstop for the enforcement of housing standards; consider reintroducing the Landlord's Energy Savings Allowance (LESA) to incentivise landlord energy efficiency investment; Improve homes in multiple occupation (HMO) properties to the same national standards as the PRS and consult on developing and introducing a mandatory national licencing scheme for private landlords in England.

³⁴ See: <https://www.nongasmap.org.uk/>.

³⁵ In from the Cold: The funding gap for non-gas fuel poor homes under ECO and a proposal to fill it, NEA, February 2017.

³⁶ The report noted that because those off the gas network are more reliant on expensive fuels such as electricity, fuel poor households off the gas grid experience average fuel poverty gaps that are double those of on-gas fuel poor. Since then, the latest fuel poverty statistics highlight the same pressing gap, (on gas fuel poor have average gaps of £296 vs off-gas £607).

³⁷ NEA. 2017. In From The Cold: The Funding Gap for Non-gas Fuel Poor Homes under ECO and a Proposal to Fill it. Available: http://www.nea.org.uk/wp-content/uploads/2017/02/In-From-The-Cold_ECO-Funding-Gap-Paper_Final-1.pdf.

³⁸ At present it is not possible for these key groups to do this without being subject to the enhanced General Data Protection Regulations or a time consuming appraisal of the household's circumstances and securing individual 'opt in' consent.

³⁹ Draft National Infrastructure Assessment, National Infrastructure Commission, October 2017.

⁴⁰ Committee on Climate Change, Next steps for UK heat policy, October 2016.

⁴¹ The Fuel Poverty Action Plan, Greater London Authority (GLA), June 2017.

⁴² Age UK. 2012. The cost of cold: Why we need to protect the health of older people in winter.

⁴³ TIF aimed to facilitate community-level trials of innovative technologies not traditionally within the scope of current retrofit or energy saving programmes. For further information visit: <http://www.nea.org.uk/hip/technical-innovation-fund/>.

⁴⁴ Whilst much of the UK's energy policy is assumed to be a devolved matter, in reality, certainly across Great Britain, the policy mechanisms to address fuel poverty represent a complicated mix of devolved and reserved powers and responsibilities however both Scotland and Wales have their own statutory duties to eradicate fuel poverty by set dates.

⁴⁵ The UK Government noted these include impacts on energy prices, impacts on the energy needs of households through improved building fabric, and changes in the way heat is supplied.

⁴⁶ Heat Decarbonisation: Potential impacts on social equity and fuel poverty, Maxine Frerk, Grid Edge Policy; Dr Keith MacLean, Providence Policy, September 2017.

⁴⁷ District Heating Networks: Analysis of information request, Citizens Advice, January 2016.

⁴⁸ NEA's recent response to the Domestic Private Rented Sector minimum level of energy efficiency consultation highlighted the need to build capacity of local authority environmental health officers (EHO) to enforce the Housing Health and Safety Rating System (HHSRS); Introduce a nation-wide mechanism that enables local authorities to specify how many improvement notices under HHSRS have been served to landlords for category one and two hazards and for what reasons (e.g. excess cold); consider a central resource for an 'EHO of last resort' which would act as a backstop for the enforcement of housing standards; consider reintroducing the Landlord's Energy Savings Allowance (LESA) to incentivise landlord energy efficiency investment; Improve homes in multiple occupation (HMO) properties to the same national standards as the PRS and consult on developing and introducing a mandatory national licencing scheme for private landlords in England.

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⁵⁰ Social housing properties are typically much more energy efficient compared to other tenures. This is very clear from the tables within NEA's response which are taken from respective housing data from across all of GB. Across Wales and England, this was due to a significant tax-paid investment via the Decent Homes programme which (in a very welcome way) has meant social housing is now considerably more energy efficient compared to other tenures. As a consequence, this also means there are also fuel poor households in social housing. This is most evident in England where the LIHC definition applies. This isn't simply true of the headcount of fuel poor households but also the fuel poverty gap. This is lowest for the social rented sector (housing association and local authority), which are substantially below the average fuel poverty gap for England. The fuel poverty gap sits around the average for households in the owner occupied sector; with the highest depth of fuel poverty seen for private rented households (£410). Whilst NEA acknowledges that social housing tenants are more likely on a low income, their housing costs have not risen to such an extent. As a result, where ECO is now such limited resource given it has been reduced by ½ compared to what it was initially, we have had to make some hard choices about who we say should be prioritised with this assistance. In deciding these priorities, NEA stresses that we hope the gap this may create for social tenants can in part be offset by their social landlords who receive funding to maintain these properties. We have therefore been trying to also highlight the business case for social landlord investing in their own stock themselves to improve the capital value of the property. We have been involved in research which has found for example that energy efficiency improvements help to reduce rent arrears and void periods etc.

⁵¹ Ibid, for further information visit: For further information visit: <http://www.nea.org.uk/hip/technical-innovation-fund/>.

⁵² The 'notional annual spend' on the overall programme was reduced from the original £1.3bn to £640 million in the 2015 spending review.

⁵³ The milestones require the upgrading of as many fuel poor homes as is reasonably practicable to Energy Performance Certificate Band E by 2020 and to Band D by 2025. According to the Committee on Fuel Poverty (CFP)'s latest annual report published on 17th October 2017 even if the current remaining investment from ECO is netted off, beyond March 2019, £14.4 billion of additional funding will be required to install the necessary energy efficiency measures in fuel poor households in England. As noted in the response, whilst it is welcome the Government's stated intention is to shift the current programmes towards making a bigger difference for fuel poor households; the impact assessment highlights this will not provide the required investment to meet current statutory targets or the near-term milestones.

⁵⁴ In Wales and Scotland, ECO is supported by other key national energy efficiency schemes. In Wales the Nest programme delivers energy efficiency improvements for eligible low income, privately owned and privately rented households, who are in receipt of qualifying benefits and have a poor energy efficiency rating. An estimated 79% of contacts were from households living in fuel poverty. The complementary area-based scheme, Arbed, continues to fund the installation of energy efficiency measures in deprived communities and the Wales Infrastructure Investment Plan⁶² also reiterates their investment in the Warm Homes Programme to drive up energy efficiency improvements to tackle fuel poverty. In Scotland, in June 2015 energy efficiency was designated as a National Infrastructure Priority. The cornerstone of this will be Scotland's Energy Efficiency Programme (SEEP), a 15 to 20-year programme which will offer support to improve the energy efficiency ratings of all domestic and nondomestic buildings in Scotland. SEEP will be launched in 2018 and will be supported by over £500 million of public funding over four years. 'Pathfinder Fund' pilot projects have already begun in areas at risk of having higher levels of fuel poverty and low income, which will shape the delivery of future SEEP. At present the Scottish Government funds the Home Energy Efficiency Programmes for Scotland (HEEPS), which is a cluster of programmes including Area Based Schemes (ABS), a reactive scheme for individuals in need called Warmer Homes Scotland and two loan schemes. Alongside this, the existing Energy Efficiency Standard for Social Housing (EESH) aims to further improve the energy efficiency of social housing in Scotland by 2020.

⁵⁵ During the passage of the Energy Act, the UK Government gave repeated assurances that the withdrawal of the Exchequer-funded Warm Front programme should not be a matter of concern since the Energy Company Obligation would provide significantly greater resources for fuel poverty programmes. In fact the projected expenditure on the affordable warmth element of the Energy Company Obligation represented a significant reduction in funding to improve energy efficiency in dwellings occupied by low-income and vulnerable households. Prior to the Comprehensive Spending Review of 2010, expenditure on Warm Front had exceeded £1.1 billion over the period 2008-11. This expenditure was augmented by annual expenditure on Priority Groups through the Carbon Emissions Reduction Target of approximately £600 million over that same period, and this in turn was further supplemented by the £350 million Community Energy Saving Programme.

⁵⁶ Cutting the cost of keeping warm - A fuel poverty strategy for England, DECC, 3 March 2015

⁵⁷ On the 24 Mar 2016, The Secretary of State noted the Government were reforming the renewable heat incentive and the energy company obligation to focus more on those most in need, "who are those in fuel poverty".

⁵⁸ 13 March 2018

The Minister for Energy and Clean Growth (Claire Perry)

ECO consultation, which we will bring forward shortly. It is my intention, as far as possible, to pivot the whole of ECO to focussing on the challenge of fuel poverty and trying to make sure that those in the greatest poverty receive the greatest benefit,

⁵⁹ The delay to a better target ECO policy has already led to a large shortfall in activity of around £1bn lifetime savings for the poorest households with the highest energy costs over the current 18 month ECO transition period.

⁶⁰ This calculation is based on the information within table 7: Estimated Progress Against Fuel Poverty Milestones within the BEIS ECO 3 Consultation Stage Impact Assessment, page 18.

⁶¹ The most acute levels of fuel poverty are in the Private Rented Sector. There are 267,000 F and G rated homes in the private rented sector, with a further 13,000 in Wales (where the PRS regulations also apply). In England, 35% of all fuel poor households in England are in this tenure, over 941,000 households, including almost 500,000 children⁶¹. NEA's research also finds that in England, whilst 1 in 5 private renters are in fuel poverty, this compares to 1 in 8 social renters and 1 in 14 owner-occupiers. Analysis conducted by NEA of the English Housing Survey also shows 42% of all children in fuel poverty live in the private rented sector. By comparison, a child living in owner-occupied housing has a 1 in 8 chance of being fuel poor. Those tenants suffering from the worst extremes of fuel poverty face excess energy costs (the extra amount they need to spend to keep warm compared to a non-fuel poor household) of £410 per year on average and up to £1,160 per year in private rented F and G properties. By comparison, fuel poor tenants in social housing face gaps of less than half their private rented counterparts (£175 per year). Characteristics of F and G properties may include no central heating, no wall insulation (leading to problems with damp and mould) and old boilers that are inefficient and less safe.

⁶² The Government committed to reforming the renewable heat incentive and the energy company obligation to focus more on those most in need, who are those in fuel poverty, in 2016. It is therefore very disappointed that the recent Regulations related to the new RHI Scheme - which were debated by MPs in April - have failed to reflect provide any enhanced access to this policy or respond to the recommendations of the CFP or CCC. In the words of the House of Lords Secondary Legislation Scrutiny Committee, which examined the policy merits of secondary legislation: "It is clear that the Department's commitment to reforming the RHI scheme needs to be rigorous and on-going if the deficiencies of the past are to be redressed".

⁶³ The levy funded Energy Company Obligation (ECO) is currently the only remaining domestic energy efficiency delivery mechanism in England. It also plays a key role in reducing fuel poverty levels across the rest of Great Britain. Whilst there are clear and well-articulated limitations to relying solely on this mechanism to meet the UK Government's legal commitments⁶³ or support fuel poverty eradication targets elsewhere in GB, this policy is current relied upon to repair and replace we welcome the opportunity to contribute to the development of the ECO 3 policy. Our response aims to improve accessibility to the programme and simplify the 'offer' ECO provides to the people it is there to serve. We also highlight the key links ECO has to wider policy areas and the need for greater ambition beyond this market-based policy.

In Wales and Scotland, ECO is supported by other key national energy efficiency schemes⁶³. As noted above, ECO is the only remaining domestic energy efficiency delivery mechanism in England. Given the notional 'spend envelope' of £640m per annum is defrayed across the whole of GB - it is clear this policy alone will not provide the required investment necessary to meet statutory fuel poverty targets or the near-term milestones in England⁶³. The limited GB resources ECO can deploy have been clear for many years⁶³. As a result, since 2010, NEA has championed the need for the limited funding that does remain to be targeted at those most in need - households in or most extreme risk of fuel poverty. In addition to NEA's own repeated calls, this has also been a key recommendation of the Committee on Fuel Poverty⁶³ and Climate Change Committee for many years⁶³. Following the Fuel Poverty Strategy for England in 2015⁶³, previous⁶³ and current Ministers assurances⁶³ (and a delay due to the current 18-month ECO transition period⁶³); NEA now hopes the UK Government will meet their welcome commitment to ensure the entirety of ECO is targeted on those in or at most risk of fuel poverty, without further delay. Despite these previous reassurance, disappointingly, NEA estimates that based on the proposed policy option, only c.10,580 fuel poor households in the worst Energy Performance Certificate (EPC) F & G bands will be supported by 2020⁶³. This is inclusive of those supported in the Private Rented Sector (PRS)⁶³. In England, this could leave an estimated 240,000 fuel poor households in F & G rated homes long after the first 2020 milestone has been missed and therefore, based on the proposals within the consultation, it is clear additional policies to ECO will be needed to meet the UK Government's commitments.

⁶⁴ CCC, Energy prices and bills - impacts of meeting carbon budgets, March 2017 noted that if the insulation and low-carbon heat installations required to meet the carbon budgets can be successfully targeted at the fuel poor then around three-quarters can be lifted out of fuel poverty by 2030.

⁶⁵ On the 24 Mar 2016, The Secretary of State noted the Government were reforming the renewable heat incentive and the energy company obligation to focus more on those most in need, "who are those in fuel poverty".

⁶⁶ In addition, from September 2018, it is hoped that ECO resources should be used to provide targeted insulation improvements to these households to ensure they have access to the RHI policy. The latter will be made even more feasible when enhanced data sharing is introduced which can reduce policy costs and help the most vulnerable households access this support. Without responding in this manner, the proposal in the recent ECO consultation will leave a big gap in provision for low income or vulnerable consumers who cannot afford to repair or replace their heating system.

⁶⁷ NEA refers to the aim to meet fuel poverty targets.

⁶⁸ Further in this response NEA notes the opportunity to use funding Ofgem have earmarked for innovation within current price controls or RII0 2

⁶⁹ Some of the main drivers for NEA's on-going collaborations and recent work with the networks include:

- ❖ Ofgem requiring networks and energy suppliers to enhance their work on the Priority Services Register (PSR)
- ❖ Requiring energy suppliers and Distribution Network Operators (DNOs) to be proactive in identifying 'need' and act on the stakeholder and collaborative incentives to trial new approaches which have a positive social impact at the same time as proving alternatives to conventional network reinforcement
- ❖ Ensuring exemplar network innovation projects are developed and disseminated fully and encouraging network companies to ensure fuel poor and vulnerable households directly benefit from these innovation competitions and allowances
- ❖ Encouraging the networks to deliver non-network solutions (either themselves and by partnering with others)
- ❖ Requiring Gas Distribution Networks (GDNs) to exceed the previous Fuel Poor Network Extension Scheme (FPNES) targets and supporting this activity on the ground
- ❖ Ensuring GDNs provide more consistent advice and support for vulnerable households when they have to disconnect gas supply at properties when the boiler is deemed to be unsafe
- ❖ Undertaking research and practical projects to raise awareness of the risks of Carbon Monoxide (CO) poisoning and acting on the key links between this and the risk of being in fuel poverty

⁷⁰ See: <https://www.nongasmap.org.uk/>.

⁷¹ In from the Cold: The funding gap for non-gas fuel poor homes under ECO and a proposal to fill it, NEA, February 2017.

⁷² The report noted that because those off the gas network are more reliant on expensive fuels such as electricity, fuel poor households off the gas grid experience average fuel poverty gaps that are double those of on-gas fuel poor. Since then, the latest fuel poverty statistics highlight the same pressing gap, (on gas fuel poor have average gaps of £296 vs off-gas £607).

⁷³ NEA. 2017. In From The Cold: The Funding Gap for Non-gas Fuel Poor Homes under ECO and a Proposal to Fill it. Available: <http://www.nea.org.uk/wp-content/uploads/2017/02/In-From-The-Cold-ECO-Funding-Gap-Paper-Final-1.pdf>.

⁷⁴ At present it is not possible for these key groups to do this without being subject to the enhanced General Data Protection Regulations or a time consuming appraisal of the household's circumstances and securing individual 'opt in' consent.

⁷⁵ To read the report visit: <http://www.northernpowergrid.com/downloads/1704>.

⁷⁶ Our analysis only covers domestic AIS, and there may be non-domestic AIS which could be suitable.

⁷⁷ NEA Report "Technical Feasibility Study for Electricity NW Ltd into Electricity demand Reduction in Heaton Norris and Heaton Mersey areas of Stockport" May 2013.

⁷⁸ City-Scale Domestic retrofit Schemes: Learning from the early adopters: <http://www.tandfonline.com/doi/abs/10.1080/09640568.2014.965299#.VnNl1vmsU9Y>.

⁷⁹ What Works in Changing Energy Behaviours in the Home? - A Rapid Evidence Assessment - DECC Final

Report <https://www.gov.uk/government/publications/what-works-in-changing-energy-using-behaviours-in-the-home-a-rapid-evidence-assessment>

⁸⁰ BRE Energy Follow Up Survey 2013 <https://www.gov.uk/government/statistics/energy-follow-up-survey-efus-2011>.

⁸¹ The service level standard that a DNO is required to guarantee leaves little space for speculation on the ability of a solution to a network problem to deliver. Current traditional methods of asset upgrades deliver a certainty nearing 100%, because the extra capacity created is a known factor, and this is an aspect on which AIS will have to compete against. In this report, we accept the judgement of the NEA experts as a valid reference point. Further research, including that already undertaken by other DNOs (for example the SAVE project), will help explore this point.

⁸² Strategy decision for the RII0-ED1 electricity distribution price control, Ofgem, 04 March 2013.

⁸³ In from the Cold: The funding gap for non-gas fuel poor homes under ECO and a proposal to fill it, NEA, February 2017.

⁸⁴ The report noted that because those off the gas network are more reliant on expensive fuels such as electricity, fuel poor households off the gas grid experience average fuel poverty gaps that are double those of on-gas fuel poor. Since then, the latest fuel poverty statistics highlight the same pressing gap, (on gas fuel poor have average gaps of £296 vs off-gas £607).

⁸⁵ The milestones require the upgrading of as many fuel poor homes as is reasonably practicable to Energy Performance Certificate Band E by 2020 and to Band D by 2025. According to the Committee on Fuel Poverty (CFP)'s latest annual report published on 17th October 2017 even if the current remaining investment from ECO is netted off, beyond March 2019, £14.4 billion of additional funding will be required to install the necessary energy efficiency measures in fuel poor households in England. As noted in the response, whilst it is welcome the Government's stated intention is to shift the current programmes towards making a bigger difference for fuel poor households; the impact assessment highlights this will not provide the required investment to meet current statutory targets or the near-term milestones.

⁸⁶ Within NEA's response to Ofgem Consultation on potential change to the Fuel Poor Network Extension Scheme, NEA recognised 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. Without adapting the current approach, we noted it is likely that remaining connections under FPNES will continue to disproportionately benefit social housing tenants and their landlords within eligible IMD areas. Recognising the limitations of using England statistics for a GB-wide scheme, we nonetheless noted that only 17% of properties in England are social rented and that this tenure contains the fewest number of fuel poor households in England. By contrast, private renters are the most likely tenure group to find themselves in fuel poverty but NEA understands that very few fuel poor connections have been delivered to this tenure. As such, we recognise that the current IMD criterion has not incentivised GDNs to deliver connections to deprived households who may be harder to engage (in particular, fuel poor private tenants) but who have much to benefit from the scheme. The merits of better targeting notwithstanding, NEA also said it remains concerned about the pace of Ofgem's proposed change consistently highlighted how power under the Digital Economy Act should allow network companies to directly access information from central Government about the support energy suppliers can provide to eligible households in their area which would help them identify some of the most vulnerable customers and deliver more bespoke solutions to them.

⁸⁷ The areas where residents regularly need advice on installations are specific to the new heating system, including implications of changing controls (for example, how to work the programmer, setting room thermostats) or how the new system will require changes in paying for fuel (for example, the most appropriate tariffs, changes to the amount the householder may have to pay through direct debit, to what extent the new technology will require a household that is off the gas grid to reduce or stop the delivery of solid or liquid fuels). The advice/advice provider should also be able to explain running costs of the new system (for example, expected savings, inclusive of any expected comfort taking, the costs of servicing, the cost of using any supplementary electric heaters). The advice/advice provider should also be able to offer further advice and support (for example, other low-cost and no-cost measures that could be adopted, local and national grant and discount schemes, or who to contact for further advice or repairs). The advice/advice provider should offer follow-up visits/helpline for those customers who need further help after the installation process. Where advice of this nature is provided directly the practical results are hugely positive. Through the provision of advice, there is a key opportunity to both amplify the benefits of the technology and to maximise the experience of the initiative/programme that helped finance the project in general etc.

⁸⁸ Whilst ECO continues to provide some limited support for gas boilers, from a high of 85,000 boilers installed from the three months October to December 2013, only 13,037 boilers were installed in the five months from April to August 2017, only c. 5,500 were gas boiler replacements, less than 6% of what they were at the start of ECO in 2013. There have currently been no repairs under the scheme since April 2017.

⁸⁹ Ofgem noted earlier this year that there are around 1.8m electric heating households in England (8%) with higher proportions in Scotland, 0.3m (13%), and lower proportions in Wales, where there are less than 100,000 (5%), homes using electric heating. A substantial minority (0.5m) use direct-acting heating systems without storage functionality, which instead generate heat instantly when needed, and use electricity at that time. The majority of these are electric room heaters which are high energy inefficient. Households that use electric heating tend to be of lower income. In England, around a third have incomes of less than about £14,500. This combined with higher costs of heating, means these households are more likely to be fuel poor.

⁹⁰ Carbon monoxide (CO) is a poisonous gas that in homes is caused by unsafe or the misuse of gas, oil and solid fuel appliances, along with poor ventilation. Limited research (e.g. Ezratty et al., 2011, Kokkarinen et al., 2014) suggests that those on low incomes and who struggle to afford heating costs may be more vulnerable to CO poisoning. Between 2015-2017 NEA worked with the Gas Safety Trust and GDNs to further investigate this relationship between CO exposure risk and household vulnerability. NEA would be happy to share the findings of our most recent report; "Understanding Carbon Monoxide Risk in Households on Low Incomes and in Vulnerable Situations".

⁹¹ In a typical semi-detached home, upgrading heating controls and replacing a gas boiler that is around 80 per cent efficient (D rated) with a new boiler will save around £85 a year, whereas replacing a boiler that is 70% efficient (G-rated) could save over £300 a year. (This is based on a 70 per cent or below efficient boiler with no heating controls being replaced by an at least 90 per cent efficient boiler with heating controls.) Households which have the worst performing boilers could save even more than this. Heating and hot water accounts for about 60 per cent of what a household spends in a year on energy bills, so an efficient boiler makes a big difference, especially to those households which are struggling to pay their energy bills.

⁹² Replacing a boiler could save between 0.3 and 1.5 tonnes of CO₂ each year depending on the efficiency of the boiler being replaced. 1.5 tonnes of CO₂ is the equivalent of a return flight from London to San Francisco. Boiler replacement will also have a positive impact on air quality.

⁹³ The National Health Service estimate that every year in the UK, more than 200 people go to hospital with suspected carbon monoxide poisoning, which leads to around 50 deaths.

⁹⁴ For example an old disused back boiler can explode if they are left unused and empty. *Woman's coffee table saves her from being chopped in half when central heating boiler explodes like a bomb*, 14 January 2015.

⁹⁵ These principles are set out in the Standards of Conduct (SLC 0 and SLC 0A). These are enforceable overarching rules aimed at ensuring licensees, and their representatives in the case of domestic suppliers, treat each domestic and microbusiness customer fairly. These broad principles relate to how suppliers behave, provide information, and carry out customer service processes. In the case of domestic consumers, the Standards also relate to how suppliers seek to identify each consumer in a vulnerable situation and respond to their needs.

⁹⁶ Energy suppliers offer a range of services but these are often poorly promoted as part of ECO by obligated parties or their suppliers and contractors. Without adding costs to the ECO scheme, obligated parties and their suppliers and contractors should be able to provide information on how households can register for priority services, get the best energy tariff, check if they can receive the WHD and hence benefit from the Safeguard Tariff, make a meter reading, benefit from a smart meter, how to maximise their income, contact their supplier to discuss energy debt, benefit from a carbon Monoxide alarm or free gas safety check.

⁹⁷ See: <http://www.nea.org.uk/hip/technical-innovation-fund/>.

⁹⁸ In this context NEA highlights how instead of solely providing new gas connections, GDNs should be given some flexibility to deliver alternative actions which lead to equivalent heat cost savings. In addition, the FPNGES could be reformed to develop a fare reward for District Heating projects.

⁹⁹ NEA does not believe it is right that low income consumers that may only top up their pre-payment meters rarely, lose a lot of credit due to standing charges before they can access any energy. It is also unfair that households who 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.

¹⁰⁰ Whilst there is some information provided on what support ECO provides by energy suppliers, a number of Government-sponsored websites, consumer organisations, statutory bodies and charities etc, NEA believes there is a need to ensure that material is clear and consistent, does not confuse those in need of advice and that support on more complex issues is readily available and suitable for all households. The sources of advice discussed above are too numerous for an overall assessment within this response however BEIS should establish the extent to which current sources of information meet the criteria of comprehensive, impartial advice tailored to individual circumstances including the needs of low-income and vulnerable households, those who don't speak English as a first language, those with limited financial capability, limited internet access and where tenure and a landlord's stipulations require onward consent.

¹⁰¹ The Energy Saving Trust has produced guidelines on providing effective advice to tenants. Energy Saving Trust, Guidance on Energy Efficiency Advice to Tenants, London: Energy Saving Trust, 2007 says that if advice is to be effective it needs to be specific to individuals and their circumstances and the distribution of general information (e.g. leaflets) is not considered to be energy advice. The areas where residents regularly need advice on installations are as follows; if the new system is replacing the main heating source (for example a heat pump is installed) it is necessary to explain not only the operation of that specific technology but the full system, including implications of changing controls (for example, how to work the programmer, setting room thermostats). If the new system is expected to save the household money, the advice/advice provider should be able to explain this in the context of the individual, for instance, how the new system will require changes in paying for fuel (for example, the most appropriate tariffs, changes to the amount the householder may have to pay through direct debit, to what extent the new technology will require a household that is off the gas grid to reduce or stop the delivery of solid or liquid fuels). The advice/advice provider should also be able to explain running costs of the new system (for example, expected savings, inclusive of any expected comfort taking, the costs of servicing, the cost of using electric boost functions and how this might vary depending on the time of day/tariff and/or any need for supplementary electric heaters). The advice/advice provider should also be able to offer further advice and support (for example, other low-cost and no-cost measures that could be adopted, local and national grant and discount schemes, or who to contact for further advice or repairs). The advice/advice provider should offer follow-up visits/helpline for those customers who need further help after the installation process. Where advice of this nature is provided directly the practical results are hugely positive. Through the provision of advice, there is a key opportunity to both amplify the benefits of the technology and to maximise the experience of the initiative/programme that helped finance the project in general (Feed-in Tariff scheme, Renewable Heat Incentive, ECO or a local initiative). This in turn can have a positive impact on the take up of these schemes amongst friends, family and neighbours etc.

¹⁰² Energy suppliers offer a range of services but these are often poorly promoted as part of ECO by obligated parties or their suppliers and contractors. Without adding costs to the ECO scheme, obligated parties and their suppliers and contractors should be able to provide information on how households can register for priority services, get the best energy tariff, check if they can receive the WHD and hence benefit from the Safeguard Tariff, make a meter reading, benefit from a smart meter, how to maximise their income, contact their supplier to discuss energy debt, benefit from a carbon Monoxide alarm or free gas safety check.

¹⁰³ NEA believes these requirements should be made clear in a similar way to the Smart Meter Installation Code of Practice (SMICoP) which use a Self-Certification Proforma as a statement of compliance. This must be completed before any energy supplier ('supplier') can begin the process of installing smart meters for their consumers and they must self-certify that they comply with all aspects of the SMICoP that apply to them, and can provide evidence of their compliance on request.

¹⁰⁴ Along with Rockwool and British Gas, NEA sponsored a new piece of research with Sustainable Homes "Touching the voids report: The impact of energy efficiency on landlord income and business plans"

¹⁰⁵ NEA continues to urge the UK Government to fully recognise the precedent within the Housing Health and Safety Rating System (HHSRS), introduced in the 2004 Housing Act, which is already regulates some of the minimum standards tenants can expect in private rented housing.

¹⁰⁶ See: Ofcom (2016) Adults' Media Use and Attitudes Report 2016. Section 4: Digital media take-up and use. Available at: https://www.ofcom.org.uk/_data/assets/pdf_file/0023/82265/section-4-digital-media-take-up-and-use.pdf

¹⁰⁷ NEA (2012) Green Deal and Energy Company Obligation: The design and delivery of energy efficiency and fuel poverty advice services to vulnerable citizens. Funded by DECC. Available at: http://www.nea.org.uk/wp-content/uploads/2016/02/02-NEA-2012-GD_advice.summary.FINAL_.pdf

¹⁰⁸ Jacques, B. et al (2016) Relationship experts - Behaviour Change and Home Energy Coaching. Funded by the Welsh Government. Available: http://www.nea.org.uk/wp-content/uploads/2016/07/Relationship-experts_final-report.pdf

¹⁰⁹ Ofgem (2003) Good practice in the provision of energy efficiency advice; Ofgem (2014) Warm Home Discount (WHD): research into consumer experiences of receiving energy advice.

¹¹⁰ Dr Peter Bonfield (2016) Each Home Counts: Review of Consumer Advice, Protection, Standards and Enforcement for Energy Efficiency and Renewable Energy. Commissioned by DECC, now part of BEIS, and DCLG. Available:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/578749/Each_Home_Counts_December_2016_.pdf

¹¹¹ HIP was a £26.2 million programme ran by NEA to bring affordable warmth to fuel poor and vulnerable households in England, Scotland and Wales. The programme launched in April 2015 and has delivered energy efficiency and advice measures to over 9000 households.

¹¹² In particular 51.4% of large measures households and 46.7% of small measures households with pre-existing health conditions said they thought the change was associated with their HIP intervention. General health was improved for 36.2% of large measures households and 31.5% of small measures households. General mental health was improved for 35.3% of large measures households and 26.4% of small measures households. 43.7% of large measures households and 24.3% of small measures households said that post-intervention there had been an improvement in a pre-existing health condition and/or disability (or ability to cope with them).

¹¹³ A catalogue of health-related fuel poverty schemes in Scotland provides useful insights into project specific challenges and successes in working with and engaging different parts of the health sector. It also gives insights into particular methods used by some schemes for evaluation. The research published by Lewisham Council and the toolkits that have been produced by the Centre for Sustainable Energy and by Cornwall Council and Citizens Advice share best practice case studies from existing schemes and give specific guidance around how schemes might look to engage different parts of the health sector and what kinds of evaluation methods they might use to produce evidence that will support this engagement.

¹¹⁴ Lewisham and Islington Councils, please contact NEA for further information.

¹¹⁵ NEA (2012) Green Deal and Energy Company Obligation: The design and delivery of energy efficiency and fuel poverty advice services to vulnerable citizens. Funded by DECC. Available at: http://www.nea.org.uk/wp-content/uploads/2016/02/02-NEA-2012-GD_advice.summary.FINAL_.pdf

¹¹⁶ Jacques, B. et al (2016) Relationship experts - Behaviour Change and Home Energy Coaching. Funded by the Welsh Government. Available: http://www.nea.org.uk/wp-content/uploads/2016/07/Relationship-experts_final-report.pdf

¹¹⁷ Ofgem (2003) Good practice in the provision of energy efficiency advice; Ofgem (2014) Warm Home Discount (WHD): research into consumer experiences of receiving energy advice.

¹¹⁸ Dr Peter Bonfield (2016) Each Home Counts: Review of Consumer Advice, Protection, Standards and Enforcement for Energy Efficiency and Renewable Energy. Commissioned by DECC, now part of BEIS, and DCLG. Available:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/578749/Each_Home_Counts_December_2016_.pdf

¹¹⁹ NEA has helped produce a new report by Frontier Economics which recommends a comprehensive Buildings Energy Infrastructure Programme to achieve major energy savings across the UK. Key recommendations include introducing a new target for all low-income households achieving a C rating by 2030 and subsidies for all low-income home-owners to make energy efficiency renovations to their properties.

¹²⁰ A range of organisations have noted this key opportunity; Better Homes: Incentivising Home Energy Improvements, Hall and Caldecott 2016, p27; Too Hot to Handle? How to decarbonise domestic heating, Howard and Bengherbi 2016, p.14; A report on initial positions, Committee on Fuel Poverty 2016, p4; After the Green Deal: Empowering people and places to improve their homes, recommendation 5, Rosenow and Sagar 2015; Effective Policy Efficient Homes, Confederation of British Industry (CBI) 2015, p2 and CCC, Meeting Carbon Budgets - 2016 Progress Report to Parliament, June 2016. More recently that investment in energy efficiency targeted at fuel poverty must double.

¹²¹ In London for example the Mayor has committed to continuing the zero carbon standards that was scrapped by central Government in the last Parliament.