National Energy Action (NEA) response to the Labour Party Consultation on a Green Recovery

About National Energy Action (NEA)

NEA[1] works across England, Wales and Northern Ireland to ensure that everyone in the UK[2] 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. As well as continuing to provide direct vital support for vulnerable energy customers during the Covid-19 crisis, NEA is working hard with energy and water suppliers to help vulnerable customers access support. NEA is also working to ensure there is consistent support provided across the industry and is liaising with Ofgem, BEIS, Citizens Advice and Energy UK to capture our own staff and supporters' feedback on the challenges some customers are still facing accessing this support. We have also been providing advice[3] to Parliament and support to the industry, Government and regulator to continue to enhance current efforts to protect vulnerable energy customers during the crisis and beyond.

Background and Summary of our Response

Respiratory and circulatory diseases are linked to living in a cold and damp home and amongst those living with fuel debt[4]. NEA believes that given the outbreak, it's now even more crucial to help keep people warm and well in their homes and create a living environment which gives people that are ill the best possible chance of recovery. This view is also shared by the Committee for Climate Change who recently stated in their Progress report to Parliament[5] that improved energy efficiency directly relates to the COVID-19 pandemic, given poor energy efficiency is linked to cold homes which is major contributor to respiratory health issues.

Overall, cold and damp mouldy homes are associated with a 30-50 per cent increase in respiratory problems.[6] Public Health England (PHE) has declared that there is "clear evidence on the links between cold temperatures and respiratory problems. Resistance to respiratory infections is lowered by cool temperatures and can increase the risk of respiratory illness."[7] The National Institute for Health and Care Excellence (NICE) have also produced related guidelines on reducing the risk of the impact of cold homes which has been supported by 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). Conversely, warm homes enable immune systems to better fight off viruses, improve the likelihood of people with viruses only suffering 'mild' symptoms and help improve the recovery process.[8] Whilst there is currently no cure for Covid-19, cold homes are preventable and improvements in energy efficiency can help stimulate the economy, save lives and address the financial impact of the current crisis when this activity is targeted at those most in need.

The current Covid-19 crisis is likely to be exacerbating these serious national issues and has had two direct significant impacts on energy consumers, increased usage, and reductions in income. Ofgem has recently[9] shown that over half of consumers say they are using more energy than normal for the time of year, rising to 75% in households with children. Analysis by the Energy and Climate Intelligence Unit[10] (ECIU) has also demonstrated that, were the coronavirus lockdown to be continued or re-imposed during winter months, families in cold, leaky homes would face heating bills elevated on average to £124 per month, compared with £76 per month for those in well-insulated homes – a difference of £49 (£48.7) per month[11].

Even before the Covid-19 crisis the scale of these issues was hugely alarming. NEA estimates that over the last five winters the number of excess winter deaths due to living in a cold home is estimated at approximately 10,000 per year. The number of excess winter deaths (EWDs) across England and Wales exceeded 50,000, the highest recorded for over 40 years[12]. Whilst the causes of EWDs vary[13], we estimate one of the largest contributors to these needless deaths is vulnerable people, often struggling with existing

ill-health, being unable to heat their homes adequately, if at all[14]. As well as an unacceptably high number of preventable winter deaths, millions more people are struggling significantly to afford to adequately heat and power their homes and are suffering with poor physical and mental health due to cold homes[15].The resulting impact on health services is acute; costing the NHS between £1.4bn and £2bn every year, in England alone[16] and creating huge needless strain on our stretched health and social care services.

As a result, NEA believes that one of the most urgent priorities in a post-covid recovery plan is to address domestic energy inefficiency, especially in low income homes. The scale of this challenge has been underlined by the Committee on Fuel Poverty who have warned that the current aims in the Fuel Poverty Strategy for England are not being met[17] and several Select Committees who have also called on the UK to revive domestic energy efficiency policies or end up "in contravention of statutory fuel poverty and climate targets"[18]. Addressing energy efficiency would create local jobs, in areas that are deeply impacted by coronavirus and social distancing measures, address financial and health inequalities, and is a requirement for meeting our net zero goals. The challenges of completing such home improvements with social distancing in place are well understood but can be overcome with sensible rules and planning.

In this context, NEA also highlights our previous support for Labour's Warm Homes for All scheme[19] which was to be the biggest overhaul of housing since the second world war, with a plan to install loft insulation, double glazing and renewable technologies in almost all of the UK's 27m homes, with priority given to those in or at risk of fuel poverty. Work by independent academics highlighted that such a programme would have created 450,000 jobs over the next decade. Under the plans, low-income households would be able to apply for a grant, paying no upfront costs. Whilst Labour will not have the ability to consider implementing these plans in the short-term across the UK, NEA highlights Labour still have a key opportunity to implement similar proposals to help end the preventable cost and suffering of fuel poverty in Wales. As well as seeking to end fuel poverty, this would reduce stress and costs on health services, reduce carbon emissions and improve air quality, provide a fair transition to a net zero carbon society and boost the economy, increase productivity and create jobs.

Each winter across Wales on average over 650 people sadly die needlessly a year due to a cold home[20] and there is a desperate need to address unsuccessful attempts to end fuel poverty in Wales[21] and that overall 155,000 households are still living in fuel poverty[22]. This is equivalent to 12% of all households in Wales. 20% of households living in pre-1919 dwellings are fuel poor and are much more likely to have solid, un-insulated walls. 21% of households living in properties with uninsulated solid walls were fuel poor and 39% of people living in properties that do not have central heating were fuel poor. 43% of households living in properties with poorer energy efficiency (Energy Performance Bands F and G) were fuel poor compared to 5% of households living in properties in bands B to C are living in fuel poverty.

A second key priority is to urgently address the growing problem of debt for struggling households across the country. For millions of people their personal finances have been hit hard and hit quickly, and no-one knows when their situations will improve. More than ever before people are looking for support with paying their essential household bills, and yet these bills are likely to be increasing due to additional usage of energy, water, telecoms, and others services whilst they spend more time at home. The Policy Institute at Kings College London has conducted research that found that whilst 20% of households have had more money left at the end of the month, 30% of households have lost income and had to cut back on non-essential spending. It is crucial that this issue is met head on by national policymakers to ensure that those who have accrued debt during the crisis do not fall into a vicious cycle between debt and mental health issues, and to ensure that the economy is in a strong position as we look to financially recover from this fiscally difficult period.

Even before the crisis energy debt was a significant issue for customers and the energy industry[23]. Addressing the immediate impact of the crisis for pre-payment customers by improving their ability to vend and access emergency credit will help some indebted customers resolve some immediate issues they are facing. The underlying issue of growing levels of fuel debt is however not being addressed by these actions and is also very significant for millions of standard credit customers whose economic circumstances will have also been badly impacted by the crisis. In response and as part of the Government's agreement, NEA welcomed that suppliers agreed to help customers access professional debt advice, review bill payment plans, introduce possible payment breaks or potentially help reduce how much customers are asked to pay or conversely spread debt repayments over a longer period. In some cases, suppliers are also providing support via to access hardship funds to have debts written off. This activity is welcome but again there is a

large variance in what different suppliers are providing for customers. Coupled with low level of awareness that these options exist there are concerns that energy debt will spiral.

In other sectors, namely the water sector (where debt issues are equally acute), this has started to be addressed by suppliers proactively contacting indebted customers to highlight assistance or offering additional support such as money matched repayment schemes. NEA recognises that some energy suppliers may already be taking some of the aforementioned proactive steps but the lack of consistency and the lack of aggregated information on what each supplier can do to help customers manage their energy debt is causing big challenges in signposting the most indebted customers for this support. Over the longer term, whilst existing debt write-off schemes and debt advice (in both energy and water sectors) are welcome, without Government support this assistance is unlikely to be sufficient. Unless addressed in a more co-ordinated way, the on-going impact of utility debt will not just impact on customers and companies' financial viability but it is also likely to be an on-going drag on the economy, with money that could normally go towards paying for other goods or services to boost the economy, instead being used to pay off household debts.

These two recovery schemes would help put the economy on a much more even footing in order to tackle the issue of restarting economic growth, whilst addressing inequalities and reducing the amount of carbon we burn.

Our response to this consultation

Question 1 - What sectors do you believe are the priorities for investment from government, for a green recovery programme to build a stronger, more resilient future economy? How can this investment reduce regional inequalities as well as address the climate crisis and environmental degradation? And what science and technologies do we need to invest in?

There are two areas that we believe require special attention in any recovery package, both of which will contribute to building a stronger, more resilient, green economy. As noted above, these two areas are the addressing the energy efficiency of domestic buildings and reducing household debt that has arisen as a result of the Coronavirus pandemic.

Improving energy efficiency of homes is necessary to meeting our net-zero carbon target, and a large scale retrofit programme is present in each and every practicable scenario that gets us to net zero, not only because it reduces carbon emissions from homes, but also because it optimises infrastructure use, reducing the overall energy system cost. It also presents a significant number of benefits, to households, landlords, the wider economy, and the health sector.

Increased energy efficiency of domestic buildings first and foremost benefits the household. Energy costs are reduced, improving financial management and reducing energy arrears, which can help the household escape a vicious cycle between debt and mental health issues. Improved air quality indoors, coupled with a greater level of thermal comfort improves health and wellbeing, especially respiratory and circulatory conditions. These benefits address the acute nature of fuel poverty, and so NEA believes that any retrofit programme should prioritise fuel poor and vulnerable households, ensuring that those worst impacted by fuel poverty receive help first.

NEA is a leading member of the Energy Efficiency Infrastructure Group (EEIG), a collaboration of leading industry and trade bodies, charities, consumer groups, think tanks, environmental NGOs and major engineering, energy, construction, and insulation businesses. The EEIG has recently launched a report highlighting energy efficiency's offer for a net zero compatible stimulus and recovery in the context of a Covid-19 stimulus package[24]. The report highlights that investment in home renovation for net zero will help to 'level up' infrastructure and opportunity across the UK – supporting over 150,000 skilled and semi-skilled jobs to 2030, reducing household energy expenditure by £7.5 billion per year at today's prices – doing more in regions most affected by unemployment, under-investment and fuel poverty.

There are benefits beyond jobs. The cost of productivity loss of poor energy efficiency in homes (including consequent lost education and employment opportunities that arise from living in the cold) is potentially as high as £18.6 billion.[25] Landlords see reduced maintenance and repair costs, reductions in arrears, void periods and administrative/legal costs, and receive capital value gains. This all leads to a more efficient private rented sector. Reduced energy costs and therefore energy arrears mean that the economy will have a greater chance of recovering more quickly – there is bitter experience of how household debt can negatively impact on the economy through the 2008 financial crisis. This lack of debt invariably means more is spent on other goods and services means that an energy efficiency programme actually makes the Treasury more in VAT alone than it costs. It has been estimated that the Treasury would receive £1.27 in tax revenue for every £1 invested[26]. Treasury would also receive:

- Income tax and other taxes from employers/employees from a buoyant energy efficiency industry.
- Increased stamp duty to HMT
- Savings and reduction in stresses to health service, with fewer respiratory and circulatory issues arising from living in a cold home.
- Reduced costs to mental health and social care services that arise because of debt.

As we note in the introduction, in this context, NEA highlights our previous support for Labour's Warm Homes for All scheme[27] which was to be the biggest overhaul of housing since the second world war, with a plan to install loft insulation, double glazing and renewable technologies in almost all of the UK's 27m homes, with priority given to those in or at risk of fuel poverty. Work by independent academics highlighted that such a programme would have created 450,000 jobs over the next decade. Under the plans, low-income households would be able to apply for a grant, paying no upfront costs. Again NEA stresses that whilst Labour will not have the ability to consider implementing these plans in the short-term across the UK,

Labour still have a key opportunity to implement similar proposals to help end the preventable cost and suffering of fuel poverty in Wales. As well as seeking to end fuel poverty, this would reduce stress and costs on health services, reduce carbon emissions and improve air quality, provide a fair transition to a net zero carbon society and boost the economy, increase productivity and create jobs.

NEA also believes that alongside energy efficiency measures, any economic recovery plan should include provisions to address a growing and acute debt problem that has arisen because of the social distancing measures that have been put in place to control the pandemic. The issues are fully described in our paper "The Gathering Storm: Utility Debt and COVID-19"[28], and potential remedies include:

- Accelerating Breathing Space legislation to ensure that debt collection is fair in this difficult time for many households
- Extending and expanding the Warm Home Discount so that more people can access the vital support
- Government funding for payment matching schemes to clear utility debt
- More funding for debt advice

As stated above, reducing problem debt has clear benefits for the household and society, with reduced mental health issues, increased economic activity, and a reduced chance of a deep economic recession that could make a substantial green recovery package unsustainable from a fiscal perspective.

Question 3 - How should sector-specific support for business during this crisis be used to both protect and promote employment and to pursue our climate and nature objectives?

As described in our answer to question one, a support package for energy efficiency measures would give a substantial boost to employment, with an estimated 100,000 jobs required to insulate all domestic buildings to an acceptable standard. If investment is targeted at fuel poor households, then these jobs will go to areas with the highest deprivation – also the areas that have suffered the most during this crisis.

A housing upgrade programme will require local jobs - the work cannot be done remotely. Investment in energy efficiency will create immediate jobs that would be suitable for builders, joiners, plasterers, and roofers who may be facing unemployment as a result of the oncoming recession.[29]

The Committee on Climate Change (CCC) has stressed the importance of enhancing the quality and efficiency of fuel poor homes as a priority in their most recent 2020 Progress Report to Parliament[30] and advice to Government on reaching net-zero emissions. This is also a key part of the CCC's recommendation that HM Treasury set out how the cost of reaching net zero will be addressed in order to be 'fair'. If nations across the UK fail to act, the CCC warn an additional 2.4 million households could be pushed into fuel poverty across the UK by 2030. Prioritising those living in the deepest fuel poverty is consistent with meeting the fourth and fifth carbon budgets, and a critical staging post for achieving zero carbon homes and net-zero emissions. Government investment in energy efficiency in fuel poor homes also reduces the costs of decarbonisation for all households, reducing the need for costlier upgrades to the electricity grid, new power supply and low-carbon heat supply.

Clearing problem debt through our energy efficiency and debt specific proposals will allow more people to thrive, reducing mental health issues and giving more opportunities for education and upskilling, promoting the employment potential for the most deprived households.

Question 5 - Given the regional and area-based impacts of this crisis, what role can a green recovery play in mitigating these impacts? What are the lessons of past environmental interventions in terms of local and regional impacts?

The crisis has impacted deprived areas disproportionately in terms of both job losses due to social distancing measures[31] and those who have suffered most with the virus itself[32]. An energy efficiency scheme which prioritises fuel poor households would positively impact on both of these fronts. Firstly, by reducing energy costs in deprived areas, which tend to have higher occurrences of fuel poverty. And secondly through job creation. Energy efficiency schemes tend to create jobs local to the areas that receive measures and as the EEIG says[33], The per capita investment needed and associated FTEs required to improve our homes in different parts of the country correspond well with regional unemployment levels. The North East, West Midlands, North West, Yorkshire and the Humber regions of England, and Wales, have

the highest per capita energy efficiency investment need and unemployment. The Green Finance Institute say that[34] "Area-based programmes to retrofit the homes of households at increasing risk of fuel poverty could stimulate supply chains and job creation in the most deprived areas of the country"

There are also several other regional benefits that could be gained through an energy efficiency scheme:

- Reductions in local authority service use (social care costs, council tax arrears etc)
- Impact on reducing regional or national public health inequalities
- Addressing regional variances in economic deprivation
- Increased spending within poorer communities

Social distancing measures and the broader lockdown has had a spread of impacts on society, creating winners and losers. The Policy Institute at Kings College London has conducted research that found that whilst 20% of households have had more money left at the end of the month, 30% of households have lost income and had to cut back on non-essential spending. Some households would have cleared debt, but those less fortunate will come out of lockdown with more debt that they went in with. The provisions to reduce debt that can be found in our answer to question one would help those most indebted households who the financial losers of lockdown are, likely addressing the regional inequalities that have arisen during the crisis.

Question 7 - How can measures you are proposing in this recovery and renewal period improve quality of life—for example around walking, cycling and public transport, and improving access to nature? What habitats are you especially concerned about and want to see more support for and focus on?

Improving energy efficiency can have a profound impact on the quality of life for the household receiving the measure. It can also have significant benefits for society in general.

For the individual households, improving energy efficiency can:

- Reduce energy costs,
- Improve indoor air quality, through less gas being needed to be combusted indoors to keep the house warm,
- Reduce energy rationing practices, allowing households the financial possibilities for keeping warm at home throughout the winter,
- Improve financial management through the reduction of energy debt and arrears,
- Improve financial health and wellbeing. (especially respiratory and circulatory health conditions).

The financial and health related impacts are particularly important at this time. The current Covid-19 crisis is likely to be exacerbating energy affordability issues and has had two direct significant impacts on energy consumers, increased usage, and reductions in income.

Ofgem has recently[35] shown that over half of consumers say they are using more energy than normal for the time of year, rising to 75% in households with children. Analysis by the Energy and Climate Intelligence Unit[36] (ECIU) has also demonstrated that, were the coronavirus lockdown to be continued or re-imposed during winter months, families in cold, leaky homes would face heating bills elevated on average to £124 per month, compared with £76 per month for those in well-insulated homes – a difference of £49 (£48.7) per month[37].

With regards to health, Damp and mould are associated with a 30-50 per cent increase in respiratory problems.[38] Public Health England (PHE) has declared that there is "clear evidence on the links between cold temperatures and respiratory problems. Resistance to respiratory infections is lowered by cool temperatures and can increase the risk of respiratory illness."[39] Conversely, warm homes enable immune systems to better fight off viruses, improve the likelihood of people with viruses only suffering 'mild' symptoms and help improve the recovery process.[40] Whilst there is currently no cure for Covid-19, cold homes are preventable and improvements in energy efficiency can help stimulate the economy, save lives and address the financial impact of the current crisis when this activity is targeted at those most in need.

There are key opportunities to quickly strengthen work already being done at a local level to directly address the overlap between poor housing, respiratory ill-health, and fuel poverty. In particular, there is a relatively rich seam of existing "shovel ready" healthy homes projects which deliver improvements, with

health sector support which could be quickly expanded and should be a strong contender for delivering home improvements to help stimulate the economy, save lives and address the financial impact of the current crisis. Last year NEA catalogued these existing healthy homes schemes[41]. The report provides details about how these schemes work, which public and private sector partners are involved and how they are leveraging different sources of funding to make sure they are cost effective and not reliant one particular source of revenue. These positive examples of where the health sector is playing a key role to deploy energy efficiency improvements to address the direct health implications of respiratory illness (and other serious health conditions) have long since been linked to fuel poverty and cold, damp and mouldy homes and some were supported under DECC's Health Booster Fund[42]. Although this non-recurrent funding was not sustained, the activity that it generated was independently evaluated by Sheffield Hallam[43] and shows the scheme was a success. The evaluation also provides a lot of helpful details of how schemes were delivered. NEA has also undertaken[44] and evaluated[45] our own health scheme that have had similar positive impacts.

Wider society will also benefit from energy efficiency improvements. The BEIS select committee has identified numerous co-benefits relating to energy efficiency that would more generally improve quality of life, through a strengthening of the economy and public budgets, including:

- **Economic Growth:** This 'cost-effective' approach would require an estimated £85.2 billion investment but would deliver benefits (reduced energy use, reduced carbon emissions, improved air quality and comfort) totalling £92.7 billion—a net present value of £7.5 billion.
- **Savings to the NHS**: The cost to the NHS of health conditions made worse by poor housing is estimated to be between £1.4 and £2.0 billion each year in England alone[46] with the costs of productivity loss potentially far higher[47]. It would also improve outdoor air quality, with a present value of £4.1 billion.
- **Optimises infrastructure investment:** Energy efficiency can prevent expensive investments in generation, transmission and distribution infrastructure and reduce reliance on fuel imports—with a present value of avoided electricity network investment of £4.3 billion; and
- **Competitiveness:** The UK is a net exporter of insulation and energy efficiency retrofit goods and services.

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

- The positive impact of reducing inflation, gas imports and the effect on the UK's balance of payments.
- The extent of the creation of a healthier workforce and jobs from a more buoyant energy efficiency industry.
- The value to the UK economy of wider benefits such as up-skilling the workforce.
- The value of avoided costs to energy consumers of reducing network reinforcement by Distribution Network Operators[48]. In turn, the positive impacts of also reducing civil utility works taking place in UK streets.
- More comfortable internal temperatures in homes will lead to fewer premature winter deaths and despite being unpalatable premature mortality has a clear cost[49];
- The reduced costs to mental health and social care as reductions in bills can reduce stress and improve mental health for occupants and keep people living in their homes longer; and
- The cost effectiveness of zero-capital interventions such as advice which can also create less damp and mould growth within homes, in turn reducing respiratory problems at little or no cost.

The impacts of directly helping households with debt problems are perhaps more obvious. There is a clear link between debt accrual and mental health issues[50]. Half of people in problem debt also have a mental health problem, and this problem is often exacerbated by, and exacerbates, financial issues, creating a cycle of decline that is hard to escape. Addressing the debt issue can go some way to addressing the mental health issue, resulting in a significantly improved quality of life. In addition to this, many of the upsides for energy efficiency are also true for debt clearance, most notably a strengthened economy as spending power increases.

Question 8 - In providing responses to 1-7, please can you indicate to us what considerations of cost-benefit analysis are relevant (and, if such analysis has not been undertaken, what sources of information would be necessary to understand costs and benefits); and which institutions would be required to enable effective delivery? In particular
what is the role of public and private investment and different ownership models?

In their analysis of an energy efficiency scheme as part of a Covid-19 energy efficiency retrofit scheme, the EEIG says that[51] energy cost savings for households translate into a persistent boost to consumer spending on local goods and services, in addition to household spending on the upgrades themselves – a dynamic that accelerates economic recovery. It has been estimated elsewhere that the Treasury would receive £1.27 in tax revenue for every £1 invested[52].

In terms of capital outlay, the EEIG suggest that in total, £6.3bn should be spent on energy efficiency upgrades for fuel poor households, whilst incentives worth £1.2bn could leverage additional spending in the able to pay market.

Question 9 - What are the key institutions including business, local government, trade unions who should play a role in delivering a green recovery? Are there particular lessons that should be learnt about effective delivery? Local people know their communities better than Westminster. What steps do we need to introduce to empower local communities to be able to tailor the provision to suit their needs?

Over the last two decades, energy efficiency policy can be categorised as an ebb and flow of funding through different schemes that are chopped and changed as Governments come and go. In order to build a stable industry that can retrofit the 2.4m homes that live in fuel poverty[53], as well as the millions more that will need to improve the efficiency of their homes in order to be compatible with net zero, there needs to be consistent, long term energy efficiency policy. Only through predictable mechanisms can an industry confidently grow to support the number of jobs required in the recovery that is sought after.

Question 10 - What other issues/points do you think are important? What are the Covid-19 challenges of delivering such a programme and how might they be overcome?

We do not anticipate that Covid-19 and social distancing presents a significant challenge to installing energy efficiency measures though, most domestic insulation measures:

- Most domestic energy efficiency measures (especially cavity wall insulation/External Solid Wall insulation) require very limited household interaction, irrespective of whether they are occupied, or it is a void period.
- Insulation measures are also largely ‘install and forget’. They do not require lots of advice to households about how they need to be used. The main challenge seems to be the logistics of the handover/sign off/compliance docs.
- Once the access to the loft is negotiated, loft insulation can also be done in very self-contained area. The interactions required to gain access can also be done with little client interaction by arranging in advance for the loft to be cleared by households and/or requesting that clients/households give clear instructions on how to enter the property and where loft hatches are located and can be entered.

Whilst there will clearly be some difficulties, these can be overcome with simple mitigation strategies:

- Alongside highlighting the need for (and ensuring households know to expect), the use of relevant PPE and importance of minimising client interactions, households should be contacted in advance of the install to walk through the logistics (preferably the day before and a further check in the morning) to ensure they are happy for the work to still go ahead and to ensure nobody in uncomfortable with the situation.
- In particular, some heating repairs or larger jobs like first time central heating or internal solid wall, require quite a detailed discussion and where possible the installer and household/tenant should aim to agree a plan for the logistics before they arrive at the property.
- During the install, if at any point the household feels that their (or others in their household) safety is being compromised, they should be given the confidence or know they can ask the installer to adapt their practices accordingly or request that they leave their property immediately.

- If this results in unfinished work, it needs to be clear that the installer should be liable to complete the work when it is safer for both the householder and installer to do so or the installer should be required or able to highlight how they will make good on any repairs so the property is left as they found it.

[1] For more information visit: www.nea.org.uk.
[2] NEA also work alongside our sister charity Energy Action Scotland (EAS) to ensure we collectively have a UK wider reach.
[3] Please see our evidence to the BEIS committee on how to better protect vulnerable energy consumers during covid-19 at https://committees.parliament.uk/writtenevidence/5744/html/
[4] Cold air can cause airways to constrict and stimulate mucus production. This affects the bronchial lining of the respiratory tract and can reduce resistance to infection (risking bronchitis, pneumonia, and bronchoconstriction in asthma or COPD sufferers). Homes which have damp or mould have been linked with a 30-50% increase in respiratory problems (with asthma sufferers two to three times more likely to live in a damp home than non-sufferers). Damp can encourage mould and bacteria to grow (known allergens), thus leading to negative impacts such as allergies, upper respiratory tract infections and asthma – especially in children. Studies have found a relationship between the severity of damp and the severity of respiratory obstruction. For further information on the health impacts of living in a cold visit: www.nea.org.uk/wp-content/uploads/2019/02/NEA-Under-One-Roof-FULL-REPORT-FINAL-Feb-19.pdf.
[5] See the CCC progress report to parliament here https://www.theccc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/
[6] Ruse and Garlick, 2018
[7] PHE, 2014
[8] Baker, Ambrose et. al. https://extra.shu.ac.uk/ppp-online/wp-content/uploads/2020/05/stuck-home-cold-covid-19-fuel-poor.pdf
[9] https://www.ofgem.gov.uk/publications-and-updates/what-are-consumers-experiences-energy-during-covid-19-emergency
[10] See: https://eciu.net/news-and-events/press-releases/2020/energy-bills-for-families-in-leakiest-homes-to-surge-during-winter-lockdown.
[11] For more information visit: https://eciu.net/analysis/reports/2020/lockdown-in-leaky-homes.
[12] Office for National Statistics, November 2018, see: https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/excesswintermortalityinenglandandwales/2017to2018provisionaland2016to2017final
[13] The main causes of excess winter deaths are attributable to respiratory and cardio-vascular diseases which are badly exacerbated by cold conditions. Other causes may include influenza, trips and falls or in a small number of cases, hyperthermia. Public Health England cites studies that 10% of excess winter deaths are directly attributable to fuel poverty and that a fifth of EWDs are attributable to the coldest quarter of homes. This was regarded as a 'conservative' estimate as separately the World Health Organisation stated that 30% is the best estimated share – based on European evidence – of EWDs that can be considered attributable to cold housing conditions. This suggests that poor energy performance – manifested in homes that are hard and/or expensive to heat, thereby exacerbating the risks of respiratory and circulatory problems and poor mental health – is a significant contributory factor to the number of EWDs in the UK.
[14] On average, this results in over 10,000 British citizens dying needlessly due to cold homes each year. For more information see UK Fuel Poverty Monitor Report 2018, NEA and EAS, page 3. See: http://www.nea.org.uk/wp-content/uploads/2018/09/UK-FPM-2018-FINAL-VERSION.pdf.
[15] According to a recent NEA call for evidence many fuel poor households are adopting unsafe strategies to try and survive winter. This includes the regular use of older dangerous or un-serviced heating appliances is commonplace, despite being potentially fatal or leading to heightened risks for nearby neighbours as a result of carbon monoxide poisoning or in extreme situations, fires, and explosions. Many more people are going to bed early to keep warm and using candles to save on electricity. People struggling to heat their homes are also spending their days in heated spaces such as libraries, cafes or even A&E to avoid the cold cold, damp and unhealthy homes continue to cause shocking levels of unnecessary hardship and premature mortality.
[16] In 2016 BRE released its revised Cost of Poor Housing (COPH) report, which estimated the cost of poor housing to the NHS based on EHS and NHS treatment costs from 2011 and includes treatment and care costs beyond the first year. It also includes additional societal costs including the impact on educational and employment attainment. Finally, it provides information in terms of QALYs (Quality adjusted life years) as well as cost benefits, and to compare with other health impacts. The report estimates that the overall cost of poor housing is £2bn, with up to 40% of the total cost to society of treating HHSRS Category 1 hazards falling on the NHS. Overall, the cost to the NHS from injuries and illness directly attributed to sub-standard homes was estimated at £1.4billion, and the total costs to society as £18.6 billion.
[17] See: https://www.gov.uk/government/publications/committee-on-fuel-poverty-interim-report-october-2019.
[18] Business, Energy, and Industrial Strategy Committee Energy efficiency: building towards net zero Twenty-First Report of Session 2017–19 Report, together with formal minutes relating to the report Ordered by the House of Commons to be printed 9 July 2019, page 23.
[19] See: https://labour.org.uk/press/warm-homes-for-all-labours-plan-to-reduce-energy-bills-create-jobs-and-tackle-the-climate-emergency/.
[20] Excess winter deaths compare the number of deaths that occurred during the winter period with the average number of deaths occurring in the preceding August to November, and the following April to July. EWD due to cold homes in Wales take a 5-year average of total EWDs and then 30% of the overall figure in line with World Health Organisation's own methodology.
[21] The 2013 Energy Act requires the Welsh Government to publish and implement a strategy for reducing FP in Wales. In the Strategy they are also required by law to a) describe the households the strategy applies to b) describe a "comprehensive package of measures" to ensure more efficient use of energy and c) set targets (alongside interim objectives and targets) for ensuring that "as far as reasonably practicable" person(s) in Wales do not live in Fuel Poverty. The Welsh Government's FP strategy has not been updated since it was produced in 2010. Despite stating FP levels have been halved since 2008, the Welsh Government admit that the original aims [to eradicate fuel poverty for vulnerable households by 2010; in social housing by 2012; and to eradicate fuel poverty for all households in Wales by 2018] have not been achieved. In fact, none of these targets were achieved.
[22] A household is regarded as being in fuel poverty if they are unable to keep their home warm at a reasonable cost. In Wales, this is measured as any household that would have to spend more than 10% of their income on maintaining a satisfactory heating regime. Any household having to spend more than 20% is defined as being in severe fuel poverty. Vulnerable households are defined as those with a person aged 60 years or over, a child or young person under the age of 16 years and/or a person who is disabled or has a long-term limiting condition. The statistics noted in this section are taken from Welsh Government fuel poverty estimates for Wales in 2018, published in May 2019 and updated on the 13 December 2019. See here for further information: https://gov.wales/sites/default/files/statistics-and-research/2019-12/fuel-poverty-estimates-wales-2018.pdf
[23] The overall number of customers in debt increased by 4.2% in electricity and 4.8% in gas in 2018.
[24] From the EEIG report "Energy efficiency's offer for a net zero compatible stimulus and recovery" https://www.theeeig.co.uk/media/1096/eeig_report_rebuilding_for_resilience_pages_01.pdf
[25] https://www.bre.co.uk/news/New-BRE-Trust-report-shows-poor-quality-homes-in-England-cost-the-NHS-14bn-per-year-and-wider-society-186bn-1161.html
[26] The report "Building for the future" found that "he Treasury would receive £1.27 in tax revenue for every £1 they invested (in Energy Efficiency" http://www.energybillrevolution.org/media/big-boost-in-energy-efficiency-investment-to-save-uk-households-4-95-billion-a-year/
[27] See: https://labour.org.uk/press/warm-homes-for-all-labours-plan-to-reduce-energy-bills-create-jobs-and-tackle-the-climate-emergency/.
[28] In June 2020, NEA published a policy paper describing the issue of problem debt and prescribing actions that Governments and companies could take to alleviate the issues. https://www.nea.org.uk/wp-content/uploads/2020/06/The-Gathering-Storm-Utility-Debt-and-Covid-19-June-2020.pdf?platform=hootsuite
[29] In their report 'A Green Recovery - How We Get There', Greenpeace describe the nature of jobs that will be required by an energy efficiency retrofit scheme. https://www.greenpeace.org.uk/wp-content/uploads/2020/06/A-green-recovery-how-we-get-there-Greenpeace-UK.pdf
[30] See the CCC progress report to parliament here https://www.theccc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/
[31] https://www.theguardian.com/business/2020/apr/20/uk-workers-without-degrees-face-deeper-job-insecurity-amid-coronavirus-pandemic
[32] https://www.poverty.ac.uk/editorial/coronavirus-covid-19-has-had-proportionally-higher-impact-most-deprived-areas
[33] https://www.theeeig.co.uk/media/1091/eeig_report_rebuilding_for_resilience_pages_01.pdf
[34] https://www.greenfinanceinstitute.co.uk/wp-content/uploads/2020/05/Stimulus-actions-for-a-greener-and-more-resilient-property-sector-.pdf
[35] https://www.ofgem.gov.uk/publications-and-updates/what-are-consumers-experiences-energy-during-covid-19-emergency
[36] See: https://eciu.net/news-and-events/press-releases/2020/energy-bills-for-families-in-leakiest-homes-to-surge-during-winter-lockdown.
[37] For more information visit: https://eciu.net/analysis/reports/2020/lockdown-in-leaky-homes.
[38] Ruse and Garlick, 2018
[39] PHE, 2014
[40] Baker, Ambrose et. al. https://extra.shu.ac.uk/ppp-online/wp-content/uploads/2020/05/stuck-home-cold-covid-19-fuel-poor.pdf
[41] For the full catalogue of schemes, please see https://www.nea.org.uk/wp-content/uploads/2019/10/Catalogue-of-Health-Related-Fuel-Poverty-Schemes-2019.pdf
[42] See https://www.gov.uk/government/publications/the-fuel-poverty-and-health-booster-fund
[43] See: https://www4.shu.ac.uk/research/cresr/sites/shu.ac.uk/files/fuel-poverty-health-booster-fund-eval.pdf).
[44] See: https://www.nea.org.uk/hip/warm-and-healthy-homes/
[45] See: https://www.nea.org.uk/wp-content/uploads/2018/09/WHHF-Impact-Report-2018.pdf

[46] BRE (2015) *The cost of poor housing to the NHS*
[47] Roys *et al.* (2016) *The full cost of poor housing*
[48] In 2015, NEA and Agility ECO produced a report investigating the possibility to divert budgets currently allocated to load-related network upgrades into local schemes that improve energy efficiency. In the report this concept is explained fully and is referred to as Alternative Investment Strategy (AIS). Specifically, the report looks to analyse the "Size of the Prize" on Northern Power Grid's network, the economic feasibility of investment in local energy efficiency and how this compares to conventional network reinforcement and practical feasibility. To read the report visit: http://www.northernpowergrid.com/downloads/1704.
[49] For example burial fees and exclusive rights to burial in a particular plot, cremation fees, including the cost of the doctor's certificate, funeral director's fees, flowers, coffin travel to arrange or go to the funeral, the costs for moving the body within the UK. An indication of the scale of these to a surviving family member or society are that a direct cremation costs c. £1,600, a cremation using a funeral director £3,214 and a burial using a funeral director costs £4,136. Whilst some costs are covered for low-income households via a state Funeral Payment, often this is paid for on credit or often loans from a more affluent family member. This in turn inhibits a low-income family spending.
[50] https://www.moneyandmentalhealth.org/money-and-mental-health-facts/
[51] https://www.theeeig.co.uk/media/1091/eeig_report_rebuilding_for_resilience_pages_01.pdf
[52] The report "Building for the future" found that "he Treasury would receive £1.27 in tax revenue for every £1 they invested (in Energy Efficiency" http://www.energybillrevolution.org/media/big-boost-in-energy-efficiency-investment-to-save-uk-households-4-95-billion-a-year/
[53] From the fuel poverty statistics 2020 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/882404/annual-fuel-poverty-statistics-report-2020-2018-data.pdf