INTRODUCTION

The Energy Poverty Research initiative (www.energypovertyresearch.org) was founded in 2017 as a step towards establishing a cross-sector centre for knowledge exchange and excellence in research. The EPR team consists of a group of experts in aspects of fuel poverty and energy policy, ranging from large scale generation to small scale distributed generation, demand reduction, energy efficiency, and devolution; and with a particular interest in the socio-economic impacts of energy policy on fuel poor and otherwise vulnerable householders.

As academics and practitioners we share the view that in an energy rich nation it is not acceptable that such a large proportion of households suffer daily the deleterious effects of energy rationing, or that they are forced to manage debts just to maintain a reasonable modern standard of living. We believe we have a duty to continually question our understanding of this modern societal inequality, and the methods and approaches we take to identifying and tackling it.

Common Weal is a Scottish ‘think and do tank’ which promotes thinking, practice and campaigning on social and economic equality, participative democracy, environmental sustainability, wellbeing, quality of life, peace, justice and culture and the arts.

The views that follow are those of the Energy Poverty Research initiative and Common Weal but do not necessarily represent the those of our host organisations. Our previous consultation responses are available from our websites. A summary of the EPR team’s latest work on energy poverty can be found in our recent article for Nature Energy.

Dr Keith Baker, Built Environment Asset Management (BEAM) Centre, School of Engineering and the Built Environment, Glasgow Caledonian University, and co-founder of the Energy Poverty Research initiative

Dr Ron Mould, co-founder of the Energy Poverty Research initiative

Dr Fraser Stewart, independent consultant and member of the Energy Poverty Research initiative

Dr Craig Dalzell, Head of Policy and Research at Common Weal
Responses to Questions

1. Do you agree with the Scottish Government’s proposal to provide for a statutory target to reduce fuel poverty to no more than 5 per cent of Scottish Households by 2040.

We support the setting of statutory targets however, we question their deliverability and are strongly of the view that the new targets represent a significant step backwards, and are a tacit admission that the Scottish Government continues to be wedded to delivering ‘fabric first’ interventions that are not delivering the desired results. Looking at the numbers required to achieve the new proposed targets we do not believe that these targets are achievable and are of the view that the Scottish Government is setting itself up to fail.

There is a substantial and growing body of evidence from which to conclude that the proposals to emphasise the elimination of poor energy efficiency as a driver for fuel poverty will neither deliver on the aims of the bill nor target those households who are most in need of support. In contrast, our research shows why an approach more rooted in health and social policy, and effectively adopted in resolving knife crime, is applicable to and likely to be more effective in resolving fuel poverty than continuing on an approach that has so far failed to deliver the expected results. This is why treating fuel poverty as a primarily social condition and emphasising the delivery of holistic ‘folk first’ interventions is essential if we are to eliminate fuel poverty in Scotland.

If the definition of insanity is doing the same thing over and over again and expecting different results then this is exactly what the Scottish Government is doing.

2. Do you agree with the Scottish Government’s proposals for a revised definition of fuel poverty?

The key challenge here appears to be the Scottish Government’s approach to developing evidence-based policy on fuel poverty. We welcomed the findings of the recent academic review of the fuel poverty definition and are deeply disheartened and disappointed that the Scottish Government appears to have ignored most of them.

Whilst we welcome the adoption of the Minimum Income Standard approach as a step in the right direction, we are deeply disappointed that the Scottish Government appears to have chosen not to pursue a more sophisticated hybrid Boardman / MIS approach. We have shown that it is entirely possible to reconcile the Boardman-based (‘10% of income’) definition of fuel poverty currently used by the Scottish Government with a wider assessment of householder vulnerability, and this reconceptualisation would also fit with the MIS approach.
We are also disappointed that the Scottish Government has chosen to ignore the consensus at the expert workshop held in Glasgow on August 1st 2017, that the finalisation of the new definition should be postponed for two to three years to allow the development and inclusion of a robust Scottish definition of vulnerability in the new definition of fuel poverty.

We are particularly concerned that the Scottish Government has chosen to reject the recommendations regarding using real energy and fuel spend data, as opposed to the modelled data; and also, the need to include an adjustment for households in rural and island areas, as evidenced by analyses of real data\(^7\,\text{–}\,\text{9}\) and supported by the findings of the Scottish Rural Fuel Poverty Taskforce\(^10\).

As attendees of expert workshop on the definition, we were very encouraged by the high degree of consensus in the room, including on these issues. We were also encouraged that (with one potential exception) the delegates lacked any vested interests in service delivery outside the public sector, and are of the view that this contributed to both the consensus and very positive nature of the meeting.

We have consistently criticised the Scottish Government for involving delivery bodies in the design of energy efficiency and fuel poverty schemes, and have strongly recommended that all schemes have independent monitoring and evaluation built into them from the outset\(^11\) (see also previous responses to the LHEES 1 and 2 and SEEP consultations at http://energypovertyresearch.blogspot.com/p/consultation-responses.html). Furthermore, based on evidence gathered but not published in full for the review of the Scottish Government’s Energy Assistance Package\(^12\) we are of the opinion that this hampered the effectiveness of the package by being designed as much around what the Scottish Government and the Energy Saving Trust felt could be delivered as what was actually needed.

Based on our analyses of real energy consumption / spend data against socio-economic data, which include the first such study to be conducted in the UK\(^13\), the first in Scotland and the first to span the urban rural divide, and the first to look specifically at rural and island areas, we have consistently and strongly argued that the use of modelled data is disadvantageous vulnerable householders, and particularly those in rural and island areas. These studies and the others conducted to date\(^14\,\text{–}\,\text{19}\) all use data already available to or easily collectable by the Scottish Government, and show that using real data is cost-effective alternative approach as well as more accurate, robust and defensible one.

To explore some of the issues around vulnerability further, as regards health outcomes, research has shown that whilst there are relationships between fuel poverty and householder health, these are complex and may be indirect rather than directly causal\(^20\) – for example, fuel poor households may be more at risk of winter deaths but the trends do not track in a manner indicative of direct causality. There is evidence that behaviours such as moving from a warm room to a cold one may trigger physical symptoms (e.g. heart palpitations) indicative of underlying health conditions\(^21\) but as
such conditions are also often related to other behaviours (e.g. smoking, sedentary lifestyles, etc) household energy efficiency and fuel poverty interventions are generally likely only to postpone or reduce visits to GPs rather than mitigate underlying physical health problems, and their associated outcomes and costs to the NHS\textsuperscript{22,23}.

Therefore, with respect to this and other evidence covered by the referenced sources on the relationships between fuel poverty and physical and mental health we are strongly of the view that vulnerability to fuel poverty would be better framed in terms of an individual or household’s capabilities for dealing with and resolving the challenges they face in respect to their domestic energy use\textsuperscript{24,25}. This would also serve to drive policy away from focussing on the current ‘fabric first’ approach, which serves to prioritise technical solutions (installing insulation, etc), when other solutions, such as support for understanding energy bills and making behavioural changes, may be more valid for addressing the needs of vulnerable householders.

Given that the Scottish Government concurs with current research that further work is required to better understand the term “vulnerable to the adverse health and wellbeing impacts of living in fuel poverty” it must surely also accept that adopting crude and poorly correlated criteria as qualifying metrics for receiving support will be ineffectual at addressing fuel poverty levels, and be to the particular detriment of those who are truly vulnerable.

The problem here is that the use of modelled data, proxies and assumptions lead us to design policy solutions for what the modelled results tell us are the problems, and not the problems that exist in the real world. Related problems here are the use of limited numbers of archetypes that put people into small numbers of boxes (e.g.\textsuperscript{26}) for which on-size-fits-all ‘solutions’ are devised, rather than treating householders as complex individuals; and the use of blunt thresholds and ‘passport benefits’ for determining eligibility for support (e.g.\textsuperscript{27,28,29}). Whilst the Scottish Government, for whatever reasons, persists in not addressing these easily rectifiable problems they will remain challenges for targeting fuel poor householders, and particularly the most vulnerable and isolated.

As an example of an inappropriate use of a threshold under the current proposals, setting an age of 75 is a crude means of defining vulnerability. A minimum age of 75 is based on an assumption of people aging well, i.e. householders maintaining a reasonable level of health after retirement. This is far from true. For example, the average age at death in Renfrewshire is 76.3, whilst in Eilean Siar it is 76.7, and the figure averages at 77.1 across Scotland\textsuperscript{30}. However, fuel poverty in Renfrewshire is at one of the lowest levels in Scotland, whilst in Eilean Siar it is at one of the highest. A similar lack of evidence of correlation with income, including evidence from our own research\textsuperscript{31} led the Scottish Strategic Fuel Poverty Taskforce to conclude that the use of the income domain of the Scottish Indices of Multiple Deprivation (SIMDs) as a proxy for determining fuel poverty was insufficiently fit for purpose\textsuperscript{32}. 


Furthermore, we are also disappointed that the Scottish Government has not taken this opportunity, in line with Prof Brenda Boardman’s original work, to expand the definition from fuel spend to expenditure on all essential energy needs.

Also, as regards data collection, this can only be addressed through investing in appropriately trained staff, effectively resourced, and able to provide independent oversight and scrutiny of the effectiveness of targeting and service delivery. Therefore, since this data can have implications on the progression towards key performance indicators (KPIs) for the Energy Saving Trust (EST) and Home Energy Scotland (HES) it is imperative that the data collection, analysis and monitoring against KPIs is wholly separate from the EST and HES. We would further add that this need for an independent Scottish Statistics Agency has also been raised by Common Weal as one of ten key policies needed to tackle climate change33,34.

Another fundamental problem here, and one which in our experience is fundamental to the Scottish Government’s approach to policy making for fuel poverty and other issues, lies in the training and understanding of many policy makers. This is that traditionally social science-led approaches to policy making view society as a disorganised complex system, meaning that analyses reliant on simplistic statistical techniques (multiple regression, p values, etc) that produce ‘good enough’ answers are seen as valid evidence on which to base policies. I.e. policies based on extrapolations of data based on assumptions thus lead to conclusions that are predetermined by those assumptions.

However, scientists familiar with more sophisticated analytical techniques, such as those used in building and complexity sciences, view society as highly complex but, critically, organised. This means that, with sufficiently robust data, it is possible to model and understand these influences, and use that knowledge to develop policies that are more sensitive to the needs of individuals, and particularly those with more complex needs, such as the vulnerable and those living in rural and island areas. One of the main reasons we established EPR was to raise awareness of this fundamental problem. For more information and critique please see work by Prof Brian Castellani35 other references in our publications and on our website.

Our Speird Project36 produced a number of key findings and recommendations for addressing fuel poverty in rural and island areas that are worth noting in full here:

- Building on the results of our previous Renfrewshire study, we found further evidence to suggest that the ‘real’ distributions of household fuel spend are heavily skewed towards lower expenditures, with long ‘tails’ towards very high expenditures. This means reporting median averages for fuel poverty statistics may be misleading, particularly to politicians and the general public. The following figures show that Rural and island households not only spend significantly more on energy for heating, but the distributions of expenditure across the urban-rural divide are different too (Proisect Spéird – Data on heating energy expenditure for 1,015 households across Aberdeenshire, Argyll and Bute, Lochaber, the Orkney Isles, Renfrewshire and Skye).
Although not conclusive, we found new evidence to suggest that, for rural and island households, expenditure on non-electric heating (only) does not necessarily increase, and may actually decrease, at higher incomes. Conversely, we found strong evidence that household expenditure on all energy needs increases disproportionately with income for those using electric heating. However, this is also consistent with other research that shows this is likely to be mainly due to other (non-heating) energy use.

We were able to confirm that key finding of the Renfrewshire study, that a statistically significant difference exists between the heating fuel spend of households in urban areas and those in rural and island areas of Scotland. In addition, we found the
difference to be more significant for the rural households than for island households. However, this latter finding may reflect known socio-economic differences between the rural and island populations that were sampled for the study.

- The results serve to demonstrate how the nature and distribution of household expenditure on energy is the result of a wide and complex range of inter-related influences, including occupant behaviour, and this complexity is significantly greater amongst the fuel poor and households in rural and island areas. What is needed is a risk-based approach that focuses on delivering maximum benefits to those most in need whilst addressing the additional complexities of tackling the problem in rural and island areas.

- Conventional social science-based approaches to policy making, which attempt to group households into small numbers of categories and assign solutions to those categories rather than to individual householders, are inadequate for addressing fuel poverty, particularly in rural and island Scotland.

Additionally, evidence submitted by Common Weal to the Scottish Energy Strategy consultation (2018) concluded that a key aspect of fuel poverty is the fact that wages are overall too low and the real effect of this is measured in aggregate rather than making clear the distinctions between rural, island and urban communities and indeed individual households which have different costs of living.\(^{37}\)

Finally, we would draw particular attention to the evidence submitted to this call for views by Prof Donald Hirsch, Director of the Centre for Research in Social Policy at Loughborough University and leader of the team responsible for calculating and reporting the MIS.\(^{38}\) In this response Prof Hirsh makes a number of important points:

- The MIS will be maintained indefinitely;
- Where there is a very systematic and large difference in part of the country it is possible to make such a variation without undermining the integrity of MIS as a national standard, for example the Living Wage with respect to London;
- Prof Hirsch’s research has found that, when it comes to additional costs related to rurality, remote rural Scotland stands out as an area with far more wide-ranging cost differences;
- Were the matter of a remote rural variation to be reconsidered in the course of the Bill, the ongoing measurement of such a variation would be feasible with a modest amount of ongoing research to keep it up to date.

Prof Hirsch concludes, whilst there may be no single objective answer to whether or not an adjustment for rurality should be included in the new definition of fuel poverty, that he can see no conclusive argument against taking up this recommendation.

Therefore, with all this evidence in mind we had hoped that the commissioning of the academic review and the discussions at the workshop signalled a welcome change in the Scottish Government’s approach to policy making in this field, but sadly those hopes have been dashed. Nevertheless, we hope that now the Bill is at Stage 1 it can receive appropriate cross-party scrutiny and that the Scottish Government will see fit to address at least some of our concerns.

Our open letter to Minister Kevin Stewart on the need for an adjustment for rurality and the problems of using Energy Performance Certificates and GB oil prices can be found at: http://energypovertyresearch.blogspot.com/2018/06/open-letter-need-for-adjustment-for.html

Our presentation from the Holyrood Communications conference on Tackling Fuel Poverty, held in September 2018, can be found at: https://drive.google.com/file/d/1PbZRdSt7-omUTbUTBtP5FHSJlvTPVwBe/view. This sets out both our critique of the current approach and how a complexity and risk-based assessment of fuel poverty could be developed, using data already being collected, to better target and support fuel poor and otherwise vulnerable householders.

A policy paper setting out our alternative approach to Energy Performance Certificates is due to be published by Common Weal later this year.

3. Do you agree with provisions in the Bill requiring the Scottish Government to publish a fuel poverty strategy? Do you also agree with the consultation requirements set out in relation to the strategy?

See our previous answer for the justification for this. We agree with the need to publish a fuel poverty strategy however, we do not believe the framing of this strategy or the proposals as they stand will be effective, and furthermore may actually serve to disadvantage some of those who are most in need of support. The previous consultation set out too many proposals as givens, e.g. the use of EPCs and the rejection of many of the recommendations made by the academic panel. We are strongly of the view that a radical rethink is required, and that (as recommended by the panel) this should allow for a period in which to develop a Scotland-specific definition of vulnerability for use as part of defining fuel poverty and other social conditions.

4. A draft fuel poverty strategy was published alongside the Bill on 27 June. Do you have any views on the extent to which the measures set out in the draft Fuel Poverty Strategy for Scotland 2018 will contribute to meeting the Government’s new target? Have lessons been learned from previous initiatives?

See our previous answers. Lessons have certainly not been learned. As internationally-recognised experts in fuel poverty we are strongly of the view that the proposals under the Bill as they stand are insufficiently ambitious, will fail to achieve the aims of the Bill, do not reflect the best available evidence on why they will fail to
do so, and will actually serve to disadvantage some of those householders who are most in need of support.

5. Do you have any views on the Scottish Government’s reporting requirements to the Scottish Parliament, as set out in the Bill?

Scotland needs a Bill, and a strategy, that will be truly effective for tackling and ultimately eliminating fuel poverty. At this stage we would much rather see the Bill and strategy returned to the Scottish Government for significant revisions rather than patching the existing proposals up and pressing on with the proposed plans for reporting. We believe that the continuation of policies which have failed to deliver previous targets is highly unlikely to be effective in delivering more ambitious targets. We are also of the opinion, based on the evidence cited in this submission, that the ongoing treatment of fuel poverty primarily as a building fabric problem will fail our most vulnerable. As a metaphor we are treating broken legs by issuing wheelchairs, without enough wheelchair to go around. We therefore strongly urge the Scottish Government to include commencing the development of a Scotland-specific definition of vulnerability, for inclusion in a future revision of the Bill and Strategy.

References

2 Ibid.
6 See also our diagram reproduced from this paper at: http://energypovertyresearch.blogspot.co.uk/p/re.html
7 Mould, R., & Baker, K.J., 2017. Uncovering hidden geographies and socio-economic influences on fuel poverty using household fuel spend data: A meso-scale study in Scotland. Indoor and Built Environment, 0 (0), 1-23, DOI: 10.1177/1420326X17707326.
22 Ibid.


38 Hirsch, D., 2018. Fuel Poverty (Target, Definition and Strategy) (Scotland) Bill Call for Views: Submission from Professor Donald Hirsch. Available at: http://www.parliament.scot/S5_Local_Gov/Inquiries/LGC_S5_18_FPB_03_DHirsch.pdf