



THE NATIONAL ENERGY FOUNDATION

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Rt Hon Caroline Flint MP
Shadow Secretary of State for Energy and Climate Change
House of Commons,
London SW1A 0AA

22 December 2014

Dear Ms Flint

**National Energy Foundation Response to Green Paper –
An end to cold homes: One Nation Labour's plans for energy efficiency**

Thank you for allowing us to take part in the consultation on the Green Paper on energy efficiency. The National Energy Foundation is a registered charity that was set up in 1988 and whose mission is "to improve the energy use of buildings". We have 25 years' experience of working with individual householders, central Government, communities, local authorities, housing associations and other organisations towards making this mission a reality.

In reviewing the document, we see two major omissions:

- A recognition of the energy performance gap, whereby buildings do not perform as well as expected whether newly built or as a result of one or more retrofit measures; and
- A lack of measures targeted at owner occupiers to make improvements, other than through a tweaking of the unsuccessful Green Deal provisions.

Our comments on the former are included under question 1; our suggestions for the latter, requiring a degree of parity between owner-occupied properties changing hands and those in the rented sector, are at the end of the attached detailed comments.

If you would like further details on any of our comments below, or to discuss them in person, either in London or by visiting our low energy buildings in Milton Keynes, then please contact the undersigned.

Yours sincerely

Kerry J Mashford
Chief Executive

Question 1: Do you think that other incentives, measures or publicity will be needed in order to raise awareness about potential savings from energy efficiency improvements?

Yes. While a personalised energy efficiency report following a visit to the household may represent the Gold Standard for advice, we believe that there will still be a role for general advice and information campaigns. This could also include improved "DIY" assessments, using online tools, as well as proper telephone advice, building on an earlier approach taken by Energy Efficiency Advice Centres/ESTACs.

Open House events, especially those which show multiple measures or where we need to get to in the future – eg 60% savings as required by Superhomes¹, are an excellent way of demonstrating that energy efficiency does work and can lead to warmer more attractive homes.

We refer in our covering letter to the problem of the Performance Gap, whereby actual savings achieved are rarely as high as forecast. The Performance Gap² has numerous causes, including:

- Occupants taking some of the potential savings in increased comfort (typically higher internal temperatures, but – especially among those in fuel poverty – running heating systems for longer periods in the knowledge that bills will be more affordable can also occur);
- Poor installation or commissioning (including advice given to householders by the installers) leads to equipment (especially controls) not performing as intended or calculated by the manufacturer;
- Errors in the energy model – although SAP is based upon empirical data, it has been greatly modified from the early and properly validated BREDEM models, and can give results that are not reflective of reality, especially on homes that are near the extremes of the range.
- External factors not included in the energy model – especially around unregulated electricity use and incidental gains.

We also believe that the assessment will be inadequate as a driver to action unless other barriers are addressed – finance, possibly conflicting advice (eg. the focus on switching energy suppliers as a way of saving money, which we believe has severely damaged the energy efficiency message by offering an easier way of reducing bills with no upfront investment) and finding a reliable installer (or supplier for DIY measures). For this reason other incentives (or regulations) may be needed to move householders from information to action.

At this point we should also note that we have long had doubts about the use of averages and quotes of savings "up to" a level. Although personalised advice should reduce this, we still see savings widely quoted for measures on an individual basis, omitting any double counting or overlap effects; we also see too many unsupported figures. For example, the Green Paper itself, in paragraph 1.11, says "immediate bill savings ... [of] up to £205 for loft insulation". This is devoid of context, and presumably ignores existing insulation in place, and probably assumes a low-efficiency boiler in a typical 3 bed semi. But as the reader we don't actually know any of these assumptions and the public are – rightly – highly sceptical of such claims. A Code of Practice for Energy Savings Claims (possibly based upon the nascent methodology in ISO 17741) should be considered.

Finally, we need to move the argument on from "potential savings" when dealing with the able to pay householders. It is misleading to claim that all energy efficiency measures that are required to meet our climate commitments and help ensure security of supply can be met at no net cost. We need to find new arguments to make energy efficiency attractive and seen as the responsible thing to do. This

¹ The National Energy Foundation (formerly the Sustainable Energy Academy) has managed the network of Superhomes which provide twice yearly open weekends, as well as a website enabling virtual visits, to enable householders to discover how to make large improvements in energy efficiency.

² In the new build sector the causes of the Performance Gap have been studied in the £8m four year programme run by Innovate UK entitled Building Performance Evaluation which is due to report during next year.

may mean appealing to people's altruism, or to shame them to do no worse than their neighbours. But the relentless focus on cost savings at the expense of other benefits (including more comfortable homes) is increasingly becoming counterproductive now that the majority of quick wins have been installed by many households.

Question 2: Do you think that any changes need to be made to the content, format or process by which Green Deal assessments are currently provided?

These should be free at point of use to encourage take up or obligatory at some point in the housing purchase/renting process. Currently it is difficult to get anyone enthusiastic about paying for a report which will tell them to pay for a service.

Question 3: Do you think that personalised home energy reports would be better provided by local energy efficiency providers or directly from central Government to individual households?

We are relatively neutral on this, believing that there is a place for both delivery routes (and noting that even if central Government has responsibility in practice it would be likely to be delivered through local agents). We would caution against too much reliance on local authorities, which are not widely trusted in the owner occupied sector, and believe that delivery through energy supply companies may also have a place in the overall mix, notwithstanding low levels of public trust.

We regret the loss of the genuinely local Energy Efficiency Advice Centres (which we helped establish on behalf of the Energy Saving Trust in 1993-6) and believe that in some respects regional centres (which neither have deep local links or central Government imprimatur) may be the least successful option.

Question 4: How can we best manage the transition from the existing energy efficiency framework to the policies proposed in this Green Paper, in order to minimise disruption to consumers and industry?

We have long argued that frequent policy or delivery changes, both within Governments as well as between Governments, can lead to confusion and alienation among the target audience. In particular we note that stop-start grant regimes lead to a disincentive to act while there are no grants or incentives available, as the public, with some justification, believe that by delaying, they may again be able to receive grant support. We also believe that for all their faults, the energy utility companies have set up arrangements over a number of years to manage schemes (SoP, EESoP, CERT, ECO...) and these should be utilised to maintain a degree of continuity.

Question 5: How do we best ensure that all revenues raised from the Energy Company Obligation go to households in or at risk of fuel poverty?

We believe that the existing eligibility criteria for the Affordable Warmth Group under ECO are too complex to support concerted efforts to tackle fuel poverty. The definitions of CScO and rural-CScO areas mean that it is difficult to identify and assist such householders. Furthermore the ECO brokerage scheme has been turbulent and resulted in measure-specific projects, notably boiler replacements, being cherry-picked at the expense of whole house approaches. Funds have often run out quickly and we recommend a much more simplified ECO administration system is put in place that allows Local Authorities, charities and other social enterprises to apply for funding in order to undertake projects and to offer them with the confidence that they are durable for years rather than weeks or months. Our recommendation is that Local Authorities and their trusted partners are able to target funds within their areas, based upon the local knowledge and resources that they possess.

However, we would possibly disagree with the underlying assumption that all revenues from ECO should go those at risk of fuel poverty. We believe that in order to maintain popular support for what

can already be seen as a "stealth tax" on energy consumers, there has to be a proportion that is more widely available to bill payers, to ensure that those contributing to the costs of the programme feel that they have a (potential) stake in its outcomes.

We also do not agree that all revenues raised from ECO should go directly to households. A small proportion should be used to evaluate and improve the programme – testing before and after improvements to be sure they are delivering the expected benefits (technical and human factors) and improving the figures for the impact of measures that are used in modelling tools and carbon/energy credit; improving the tools used to identify and target improvements for use either by householders or professionals; engagement programmes involving open homes, outreach, case studies etc.; development of assurance procedures and certification to increase confidence in outcomes and thus potential investor confidence (especially if external investment is sought). Individuals also need reassurance that the improvements to their property will be without risk.

The NEF/EEPB Breaking Barriers³ report explores some of these issues in greater detail.

Question 6: Do you think that low-income households living in properties with an EPC D or lower is a suitable proxy for households in or at risk of fuel poverty?

Yes, we do. Whilst we recognise that the EPC rating methodology is not an absolutely precise tool we do think that establishing minimum threshold ratings will add clarity to eligibility criteria and more importantly to create awareness and to trigger action for intervention. In order to avoid the production of a full EPC (where one does not previously exist) we recommend that this is supported with a reduced data set EPC calculation tool, so that eligible households can be easily helped. We welcome the addition of the 'low-income' classification as we do observe that the current ECO eligibility criteria can rule out those who would appear to be in fuel poverty.

Question 7: How do we most effectively deliver an area-based energy efficiency scheme?

We think that the critical factor here is that of the role of Local Authorities. Given that there is a body of experience of a number of area based approaches, we think it quite straightforward to put together a 'best practice' note on area based schemes using simple, straightforward marketing approaches and using local supply chain partners.

Question 8: Which organisations do you believe are the best delivery agents for energy efficiency improvements?

This can be done by Charities or Community Groups – those which are unbiased and independent. This is required to provide the trusted information source to the householder and to provide robust evaluation.

Question 9: How should funding be allocated so as to ensure an equitable distribution between different communities? What criteria should be used when determining which projects should be prioritised?

Those in Fuel Poverty should always be prioritised. These should be fully funded wherever possible. Then grants should be provided for others, but organised to move away from the stop start chaos of recent years.

³ "Breaking Barriers: An industry review of the barriers to Whole House Energy Efficiency Retrofit and the creation of an industry action plan" report by the National Energy Foundation and Energy Efficiency Partnership for Buildings, May 2013 – summary downloadable from http://www.nef.org.uk/themes/site_themes/agile_records/images/uploads/BreakingBarriers_SummaryReport.pdf.

Question 10: How can we best use government energy efficiency schemes to bring in other investment and boost economic development and regeneration?

In addition to encouraging installations of measures, Government needs to invest in training of the supply chain and to encourage local/national manufacture of materials with the aim of limiting the need to import all our high energy efficient windows or PV panels.

Some of the funding in almost all schemes must be used to develop the mechanisms for assurance and development of the business case – hence improving investor confidence.

Question 11: Do you support moving from a single-measures approach to whole house retrofits?

Yes. We have almost a decade's experience in showing how such packages can be put together through the network of exemplar SuperHomes. Whole house retrofits benefit from:

- Being more cost-effective overall (with fewer repeat visits from trades and, in the rented sector, the ability to do all work in voids);
- Less disruptive for residents (either homeowners or tenants);
- Enable some offsetting of high cost/long payback measures against those costing less or with short payback periods;
- Permitting a single finance package to be applied to the property (eg. following a GDA);
- Helping assist that savings from one measure don't interact negatively with other measures (eg. through boilers and heating distribution systems not being properly matched)

However we note that because grant schemes often focus on individual measures, Government can inadvertently place barriers to the whole house approach.

We would again refer to the "Breaking Barriers" report⁴ on this topic.

Question 12: Do you think EPC C is an appropriate target for whole house retrofits?

We think that there may be a need for finer distinction between types and ages of property. Thus while an EPC of C may not be very challenging (or barely adequate) for a 1980s terraced home, it could be much harder to achieve for a traditional thatched cottage.

Question 13: Do you think that offering interest free loans for energy efficiency improvements will be sufficient to increase demand among able-to-pay households?

It may not be sufficient, but it would be a step in the right direction. However, as we note under 18 below, many householders are unwilling to take on loans for anything that they do not consider to be absolutely essential.

Question 14: How can we best offer greater flexibility for the length of an energy efficiency loan, or to the repayment structure, so as to make households more likely to take out a loan? 36 One Nation Labour's plans for energy efficiency

We have observed that the current arrangements for the Green Deal 'Golden Rule' and maximum loan 'headroom' that are currently in practice are extremely difficult for consumers to easily understand and, in any event, do not allow sufficient funding to be borrowed to significantly support the overall costs of intervention. We believe that once measures have been identified as being cost effective, then any loan element should be available to fully fund the capital costs for a duration of up to the projected life span of the measure.

⁴ See note 3 above.

Question 15: Do you think that any additional energy efficiency improvements to those already approved should qualify for finance under an energy efficiency loan?

Currently not, although developments in products such as MVHR should be kept under review, especially if – as a result of a whole house approach – air quality risks becoming compromised.

Question 16: How do we ensure that the widest possible cross-section of households can access interest free loans for energy efficiency improvements?

Largely through carefully coordinated publicity, with clear central Government endorsement (as people are rightly wary of taking on debt that sounds too good to be true). Energy utility companies and local authorities may also have a role in this area, as there are in regular contact with their customers/residents.

Question 17: How do we maximise public awareness about interest free loans and energy efficiency?

We recommend working with Charities and Community Groups. We also think that simple but continuous and durable consumer marketing campaigns that can be orchestrated centrally are of benefit, especially if various actors across the sector, such as energy suppliers, supply chain partners, Councils and retailers can be encouraged to promote the campaign.

Question 18: What lessons can be learnt from the failure of the Green Deal scheme?

Government needs to take into account the willingness to accept loans (with or without interest) by the general population. Many do not want to do this for personal reasons – it represents a risk or obligation they do not want to have hanging over them; it can affect their ability to get credit for other things; it complicates transactions when buying or selling property; it may be against their religious beliefs or cultural norms. Any mechanisms need to be viewed from the perspective of all sectors of society to identify potential acceptability / barriers.

The Green Deal scheme has largely been criticised because of the very complex processes that customers are exposed to. The framework for Green Deal participants, whilst very robust, does make it difficult to give a straightforward proposition to the customer. We recognise the need to have high standards of accreditation within the installing trades but do think that those trades which are already regulated by trade bodies should not need to undergo costly additional certification before they can become entrants in the market. We would suggest that the key lessons are to keep things very simple for consumers and to remove unnecessary red tape from installers who have already demonstrated competence and compliance within their recognised trade.

Question 19: Do you support a new target on landlords to improve all properties in the private rented sector up to EPC C by 2027?

In principle, yes, but subject to our comments on question 12 about the need to distinguish between different property ages and types.

There will need to be a period of awareness-raising prior to the measures being brought in and then they must be staggered. For example, initially no homes rated band G could be sold, then a couple of years later no homes to be band F or below etc. Additional inspections should be undertaken for those homes of heritage value to ensure that the caveat ‘where practicable’ is not consistently used as a get out clause.

Question 20: How can we best support landlords to enable them to upgrade their properties?

Social landlords operate an ongoing programme of acquisition (often new build) and disposal of properties and are most likely to dispose of the lowest EPC rated stock whilst upgrading their moderately rated stock to EPC C. This could lead to properties with the lowest EPC ratings being transferred to low income owner occupiers and smaller or potentially less scrupulous private landlords who could be less well equipped to embark on property improvements (note this is not always the case – we are aware of some small landlords whose skills are predominantly in the property improvement field as they have construction backgrounds and are thus very well positioned to take on dilapidated property and improve it). It would be useful to explore mechanisms for linking the modest improvement of an EPC D property with the significant improvement of an EPC F or lower rated property – with a view to avoiding a bifurcation of the housing stock.

Question 21: In what ways could energy efficiency benefit from being designated as a national infrastructure priority?

While we are on public record as supporting this, it probably depends more on the political will behind energy efficiency than where it sits on a list of priorities.

Question 22: Do you believe that a long-term path for energy efficiency will encourage investment in non-domestic energy efficiency?

Yes, as in the domestic sector short-termism has been a major problem, and setting longer term targets (with indications of likely future minimum standards) will help. However simple targets, such as aiming for as 30% improvement in energy efficiency by 2030, with no indication as to the path to deliver them, can be counter-productive as they lack credibility.

Question 23: Do you believe that there are advantages to making minimum energy performance standards in the [non]-domestic sector consistent with those of the residential private rented sector?

We have assumed that the question intended is as above, given that it is in a section on non-domestic properties.

Broadly consistent, but it should be borne in mind that an EPC of (say) C for a home bears no mathematical link to an EPC of C on a non-domestic building, but simply reflects the way that the initial scale as – somewhat arbitrarily – defined.

Question 24: How can reporting requirements best be simplified for non-domestic buildings?

The main issue around non-domestic buildings is to try and disaggregate energy use between tenants and owners' responsibilities. We have addressed this through the introduction of voluntary display certificates⁵ ("VolDECs") that reflect this division. EPCs and DEC by themselves do not need further simplification, although an extension of the DEC requirements to all buildings widely used by the public (including shops, restaurants and hotels above a size threshold) would be helpful.

Going beyond **buildings**, we see a greater problem in terms of complexity of reporting requirements for energy used by **organisations**.

We do however accept that there is a wide problem with reporting energy use and energy efficiency at a corporate level with overlapping requirements for CCA, ESOS, ETS, etc. Requiring simple energy use reporting (rather like DEC) on either a site basis (which could be a single building, an office within a larger building, or a complex of buildings and manufacturing plant, such as a university or a

⁵ VolDECs allow separation of landlord and tenant energy use, permitting better benchmarking and better segmentation. See <http://www.nef.org.uk/service/search/result/voldecs-voluntary-display-energy-certificates>

petrochemical works), or on a legal entity basis, alongside the company's financial report and accounts could be a relatively straightforward requirement to introduce. The latter could be accompanied by a statutory requirement for the Board of the organisation to consider and report on its policy towards energy management (eg. through ISO 50001), and its assessment of opportunities to make energy savings and improve energy efficiency. This need not be as onerous as is required in terms of a quality controlled ESOS-compliant audit, but would at least help raise the topic of energy efficiency in the boardroom.

We are less concerned about comparability between companies (despite promoting benchmarking as a useful energy management tool), as crude comparisons (say in terms on energy used per square metre or per employee per annum) are usually misleading unless a great deal more information is provided about the other (physical) attributes of the company. However a requirement to report the trend in energy consumption, showing changes in energy use over the past 3 years (so that there are two energy savings⁶ figures to be reported), could be more useful to stakeholders as an indicator of whether that organisation has taken successful action to improve energy efficiency.

Question 25: How can awareness of these requirements and energy efficiency opportunities be improved?

If energy consumption and savings reporting became mandatory, then it would rapidly gain a higher profile, both within companies (up to Board level) and, potentially, among customers and other stakeholders.

Question 26: How can non-domestic financing be improved for small and medium-sized businesses in particular through a pay-as-you-save loans model?

The Green Investment Bank should be encouraged to make more money available through energy efficiency funds for smaller enterprises, perhaps following the model used by the Carbon Trust in partnership with Siemens. Government could also encourage the main UK clearing banks to create dedicated energy efficiency loans, especially as a substantial proportion of the costs of servicing the loans should be able to come from energy savings made.

Additional Comments

The green paper spends a lot of time looking at energy efficiency in the domestic rented sector, as well as at incentives that might apply to owner occupiers (albeit with a focus on those at risk of fuel poverty). However it lacks ideas for the able to pay owner occupier and seems to shy away from any suggestions of higher minimum standards.

One idea could be to introduce a requirement for EPC C or higher for all domestic properties where transferred to new ownership (as well as tenancy), with sellers being able to undertake any necessary work prior to transfer or for this to be undertaken within a timescale following transfer. Funding could be required to be shown to be available as a condition of transfer if the property is to be inhabited. A major renovation, for example where the new owner would not be living in the property, would not require this work to be undertaken within a certain time limit but the property would need to reach EPC C before approved for habitation. This also relates to Q23.

⁶ We are currently helping develop ISO 17747 "Determining Energy Savings in Organizations" and believe that this could provide a useful basis from which to report the results of energy efficiency improvement actions taken.