



A grassroots campaign taking action against mammoth fuel bills and working towards an affordable, sustainable and democratic energy system

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Fuel Poverty Action response to consultation

Coal generation in Great Britain: The pathway to a low-carbon future

We are glad to see in this consultation document explicit recognition of the damage caused by the use of coal, in terms of both local pollution and climate change. However any commitment to a speedy end to unabated coal generation is conditional, in the document, on the basis that nothing must be done that could undermine the supply of electricity. We want to comment on just this one consultation question: “Ensuring security of Supply”.

Energy needs

We believe that the UK’s energy needs can well be met by low carbon, low pollution options, crucially including measures to dramatically increase energy efficiency. The present consultation, like many others, is conducted with an assumption that demand for energy is a given and that any reduction must be based on replacing the lost capacity to generate electricity. We do not believe that is a correct assumption in any area, but we focus here on the use of energy in homes, where energy efficiency would not only decrease the need for power but greatly reduce fuel poverty and improve health and welfare. Clearly, it would also impact on gas and oil burning; the effects of this reduction on carbon emissions would run in parallel to the savings in electric power.

Electric heating

Ofgem research published in December 2015 shows that:

“There are around 1.8m electric heating households in England (8%) with higher proportions in Scotland, 0.3m (13%), and lower proportions in Wales. . . In Great Britain,

25% of flats use electric heating compared to only 4% of houses.

Dwellings with electric heating systems tend to have a lower energy efficiency rating, partly reflecting the higher running costs of using electric heating.

Households that use electric heating tend to be of lower income. In England, around a third have incomes of less than about £14,500. This combined with higher costs of heating, means these households are more likely to be fuel poor.”ⁱ

Rather than decreasing, electricity is increasingly the choice of developers building or refurbishing housing estates, due to its simplicity and low installation costs. The cost to consumers is extremely high, plunging many into fuel poverty. A reversal of this trend could significantly reduce demand for electric power.

Efficiency measures for electricity consumption reduction

Domestic energy usage makes up 29% of the UK's energy consumption. In 2013 DECC published its last United Kingdom housing energy fact file, which states that “It will be impossible to meet the 2050 objective without changing emissions from homes”.ⁱⁱ

According to the same document, electricity usage makes up more than half of home energy consumption. So you could argue that home electricity usage makes up 15% of total UK energy consumption.

There is therefore scope for significant reduction in coal-fired power generation by simply improving energy efficiency in homes. The ways of doing this are well known, ranging from installing modern condensing boilers and energy efficient refrigerators and other appliances, to solid wall insulation, which requires major infrastructure funding. There is also a great deal of waste due to the fact that heating controls are, for many people, complicated and often hard to use.

The targets enshrined in the 2010-2015 Coalition government's “Fuel Poverty Strategy” of 2015, were to bring all homes up to a minimum standard, measured by the Standard Assessment Procedure (SAP) and encoded in Energy Performance Certificate (EPC) bands A-G. The targets themselves are very inadequate, but would still make a substantial contribution, if met, to reducing carbon emissions and keeping people warm.

At the same time they would reduce demand for electricity.

Effect of Energy Efficiency Measures

An analysis of the total carbon that could be saved due to retrofit measures is beyond the scope of this document. The potential, however, is clearly enormous. For instance, according to the Energy Saving Trust, between 600kg (for a flat) and 1,900kg (detached house) of CO₂ could be saved annually by adding solid wall insulation. There are an estimated 4.5 million homes in the UK with solid walls. Note that 600kg of CO₂ is roughly the same amount as that from a flight from London to New York.

As well as carbon emissions, this has huge implications for fuel poverty. A household in a band E home, for instance, needs to spend £1,000 more per year on heating than the average home.ⁱⁱⁱ

Efficiency Commitments

The Coalition government made a commitment to bring all 'fuel poor' homes up to EPC band C by 2030. This means making improvements to 93% of fuel-poor homes -- a commitment to ensure that some improvements are made to 2.21 million homes by 2030.

The Coalition also set an earlier minimum energy efficiency requirement of EPC band E for private rental homes by April 1st 2018^{iv}, without which landlords cannot let homes. This would cost on average £1400 per home, and 70% of homes could be brought up to this standard for under £1,000,^v by means e.g. of loft insulation, draught stripping, the installation of a decent boiler. The policy was to benefit around 1 million homes.

Were these targets to be met, they would particularly affect homes with electric heating. For example, in England, 2% of dwellings with mains gas heating are 'F' or 'G' rated, compared to 14% of dwellings with storage heating systems, and 57% of dwellings with direct-acting heating systems.^{vi}

However, whether this happens at all is debatable. The immediate problem is that on present indications, there is no chance of coming anywhere near these same targets.

How reversal of policies could reduce the need for coal

As the Committee on Climate Change put it,

“The existing set of policies is not an effective overall package for decarbonising heating”.

And:

“Emissions from gas, oil and solid fuel heating fell by a tenth in the years from 2005 to 2012, having been broadly flat before 2005. This fall was a result of improving efficiency of buildings and heating systems, which have more than offset increases in the number of buildings and the average temperature to which they are heated. The roll-out of more efficient condensing boilers has been a strong driver of efficiency improvement in recent years, together with low-cost insulation. Heating emissions have flattened out again since 2013 as progress in rolling out insulation measures has stalled.”^{vii}

A number of clear, and reversible, policy decisions have led to and reinforced this reversal of progress. The opposite policy changes could significantly reduce demand for coal.

First, the regulations are based on, and framed in terms of, the Green Deal, which was never successful to begin with, and was scrapped in 2015, rendering the regulations worthless. No clear replacement for the Green deal scheme has been announced, nor have the regulations been re-framed.

Secondly, the targets are based on landlords being able to use Energy Company Obligation (ECO) Deal funding to implement the measures. But the ECO scheme, already watered down, and already abused by energy companies who took the money for work not done^{viii} and then blamed high prices on “green measures”, has now had its funding slashed by 40%^{ix}, and after the present round of ECO ends in March 2017 it is not clear what, if any, incentives there will be for landlords to make efficiency improvements.

Thirdly, they are framed in terms of an obligation to do what is “reasonably practicable” – a get-out clause which practically guarantees that they will not be met.

Fourthly, the plan is to first identify “fuel poor homes” – a task that is in itself not easy and uses valuable resources. Like all means-testing, it is advocated as a way of making sure that help reaches its targets, instead of being wasted on those who are just about

managing. And like all means-testing it means that many in need get nothing.

Then, having been identified, a home is not brought up to Band C, but to band E, still very expensive and energy-intensive to heat. The programme then needs to go back to square one, identifying, assessing, and bringing a team back to the same home later to bring it up to band C. This is wasteful to the point of being perverse. It is also disruptive to people's lives, which is a major obstacle to installing insulation, in particular. A genuine intention to stop UK homes being among the least efficient in Europe in terms of heat and power would instead initiate street-by-street teams bringing all homes up to a good standard and would take advantage of the opportunity to improve homes when they are empty, when people move house.

There was in fact a successful scheme in place just a few years ago, but it was terminated. A University of Sussex study in 2016 records:

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Despite the failures associated with the Green Deal, the government's previous energy efficiency scheme, called [Warm Front](#), which ran from 2000 to 2013, was found to have been generally [successful at reducing fuel poverty in England](#).

The government-funded programme aimed to tackle fuel poverty and to reduce winter deaths by weatherising doors and windows, installing insulation and giving free energy audits on people's homes. The scheme [improved the energy efficiency of 2.3 million homes](#) – 11 percent of all homes nationwide – saving households money on fuel bills and increasing income per customer by £1894.79 per household. The Warm Front scheme has also been credited with cutting greenhouse gas emissions per home by 1.5 tons per year, and it had high customer satisfaction rates.

Despite its successes, the government cut the Warm Front budget in 2010 and then replaced it with the Green Deal in 2013. This meant energy companies were left to tackle the problem of rising fuel poverty, rather than the government. ^x

The rise of private rental

Ofgem has noted that:

Households in the private-rented sector and social housing are more likely to have storage heating systems whilst direct-acting electric heating systems can be found

disproportionately in the private-rented sector but not social housing.^{xi}

The private rental sector has doubled in size since 2002. This is a big problem for energy efficiency measures as tenants pay the energy bills, so there is no financial incentive for landlords to improve the efficiency of their properties. The sale of council homes – now often owned and rented out privately by private landlords – has had a negative effect on energy efficiency. The 2016 Housing Act, when and if implemented, will push thousands of households out of social housing and into the hands of private landlords. Consideration of a White Paper on housing should take this into account.

Reversal on New Builds

In addition to undermining its own targets for improving the energy efficiency of existing housing, the Government in 2015 scrapped the zero carbon homes policy, which would have required that all homes built from 2016 onwards would generate as much energy on site as they would use for heating, hot water, lighting etc. It is estimated that even by 2050, homes built before 2016 will make up two thirds of the UK housing stock, so retrofitting existing homes is an essential task, but this policy would have at least ensured that future homes would be completely unreliant on power stations - coal or otherwise - for energy. Instead, architects' drawings for zero carbon homes that were ready to go into construction were scrapped; developers went back to the drawing board when regulations eased, to save a little money by building colder and less efficient homes.

Renewable energy

According to the Committee on Climate Change document cited above, “PV fares particularly well under SAPS”,^{xii} yet it has been decimated, at the cost not only of emissions but of businesses and skills. The government's 65% cuts to solar feed in tariffs resulted in a 75% reduction in the amount of solar energy being installed on people's homes in early 2016 compared to the same period the previous year. The cuts were made on the basis of reducing energy bills, but the government has admitted that this will save only 50p per year.

The government ended onshore wind subsidies in 2016. Onshore wind is the cheapest and most developed form of clean energy. It is, or will soon become, a cheaper source of

energy than coal, oil or gas. This is being done to 'protect countryside' but as a result more fossil fuels are likely to be burnt. Coal mining in particular has devastating effects on the countryside. Some of the devastation caused is in Russia. Some, particularly from open-cast mining, is in the UK, where communities are fighting the retention and extension of massive mines on their doorsteps.

District Heating

One new policy which the government is supporting has the potential to very significantly reduce the need for power, especially as it is an alternative to electric heating which is now being installed by developers in much new housing. In high rise buildings where gas is not viable, this alternative – District Heating -- is particularly important.

District Heating, commonplace in Europe, is only now taking off at scale in the UK, with the help of the BEIS seed fund of £32 million. Using waste heat or combined heat and power generated at a central point, it is intrinsically more efficient rather than burning gas in small household boilers, let alone using electricity for heat – a difference that is supposed to be reflected in the cost to customers. Well-designed, well-maintained, and well-run heat networks are already popular with customers on many UK sites.

It is therefore extremely disturbing that this potential is being squandered, and the future of heat networks is being threatened, by unregulated, ill-conceived, badly designed, and poorly operated heat networks, which customers can be locked into for in some cases as much as 80 years with no opportunity to switch supplier. Fuel Poverty Action is in touch with tenants and residents on estates round the country who are left freezing in their homes, suffering frequent outages, tepid hot water, and bills so high that many turn off their heating altogether. As the problems become more widely known (see Observer article, 5 February 2017^{xiii}), people will not want to live with District Heating, and purchasers will not want to buy homes with this form of heating.

Regulation is urgent, as is genuine accountability to customers – and to *potential* customers, for instance on regenerated estates. If it is achieved, the potential saving in demand for electric power is very significant.

Conclusion

Many policies that the Government has pursued, even in the name of mitigating climate change and fuel poverty, in fact have the opposite effect. Previous policies, while insufficient, were having much better results. There are many ways to “keep the lights on”, to ensure that we are all warm in our homes, and to reduce fuel poverty, without prolonging the use of coal.

- i <https://www.ofgem.gov.uk/ofgem-publications/98027/insightpaperonhouseholdswithelectricandothernon-gasheating-pdf>
- ii https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/345141/uk_housing_fact_file_2013.pdf
- iii https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/408644/cutting_the_cost_of_keeping_warm.pdf, 2015
- iv https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/408644/cutting_the_cost_of_keeping_warm.pdf
- v Richard Twinn, UK Green Building Council
- vi <https://www.ofgem.gov.uk/ofgem-publications/98027/insightpaperonhouseholdswithelectricandothernon-gasheating-pdf>
- vii <https://www.theccc.org.uk/wp-content/uploads/2016/10/Next-steps-for-UK-heat-policy-Committee-on-Climate-Change-October-2016.pdf>
- viii <https://www.theguardian.com/environment/2013/nov/15/energy-firms-green-measures-big-six>
- ix <http://www.cleanenergynews.co.uk/news/efficiency/eco-replacement-slated-for-2017-but-with-40-budget-cut-5722>
- x <http://www.sussex.ac.uk/broadcast/read/35387>
- xi <https://www.ofgem.gov.uk/ofgem-publications/98027/insightpaperonhouseholdswithelectricandothernon-gasheating-pdf>
- xii <https://www.theccc.org.uk/wp-content/uploads/2016/10/Next-steps-for-UK-heat-policy-Committee-on-Climate-Change-October-2016.pdf>
- xiii <https://www.theguardian.com/money/2017/feb/05/district-heating-fuel-bill-regulation>