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Energy Saving Trust submission: Setting the fifth carbon budget inquiry

Energy Saving Trust is pleased to respond to the Energy and Climate Change Committee's inquiry into the Committee on Climate Change's proposed fifth carbon budget.

Energy Saving Trust is the leading, impartial sustainable energy organisation. We work on behalf of governments and businesses across the UK providing services in the area of data, assurance, consumer engagement, advice and grant administration.

For DECC the Energy Saving Trust delivers the telephone-based Energy Saving Advice Service in England and Wales. We also undertake other research and awareness-raising work for DECC on a project-by-project basis. Prior to the coalition government, for over 15 years, EST ran national energy advice services for DECC and predecessor departments as a grant-funded organisation.

In Scotland the Energy Saving Trust is the principal delivery partner of the Scottish Government for home energy efficiency. We run comprehensive local and national advice and grants programmes.

The Energy Saving Trust Foundation supports the development of a strong and vibrant community energy sector in the UK through research and support projects.

On transport, the Energy Saving Trust is funded by the Department of Transport (DfT) and the Office for Low Emission Vehicles to provide a range of services to help organisations reduce their transport fuel spend and emissions. We are the leading independent organisation supporting the uptake of ultra low emission vehicles amongst fleets and work across the sector to promote the acceleration of plug in vehicle sales. Energy Saving Trust is also the UK's top provider of fuel efficient driving advice and training to drivers and organisations with a track record in the UK and Europe of developing fuel efficient driving initiatives.

Public engagement on energy is at the heart of our work. In total each year the Energy Saving Trust handles just under half a million energy efficiency advice calls on behalf of UK and Scottish governments. Energy Saving Trust has a unique relationship with the public around energy saving and renewable energy and our response reflects that.

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Introduction

1. Overall, we support the advice and the level of ambition for the Committee on Climate Change (CCC) fifth carbon budget recommendations. As identified in the report, meeting the budget will require progress in increasingly difficult areas: some of the areas that are highlighted are electric vehicles, solid wall insulation and low carbon heat. As these are areas that we work in we have commented on them in detail below.
2. We support the proposed 1,765MtCO₂e budget and believe that the Government should set the fifth carbon budget in line with this as a minimum level of ambition. We would support a more ambitious budget in line with the 1.5°C target and in fact encourage taking this route. We believe this gives the UK the best opportunity not only to make a strong contribution to tackling climate change but also to establish a strong green economy and gain a competitive advantage in industries that will prove vital over the course of this century (e.g. renewable energy technologies, low carbon buildings, etc.)
3. Below are our comments on specific sectors the Energy Saving Trust has expertise in, looking at how challenging the targets set by the CCC are and the policy tools that we believe are best suited to meet them.

Buildings/heat

4. **CCC targets:** low carbon sources should provide heat for around 13% of homes and half of business demand. In addition, the report recommends insulation increases – 1.5m solid walls and 2m cavity walls in 2020s – more use of heating controls and efficient lights and appliances.

Challenges

5. Current and past activity on **cavity wall insulation** suggests that a 2m target is within reach for the 2020s. That being said, as has been pointed out on numerous occasions, the ‘easy’ improvements have already been made, meaning that the properties that are left are increasingly the hard-to-treat and more expensive ones.
6. Regarding **solid wall insulation** we would refer to a recent report published by the Chief Construction Adviser¹. In this report it’s stated that there are around 8m properties in the UK with solid walls and so far only 132,000 solid wall homes have been insulated. The report identifies a number of barriers and challenges for solid wall insulation which we would broadly agree with- especially in terms of standards, quality assurance and improved consumer protection, along with measures to promote awareness and build trust in the technology.

¹ ‘Solid Wall Insulation: Unlocking Demand and Driving Up Standards’ - Chief Construction Adviser. November 2015. <https://www.gov.uk/government/publications/solid-wall-insulation-future-recommendations>

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7. If we are going to meet the fifth carbon budgets it will be crucial to address the properties that have not received any improvements so far, due to their complexity or cost, e.g. private blocks of flats, the private rented sector and properties off the gas grid.
8. Awareness (the benefits, costs and work involved) of solid wall insulation and trust in the technology is low for the general public and it is an expensive measure; these aspects need to be tackled. The Green Deal Home Improvement Fund proved to be very attractive and demand was high however as pointed out in a recent Energy and Climate Change Committee oral evidence session it is not necessarily the best tool for long term, sustainable growth in the solid wall insulation industry. Finance is only one of the barriers and it has been argued that one of the reasons the Green Deal was not as successful as hoped is due to an over-emphasis on the financial benefits, whereas there are many other barriers that also need addressing. Energy Saving Trust welcomes the progress that has been made so far on improving the energy efficiency of **household appliances**. This has been thanks to a joint approach of improving minimum standards – getting rid of the worst performers – and improving information provision – pushing consumers to the best products. EU Directives have been useful on this; the Ecodesign Directive and Ecolabelling Directive being important drivers. It is important that we maintain this successful approach and maintain momentum through to the 5th Carbon Budget.
9. At the national level the 2005 regulations (in England and Wales with equivalent regulations introduced slightly later in Scotland) on gas condensing boilers made high efficiency boilers mandatory in homes. This has been the single most effective policy for home energy efficiency. More recently labelling for boilers and heating systems creates an opportunity to engage householders with their heating system to a much greater extent.
10. As identified both in the fifth carbon budget report and by DECC ministers one of the most significant challenges relating to buildings will be increasing the proportion of **heat** generated from low carbon sources. The extension of the Renewable Heat Incentive (RHI) until 2021 and the associated funding commitment was a welcome inclusion in the spending review but in light of the progress that has been made so far it is clear that activity in this sector needs to be ramped up further.
11. Without further policy instruments in place the CCC's 13% target for heat to come from low carbon homes and half of demand for businesses looks difficult to achieve.
12. Recently proposed changes to the reduced VAT rate for energy saving materials will result in increases in cost for renewable heating systems (ASHPs & GSHPs) through a social policy test. This will also mean solar PV VAT increases for all categories of persons. We are currently looking at the cost impact this would have but as VAT would jump from 5% to 20% we do not expect it to be a trivial cost increase. We recognise that the Government has made efforts to minimise the impacts of the very disappointing European Court Ruling on VAT rates for energy saving materials. It's important that the UK asserts the need at European level for equivalency between energy efficiency as energy with regards to VAT.

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Policy tools:

13. Generally, we think that a more ambitious approach to energy efficiency is needed and we have been calling for energy efficiency to be set as an infrastructure priority by UK Government (as it has been by Scottish Government). As mentioned in the CCC report energy efficiency has an important role to play in reducing energy demand and therefore reducing the investment needed in the UK's energy infrastructure. We would point to a report² published by Frontier Economics for further information on this subject.
14. There needs to be a strong policy mix for buildings that offers solutions for the fuel-poor and able-to-pay groups. This needs to be built around using appropriate mechanisms to achieve the desired target. We are not opposed to the Energy Company Obligation and recognise that if this is the only financing support it needs to be substantially focused on the poorest customers. Nonetheless we do not necessarily feel that a supplier obligation is the right policy tool to help the fuel poor. It would be better in equity terms for taxpayer funding to be used for the fuel poor and an ECO-type mechanism to support offers of cost-effective measures across a wider group of households.
15. A Government-led national discussion on better homes could culminate in a clear roadmap for energy efficiency, showing how every home and community in the UK needs to change over the next 34 years – and then bringing that together in a longer term energy efficiency plan, clearly linked to the ambitions of Carbon Budgets and the Fuel Poverty Strategy.
16. A '2050 roadmap' that uses an evidence-based approach to assess what is required to meet our long term objectives - in line with our carbon budgets – should be the starting point for choosing policies (regulation or incentives) that can:
 - Mobilise action and finance on energy efficient home retrofit for able-to-pay owner occupiers
 - Provide finance to help fuel poor owner occupiers invest in the energy efficiency of their homes
 - Support landlords investing in the energy efficiency of their stock, and empower tenants to demand energy efficient homes (further details under regulation below)
 - Drive the renewable heat market over the coming decades

REGULATION

17. Housing regulation should seek to incrementally improve the state of the UK housing stock over the coming decades. With our 2050 targets in mind we should be looking at what policy framework and targets between now and then are needed to achieve them, then assess what minimum standards, building regulations and consequential improvement legislation is needed to achieve this.

² 'Energy efficiency: An infrastructure priority' - Frontier Economics. September 2015.
<http://www.frontier-economics.com/publications/energy-efficiency-an-infrastructure-priority/>

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18. A complete overhaul of the UK housing stock will be required between now and 2050 so both information, financing and regulatory mechanisms will be needed. To give one example, private rented sector minimum energy efficiency regulations are coming into force soon with minimum standards coming in 2018 – for these PRS standards to have a real impact landlords will need to finance improvements and they will require support to do so.

BUILDING DEMAND AND TRUST

19. Consumer demand and trust in what are often still relatively poorly known measures are barriers that we need to overcome. The Energy Saving Trust is leading the consumer advice strand of DECC's current Bonfield Review and we are pleased with the progress this review is making in considering new solutions in this area.
20. It's vital that the Bonfield Review process and conclusions are taken forward by DECC through a comprehensive implementation plan. We ask the Energy and Climate Change Committee to closely follow DECC's progress in taking forward the findings of the review.
21. We welcome Lord Bourne's statement to the ECC Committee that government is exploring stamp duty and council tax incentives for energy efficiency. These are not new ideas: the Energy Saving Trust produced the first detailed analysis of these concepts in 2008. It's time for some proper piloting and progress in these areas.

Power

22. **CCC targets:** the budget recommends a reduction in carbon intensity of the power sector to below 100gCO₂/kWh. This will be achieved through a range of low carbon generation technologies, which will meet a total share of around 75% of generation by 2030. Energy efficiency improvements and the demand side also have an important role in supporting progress in the power sector.

Challenges

23. The Energy Saving Trust's work on both domestic and community scale energy-efficiency renewables has shown us the benefits and the potential of efficiency and of smaller scale decentralised generation in our new energy system.
24. Decentralised, small scale generation will play a bigger role in the UK's energy system as storage and solar PV technologies continue to progress, especially with improved energy efficiency and energy demand management systems in place.
25. As pointed out in the CCC report and above, energy efficiency has a significant role to play in reducing energy demand. We very much agree with the idea of energy efficiency being seen as the

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first fuel: the cheapest (and least polluting) energy is the energy that is not used. This also ties in with setting energy efficiency as an infrastructure priority, as laid out above.

26. To support domestic renewables a clear and consistent policy framework is needed. Now that the feed-in tariff rates have been set for the next few years industry and householders can adjust accordingly and we welcome this stability. However we are concerned about the increase in VAT for solar PV.
27. Regarding community energy, recent changes to EIS, SEIS and SISR removed tax exemption for investors in the community energy sector, despite previous assurances from the Treasury that this would not happen. This represents a blow to the community energy sector, and combined with the cut in ambition in the feed-in tariff, the progress in community energy that we have seen could be setback.

Policy tools:

28. Relating to the proposed VAT increase on solar PV (as referred to above) we would ask that European legislation addresses the longer term barriers to renewables and that legislation on renewables is consistent. On the one hand there are significant EU Directives to encourage renewable energy yet on the other the UK has to increase its rate of VAT on solar PV, hydro and wind turbines. We would like to see a favourable tax regime for renewables.
29. Re-introduce tax exemption for investors in community energy schemes
30. Ensure that consistent and stable policymaking provides adequate incentives to the community energy sector beyond what is available under the FiT and that a long term perspective is taken for the industry to grow over the coming decades.

Transport

31. **CCC target:** emissions need to fall around 2% each year from 2014 to 2030. The budget recommends that this is achieved through conventional vehicle efficiency improvements alongside deployment of electric, increased uptake of hydrogen buses and behavioural change.

Challenges:

32. The VW emissions scandal has brought into question the progress made on convention vehicles emissions and particularly in the role of diesel engines in helping to meet carbon reduction targets. The introduction of real world emission testing is likely to further bring this issue into sharp relief, raising the effective scale of savings that need to be achieved within the duration of the 5th Carbon budget. Without the continual improvement of CO₂g/km in new cars seen over the last 5 or more years, more work will be needed to encourage more radical changes to the energy mix and efficiency of the UK's transport system.

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33. Putting aside the efforts to mainstream electricity as a transport fuel, key issues to tackle are vehicle and fuel mix used by companies; (businesses account for half of all car registrations and significantly more of vans), vehicle choice by consumers, in-car driver behaviour and the encouragement of alternative ownership models such as car-sharing. While progress has been made in all these areas, a step change will be needed in the new context VW has defined. Electric vehicles offer a fantastic opportunity, but as the new car market gains momentum there is a need to nurture the nearly new market. There are also problems around residential on-street charging which need concerted effort to overcome. Furthermore, public charging infrastructure needs better planning and to be future-proofed to ensure that operators of high mileage and high emission commercial vehicles are able to see a compelling business model for them to switch to ultra-low emission vehicles.

Policy tools:

34. Clearer policy is needed to better integrate personal transport and home energy. Technological solutions exist now to increase the efficiency of energy use through smart linkage of vehicles and homes and micro-generation. Energy markets and the way electricity is bought and sold has a material impact on how these efficiencies are realised.
35. Fiscal policy is key to creating the right environment for commercial investment in low emission vehicles. The tax regime needs to more clearly reflect the priorities of the carbon budget, further stimulating the move to low carbon and low emission vehicles.
36. Grants and incentives need to adapt to changing markets, ensuring that users beyond the early adopters of ULEVs are now supported and incentivised to take up new technologies. The nearly new market needs encouragement, advice and support to make better choices around vehicle choice and the viability of ULEVs.
37. Driving behaviour - which contributes to almost a third of all vehicle fuel use - needs stronger emphasis during learner training and testing and policy could be used to stimulate innovation from supply chains and manufacturers here. We recommend that the driving test is altered so that efficient driving faults are treated in the same way as other Driving Faults. In addition efficient driving training should feature much more prominently in instructor ADI training and become a mandatory part of the instructor ADI standards check.