

The existing homes alliance

Existing Homes Alliance Response to the Heat and Energy Saving Strategy Consultation: Published by DECC and CLG in February 2009

Introduction

The Existing Homes Alliance¹ (ExHA) welcomes the opportunity to respond to this consultation on the Government's Heat and Energy Saving Strategy. The ExHA is a coalition of organisations calling for urgent action to transform the UK's existing housing stock and make it fit for the 21st century. The members of the ExHA have extensive experience and knowledge of the housing sector and understand what is required to make the sector a low carbon one.

The Climate Change Act has set ambitious targets for the reduction of greenhouse gas emissions and the housing sector provides an excellent opportunity for the Government and UK to not only reduce these emissions but to create new jobs whilst moving towards a low carbon economy. The recommendations from the Committee on Climate Change (CCC) in the carbon budgets to 2022 have identified that 9 million tonnes of carbon dioxide (CO₂) can be saved through the retrofitting of the existing housing stock with low and zero carbon technologies. In WWF's How Low? Report² it was identified that residential emissions need to be cut from 45.8MtC (1990 levels) to less than 8.5MtC in 2050 to achieve the 80% target set out in the Climate Change Act. There is no doubt that the 80% target is a challenging one but it is one that the existing housing stock is well placed to meet if all the right elements are in place. In addition, the housing sector is the most likely sector to be able to achieve an 80% cut and it is possible that the emissions cuts from homes will need to go deeper than this if the UK is to achieve its targets under the Climate Change Act.

The implementation of a large scale low carbon retrofit programme for existing homes presents the UK with opportunities for; emissions reductions, the reduction of fuel poverty, improved energy security, the development and export of new skills and low carbon technologies and an opportunity to protect UK jobs. In their report *Building a greener Britain*³, the Federation of Master Builders (FMB) estimates that the market for green refurbishment and improvement could be worth between £3.5 billion and £6.5 billion per year. Thus, such a programme of retrofit will help insulate the UK from future economic difficulties by placing the UK at the forefront of developments for greener buildings.

Q1: Do you agree with the level of ambition and the indicative pathway set out in this chapter? If not, why, and what alternative would you suggest?

The ExHA welcomes the level of ambition laid out by the Government in this strategy and believes it is set at the right level. We are concerned however that the indicative pathway, whilst a useful framework, does not provide enough detail and it is therefore unclear how this will enable Government to achieve the level of ambition set.

We do have concerns however that the language of the strategy focuses on householders being given the "opportunity" to take up a whole house package. In order to achieve the ambition set out in the strategy 7 million homes need to have received whole house packages of measures and not just provided with the opportunity. As part of this we also suggest that a clear and robust definition of what constitutes a whole house package is provided as soon as possible. In addition, sufficient incentives will be required from the outset to generate a market of a sufficient scale to encourage the private sector to invest in skills and innovation.

The Government must also ensure that the delivery of the 7 million packages is spread evenly across the period from the end of CERT in 2012 through to 2020 so as to provide industry with certainty and the ability to meet the level of installations required. There must be an end to the stop/start delivery we have seen under EEC and more recently CERT.

Finally, the ExHA would like to see the Government move from this being an ambition to a clear duty to help ensure delivery of the carbon budgets recommended by the Committee on Climate Change.

Q2: Do you agree with the Government's policy approach set out in paragraphs 1.31 onwards to achieving our ambitions on heat and energy saving?

As answered in the previous question we support the overall ambition for tackling carbon emissions from the UK's existing housing stock and agree with the immediate challenges identified by the Government. We agree that the policy approach is the right one however paragraphs 1.31 onwards simply set out the broad policy areas and do not identify specific policies. It is imperative that the Government sets out specific policy measures to **deliver** the required carbon reductions in the time scales identified as a matter of urgency.

The ExHA feels that in order to deliver the required scale of carbon emissions from the UK's existing housing stock that a number of additional policy measures which are not currently included in this consultation document will be necessary.

These primarily relate to the introduction of stronger financial incentives, and include:

- Reform the energy market to introduce "fair fuel" or reverse tariffs which reward low energy consumption and penalise high consumption.
- Consider the use of fiscal incentives (such as council tax or stamp duty rebates) to trigger specific action at other points when not covered by 'consequential works' policies.
- We strongly welcome feed in tariffs and a renewable heat incentive, but prior to their introduction support ongoing easily accessible capital grants, and following their introduction, access to up-front loans to ease the burden of high upfront cost of certain measures and technologies to homeowners, private and social landlords.
- Link payment of all financial incentives to the achievement of certain minimum requirements or improvement standards, as well as use of accredited products and installers, to drive quality and achieve certainty of outcome.

A number of additional policies also relate to the Building Regulations (England & Wales) Part L and these are referred to in the response to Question 20.

Further research is also required to understand how this approach can be practically delivered on a wide scale. We are already aware of anecdotal evidence that homeowners are not taking up such simple measures as loft insulation due to the hassle factor. The realities of whole house improvement, potentially including insulating beneath floors and the addition of insulated linings internally, will only exacerbate these issues.

If the Government is committed to delivering on these targets their needs to be a mix of interventions in order to achieve them and both regulation and finance are key to ensuring delivery.

Q3: How can the Government encourage people and communities to change behaviour to save energy? What is the appropriate balance between changing attitudes, and providing advice and information?

In a literature review of research for the UK-GBC report into Low Carbon Existing Homes⁴ it was found that in general people are well versed on the issue of climate change and wanted more information about the specific actions they, as individuals, could take to make a difference. This desire for information and advice needs to be balanced with policy mechanisms that will **enable** householders to take action. Research undertaken by the EST into the installation of low and zero carbon technologies⁵ suggests that one of the major barriers to the implementation is the lack of an information and advice service that will take the customer from the initial advice right through to implementation. Householders are extremely unsure of the technologies available, the suitability of those technologies for their homes and how to find a trusted installer, all of which add up to inaction. Many do not have the skills or the desire to manage such a project themselves; further supporting proposals for a trusted central coordinating body (see Q17).

The focus for the Government regarding behaviour change must be on the provision of an advice and information service that will not only provide householders with access to advice but also take them through the whole process to final installation of measures in their homes. It is a mix of policy measures that will move people to a place where it is as socially unacceptable to live in an energy inefficient home as it is to smoke in certain public places. The Government must focus on the policy measures that will inspire and **enable** people to take action and change their behaviour towards their energy use in the home.

There are a number of additional measures that the ExHA proposes that will strengthen behaviour change to save energy:

- Review and strengthen the EPC as a tool, including making it more transparent, reviewing RDSAP, crucially reviewing the definition of 'cost effective measures' and consider the provision of information and benchmarking of actual occupant consumption. As part of this there needs to be a thorough overhaul of SAP/rdSAP to make it fit for purpose and ensure accuracy, consistency and coherence.
- Establish installer accreditation so that public trust will be fostered and link grants and other incentives to this.
- Encourage the development of low carbon refurbishment exemplars around the country to foster research and learning to demonstrate to the public what is possible and to inspire action.

Lastly we want to emphasise that it is important that consideration of how to achieve behaviour change is not limited to information, persuasion and encouragement alone, but also encompasses sensible use of standards and regulation which can be the cost-effective and reliable way of achieving end objectives. We believe it will be difficult, if not impossible, to achieve the level of ambition outlined in HESS without use of regulation (see question 21).

Q4: How can home energy audits be made most useful, and do you agree that the Government should use Domestic Energy Assessors, who have been suitably trained, to deliver them as widely as possible?

Home energy audits will be most useful to people if they identify **all** the measures that should be applied to bring that property up to a reasonable standard of energy efficiency, say a band B or C on the EPC. There should be a move away from the traditional focus on only those measures that are cost effective in the short term towards the whole house approach with a view to

meeting a minimum standard. The whole house approach will still deliver cost effective measures but ones which payback over a longer period.

ExHA supports the idea of using suitably trained Assessors, whether DEAs or others, to deliver this service. Assessors will need skills both in assessing homes and the softer skills required to give effective advice. DEAs who have received no additional training may lack these softer skills, and we believe new or follow-on qualifications therefore will be required to ensure that the right standards of service are delivered.

It is vital assessors remain independent of any particular programme or utility company in order to deliver the most appropriate advice tailored to individual households. In addition, we believe that continuous professional development of DEAs, in line with the necessary continual changes to the information provided through EPCs, will be required.

Q5: Should the Government work with industry to develop accreditation standards for advice about, and installation of, energy efficiency technologies? What would be the best model for such a scheme, and why?

We believe that a key issue with the installation of low carbon improvement measures is that they are currently not commonplace enough for the majority of people to have had experience of them and this has led to a lack of trust regarding installers. The development of accreditation standards for advice about, and the installation of, energy efficiency measures and technologies would be welcomed by the ExHA.

Energy efficiency measures should be installed before householders or businesses are eligible to apply for the incentives. This will help increase the uptake of energy efficiency measures and ensure that heating systems are sized correctly, maximising energy and carbon savings and minimising the risk of systems needing to be prematurely replaced in future.

The easiest way to achieve this would be to ensure that installations are MCS accredited and that the installers include an assessment of energy efficiency measures as part of their initial feasibility study. Requiring energy efficiency measures as a precursor to renewables becomes more difficult for the more costly EE measures such as solid wall insulation.

We believe that accreditation should extend to the building trades (general builders, electricians, plumbers, plasterers etc) to develop the necessary knowledge and skills and provide assurance that general work undertaken is consistent with the quality necessary to deliver low carbon refurbishment.

Within the ExHA membership there are organisations that have direct experience of developing accreditation and installer performance rating schemes and we would be happy to provide those contacts for the Government to obtain further details about such schemes.

Q6: Are the information, advice and support services provided by the Government to businesses effective in encouraging them to reduce their energy use and their CO₂ emissions?

While the ExHA does not work specifically in this area we believe that from discussions with other organisations there is scope not only to do considerably more with businesses to maximise the reduction of CO₂ from businesses but more specifically to provide much more support to small and medium sized enterprises (SMEs), including small builders, that make up a large part of the UK's economy.

Q7: Are the existing commitments for public sector buildings sufficient for the public sector to fulfil its role in driving improvements and leading by example?

The ExHA believes that the current recast of the European Directive on Energy Performance in Buildings contains several provisions which are central to its effectiveness and we hope that the UK will implement on time and in full:

- The requirement for all buildings (publically and privately owned) which are visited by the public to display an energy certificate – this requirement must relate to a Display Energy Certificate (showing energy in use), and not simply an Energy Performance Certificate (theoretical energy based on design).
- The Directive says that buildings occupied by public authorities should be required to implement all ‘cost effective’ measures within the lifetime of the certificate. This needs to be implemented on a realistic but ambitious timescale.

Q8: What will be the most effective way for the Government to develop RHI and FIT policy so that combined financing packages of insulation, renewable heat and small-scale low carbon electricity technologies might be offered?

In addition to the standard revenue payments the RHI and FIT offer, the option to take up the RHI and/or FIT as either a lump sum (based on the expected heat or energy generated), or as a combination of a lump sum and subsequent lowered revenue payments, should be offered at the point of capital investment in the qualifying renewable heat and/or small scale renewable electricity measures. This could provide a powerful additional incentive to take up and supplement the Government’s proposals for long-term loans. If and when the heat or electricity exceeds the prediction made when the lump sum was taken up, the revenue-based payment of RHI/FIT should resume – providing further incentive to maximise the productivity of the qualifying equipment.

Q9: What action, if any, should the Government take to enable finance to be arranged for the higher cost energy efficiency and low carbon measures? Are there other options the Government should consider? Please provide evidence to support your response.

There are many different examples of effective Government-backed financing schemes for energy efficiency across the EU and with the high up-front costs associated with the implementation of whole house energy efficiency measures the Government must look at implementing an appropriate financing scheme as soon as possible.

The ExHA has a finance working group looking at some of the current options available to the Government and we have produced a paper outlining the most viable options for implementation. The main conclusions of this paper are that there are three methods which are preferred options, all of which are more attractive to the consumer, are more cost efficient to the Government and have better funding leverage. This paper is attached as annex 1.

Q10: What should the Government do beyond these initiatives to promote investment in energy saving and low carbon energy technologies in business and the public sectors?

No comment.

Q11: Should levels of support through the Renewable Heat Incentive vary by technology and/or customer group? Are there any other ways of differentiating levels of support under the RHI?

Variation by technology will provide the flexibility needed to allow each technology to be installed where that is the most appropriate solution for the site. Some sites will not be suitable locations for all the technologies and it is important that all building owners are encouraged and have the opportunity to install renewable heat technologies.

However, this consideration should be balanced against the need to maximise the reduction of carbon emissions and to reflect the fact that smaller domestic technologies are more expensive per unit of energy produced than larger community or commercial scale ones.

Lastly, incentives should be used to encourage innovative ways of generating heat, for example, biogas from anaerobic digestion. At present contractors are being incentivised to burn waste to create electricity with the heat being lost.

Getting the balance right between these different considerations is not a simple task. Government needs a transparent process and effective consultation as it establishes the RHI levels.

Q12: How can we introduce the levy to fund the Renewable Heat Incentive so as to minimise suppliers' administrative costs and reduce uncertainty among suppliers of fossil fuels for heat?

No comment.

Q13: Do you think that financial institutions, such as banks or other loan companies, would be an effective way of assisting potential small-scale heat generators (such as householders) with financing of the initial capital cost of renewable installations?

As outlined in the ExHA's paper *'Paying for it'* there are many ways of administering a finance scheme for householders and this would include financing for small-scale renewable heat generation. Banks and/or loan companies could provide an effective mechanism for financing providing that they meet the conditions necessary for encouraging take up such as low interest and flexibility to take account of people moving homes. The 'Paying for it' paper highlights the criteria that any financing mechanism introduced by the Government should meet and will be sent as a follow up to this submission.

We would also recommend that in the use of banks and/or loan companies in this way that the Government ensure that they are "on message", i.e. they are required to offer support for investment in small-scale renewable heat in a consistent and recognisable manner with some degree of flexibility built in, similar to the way that ISAs are marketed and offered. Linked to this, government needs to ensure that provision of loans does not exclude those with poor credit ratings. It is vital that the benefits of these technologies are not limited to the wealthy few, especially as they have the ability to tackle fuel poverty (as shown in Scottish and Welsh pilots of microgeneration technology within fuel poverty programmes).

What other considerations, if any, should be taken into account when determining eligibility for an up-front payment (for example, only generators below a certain size can apply, such as domestic customers)?

The major groups that need incentivisation are the homeowner, and social and private landlords, and the scheme should be framed to acknowledge this. However, nothing should prevent small scale ESCO activity from qualifying for a grant.

Q14: How can we maintain demand for renewable heat technologies before we introduce the Renewable Heat Incentive?

In order to maintain demand so that industry can steadily scale-up to meet potential future demand the Government must provide householders with interim incentives to enable them to install such technologies. The Government's Low Carbon Buildings Programme has been successful in providing the early adopters of these technologies with additional incentive to install such technologies and the ExHA urges the Government to continue with this programme until the RHI is introduced or alternatively to provide financial incentives in another format to ensure a smooth transition to the RHI. The removal of incentives for renewable heat technologies could do untold damage to this industry in the current economic climate at a time when the Government should be investing in a move towards a low carbon economy. Without incentives householders will be more inclined to wait until the implementation of the RHI and we could see a situation whereby this sector scales down rather than increases capacity and skills which we arguably need if we are to achieve the ambition laid out in this strategy.

If the government cannot introduce the RHI earlier than April 2011 - an early announcement on eligibility is made to give certainty to those considering investing now that they will receive the tariff.

Thirdly, the government needs to find ways to engage with the heating installer industry to encourage them to promote the renewable option. This could be through accreditation and training schemes,

Q15: Do you agree with the proposal to continue with a CERT-type obligation until December 2012?

The ExHA understands the Government's reasoning behind the extension and scale up of CERT until 2012 to bring it in line with the carbon budgets and as such supports it. However, we assert that the Government should use this additional time to develop a robust programme to follow CERT that will focus on actual demand reduction and whole house carbon reductions rather than the current CERT model focussing on cost effective measures.

Do you also agree that the proposed CESP framework should sun concurrently to the same end date?

Yes.

Q16: Do you agree with our analysis of the potential impacts of a cap-and-trade approach to delivering energy efficiency in homes? Please support with evidence.

Whilst it would be optimal for energy suppliers to have an incentive to sell less energy, we broadly agree with Government that there is a good chance that suppliers will achieve this goal by simply increasing their prices. The market failure of energy efficiency cannot be solved by a simple market based mechanism such as cap-and-trade and requires greater intervention.

Q17: Do you have views on the merits of moving to a different approach for delivering energy efficiency to households? Do you have other suggestions of alternative delivery models which might be effective in achieving our objective?

The ExHA supports a transformation from the current household energy supply market to an energy services based approach. The way that the market currently operates means that energy supply companies make their money from supplying more and more energy giving them a clear disincentive for reducing demand. We believe that one way to remove this disincentive would be for energy supply companies to become energy service companies that provide energy services as opposed to units of gas and electricity.

Energy supplier led schemes have achieved significant levels of uptake of the cost-effective energy efficient measures. However on their own they are unlikely to be able to deliver the large scale change we want to see over the coming years.

The ExHA believes we need central coordination of delivery, whilst maximising the opportunities of supplier-led measures installation. This should involve working with local authorities, to better coordinate take up on an area by area basis. Lastly it's vital there is a seamless customer interface and journey. The market place will get more confusing, not less, and removing complication for the consumer is vital.

We believe that this is essential to achieve the set targets through ensuring the customer is engaged in the process through the use of trusted organisations (see Appendix 7 of the UKGBC Low carbon Existing Homes Report). It also offers improved opportunities for economies of scale and coordination with district heating incentives.

Q18: Would you support a voluntary code of practice on energy performance for landlords and/or builders? How high do you think uptake would be, and would it achieve much additional action? Please support your response with evidence.

Whilst not directly against a voluntary code of practice on energy performance for landlords and/or builders we question whether this would lead to any marked changes. To date private sector landlords have been particularly unengaged on this agenda with the stock within this sector generally being the worst performing stock in terms of energy performance. The main issue with landlords is that they cannot see a financial incentive for them improving their properties with the tenant benefiting from reduced fuel bills and increased comfort.

It is the opinion of the ExHA that better use and awareness of the Energy Performance Certificates will lead to a value being added to high performing rental properties through them being easier to rent out and suffering from fewer voids. Research carried out by the Energy Efficiency Partnership for Homes in 2008 and 2009 has highlighted that both tenants and landlords see substantial value in EPC information (for example over 80% of tenants think EPC information about heating costs is very useful and even potentially decisive in choosing a property), but it needs to be promoted and clearly presented. We urge the Government to better promote EPCs in both the rented and owner-occupied sectors. In addition, if a voluntary code were introduced we would like to see landlords being required to bring their properties up to minimum EPC standards before they can be let as part of this code and for such a scheme to begin immediately with first minimum standards from 2012 onwards.

We believe government should support and encourage local authorities who run existing accreditation schemes for private landlords to set minimum energy standards for let homes. Local Authorities should also ensure that homes let within Private Rented Schemes (whereby councils manage private rented homes) should also meet minimum energy standards. These

energy standards should be based on the EPC rating, and must specify at least an E rating to ensure that the home does not constitute a health and safety hazard: the government's Housing Health and Safety Rating System has identified that any home that is F&G rated is potentially a category 1 risk of excess cold for residents.

Q19: Should we require marketing material for property sales and rental to feature the EPC rating more prominently? If so how?

Yes. The ExHA supports the use of EPCs and believes that they have the potential to be valuable tools in raising awareness of the energy performance of homes and in encouraging change. We are pleased that the Government has recently introduced the 'first day marketing' of EPCs and it is key that this remains in place. The ExHA believes that the EPC label should feature on the front of the particulars of properties for sale and/or rent to enable people to become much more familiar with the energy ratings of homes and therefore, associated running costs. The EPC rating should also be required to feature in all marketing material, including estate agents' windows, press and internet advertising for sales and lettings.

What delivery bodies or industry groups could be given access to the EPC database, and how could they make best use of it whilst ensuring it is not misused?

The ExHA believes that EPC data should be widely available in order to make the most of this valuable tool and see where the areas are that require interventions most urgently. More widely available access to the data would support the Government's proposals to use an area based approach to low carbon refurbishment. We understand that safeguards will need to be in place with regard to this data but urge Government to look carefully at the benefits of access to this data.

The ExHA also believes that Local Authorities should be given access to the EPC database to target measures to the poorest performing areas (allied to areas of social need). This will also assist in their reporting against national indicator 186. We also support integration of EPC data within the Energy Saving Trust's Homes Energy Efficiency Database which already brings together CERT and Warmfront data to produce a picture of the energy efficiency of the housing stock - which can then be used, with appropriate safeguards by LAs and others (The Energy Saving Trust is already being given data on F&G rated EPC certificates, and has access to full EPC data in Scotland).

Q20: Besides removing the threshold for consequential improvements, which will be considered in the consultation on changes to the Building Regulation in 2009, are there any other options for wider building regulation that you would like to see considered in the longer term? Please support your answer with evidence for the effectiveness of your suggestions.

As stated in question 2 the ExHA believes that the following elements should be applied to Part L of the Building Regulations:

- Establish clear 'consequential works' policies as part of the Building Regulations which require minimum standards of whole house energy performance improvement upon changes such as extensions, loft conversions, conservatories and re-roofing, and publicise them so it is clear what will be required by when.
- Strengthen the existing minimum product standards for building elements (such as replacement windows) which can tighten over time, to send a strong message to industry to invest in improved product performance.

- Signal an intention to introduce minimum mandatory standards for EPCs in the future with an indicative timetable so homeowners and landlords know what will be required by when.
- Establish a targeted programme in the social housing sector such as a follow up programme to Decent Homes which targets substantial carbon emissions reductions and thermal upgrades of the social housing stock.

In addition to the above, the ExHA is concerned that the Government is considering not including conservatories in the consequential improvements in the forthcoming Part L consultation. The UK housing sector must make significant cuts in carbon emissions and as such we believe that the Government must include conservatories as part of the consequential improvements in Part L.

Q21: Do you agree with the approach of conducting a review in 2012 to assess the effectiveness of other policies before considering further policy interventions for the energy performance of existing buildings?

No. The ExHA does not agree that 2012 would be an appropriate point at which to assess the effectiveness of other policies. In the *How Low?* Report released in May 2008 WWF identified that in order to achieve an 80% reduction on emissions from the residential sector we needed to move from emitting 45.8MtC at 1990 levels to 8.5MtC in 2050 and the mix of policies required to support this. This level of emissions reduction is a challenge and one that can be met. However, in order to meet these targets we need to build capacity and skills to install measures immediately. We cannot wait 3 years for a review and a further year for that analysis to be complete before policy interventions are even consulted on let alone implemented. Housing has to meet a steep downward trajectory in emissions, one which becomes even steeper if it is to help meet the emissions from other sectors such as international aviation.

In addition, the ExHA asserts that funding incentives are required as a matter of urgency and should be in place, and available by December 2009, particularly as it will have a beneficial effect on job creation and retention of up to 200,000 jobs per year. As a consequence of market circumstances the construction industry is shedding jobs at an alarming rate. This decline needs to be reversed at the earliest opportunity such that this skilled workforce may be retrained and redeployed on the Great British Refurb⁶.

Q22: Do you agree that the Heat Markets Forum should consider regulatory arrangements for district heating to ensure consumer protection? Are there specific issues you think it should cover?

Yes, regulatory arrangements should be considered. This is not only for consumer protection, but in order to promote the standardisation of district heating from a technical, legal and commercial perspective. The lack of standardisation adds yet another burden to the District Heating developer. Issues currently have to be considered on a project by project basis, leading to considerable fees for the necessary legal and technical advice.

Q23: There are a number of ways to tackle commercial barriers to district heating. These include the planning system and heat mapping, encouraging or requiring certain buildings to connect to networks and engaging property developers. Which of these options should be taken forward and why?

Comprehensive heat mapping should be undertaken and free access provided to those maps. This needs to take into account the implementation of large-scale building refurbishment programmes, so that the long-term heat demands can be assessed.

However, this is just one step that needs to be taken in order to achieve large scale uptake of district heating. Major steps in policy need to be taken in we are going to see the potential of district heating realised. These include:

- Regulations should force developers of community-scale developments to integrate district heating where appropriate heat densities make this feasible. Incentives should be provided to encourage these schemes to connect to existing buildings in the locality.
- The speedy introduction of Renewable Heat Incentives and Feed-in Tariffs. These are essential in encouraging take-off of district heating schemes.
- Grants should be made available to providers to help with the capital cost.
- Long-term (5 to 10 years minimum) support is required due to the scale of the projects involved.
- Ensure that where feasible, new power stations are located in proximity to areas with high heat demand and that adequate incentives and finance allows for the creation of heat networks in order to make use of that heat.
- Engage with skills councils and RDAs to identify where skills shortages lie with regard to the construction of heat networks.
- Create incentives for households and businesses to connect once heat networks are built
- Develop independent data on community energy technology performance in the field..
- Raise awareness about the benefits of district heating and provide expert advice to those considering it.

Q24: What are your views on the options for reducing the risks of poor returns on investment in district heating networks? Which do you think would be most effective and are there other more appropriate solutions?

Local Authorities are key to the development of district heating schemes. They have an established and trusted relationship with residents and the ability to coordinate schemes. They also have access to local waste which should be used as fuel for district heating e.g. through the creation of biogas to be used in CHP systems. However, at the moment, only select local authorities are implementing such schemes. The government needs to encourage more local authorities to act

More generally, the following measures are needed to reduce risk:

- Introduce an effective Feed In Tariff and Renewable Heat Incentive which provide adequate incentives for district heating and CHP.
- Invest in education and international knowledge transfer
- Provide capital investment programme that provides capital to district heating networks across the country. The fund can diversify its risk across multiple sites, and DH developers can get access to capital with lower transaction costs. Local Authorities will be key stakeholders.
- Simplify the planning process for district heating schemes
- Use government estate buildings as the hub of heat networks as they will provide an anchor load for systems and ensure there is adequate demand.
- Connection subsidies for customers – this is vital to enable district heating schemes to of

Q25: Will the ETS and other policies, such as the Carbon Reduction Commitment and support for renewable combined heat and power, send a strong enough signal to encourage the development of CHP schemes and more efficient use of surplus heat? If not what measures do you believe would provide sufficient stimulus to accelerate new CHP capacity build? Can you provide evidence to support your view?

Policies which will provide needed support to CHP include:

- Extend the Climate Change Levy on gas CHP to give investors financial certainty
- Provide an exemption on the fossil fuel levy on gas used in CHP, as is already the case with the CCL
- Invest in R&D and support emerging technologies for CHP (e.g. biomass and fuel cell). This is vital for all low carbon technologies. A recent report by UKERC found that low carbon technologies including fuel cell CHP has significant prospects for accelerated development. Technology acceleration through a combination of increase public and private funding will lead to cheaper low carbon power and reduce the cost of reaching an 80% cut in CO₂ by 2050. The report found that the average benefits over the next 40 years are just under £1 billion per annum. However, there is a need for a step change in R&D funding to enable this to happen.
- Introduce an effective Feed In Tariff and Renewable Heat Incentive which provide adequate incentives for renewable and non-renewable CHP.
- Create sufficient incentives or regulations to ensure new gas power stations to locate near heat demands and make use of the heat they create through heat networks.

Q26: As electricity generation overall becomes much less carbon intensive than today, the advantages of CHP powered by fossil fuel in reducing carbon emissions will diminish, although it will continue to be a cost-effective energy efficiency measure. When do you think CHP powered by fossil fuels will no longer help to reduce emissions because the alternatives are less carbon intensive?

Fossil fuel generation will be with us sometime yet, so where it has to be used then the waste heat must be put to productive use. This implies a more distributed model for power generation, which will take time to establish. The regulatory support the uptake of CHP over the coming decades as part of this, but a step change in the current level of support will be needed.

The Energy Saving Trust's report, Power In Numbers⁷, found that should the grid decarbonise sufficiently (for example to around 0.24kg/kWh or below, from current level of c. 0.43kg/kWh), carbon savings from gas CHP would be eliminated. However, there is potential for renewable biogas from anaerobic digestion. A report by the National Grid found that with the right government policies in place, renewable gas could meet up to 50% of UK residential gas demand.

Q27: Should the Government do more to publicise the opportunities and benefits of CHP and surplus heat? If so, how should it do this, and which are the key audiences we need to reach?

Yes. We believe that greater understanding is required in the housing sector of CHP especially as the zero carbon homes policy will come into effect in 2016. It is likely that CHP will have a large role to play in the development of zero carbon homes and this too could have a knock on effect in the existing homes sector, potentially through the extension of networks to existing communities. As such local planning authorities will need to have a much greater understanding of how CHP and surplus heat can be used to benefit communities and developers of new build

and regeneration schemes will also need to better understand how CHP could benefit their developments.

Q28: Do you consider such cooling technologies can play a role in delivering a renewable and low carbon energy mix? What opportunities exist for their exploitation in the UK? What further factors do we need to consider?

Given that the UK is already experiencing changes in climate it is important to consider cooling technologies in the move to a low carbon energy mix. It is likely that the UK will see an increase in demand for cooling in homes and businesses and this will have a direct impact on the UK's energy demand. By factoring in cooling technologies at the early stages this will have an impact on not only on ensuring the most appropriate technologies to reduce carbon emissions are installed but will also ensure carbon reduction targets are met.

However, it is even more important to try and reduce demand for cooling in the first instance. Passive design measures can significantly reduce the demand for cooling, for example through using solar shading, natural ventilation and thermal mass. These techniques can largely eliminate the need for mechanical cooling and have been used successfully in much hotter countries.

The ExHA has a broad range of members and would be happy to provide the contact details for the Government to obtain further information to enable a better understanding of the opportunities that exist and the factors that need to be considered in their implementation.

Q29: Do you agree with our analysis of the likely impacts of the proposals in this document and in the associated impact assessments on:

- carbon dioxide emissions?
- energy prices?
- fuel poverty?
- security of supply?
- sustainable development?
- the economy?

The EXHA would like to reiterate that the Government must ensure that it meets the statutory duty to eradicate fuel poverty in vulnerable households by 2010, and all remaining households by 2016.

Are there any other wider issues that we should consider? Do you have any other comments on the Impact Assessments?

References

1. The Existing Homes Alliance (ExHA) is a coalition of organisations calling for urgent action to transform the UK's existing housing stock and make it fit for the 21st Century. For more details including the declaration and membership of the ExHA visit <http://www.existinghomesalliance.org/index.php>
2. WWF's How Low? report (May 2008) http://assets.wwf.org.uk/downloads/how_low_report.pdf
3. Killip G (2008) *Building a greener Britain: Transforming the UK's existing housing stock*, report for the Federation of Master Builders by the Environmental Change Institute, University of Oxford.
4. UK GBC Low carbon existing homes (October 2008) <http://www.ukgbc.org/site/resources/showResourceDetails?id=316>
5. EST Report, YIMBY Generation – Yes in my backyard! <http://www.energysavingtrust.org.uk/corporate/content/view/full/71565>
6. The Great British Refurb www.greatbritishrefurb.co.uk
7. EST Report, Power in Numbers <http://www.energysavingtrust.org.uk/corporate/Global-Data/Publications/Power-in-numbers-full-report>