

# DEFINITION OF ZERO CARBON HOMES AND NON-DOMESTIC BUILDINGS: CONSULTATION

Respondent Details:	
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<b>Is your response confidential? If so please explain why. (See disclaimer on page 13)</b> <b>Yes</b> <input type="checkbox"/> <b>No</b> <input checked="" type="checkbox"/>	
<b>Comments:</b>  <b>Are you responding as an individual?</b> <input type="checkbox"/> <b>Or are you representing the views of an organisation</b> <input checked="" type="checkbox"/> <b>?</b> <b>If you are responding on behalf of an organisation, please say who the organisation represents and, if applicable, how the views of members have been assembled.</b> <a href="#">This response represents the views of NHBC and has been assembled through consultation with colleagues. NHBC is not a membership organisation.</a>	
Provision is made throughout this questionnaire for you to provide additional comments. If, however, you wish to provide more detailed comments on any aspect of the consultation then please feel free to append additional materials and supplementary documents, clearly marked and cross referenced to the relevant questions, as necessary.	

<b>Organisation type (tick one box only)</b>			
House or property developer	<input type="checkbox"/>	Local authority – Planning	<input type="checkbox"/>
Commercial Developer	<input type="checkbox"/>	Local authority – other (please specify)	<input type="checkbox"/>
Housing Association (Registered Social Landlords)	<input type="checkbox"/>	Approved Inspector	<input type="checkbox"/>
Property Management: Residential Commercial Public sector	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Professional body or institution	<input type="checkbox"/>
Builder – Main Contractor (commercial/volume house builder)	<input type="checkbox"/>	Trade body or association	<input type="checkbox"/>
Builder – Small Builders (repairs/maintenance, etc)	<input type="checkbox"/>	Householder: Homeowner Tenant	<input type="checkbox"/> <input type="checkbox"/>
Builder – Specialist Sub Contractor	<input type="checkbox"/>	Energy sector: Generation Transmission Distribution Supplier Energy Service Company	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Manufacturer	<input type="checkbox"/>	Other non-governmental organisation	<input type="checkbox"/>
Architect	<input type="checkbox"/>	Specific interest or lobby group	<input type="checkbox"/>
Civil/Structural Engineer	<input type="checkbox"/>	Research/academic organisation	<input type="checkbox"/>
Consultancy	<input type="checkbox"/>	Journalist/media	<input type="checkbox"/>
Individual in practice, trade or profession	<input type="checkbox"/>	Development funder	<input type="checkbox"/>
Local authority – Building Control	<input type="checkbox"/>	Other (please specify): <a href="#">Housing warranty provider</a>	<input checked="" type="checkbox"/>
<b>Geographical Location</b>			
England	<input type="checkbox"/>	Wales	<input type="checkbox"/>
England and Wales	<input checked="" type="checkbox"/>	Other (please specify)	<input type="checkbox"/>

## Questions

### Section 4: Overview of Proposed Approach

**Q1.** Do you agree that the Code for Sustainable Homes should be revised to reflect the approach to zero carbon homes described in the hierarchy set out in Section 4?

Yes  No  Do not know

**If you agree, how do you think the Code should be revised?**

It is essential that the Code for Sustainable Homes and the Building Regulations align. As a matter of principle, we consider that the shape of future Building Regulations should be decided upon through this consultation and fixed before further changes are made to the Code.

**If you have any further comments on Section 4 please add them here**

### Section 5: Energy Efficiency and Carbon Compliance

**Q2.** Government is minded to require very high levels of energy efficiency in 2016, broadly equivalent to some of the most demanding standards currently published by third parties (such as PassivHaus and Energy Saving Trust). Do you agree with that ambition?

Yes  No  Do not know

If you do not agree to setting very high energy efficiency standards for homes, please say why you disagree.

Yes, we agree with the 'fabric first' approach and consider that this is most likely to yield long-term benefits. The challenge to the industry in achieving these very high levels of energy efficiency should not, however, be underestimated. They are exceptionally demanding and, to date, few homes have achieved these standards, even internationally.

Masonry construction is currently used for the majority of new housing and it will face a particular challenge in achieving these standards. We would doubt whether there will be sufficient capacity amongst suppliers of MMC (modern methods of construction) and whether there is sufficient experienced labour available to support a widespread move away from masonry construction.

These considerations will need to be taken account of when working up the detailed requirements of Part L 2016.

**Q3.** Do you agree that the approach to carbon compliance should not favour a direct physical connection of electricity or of private wire over connections via the distribution network?

Yes  No  Do not know

We consider that private wires would unnecessarily duplicate the existing National Grid infrastructure and therefore represent a carbon cost, rather than a benefit.

**Q4.** Government is minded not to allow offsite renewable electricity to be claimed as part of the carbon compliance calculations. Do you agree with this approach?

Yes  No  Do not know

We agree that full consideration should be given to the use of various onsite technologies where opportunities for their use exist. However, it is acknowledged that there will be developments on which the scope for onsite generation is very limited, the viability of which will be adversely affected. Whether such developments can go ahead (if offsite renewable energy cannot be claimed) will be entirely dependent on the level that is set for carbon compliance.

**Q5.** Is the Building Control system the right regulatory framework for monitoring and enforcing carbon compliance?

Yes  No  Do not know

If not, what approach would you prefer and why?

Building Control is undoubtedly the right framework for dealing with onsite technical issues. There is no reason why Building Control Bodies cannot also deal with 'connected heat'.

**Q6.** Does the analysis of carbon dioxide reductions from different technologies and the associated costs set out in Annex E look about right to you?

Yes  No  Do not know

If not why not?

We do not have access to data that would allow independent analysis.

**Q7.** Is it right to rule out a carbon compliance level based on eliminating 100 per cent of regulated emissions plus emissions from cooking and appliances onsite as from 2016?

Yes  No  Do not know

If not, why not?

This is not a realistic proposition and for the vast majority of developments the costs would be totally disproportionate.

**Q8.** Assuming feed-in tariffs and renewable heat incentives cannot be claimed towards the cost of installing low and zero carbon energy in support of a new home, which of the following carbon compliance levels would you favour for 2016 (please tick):

(i) a continuation of the 44% to be introduced from 2013

or (ii) 70%

or (iii) 100%

Please give reasons for your preference:

We consider that maximum flexibility should be permitted in the early years of this new requirement in order to allow cost-effective solutions to emerge.

The focus of the policy should be on maximising the reduction in CO<sub>2</sub> emissions per pound spent and 'allowable solutions' have, in general, the greatest potential to do this. Paragraph 7.14 specifically notes that onsite carbon reductions are less cost-effective than allowable solutions.

Our view is strengthened by the current appalling state of the house-building industry. There seems little prospect of developers being able to recoup the additional costs of construction from sales premiums.

Setting a higher carbon compliance level would, in our opinion, seriously compromise the ability of the house-building industry to assist the Government in achieving its housing objectives of building 3 million homes by 2020.

**Q9.** If feed-in tariffs and/or renewable heat incentives could be claimed by a house builder or energy service company, what would be your answer to the previous question (please tick)?

(i) a continuation of the 44% to be introduced from 2013

or (ii) 70%

or (iii) 100%

Please give reasons for your preference:

The reasons outlined at Q8 still remain, even if the economics are improved somewhat.

**Q10.** Following the outcome of this consultation, should Government indicate the level of carbon compliance proposed for 2016 as:

(i) a single number

or (ii) a range, with the final number to be decided through subsequent Part L reviews?

If you prefer a range, how wide should the range be (please express as a number)?

**If you have any further comments on Section 5 please add them here**

CLG should give consideration to the possibility of starting with a relatively low number and increasing it over time. The rate at which the number is increased could take account of the ability of the UK economy's ability to absorb the costs of zero carbon and the state of the house-building industry at the time.

## Section 6: Allowable Solutions

**Q11.** Do you disagree with the inclusion of any of the allowable solutions listed in Section 6.3?

Yes  No  Do not know

If you do disagree, please list which allowable solutions you disagree with and state your reasons.

We consider that each of the allowable solutions has merit and that having a range from which the developer is able to choose will improve the likelihood of the policy working in practice.

**Q12.** Assuming directly connected offsite renewable electricity does not count towards carbon compliance, should it count towards the allowable solutions?

Yes  No  Do not know

Yes, it is a perfectly valid solution as it is reducing CO<sub>2</sub> emissions.

**Q13.** Are there any further measures which you think should be added to the list of allowable solutions at this stage?

Yes  No

If so, what are they and why should they be added now?

No, but we do welcome the fact that other additional measures will be considered in due course as they arise. This will encourage innovation.

**Q14.** Please provide any views on how the Community Infrastructure Levy (CIL) might be used as an allowable solution in a way that is consistent with the Government's approach to the CIL.

The proposal to allow CIL to be used is welcomed in principle, although we are not able to contribute specific ideas of how this may work in detail.

**Q15a.** Paragraph 6.6 notes that carbon compliance measures and nearly all the allowable solutions relate to measures undertaken in the locality of the housing development. Do you agree that this provides sufficient emphasis on local measures?

Yes  No  Do not know

**Comments :**

Yes, it does give sufficient emphasis. However, given that CO<sub>2</sub> emissions and climate change are a national and an international issue, we do not think it is necessary to emphasise local measures unduly.

**Q15b.** Alternatively, would you favour an approach which gives further prioritisation to local emissions reductions?

Yes  No  Do not know

If so, how do you suggest this should be achieved?

Should there be a further distinction between reductions achieved in the same government office region as the zero carbon home versus reductions achieved elsewhere in the UK?

Yes  No  Do not know

**Comments:**

For the reason that CO<sub>2</sub> emissions and climate change are not local issues, we consider that there should be no such distinction. Also, there may be unintended consequences for developments on or close to regional boundaries, e.g. a limitation imposed on exporting heat to the neighbouring community because it is in another region.

**Q16.** Do you agree that the review mechanism proposed for 2012 will provide predictability for industry now, while enabling the policy to be adjusted in the light of developments between now and 2016?

Yes  No  Do not know

**Comment**

The mechanism proposed probably represents an acceptable compromise. However, clearly it would be desirable if it were possible to provide greater certainty at an earlier stage.

**Q17.** Should development on brownfield land be subject to derogations from allowable solutions that are not available to other forms of development?

Yes  No  Do not know

If you agree the brownfield land should be subject to such derogations, please say how this could be done?

We do not have sufficient information to be able to express a considered view.

**Q18.** Do you agree with the proposed scope of the review mechanism?

Yes  No  Do not know

If not, please set out what you think the scope should be.

The mechanism proposed appears to represent an acceptable compromise.

**Q19.** Is 2012 the right time to undertake a review of the allowable solutions?

Yes  No  Do not know

If not, do you think the review should be (i) earlier  , or (ii) later  ?

**Comments:**

We agree with a review in 2012 - it appears to be a sensible compromise.

**Q20.** Please indicate which one of the following is your preferred basis for setting the capped cost:

(i) Shadow Price of Carbon

or (ii) price of carbon dioxide implied by Renewable Obligation Certificates;

or (iii) price of carbon dioxide implied by incentives for emerging renewable technologies (ie two ROCs)

Please give reasons for your preference.

It is appropriate to use the Shadow Cost of Carbon because that is the figure used for the appraisal of Government policies.

**Q21.** Of the following, which is your preference as to the number of years of residual emissions to be covered via allowable solutions:

(i) 30 years  ,

or (ii) 60 years

Please give reasons for your preference.

The reason outlined at paragraph 6.42 is logical, although for some onsite LZC technologies, 30 years would be at the upper end of their expected lifetimes.

**Q22.** If you do not think that either 30 or 60 years is appropriate, then please say what your approach would be.

**Q23.** Do you consider that the role outlined for Local Planning Authorities in paragraphs 6.52 - 6.56 is reasonable in relation to their capacity and expertise?

Yes  No  Do not know

**Comments:**

Evidence to date suggests that some LPAs have had some difficulty in dealing with the technical issues related the energy/CO<sub>2</sub> agenda and there will need to be considerable investment in order to improve their knowledge and future performance.

Capacity and expertise may be a continuing issue for some smaller LPAs and those encountering new housing less frequently.

**24.** Do you consider that the role outlined for Building Control Bodies in paragraphs 6.52 - 6.56 is reasonable in relation to their capacity and expertise?

Yes  No  Do not know

**Comments:**

BCBs are certainly capable of fulfilling the role described.

**If you have any further comments on Section 6 please add them here**

Paragraph 6.54 refers to the LPA 'generating opportunities' for allowable solutions. Hopefully it is the intention that the builder would have the opportunity to choose between these or any other allowable solutions and not for the LPA to insist on particular solutions.

## **Section 7: Costs and Benefits**

**Q25.** Do you agree that the Impact Assessment broadly captures the types and levels of cost associated with the policy?

Yes  No  Do not know

If you do not agree, please say why not.

The scope appears to be broadly correct. We do not have information that would enable us to independently verify the costs.

**Q26.** Do you agree that the Impact Assessment broadly captures the types and levels of benefits associated with the policy?

Yes  No  Do not know

If you do not agree, please say why not.

The benefits of the policy are not clearly laid out.

**Q27.** Do you agree that the Impact Assessment reflects the main impacts that particular sectors and groups are likely to experience as a result of the policy?

Yes  No  Do not know

If you do not agree, please say why not.

**If you have any further comments on Section 7 please add them here**

Please make any further additional comments here, ensuring that you clearly refer to any relevant questions or responses submitted above.

**Any other comments:**

The state of the house-building industry has changed, almost beyond recognition, from the time of publication of *Building a Greener Future* and it continues to worsen. Whilst the zero-carbon targets are seven years away, with housing starts at a record low, a sizeable proportion of the house-building industry is struggling even to remain in business. This does not put it in a good position to prepare for the zero carbon future or even engage with this consultation.

There is considerable uncertainty as to how long the recession will last, and the industry's ability to recover from it and deliver increased output. Clearly the zero-carbon policy will add to the challenge very considerably and is likely to have a detrimental effect on the supply of new homes.

We seriously question the ability of the UK economy to absorb the enormous cost of this policy and have seen few signs that potential homeowners are willing to pay a premium for a zero carbon home. Indeed evidence suggests that lenders' valuations no longer attribute a premium for new homes at all.

NHBC firmly believes that the challenge of building all new homes to energy efficiency standards approaching those of PassivHaus or EST is, of itself, considerable and represents a step change for house builders. We consider that this should be recognised by a pragmatic approach being taken to setting the minimum carbon compliance level.

Adopting a low carbon compliance level and allowing the residue to be made up through allowable solutions would meet the objective of achieving zero carbon homes most cost-effectively, while:

- allowing builders to focus on one challenge at a time (i.e. initially achieving standards approaching those of PassivHaus or EST), and
- allowing further progress to be made in the development LZC technologies and their industries to grow in a controlled way.

Then, dependent on the state of the economy, the house-building industry and technology, etc., the option could be taken to ratchet up the level of carbon compliance at a later stage.