



ZERO CARBON HOMES

PROGRAMME DELIVERY TIMELINE

2016 Taskforce – 25th June 2013

Overview

Overall status – Red, many aspects require urgent and decisive action

The overall status has been re-graded to **RED** (from Red-Amber) but depending on what is published for Part L 2013, some items may be re-graded.

With the full consensus of the group the overall status has been re-graded to RED. Some critical issues raised in the last timeline report in 2012 have not been progressed. The 2016 deadline remains seriously challenged by a lack of certainty, particularly resulting from delays in the expected key policy announcements from Government, although the Budget statement was recognised as helpful in clarifying the journey. However, there is simply an enormous amount to do and some intractable issues to solve in a very short time, and without immediate and concerted action by industry and government, puts the entire zero carbon timeline in jeopardy.

The lack of certainty to the development of specific policies is now extremely serious and several of the subjects have been re-graded since the last report. These include both Carbon Compliance and 'Scale up' which now move to Red-Amber, together with Allowable Solutions which moves to 'Red - Critical'. Please note that whilst the Fabric Energy Efficiency Standard has not been re-graded it remains a material concern as to whether the FEES methodology will be embedded in Part L 2013 in full and indeed what information Part L might contain that moves the zero carbon policy forward.

The group noted that some certainty was provided by the Budget statement regarding an upcoming Allowable Solutions consultation. However the group remain seriously concerned by the two year delay to the development of this policy since the commitment made in the document 'A housing Strategy for England', although recognising that work undertaken by the Zero Carbon Hub in conjunction with DCLG on Allowable Solutions in that period has been helpful. The group remain frustrated that an announcement on Part L 2013 is delayed from the signals given in the Budget statement.

The group awaits the consultation on the Housing Standards Review and recognises that this set of issues must be considered in conjunction with the policies associated with the Zero Carbon Hierarchy. The National Compliance methodology (SAP) remains at Red. There has been very limited progress on the Carbon Compliance Standard since March 2011 and this is critical to the development of the 2016 regulations. The Hub has the potential of some external financial support to assist in developing some of these unresolved issues. There is also increased concern around 'Scale up' where the lack of investment in trialling the three aspects of the zero carbon hierarchy is an issue and one with strong links to the lack of development of skills and knowledge.

This group is asked to consider:

- The current RAG status of each critical element which impacts on the journey to zero carbon 2016.
- What needs to be done by industry and government to improve the RAG status.

Key Points

Fabric Energy Efficiency Standard (FEES) (Green)

- The minimum FEES for low and zero carbon homes has been embedded in the Code for Sustainable Homes (since November 2010) although there is little experience and therefore feedback from industry on its implementation (less than 1000 homes built to-date).
- Concern was raised over the lack of skills and knowledge being embedded in the industry relating in general to increasing housing standards, and in particular to FEES. However this concern is reflected in the Knowledge & Skills and Scale up sections so does not influence the RAG status of the FEES itself.
- In order to drive this learning some expressed the opinion that should the Part L 2013 amendment not utilise the FEES methodology, this would be a severe set-back for the path to zero carbon from 2016. However, others still supported a no-change approach given the current economic conditions.
- The group concluded that this element is at risk of being re-graded towards red on the RAG scale and noted that the uncertainty over what the final position for Part L 2013 will be is extremely problematic.



Carbon compliance (Red-Amber)

- There has been very limited action from government on the outstanding additional work from the Carbon Compliance Standard (CCS) report (Feb 2011), with the exception of the commissioning of the Design vs As-built Performance Gap project. This is of serious concern to the group and has caused the status to change from Amber to Red-Amber.
- Industry has previously sought further clarity on issues surrounding the Carbon Compliance standard including: i) modelling additional small dwellings, ii) determining the level for high rise buildings, iii) determining the weather assumption to be used, and iv) determining 'development averaging' and had offered support in doing so. Carrying out/ commissioning this work without further delay would cause the RAG status to be improved. (Government previously confirmed to the Task Force its intent to consider these issues in preparation for regulation change in 2016).
- The group felt that a review of the assumptions used as a basis of the Carbon Compliance work would be useful, including an update of the costs. However, it was stressed that any additional modelling work should be carried out using SAP2012 and that the work would need to be cognisant of any implications from Part L 2013 regulations.
- The Code for Sustainable Homes has yet to reflect requirements of Carbon Compliance, which is delaying the opportunity to evaluate the Standard. However, the opportunities for trialling Carbon Compliance will now need to be considered in light of any recommendations coming out of the Technical Housing Standards consultation.
- The potential simplification of the zero carbon hierarchy was briefly discussed, and whether there was a need for a Carbon Compliance standard at all, but no conclusions were drawn at this stage.



Allowable solutions (Red - Critical)

- Ahead of a formal consultation on Allowable Solutions announced for summer 2013, the Zero Carbon Hub held a workshop on 9th May 2013 on behalf of government to re-convene key stakeholder groups. The aim was to identify those issues that are important to industry, and other key stakeholders, and which need to be addressed within a framework for Allowable Solutions
- Despite this recent movement, the group were extremely concerned over the lack of progress in this area over the last two years, which has caused the RAG status to be re-graded to 'Red -

Critical'. The group stressed that in order for the RAG status to be improved swift action is required to set out in detail key aspects of a workable framework (including cost per tonne CO₂) which must be simple to implement.

- The lack of clarity has resulted in some Local Authorities creating their own Allowable Solutions schemes (sometimes referred to as Carbon Funds). Examples the group cited include Brighton, Islington and Milton Keynes. This reinforces the need for a pressing and urgent action around a national framework to ensure a level of consistency and avoid ineffective use of development capital for CO₂ abatement in the built environment.
- Finally, and of great concern, the severe lack of policy certainty coupled with fragmented early action by some local authorities in this area, risks amplifying the difficulties now being faced by house builders and their supply chains in making future commercial decisions.



Scaling up examples of low carbon and zero carbon homes (Red-Amber)

- Consistent scale up and dissemination of learning prior to regulations being introduced is an important element of safely and efficiently delivering the zero carbon homes policy.
- There is a need to follow the Research, Development, Demonstration, Deployment cycle, but the group were very concerned about the lack of demonstrators which has resulted from a number of issues including funding being withdrawn from HCA to support advanced standards, uncertainty over the zero carbon definition, and the fact that the rate of build has been much slower than anticipated when the zero carbon policy was first announced. It was noted that a continuous improvement model with a knowledge sharing loop for the whole of industry is important to support scale-up.
- There is therefore significant concern that the numbers of dwellings required to meet the 'scale up' requirements will not be met. This significantly reduces the predictability and planned nature of scale up and the opportunity to disseminate learning. However, projects such as AimC4, undertaken by industry, are expected to provide some learning.
- The Code for Sustainable Homes has been of use in providing examples to advanced standards but with the Technical Housing Standards Review even this small body of evidence is likely to be curtailed fairly quickly. Hence the RAG status has been moved to Red-Amber.
- To improve the RAG status, a driver needs to be put in place to allow for learning to be gathered.

National compliance methodology - SAP (Red)

- The group emphasised that the issues surrounding SAP are a serious and severe risk to the delivery of Zero Carbon Homes from 2016 and hence the RAG status remains at RED.
- The group considered splitting the SAP RAG status into two elements whereby the tool itself would reflect an 'Amber-Green' status but the lack of Policy decisions for SAP development would lead to a 'Red – Critical' status, however it was felt more helpful to continue to consider SAP as a single issue.
- The inclusion of a Quality Assurance process in the recent tender for the management of SAP is seen as beneficial but many issues regarding the inputs and assumptions continue to concern the group.
- Serious concern was expressed over the potential effect on stalling innovation if changes are not made to SAP in a consistent and timely manner. In particular, barriers to achieving acceptance of products into appendix Q continues to restrict innovation.
- It is helpful that the overheating risk with homes built to higher energy efficiency standards (including those built to 2006 regulations) is being investigated by industry and DCLG (albeit to a limited extent), yet there is not currently an adequate tool for guiding designers and the approach to address this could fundamentally alter the development of SAP as well as the regulations.

- The group supports the inclusion of the Zero Carbon Hub as part of the ‘SAP Integrity Group’ but feel strongly that a representative of the house building sector is also included.
- In order to improve the RAG status of this item, a clear and unambiguous Policy statement on how SAP is going to evolve up to 2016 and beyond is required, providing certainty to industry to carryout R & D and enable the sector to ‘model’ 2016 building types.

Designed vs As-built Performance (Green)

- The Zero Carbon Hub has been commissioned by DCLG to carry out a full review of the Design versus ‘As Built’ performance gap and has provided significant funding for this work. The work programme is focused on developing solutions without the need for regulation. Work Groups have been established and good progress is being made. The group are very supportive of the work to date and a public facing interim progress report will be available in Mid July.
- The group has agreed that this issue can now move from ‘no status’ to ‘Green’ as industry has been commissioned by government to undertake a review of this subject and propose solutions.

Knowledge and Skills (Amber)

- The continued low level of housing delivery and the lack of policy clarity from government are delaying investment in the development of knowledge and skills across the individual construction sectors. It is helpful that the Skills Council is trying to develop solutions but the lack of certainty and limited house building output (particularly amongst SMEs) continues to leave the group seriously concerned.
- With the limited improvement in the house building sector and continued poor health of the construction industry as a whole there is little R&D capital and therefore concern that knowledge and skills are leaving the industry as opposed to being enhanced.
- Organisations such as NHBC, HBF, HBA, FMB et al continue to work with CITB ConstructionSkills to assess the current needs of the industry and produce clear evidence of shortfalls going forward. The latest NHBC Foundation report reflects the AMBER status.

Community and large-scale energy solutions (Amber)

- Whilst the definition of Carbon Compliance does not in itself result in increased reliance on community and district energy solutions, there is a need for a suite of ‘off the shelf’ legal and administrative frameworks to help speed deployment and reduce costs (improve viability) where these networks are technically appropriate or stipulated locally.
- The recently published DECC strategy on Heat offers some clarity on the role that district heating should play in the journey towards decarbonised heat supply in the UK. However, concern was expressed by the group around the policy gaps which still exist which may prevent this vision transforming into reality. At present the majority of the house building industry is focusing on individual/ small scale energy solutions and there a lack of funding for community schemes.

Rob Pannell, Zero Carbon Hub

20th June 2013

Key



Status degraded since last review

Appendix A

The Zero Carbon Hub maintains a series of timelines and convenes a cross-industry ‘Timeline Group’ on a regular basis to review and report progress.

Summary: Programme status by report

Programme Delivery Timeline Report No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Date	Oct 2008	Jan 2009	Apr 2009	Oct 2009	Jan 2010	Nov 2010	Mar 2011	Jun 2011	Sep 2011	Nov 2011	Jan 2012	May 2012	Jun 2013
OVERALL PROGRAMME STATUS	A	A	A	A	A	A	A	A	RA	RA	RA	RA	R
General comments	/	/	AG	AG	AG	/	/	/	/	/	/	/	/
EPBD	/	/	A	A	G	/	/	/	/	/	/	/	/
Definition of Zero Carbon	/	/	A	AG	(See below)								
Fabric Energy Efficiency Standard (FEES)	/	/	/	/	G	G	G	G	G	G	G	G	G
Carbon Compliance	/	/	/	/	AG	G	G	G	AG	AG	A	A	RA
Allowable Solutions	/	/	/	/	R	RA	RA	R	R	R	R	R	RC
National Calculation Methodology - SAP	/	/	AG	RA	RA	RA	RA	R	R	R	R	R	R
Design vs As-Built Performance	/	/	/	/	/	/	/	/	/	/	/	/	G
Low carbon pre-production homes	Scaling up examples of low carbon and zero carbon homes	/	AG	AG	AG	AG	AG	A	A	A	A	A	RA
Zero carbon prototype homes		/	AG	AG	AG								
Scale-up		/	AG	RA	RA								
Knowledge and Skills	/	/	A	A	A	AG	AG	A	A	A	A	A	A
Miscellaneous	/	/	AG	AG	AG	/	/	/	/	/	/	/	/
Community and large scale energy solutions	/	/	/	/	/	A	A	A	A	A	A	A	A

KEY

R	Red	Highly problematic	Requires urgent and decisive action
RA	Red/Amber	Problematic	Requires substantial attention
A	Amber	Issues	Some aspects require substantial attention, some good
AG	Amber/Green	Mixed	Some aspects require substantial attention, others good
G	Green	Good	Requires refinement and systematic implementation

Please note that in order to signal the critical nature of Allowable Solutions this is now graded as ‘Red – Critical’ [RC]

Appendix B

The Zero Carbon Hub maintains a series of timelines and convenes a cross-industry 'Timeline Group' on a regular basis to review and report progress. The Timeline Group met on the 22nd April and 13th June 2013 and considered what progress had been made since the previous meeting on 16th May 2012.

Timeline Group members

CHPA

CPA

EST

FMB

HBF x3

HBA x2

HCA

LGA

REA

SummitSkills

TCPA

UKGBC

ZCH Energy WG Chair

Observers

DCLG

DECC