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# ZERO CARBON HOMES - PROGRAMME DELIVERY TIMELINE

2016 Taskforce – 14 February 2012

## Overview

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 20 January, 2012 and considered what progress had been made since the previous meeting on 7 November 2011.

The overall status was downgraded from 'Amber' to 'Amber Red' in September and the reasons for this downgrading remain. With the continual delay in resolving the outstanding issues relating to Carbon Compliance the group have moved its status from Amber-Green to Amber. The National Compliance methodology (SAP) remains at Red despite the release of the consultation for SAP2012 on 4 January because the consultation lacked the necessary progress required to meet the 2016 deadline. The timeline group felt that progress in the other areas assessed had not been significant enough to improve their status.

The outstanding work on the Carbon Compliance Standard has not progressed since publication of the report in February 2010. The Hub has secured some external financial support to assist in developing some of these unresolved issues.

The group was pleased to see the progress being made with Allowable Solutions, although the status of this item remains at Red. There is also concern that the Code for Sustainable Homes (CfSH) has not been revised to reflect the new zero carbon definition for 2016, which continues to confuse industry as a whole.

**It should be noted that the group met prior to the publication of the Part L 2013 consultation and hence were not able to assess the areas in this report in light of its content.**

The group felt its membership should be expanded to reflect the membership within the Taskforce and invites will be sent to the relevant parties for the next meeting.

**Overall status – Red Amber**, some aspects require substantial attention.

## **Key Points**

### **Scaling up examples of low carbon and zero carbon homes (Amber)**

- Consistent scale up and dissemination of learning prior to regulations being introduced is an important element of safely and efficiently delivering this zero carbon homes policy.
- HCA funding to support early adoption of low and zero carbon standards (including Code Level 4) is no longer available with their quality standard requirement now remaining at Code Level 3 for the current funding round. There is significant concern that the numbers required to meet the 'scale up' requirements will not easily be met. This significantly reduces the predictability and planned nature of scale up and the opportunity to disseminate learning.
- The Code for Sustainable Homes is an important aid to encourage early learning but there is concern that the late revision of the Code to reflect the latest zero carbon definition is creating confusion and creating mixed messages for industry and/or resulting in unintended consequences. The Code should be amended to ensure both Carbon Compliance and Allowable Solutions can be tested.
- Some local authorities are seeking to push further with various levels of the Code and this is more apparent in London and the South of England. Local requirements should be encouraged to support a national scale up trajectory but, left to local decision making, the risk is that scale up is inefficient with inconsistent demands, lack of critical mass and little consolidation of feedback (technical and consumer reaction).

### **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 feedback from industry on its implementation.
- The Part L 2013 process is utilising the FEES methodology and considering the appropriate level for minimum fabric efficiency standards on the path to zero carbon from 2016.
- A number of companies have embedded FEES in to their business practices. FEES is a requirement of the HCA's Public Land Initiative and some 1,200 homes are under construction using this methodology.
- The FEES is also being tested in detail as part of a Hub-led monitoring project of 12 new flats in Rowner as part of the TSB 'Building Performance Evaluation' programme.



### **Carbon compliance (Amber)**

- The outstanding additional work from the Carbon Compliance Standard (CCS) report is causing concern. This further work includes: i) modelling additional small dwellings, ii) determining the level for high rise buildings, iii) determining the weather assumption to be used, iv) determining the pathway and supporting 2013 regulations for delivering 'as built performance' and v) determining 'development averaging'. Therefore the group decided that due to the lack of progress in this area its status should be downgraded to Amber.
- Further, the Code for Sustainable Homes has yet to reflect requirements of CCS, which is delaying the opportunity to evaluate the Standard.

### Allowable solutions (Red)

- The Zero Carbon Hub, in conjunction and with guidance from DCLG, has set up a series of workshops to further explore and challenge the framework for Allowable Solutions developed by the Hub in 2011, with the aim of developing a fully detailed mechanism. These will continue until at least the Budget statement expected from Government. However, the lack of a defined timescale for the development and adoption of a clear policy is hindering commercial certainty within industry.
- The Budget 2011 'Plan for Growth' report announced that the 2016 zero carbon definition would cover regulated energy only and also indicated that the carbon price would be at the carbon market price. The subsequent DCLG Zero Carbon Homes impact assessment used £46/tCO<sub>2</sub>. Considerable concerns remain that this is not clarified as the actual cost of tCO<sub>2</sub> which creates difficulties for businesses making commercial decisions about future developments.
- The HCA is currently considering testing this approach to zero carbon on an existing committed project, and whilst this would be useful learning for the industry, lack of clarity is making the decision regarding scheme viability and calculating the size of the proxy 'Allowable Solution' difficult.
- Some local authorities are creating their own Allowable Solutions schemes (often seen as a carbon tax). This reinforces the need for a national framework to ensure a level of consistency and avoid ineffective use of development capital for CO<sub>2</sub> abatement in the built environment.

### National compliance methodology - SAP (Red)

The timeline group focused much of its attention on the SAP 2012 consultation as this area is seen by the group as a serious and severe risk to the delivery of Zero Carbon Homes from 2016:

- Disappointingly, the SAP consultation has not covered many of the aspects outlined as critical in the *Carbon Compliance for Tomorrow's New Homes* (CC4TNH) report. Recognising this fact, it is imperative that a roadmap to SAP 2015 is urgently developed and industry is keen to assist and support DECC in developing this. This is on the critical path and is urgent for 2016 regulations.
- Serious concern was expressed over the lack of recognition of the multimillion pound impact SAP can have on industry – and the potential effect on stalling innovation if changes are not made in a consistent and timely manner.
- As previously reported changes to the move to 'as built' performance need to be integrated into the SAP tool to provide a better prediction of performance and providing a structure which rewards continuous improvement. The SAP 2012 consultation fails to address the recommendations produced by the Zero Carbon Hub and others<sup>1</sup> and consequently the move to 'as built' performance from 2020 must be regarded as being at risk.
- 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, 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.

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<sup>1</sup> Carbon Compliance Setting an Appropriate Limit for Zero Carbon New Homes - findings & recommendations, Zero Carbon Hub February 2011 & Carbon Compliance for Tomorrow's New Homes, Zero Carbon Hub, July 2010

- The group supports the inclusion of the Zero Carbon Hub as part of the new 'SAP Integrity Group'.

### **Designed vs As-built Performance (no status)**

- The group discussed this issue and agreed it should have its own section in this report.
- The specifics of this area will be added following the release and discussions surrounding Part L 2013 proposals.

### **Knowledge and Skills (Amber)**

- Last year was considered to be a critical year for ensuring that the knowledge base, initially focusing on industry professionals, is developing fast enough to meet the necessary timeline. However, the continued housing slump is delaying the development of these skills. It is helpful that the Skills Council is trying to develop solutions and the development of the HCA's new enabling role should also make key tools and lessons learned available to public sector land owners and local authorities.
- With the current poor health of the industry there is little R&D capital and therefore concern that knowledge and skills are leaving the industry as opposed to being enhanced.
- The reforming of the Zero Carbon Hub and NHBC steering group funded by CITB ConstructionSkills will assess the current needs of the industry and produce clear evidence of shortfalls going forward.
- It is recognised that the Green Deal will act as a driver to develop some of the necessary skills.

### **Community energy and infrastructure enabling actions (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 to have a suite of 'off the shelf' legal and administrative frameworks to speed deployment and reduce costs where this is stipulated locally or where such a solution would be more cost effective in a regulated market.
- Currently, there is not a coordinated national strategy for deployment of distributed energy solutions, which has resulted in numerous local policies setting out varying requirements for distributed or decentralised energy solutions in new developments. This is putting at risk the deployment of decentralised community energy solutions in appropriate locations in line with DECC's roadmap for future energy solutions.
- The publication of DECC's Heat Strategy is likely to be an important strategic document for potential community energy infrastructure and the group hope that it offers some comfort to industry practitioners seeking to make cost-effective use of community energy systems.

Rob Pannell  
20 January 2012, v7



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       |
|--|---|----------|----------|----------|-------------|----------|----------|----------|----------|----------|----------|
| Date   | Oct 2008  | Jan 2009 | Apr 2009 | Oct 2009 | Jan 2010    | Nov 2010 | Mar 2011 | Jun 2011 | Sep 2011 | Nov 2011 | Jan 2012 |
| <b>OVERALL PROGRAMME STATUS</b>                      | A   | A        | A        | A        | A           | A        | A        | A        | RA       | RA       | RA       |
| 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        |
| Carbon Compliance                                    | /   | /        | /        | /        | AG          | G        | G        | G        | AG       | AG       | A        |
| Allowable Solutions                                  | /   | /        | /        | /        | R           | RA       | RA       | R        | R        | R        | R        |
| National Calculation Methodology - SAP               | /   | /        | AG       | RA       | RA          | RA       | RA       | R        | R        | R        | R        |
| Low carbon pre-production homes                      | Scaling up examples<br>of low carbon and zero<br>carbon homes | /        | AG       | AG       | AG          | /        | /        | /        | /        | /        | /        |
| Zero carbon prototype homes                          |   | /        | AG       | AG       | AG          | AG       | AG       | A        | A        | A        | A        |
| Scale-up   |   | /        | AG       | RA       | RA          | /        | /        | /        | /        | /        | /        |
| Knowledge and Skills                                 | /   | /        | A        | A        | A           | AG       | AG       | A        | A        | A        | A        |
| Miscellaneous  | /   | /        | AG       | AG       | AG          | /        | /        | /        | /        | /        | /        |
| Community energy and infrastructure enabling actions | /   | /        | /        | /        | /           | A        | A        | A        | A        | A        | A        |

#### KEY:

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