

Zero Carbon Development and Allowable Solutions – The Potential Value

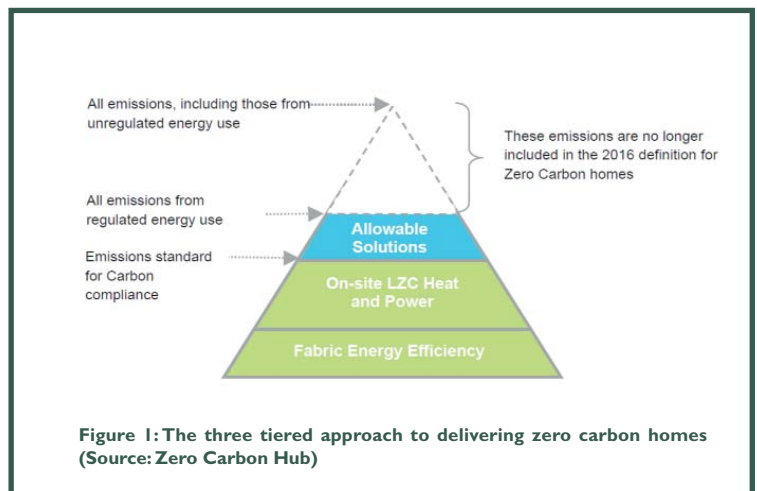
The previous government announced in 2008 that all new homes would be “zero-carbon” from 2016

Dr. Dan Lash, Research Fellow, Centre for Energy and the Environment, University of Exeter
t: 01392 264143 e: d.lash@ex.ac.uk w: www.ex.ac.uk/cee

Since the previous government announced in 2008 that all new homes would be “zero-carbon” from 2016, there have been significant efforts to further define what a “zero-carbon” building actually is, and how the supporting policy framework can be developed. Carbon emissions in new buildings are regulated in Part L of the Building Regulations. The national timetable towards “zero-carbon” buildings saw a tightening of Part L to the Code for Sustainable Homes level 3 equivalent in 2010. That is, a building in 2010 emits 25% less carbon in theory than one built to the 2006 regulations. This will be tightened again in 2013 to Code 4 (a 44% improvement), and to Code 5 in 2016 for homes – a 100% improvement. The original definition of “zero-carbon” envisaged homes in 2016 being built to the highest energy standards (Code 6), in other words, “zero-carbon” was originally intended to cover emissions from both regulated sources e.g. boilers and lighting as well as unregulated sources e.g. cooking and appliances. The downgrading of the “zero-carbon” standard in the March 2011 budget from Code 6 to Code 5 represented a significant watering-down, and resulted in the WWF leaving the Government’s Zero Carbon Hub (ZCH), the public/private partnership established to mainstream delivery of low and zero carbon homes. Non-domestic buildings are planned on being “zero-carbon” from 2019.

stated that the cost of “allowable solutions” would be £46 per tonne/year in present value terms and will be set as an upfront cost for the cumulative value of the carbon emitted from a house over 30 years. Based on analyses of projected development, the University of Exeter has estimated that the potential value of allowable solutions could be around £23 million in East Devon and £12.5 million in Exeter for the period between 2016 and 2026.

Whilst the policy surrounding allowable solutions is only in its infancy, the current proposals mean that it will be important for local authorities to develop allowable solutions policies through local plans. Failure to do so would potentially result in allowable solutions contributions being utilised on national



The ZCH has been developing the framework within which “zero-carbon” homes will be delivered with a three-tiered hierarchy being the approach taken (see Figure 1). Meeting both an “energy efficiency standard”ⁱ and a minimum level of “carbon compliance”ⁱⁱ, essentially requires some on-site renewable energy or connected heat. This will vary depending on the house type and ranges between 10kgCO₂/m²/year for a detached house to 14 kgCO₂/m²/year for an apartment. In the case of the latter this corresponds to only a Code 4 standard to be achieved on-site – significantly lower than in previous consultations. The remainder of emissions reduction may be met by “allowable solutions”. These comprise a potentially broad range of on-site, near-site and off-site measures which are still to be confirmed. The ZCH recently published a reportⁱⁱⁱ on how these might work in practice in which it was

projects through a Private Energy Fund i.e. the money would be lost to the locality. Developing a local policy would result in a list of projects that could deliver significant benefits and carbon reduction to a local area. Developers would have the option to contribute to the objectives of the local plan either through a Community Energy Fund or by private contract with a third party provider. A key stated benefit of the proposed framework is that by setting local plans, the policy aligns with the Government’s ideology on localism and the Big Society. The University of Exeter has undertaken studies for a number of local authorities to support the development of local energy policies.

References:

- ⁱ Defining a fabric efficiency standard for zero carbon homes, Zero Carbon Hub, 2009.
- ⁱⁱ Carbon compliance: What is the appropriate level for 2016? Interim report, Zero Carbon Hub, 2010.
- ⁱⁱⁱ Allowable solutions for tomorrow’s new homes, Zero Carbon Hub, 2011.

The RTPi SW Special Business General Meeting will take place on Wednesday 16th November 2011 at 12.45 pm at Burges Salmon Offices in Bristol. Go to <http://tinyurl.com/42m1tg> for a copy of the full agenda.