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Zero Carbon – where are we?

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Building A Greener Future: Towards Zero Carbon Development







Consultation

Today's Challenge"

December 20

Building A Greener Future Towards Zero Carbon Development

- Dec 2006 consultation doc:
- July 2007 policy statement
- Set timetable for zero carbon
- 2010 2013 2016



Set timetable for zero carbon

2010 - Code Level 3 - 25%

2013 - Code Level 4 - 44%

2016 - Code Level 6 - Zero Carbon



- Code for Sustainable Homes Dec 2006
- 2016 Task Force Jan 2007
- The Callcutt Review Nov 2007
- 2010/2013 Part L changes 2008

- Carbon Challenge
- English Partnerships
- Planning Conditions







2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Item Description Micro-gen performance modelling tools and Definition of zero carbon energy generation 3a SAP Development / validation / iteration 3b SAP 2009 coding and public release ZC Prototypes (SAP 2005) 5 ZC Pre-production build - (SAP 2005) Firm design / systems integration (SAP 2009) ZC Prototypes (SAP 2009) Planning (due to SAP 2009 changing house design) ZC Pre-production build (SAP 2009) 10 Monitoring / validation Integrating learning from monitoring (SAP 11 2009) 12 Dissemination of learning Prototypes (SAP05) Pre-prodSAP05 / Prototyp Pre-production (SAP 2009) 13 Build consumer demand 14 ZC Production building (Zero Carbon) MS - Building regulations - Zero net carbon November 2007 Moderate activity



SAP methodology

- Required now
- Needs to develop
- Needs to be flexible

Zero Carbon definition

- Exact definition required now
- Role of on plot/development renewables
- Role of local/remote renewables
- Industry needs clear understanding of what is required



Zero Carbon – where are we

- Where do we find the answers?
- Everyone's 'An Expert !!!'
- Groups looking at how to help us
- Futures Group
- Kingspan Group
- BEAMA



Futures Group and Kingspan Group

- Improving the thermal efficiency of the structure
- Reduce thermal bridging
- Reduce air permeability of the dwelling as far as is practical
- Can we achieve a 25%/44% improvement on the 2006 Part L without renewables?
- Look at the most cost effective way of reaching these targets
- Move on to Zero Carbon



District Heating

- Average development size
- Economics/viability
- Ongoing maintenance



On plot renewable technologies

- Ground source heat pumps
- Air source heat pumps
- Solar hot water collectors
- Photovoltaic cells
- Micro combined heat and power
- Micro wind turbines





Zero Carbon – where are we?



Consumers

- Will Zero Carbon houses look different?
- How will the consumer view this
- Does the consumer want to be responsible for the upkeep/maintenance of on plot renewables
- Will it end up as 'Eco Bling'



Conclusions

- Need new SAP methodology & Zero Carbon definition
- House builders are researching and trialling homes at levels 3, 4 & 6 of the code
- We are reaching the stage where we need to be looking at building these in volume
- Carbon Challenge & English Partnerships will help this
- We are making progress



Thank you

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