

Thriving communities, affordable homes



INVESTING NATIONALLY

DELIVERING LOCALLY



HCA:
Delivering Low Carbon Cities

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Homes and Communities Agency

cRRescendo Conference
Almere City Hall, The Netherlands
13th October 2011

HCA: UK update




- The UK Government's housing and regeneration agency enabling and investment in England
- Going through a half cut in operational costs/directors reduced scope, will do less in the future
- £6.5bn for affordable housing, still a big role in regeneration and public land
- London functions go to the Greater London Authority and Mayor in 2012

HCA statutory requirements



- Contribute to the achievement of sustainable development and good design
- Other HCA projects include Greenwich Peninsula, 'zero' carbon homes projects, EU Concerto projects



UK recent developments



- Stern Report – an economist.
Costs of mitigation of around 1% of GDP are small relative to the costs and risks of climate change that will be avoided.
- Ecohomes, Code for Sustainable Homes, Local Standards Framework.
- Merton rule (renewable energy requirement).
- New Ecotowns proposals.
- Building regulations, ramping up over next 5 years to Scandinavian standards, zero carbon by 2016.
- More recently the financial crisis affecting market.



Government Policy



- All new homes Zero Carbon by 2016
- Feed-in Tariffs and Renewable Heat Incentive
- Increase in Part L Building Regulations 2013
- Potential introduction of Fabric Standard in 2013
- All buildings Zero Carbon by 2019
- National Planning Policy Framework / localism



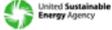







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UK Partners

- Arup 
- Homes & Communities Agency 
- Milton Keynes Council 
- Oxford University 
- United Sustainable Energy Agency 

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Milton Keynes was designated in the 1960's as a planned New Town. It continues to pursue its vision of a sustainable community with energy efficiency (EE) and the integration of environmental and socio-economic factors

•Will achieve this through:

- Renewable energy supply (RES) and Energy efficiency in buildings (RUE). The project will comprise of apartment blocks with 441 dwellings, with retail and community facilities at ground floor on main frontages. Each building will have improved insulation, air-tightness and ventilation systems. To supply renewable energy they will be fitted with 165 kWp of PV.
- Polygeneration e.g. a gas-fired CHP system and examining the practicality of an off-site anaerobic digestion (AD) plant
- Specific Innovation e.g. includes the integration of an AD plant, gas-fired CHP and PV to serve a community centre

•Summary
Integrated design and construction of environmentally responsive buildings with RES and EE measures will lead to savings of up to 33% on CO2 emissions per year

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Milton Keynes



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Outputs

- Physical Implementation
- Monitoring
- Social Research
- Dissemination

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Principle of co-location of infrastructure
Distributed services not centralised



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Low Carbon Materials



- Influence on other HCA programmes
- £6.3m Department of Energy and Climate Change
- Renewable materials
- 250 homes
- Code 4



Low Carbon Infrastructure Fund



- Influence on other HCA programmes
- Part of Budget '09 Housing Stimulus Package in April 2009
- £25m fund to support low carbon community heating schemes. To be spent by March 2011
- 13 projects allocated funding covering new build and retrofit schemes



Tower block refurbishment and heat network Newcastle (£1.7m)

www.homesandcommunities.co.uk/publications

Low Carbon Infrastructure Fund Anaerobic Digestion Plant, Milton Keynes



- New biomethane plant at Milton Keynes Council's planned Anaerobic Digestion (AD) plant 5km from the city centre and its injection into the regional gas network.
- Connection to an existing good quality CHP/private-wire system in Central Milton Keynes
- The combined technologies will displace approximately 70% CO₂ emissions in the area; total potential saving of CO₂ in MK is 3,400 tonnes.
- Serves existing, high density, mixed used developments with the possibility of further extension



Low Carbon Infrastructure Fund Greenwich, London: London heat network



London Thames Gateway Heat Network: www.ltgheat.net

Greenwich



Newcastle: Riverside Dene former Cruddas Park estate cladding and heating scheme



Conclusions



- House builders are the experts at building homes, so I'm inviting them to be in charge of developing a new framework for local building standards
Grant Shapps, Nov 2010
- UK facing 1970s-style oil shock which could cost economy £45bn. The only way in which to avoid such shocks, he said, was to invest heavily in energy efficiency and renewable sources of power.
- In the low-carbon economy, Huhne said, "we will turn to electricity to heat our homes and charge our cars, leading to a doubling in demand for electricity by 2050"
Chris Huhne, March 2011

Clearly the findings from Crcrescendo will be important for the future



crrescendo is a project of the concerto initiative co-funded by the European Commission under the Sixth Framework Programme



ARUP

