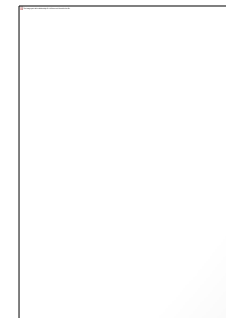


# The future of policy and standards for low and zero carbon homes

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Report available at: [www.rics.org/research](http://www.rics.org/research)



# Streamlining = watering down?

- **Regulations and standards** for new homes very widely viewed as **too complicated**
- Aim of **streamlining**/ simplifying regulatory frameworks.
- The Coalition government initiated a **deregulation** agenda ('one in, two out')
- The Housing Standards Review: aim of **“cutting red tape”**

# Towards smart regulation?

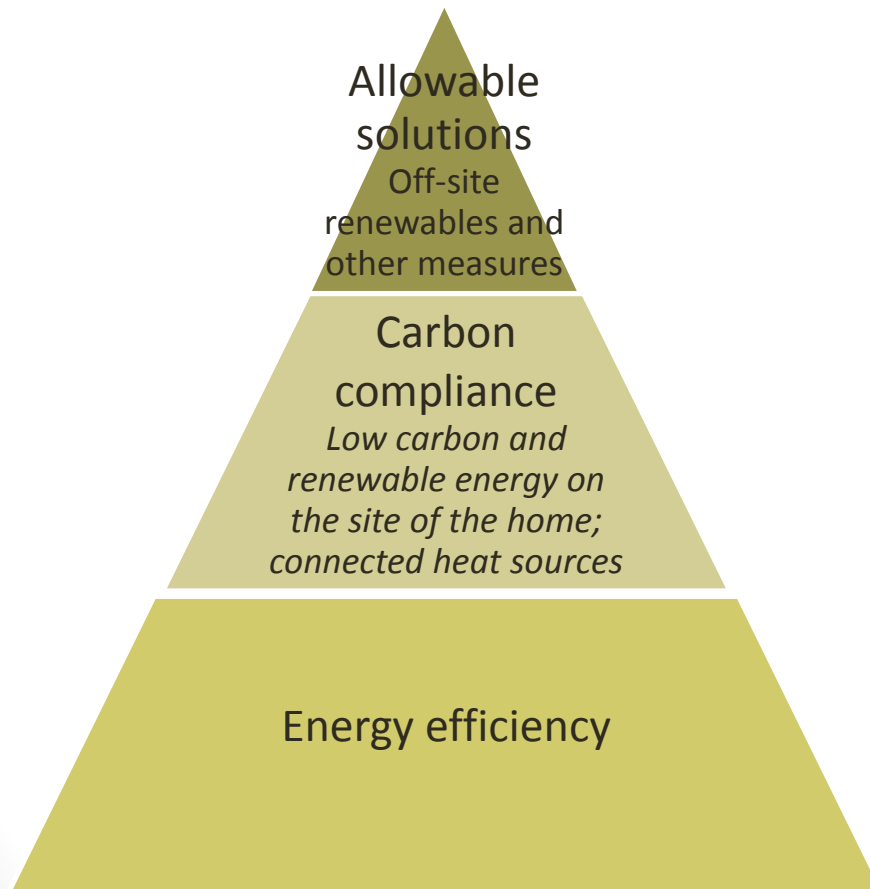
- Steering business towards policy goals while allowing flexibility/ scope for innovation (**performance orientated** regulation)
- Performance orientated regulation would be setting a target e.g. kWh per square metre per year not mm of insulation.
- **Smart regulation**: a mix of mandatory and non-mandatory standards (Gunningham et al 1998)

# How to evaluate regulation?

Predominant approaches (**regulatory impact assessment**) focus on analyzing **monetary costs and benefits**. Yet some costs and benefits might not be captured:

- Regulations not necessarily a cost; much depends on the quality of regulations/ standards (Helm 2006)
- Benefits of regulatory certainty; 'ecological modernization'/ fostering 'win-win' outcomes (Porter and van der Linde 1998)
- Costs of transitional arrangements (moving from one policy/ standard to another)
- Qualitative criteria not easily captured in monetary terms (O'Neill and Spash 2000)
- Hard to evaluate individual policies and standards in context of complex policy mixes (Baldwin 2006)

# The zero carbon debate



- Include unregulated energy used within the home? (e.g. from cooking, plug-in appliances).
- How to define minimum fabric efficiency/ on-site renewables requirements?
- Would small sites be exempt?

# Zero carbon and the Code for Sustainable Homes

Energy and CO2 Emissions

Pollution

Health and Well-being

Water

Materials

Management

Surface Water Run-off

Ecology

Waste

Year	2010	2013	2016
Energy efficiency improvement (compared to 2006 building regulations)	25%	44%	Zero carbon
Equivalent energy/ carbon standard in the Code for Sustainable Homes	Level 3	Level 4	Level 6

# Research questions

How effective has Coalition policy been in ‘streamlining’ regulations and standards for low/ zero carbon homes?

- How to define and combine binding regulations with voluntary standards - towards “smart regulation”?
- At what scale should mandatory standards be set (balance between national and local policy)?
- In what way should regulatory strategy respond to consumer perceptions and preferences?

# Research scope and methods

- Qualitative analysis of wide range of stakeholder views (developers, designers, planners, sustainability consultants, construction industry representatives, contractors, surveyors).
- Including over 70 semi-structured interviews (from late Sep 2014 – Nov 2015)
- Participants in national policy debate
- Stakeholders working on housing developments in three English cities: Brighton, London (Greenwich), Manchester



# Challenges

- Costs
- Compliance/ performance gap
- Skills/ construction methods
- Technologies
- Consumer demand

Dwelling type	Cost range for achieving zero carbon (compared to 2013 Part L).
Detached house	£6,700-7,500
Semi-detached house	£3,700-4,700
Apartment	£2,300-2,500

# Consumer demand

- Complex area for consumers to understand (NHBC consumer study; Which)
- Energy savings not incorporated into valuations
- Standards often aimed at built environment professionals rather than the public
- Green technologies seen as complicated to use can put off consumers

# Minimum energy efficiency standards for new homes

- Broad support for energy efficiency to be addressed through a single national standard.
- Could get benefits from economies of scale with single national standard
- Importance of performance gap – current building regs not being met
- Role of Government supporting industry effectively
- Created system of uncertainty in future direction of regs. Need to allow industry time to adapt and give confidence
- Problem of larger developers banking permissions – Developers still building to 2010 or even 2006 regs.

# Code for Sustainable Homes

- Benefits of a sustainability/ energy standard beyond statutory minimum
- Clear view Code had major role in driving innovation and incorporation of sustainability into working practices
- Concern – from irritation to deep suspicion about the costs associated with Code paperwork
- Some points in Code criticised as a ‘tick box’ approach e.g. some facilities/ technologies installed but not used
- Many question the strong emphasis in the Code on on-site renewables

# A new voluntary code

A new standard could provide a framework to follow for a social landlord and others with a longer term interest in property who wished to develop a sustainable project, above Building Regulations

Relative success of Ecohomes shows potential for industry led Code

“Unlike the big office market the drivers are just not there. My question would be where is the business model here with BRE being a business. How do you think this is going to make you any money. There needs to be a lot of work around this to convince people why they want to use it with local authorities not requiring it.”

Voluntary code to engage more with consumers....

“We are designing homes for people that suit regulations. We are not designing homes for what people want any more.”

# Other standards

Purpose – price premium, audit trail, design tool?

- Passivhaus ( PHPP) – most widely recognised standard after Code. Limited knowledge from most stakeholders.
- Concern about building fabric to Passivhaus without ventilation measures to match.
- LEED – very similar model to Code/ BREEAM
- Next Generation – industry benchmarking with UKBGC
- BREEAM Communities – bring in through planning?
- Home Quality Mark – customer facing, with Code data?
- Brands as standards (e.g. Apple or Audi) – also to apply in housing?

# Local discretion

- Wide support for strong, national mandatory regulations as the primary driver towards LZC/ sustainable homes (particularly on energy)
- Widespread concern about local skills/expertise to set standards for energy efficiency (through Code) or renewables through Merton rule
- Local authorities retain powers for commercial buildings through BREEAM standards – qs about mixed-use developments
- London continuing with higher standards – April 2016

# Conclusions

- Streamlining in this case has ended up as watering down but not inevitable
- Capacity of industry to achieve targets – need for greater support
- Frustration at rapid policy change and uncertainty – undermines industry willingness to invest in skills/ R&D
- Demand for strong, clear national regulations – more significant for some than debate about the precise level
- Policy tools and standards not capturing key factors in energy efficiency/ sustainability (e.g. embodied energy, ecology )
- Engaging homebuyers has potential alongside other measures



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