

# Policy Context for UK Heat Policy

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## Policy Context

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- tackle the damaging effects of **climate change**;
  - increase our **security of supply**;
  - action to help all householders reduce their fuel bills – affordability ;
  - Success in the longer term will require radical reforms in the way we use energy at home and at work, and to the fabric of our buildings and for our industrial processes.
  - This means a step-change in ambition by 2020, to both save people money and meet our carbon budgets
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# There are three components to the heat policy challenge

## Households

- 70% of the 2050 housing stock is already built. To meet our target of an 80% cut we will need ensure emissions from households are approaching zero
- Continued pressure on fuel bills for all households with particular effects on the poorest: need both to deliver carbon budgets and tackle fuel poverty
- Particular challenges in the hardest to treat houses, and in the private rental sector

## Businesses/ Industry

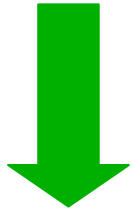
- We have a clear policy framework to drive energy efficiency in large businesses – EU ETS, Climate Change Agreements, Carbon Reduction Commitment.
- For SMEs our information base is very limited – we hope to use the energy savings consultation to build our understanding

## Communities

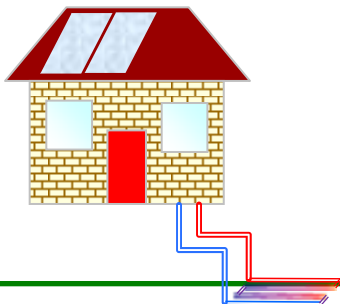
- Many of the changes that we need can be made by individual households
- However people may be more motivated to act in concert with their friends and neighbours. Some local authorities have shown that co-ordinated local action is effective
- And some measures, such as district heating, need to be installed at a community level

# Households

Energy  
inefficient  
house



Energy efficient  
house with  
renewables/low  
carbon heating



## What is the challenge?

- By **2050** we need to have reduced carbon emissions from households to a minimal level. On the way to this, we could aim to have completed all of the currently cost-effective heat and insulation measures by **2030**
- By **2015** we should have completed **all of the loft and cavity wall insulation that is practicable (CERT)**



## What will be needed to deliver this?

- Different houses will need different measures to help them save energy and reduce their bills
- Newer houses require simple insulation (cavity wall and loft) and then the offer of renewable heating technology – such as solar panels to heat their water - as well as smart meters
- Older houses (especially the c35% built before WWII) will need more radical insulation changes as well as renewable heat or access to low carbon heat.

# The need for whole house approach and support for consumers

## Case study



17 St Augustine's Road in Camden is a Victorian house which has been refurbished to save 80% of its carbon footprint

It uses solar panels for heat and electricity, mechanical ventilation, solid wall insulation and advanced windows that retain the traditional look of the house

## Vision for the service to consumers

- Is there a need for a more co-ordinated advice service which considers the options for that specific house and consumer including insulation, heating and micro generation ?
- Signposts the consumer to sources of financial support, and helps them access it (RHI; FITs; subsidies for insulation & energy efficiency measures)
- Do our ambitious targets require more direction through regulation in the future?

## Communities

- **Veolia Environmental Services' Energy Recovery Facility**

An Energy Recovery Facility in Sheffield's city centre uses 225,000 tonnes of waste to produce up to 60MW of thermal energy or 19MW of electrical energy. There are 45 km of pipeline delivering heat through 2 networks to 140 different buildings including: universities, health facilities, shops, offices and leisure facilities. Over 2800 dwellings have benefited, where in a typical year around 120,000MWh of heat is delivered, saving over 21,000 tonnes of CO<sub>2</sub> annually.



# Communities

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- **Viability and benefits of Community District Heating**

**Preliminary research:**

- **heat density capable of effectively supporting a district heating network would be above 3000kW/km<sup>2</sup>.**
- **Connecting the areas in the UK with this density or above would account for about 5.5 million properties (20% of overall heat demand). This compares to less than 2% of the UK receiving their heat via district heating today**

- **Barriers to District Heating**

- Regulatory barriers to district heating deployment
  - Commercial barriers to district heating
  - Financial barriers
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## Industrial heat & CHP

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- **Existing & Emerging Policy Framework**
    - Phase II & III of EU ETS
    - Carbon Reduction Commitment
    - Exemption from Climate Change levy
    - Enhance Capital Allowances
    - Support for Renewable CHP : RHI; RO
    - Micro CHP: FITs
    - CHP using energy from Waste
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## Emerging Policy measures

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### **PMs September 08 fuel package**

- 20% increase to CERT obligation on energy suppliers
- Community Energy Saving Programme - energy efficiency 'measures' to be delivered by the electricity generators and energy suppliers, via a 'community/partnership' approach, targeted at the most deprived households
- Other elements in progress: additional investment of £74m in Warm Front

### **Renewable Heat Incentive**

- Broad power to give revenue incentive heating from renewable fuel sources
- Applicable for across heat sector – small to industrial scale
- Issues of level of support, banding and administration

### **Delivery & Regulation**

- Delivery landscape
  - Household sector; heat markets
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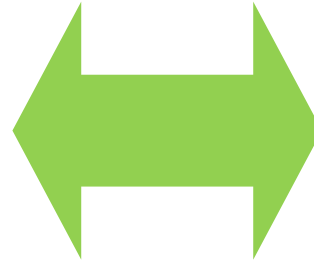
Our policies will have to consider bills and carbon emissions – and these impacts are related

### Impact on bills

Improving homes reduces bills  
for those households



But the cost of installing  
measures increases prices for  
those who do not take action



### These are linked:

Trade-off between  
prioritising efficient  
carbon cuts or  
achieving a  
particular  
distribution of  
benefits

### Impact on emissions

Energy efficiency and heat are  
essential to meeting carbon  
budgets



## Cost implications

- Overall energy prices are largely driven by wholesale prices and the costs of transmission, distribution and metering. Environmental policies amount to about 2% of gas prices and 14% of electricity
- Taking action on energy saving and renewable heat can lead to major savings. For example solid wall insulation can save an average house some £400 per year
- The more energy we save through installing insulation, the lower the cost for all consumers of meeting the renewable energy target (as we need less renewable electricity)
- The largest impact of this package will be on gas bills, and will be after 2015. Taking all factors affecting bills into account.

## Next steps

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- Forthcoming Heat and Energy Savings Strategy consultation - Setting out short, medium and long term policy thinking
- Targeted consumer and stakeholder engagement programme ( Household sector, SMEs; Public Estate; Industry and Local Government
- Final policy package later this year – taking account of EU Renewable Energy Target; Carbon Budgets and UK emissions reduction targets