



Hitting the Targets

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Hitting the Targets – workshop agenda

Carbon Emissions Reduction Target (CERT)

- An Overview
- Observations

Discussion - Local Authority Perspective

CERT Priority Group Flexibility

- An overview
- Ground Source Heat Pumps

Discussion - Fuel Switching in the Private Sector

Carbon Emissions Reduction Target (CERT)

- CERT (2008-2011) has replaced the Energy Efficiency Commitment II
- For the first time the Energy Suppliers will be set a target in Mega tonnes of Carbon Dioxide (MtCO₂)
- The target will be 154 MtCO₂ for the 3 year programme
- This approximates to a 90% increase on the EEC II target

CERT Observations – Measures

Suppliers will meet their target through a range of energy efficiency measures provided to homes

- using DEFRA's illustrative mix of measures as an example:-
 - 95% of the CERT target could be delivered through 6 key areas
 - Cavity wall insulation
 - Loft insulation
 - Fuel switching
 - Low Energy Lighting
 - Solid wall insulation
 - Heat Pump technology
 - Cavity wall, loft insulation and low energy lighting could deliver 80% of the target

CERT Observations – measures perspective

Cavity wall Insulation

- Through ‘reduction factors’ comfort factors and other adjustment factors the results is that CWI is 50% less beneficial than under EEC2
- Removal of the distinction between pre76 & post76 cavity walls replaced with a singled weighted cavity measures

Loft Insulation (Professional installs)

claimable depths for loft insulation will be consolidated to:-

- Less than 60mm existing insulation
- More than 60mm existing insulation

Both measures are examples where house fuel type has been removed

CERT Observations – measures perspective

Solid Wall

- As for EEC2 but given a boost through the Priority Flexibility option

Heating

- Micro-Generation and Heat technologies included for the first time

Lighting

- Whilst phasing out of GLS type bulbs is proposed low energy lighting remains a key CO₂ reduction deliverable

Appliances

- Limited application within CERT due to successful market transformation in the white goods sector but new technologies such as “powersaver” devices are emerging

CERT observations - Priority Group

Priority Group

- The CERT Priority Group target share is set at 40%
- The criteria is still those on a means tested benefits and tax credits but now includes those aged 70 or over
- The Priority Group Flexibility option provides a further incentivised approach to hitting the Priority target

CERT Observations

Innovative Qualifying action

- An action which might reasonably be expected to promote a reduction in carbon emissions where it has not been possible to determine a specific carbon saving
- Market transformation qualifying – Our ability to demonstrate qualifying action e.g. Gas tumble Dryers! LED's
- A key aim from this approach would be to develop the next generation of solution beyond 2011 Microgen, Heat Technologies?

CERT Observations

Demonstration Qualifying Action

Suppliers can trial new products and technologies via the 'Demonstration Qualifying Action' route. The aim is:

- To provide confidence to Suppliers to trial a new measure which does not have an accredited carbon or energy saving
- Suppliers can gain accreditation for a new measure and quantify the carbon or energy savings
- Remove the risk Suppliers face in supporting new technologies

CERT observations – product perspective

Demonstration Qualifying Action

- Trialling a new technology e.g. air source heat pump
- Trialling consumers behaviour to better information e.g. electrishave
- Trialling a consumers reaction to a new technology – a bit of both!
- Any actions must demonstrate a clear addition above Business as Usual

Local Authority perspective

National Indicators

- **158** - % of decent council homes
- **186** - Per capita CO₂ emissions in the LA area
- **187** - Tackling fuel poverty – people receiving income based benefits living in homes with a low energy efficiency rating
- **188** - Adapting to climate change
- What other drivers should we consider relevant?

CERT Priority Group Flexibility

The criteria for the flexibility option:

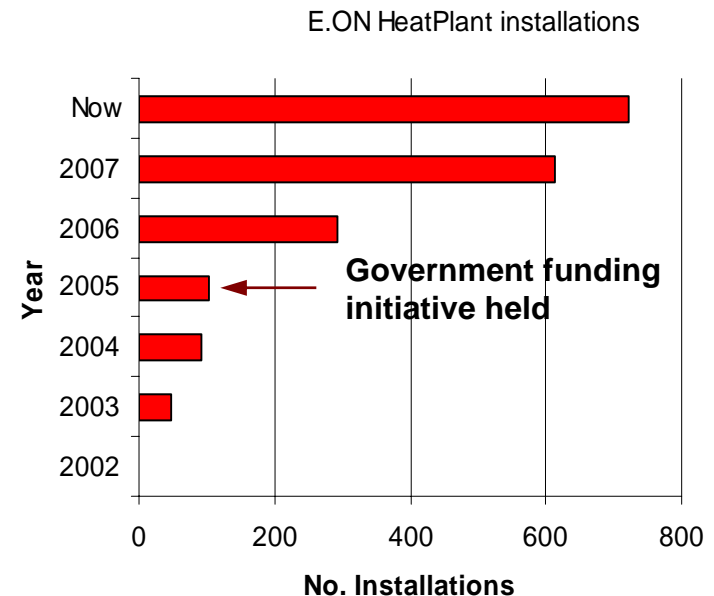
- The home is owner occupier/private rented
- Priority households only but 70's and Over group excluded from the Flexibility option
- Solid wall (external or internal) insulation
- Solid wall insulation in all geographic areas
- Accredited Ground source heat pump (GSHP)
- GSHP in off-gas network areas only

Bio Mass boilers removed post consultation phase

Priority Group Flexibility

What does this option mean to Suppliers?

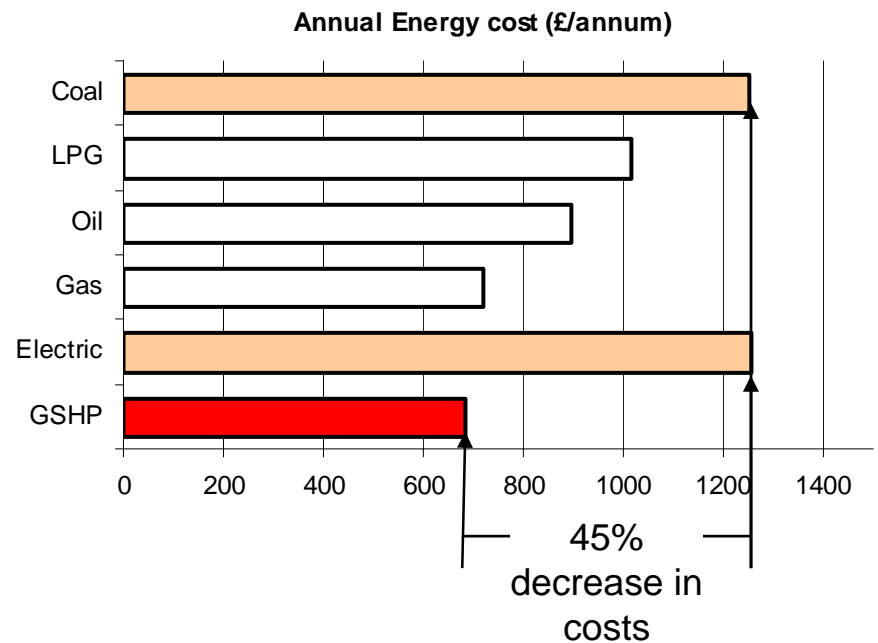
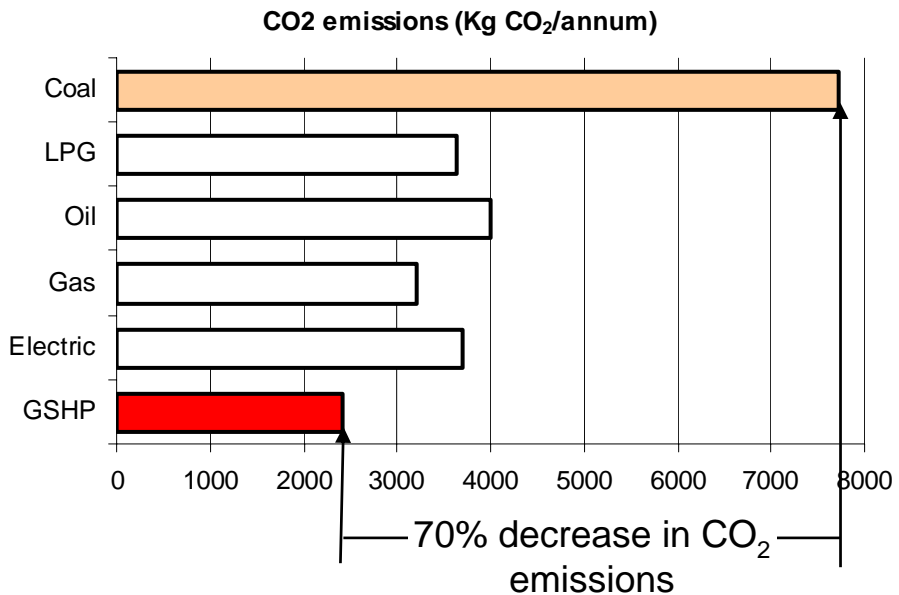
- 5% of our total obligation can be used for the Priority Flex (7.7Mt)
- It provides a tangible incentive to tackle the hard to treat sector
- 245% uplift in carbon savings for Ground Source Heat pumps and Solid Wall Insulation
- A GSHP can now be worth >300T of carbon, resulting in significant funding opportunities
- Solid wall insulation is not as well established a product and remains a relatively complex and potentially invasive method of reducing dwelling heat loss
- GSHP is no longer a juvenile, untested and unproven product. The priority flex will:
 - => **Increase the motivation to ‘find’ PG households through substantial funding opportunities**
 - => **Open up the GSHP market further and make it even more affordable**



Priority Group Flexibility

What does this option mean to you?

- GSHP become more available and affordable. They should no longer be considered as a premium option.
- A 4 year case study lead by E.ON in 16 Nottingham retirement homes demonstrates significant



Priority Group Flexibility

What does this option mean to you, and how will it hit your targets?

GSHP will be:

- Affordable
- Technically efficient and effective
- Opportunities available across the country

Solid Wall insulation should also:

- Become more affordable and effective
- Be developed to be less invasive or more acceptable to householders

The benefits to the end user will also support the National Indicators targets:

- By improving SAP ratings across some of the worst housing stock
- Reducing carbon emissions per capita (demonstrated by up to 70% savings in case study)
- Alleviating fuel poverty with up to 45% reduction in energy costs (as indicated in case study)

Priority Group Flexibility

Sample SAP Analysis

1950's Home	1950's Coal Back Boiler heating	old heating/hot water system	Solid Walls	Loft at 50mm insulation	SAP 23	Annual Running Costs £1,427
1950's Home	1950's Coal Back Boiler heating	old heating/hot water system	Wall Insulated to 'U' Value of 0.35	Loft Insulated to 250mm	SAP 55	Annual Running Costs £806
1950's Home	Ground Source Heat Pump	New GSHP hot water system	Wall Insulated to 'U' Value of 0.35	Loft Insulated to 250mm	SAP 75	Annual Running Costs £434

Fuel Switching

Fuel switching can apply in various stages

Stage 1 – Extension of Mains Network



Stage 2 – Connection to Home



Stage 3 – Modification of Heating System

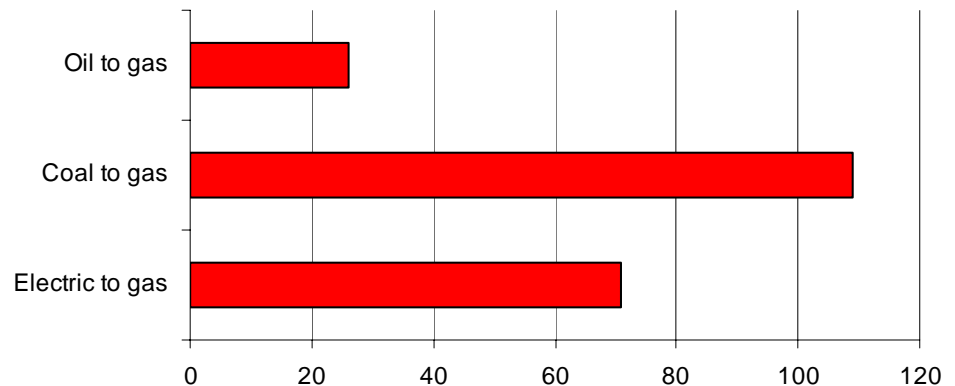


Significant carbon savings can be achieved by connecting off-gas islands onto gas

At stage 3, the carbon savings are most significant

- What do you know about fuel switching?
- How do you believe it will meet your targets?
- What benefit is there in an end to end solution from Stage 1 to 3?
- What are the barriers in the private sector
- Are there many funding opportunities for Suppliers?

Average Carbon savings per fuel switch (Kg CO₂e)



for coal to gas



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