

The Scale of the Challenge – and the opportunity

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UK Carbon targets

UK Climate Change Act, Low Carbon Transition Plan,
Carbon Budgets

- 34% reduction from 1990 by 2020
- 80% reduction from 1990 by 2050
- 18% overall reduction from 2008 by 2020
- *29% reduction from domestic housing*

To achieve this we need:

All Cavity and Loft insulation by 2015 (UK)

7m Eco-refurbishments by 2020 (UK)



Insulate - A Rate - Generate



The Government's new carbon reduction targets* mean 13,400 homes per week will require whole house makeovers by 2020. For industry, that's a lot of work. Here's how we can help you spot the opportunities to improve energy efficiency. Project by project. Room by room. Budget by budget.

Insulate
Focus on the building fabric

- Replacing the kitchen?**
Insulate the walls and make sure the room is fully draught proof.
- Replacing or fixing/repairing the roof?**
Insulate beyond building regulations
- Building an extension?**
Insulate beyond building regulations
- Replacing a wooden floor?**
Insulate below the floor boards
- Replacing windows?**
Make sure you have double or triple glazing and ensure glazing and frames are draught proofed



A Rate
Recommend the best in class products

- ... kitchen?**
Install Energy Saving Recommended appliances, lighting and water saving taps. Replace an old boiler which is 30% more energy efficient
- ... roof?**
Use best in class insulation materials
- ... extension?**
Use best in class windows and insulation product
- ... floor?**
Use best in class insulation materials and FSC certified timber
- ... windows?**
Use best in class windows and Energy Saving Recommended products



Generate
Understand the opportunities for renewable technologies

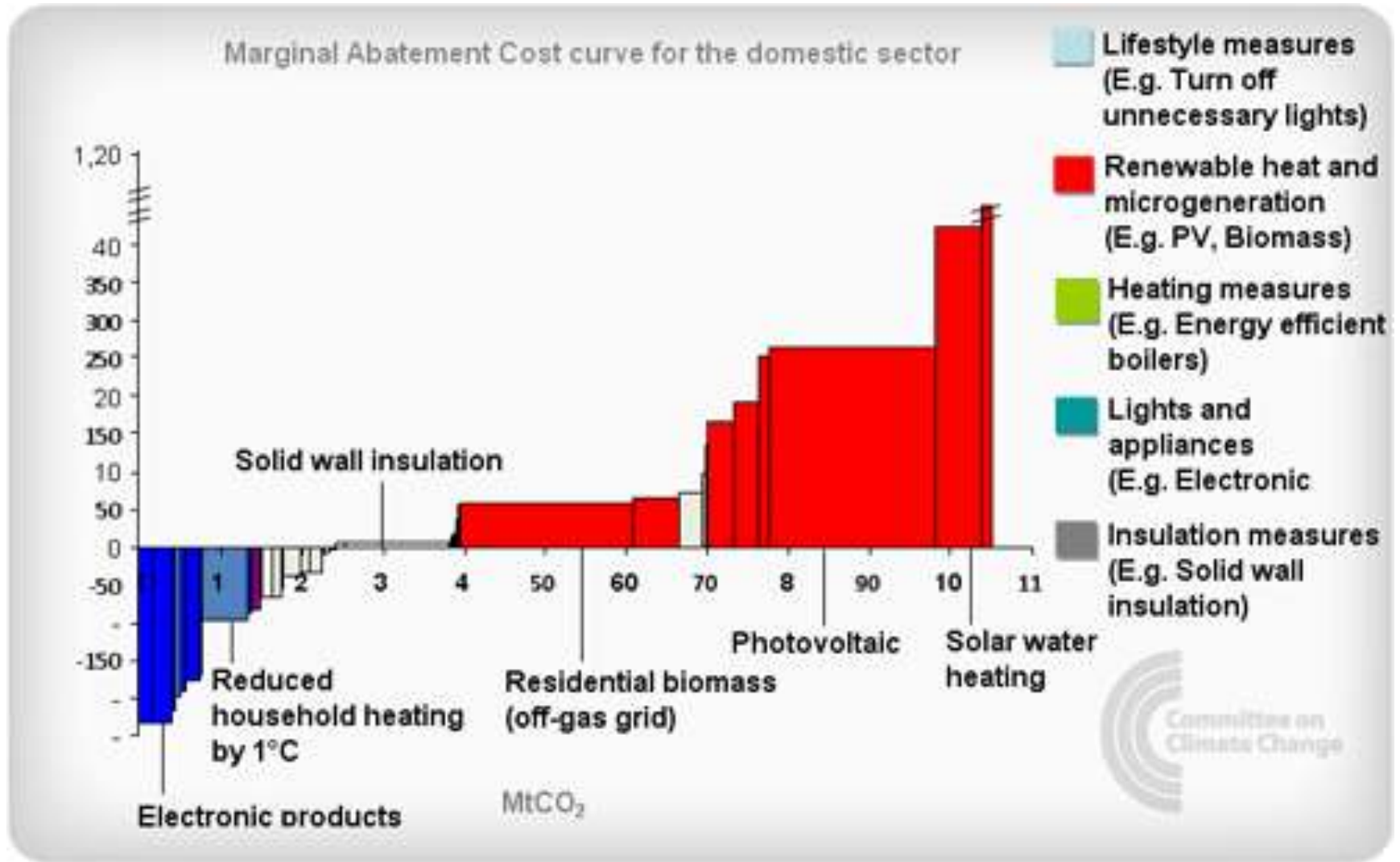
- ... kitchen?**
Install a dual-axis solar cylinder in anticipation of installing a solar thermal system at a later date
- ... roof?**
Consider solar electric or hot water or install infrastructure so they can be installed at a later date
- ... extension?**
Consider an air source heat pump or ground source heat pump
- ... floor?**
Consider under floor heating connected to a heat pump
- ... windows?**
Continue to utilize natural sunlight by installing solar PV or solar thermal on a south facing roof



*The Government's UK Low Carbon Transition plan (2020) target is a CO₂ reduction of 70%



In detail: Domestic Sector



SW Domestic Sector carbon emissions (2007), tCO2			12,238,000
29% SW Domestic Sector reduction by 2020 (from 2008), tCO2			3,549,020
SW Number of households			2,266,000
Measure	SW potential measures	Annual carbon saving tCO2	Running total tCO2
Cavity Wall insulation	719,884	409,614	409,614
Loft insulation	1,029,028	233,589	643,203
Up grading all appliances to 'Energy Saving Recommended'	2,266,000	256,058	899,261
All appliances off standby when not in use	2,266,000	285,516	1,184,777
Change all light bulbs	2,266,000	305,910	1,490,687
Solid Wall Insulation (336,000 potential)	160,000	304,000	1,794,687
Biomass heating (off gas grid fuel switching, 591,000 potential)	285,000	1,289,910	3,084,597
PV (2kWp, 2,000,000 potential?)	650,000	473,850	3,558,447
Total			3,558,447
SW Domestic Sector Carbon reduction target			3,549,020
Variance			9,427

How will targets be met?

Game changers:

- Feed in Tariffs
- Renewable Heat Incentive?
- Green Deal
- Pay as You Save

Guaranteed income stream = Private Finance

For example, 'PV for free' is now possible

We are running DECC's PAYS pilots

We are researching private finance models

Home Energy Pay As You Save Pilot

Local Authority

1. Stroud DC with SWEA
2. B & Q with London Borough of Sutton and Bioregional

Energy Supplier

3. British Gas

Registered Social Landlord

4. Gentoo

Other Financial Institution

5. Birmingham City Council with Kickstart and Art Homes

Our Finance Research



- We need low cost borrowing i.e. PWLB, EIB, GIB
- Any public sector borrowing could be maximised by working with the private sector and could get the finance off the public books sooner
- You may still need a subsidy to make it worthwhile for householders (CERT, CESP, ERDF, Customer Contribution)
- Trials for track record (1,000's not 100's) - Banks want to deal in larger amounts e.g. £100m
- [Energy Efficiency Partnership for Homes briefing paper](#)

Major SW Opportunity

‘Supporting domestic microgeneration and energy efficiency businesses’

£30m investment – SW EU/Local

3,000+ SW home Eco-refurbishments 2010-13

Subsidy to home owners

Local small business supported to do the work

0844 84 888 30

(Local Authority Practical Help Service)

0800 512 012

(customer helpline)

www.est.org.uk

impartial advice
for
action on climate change