

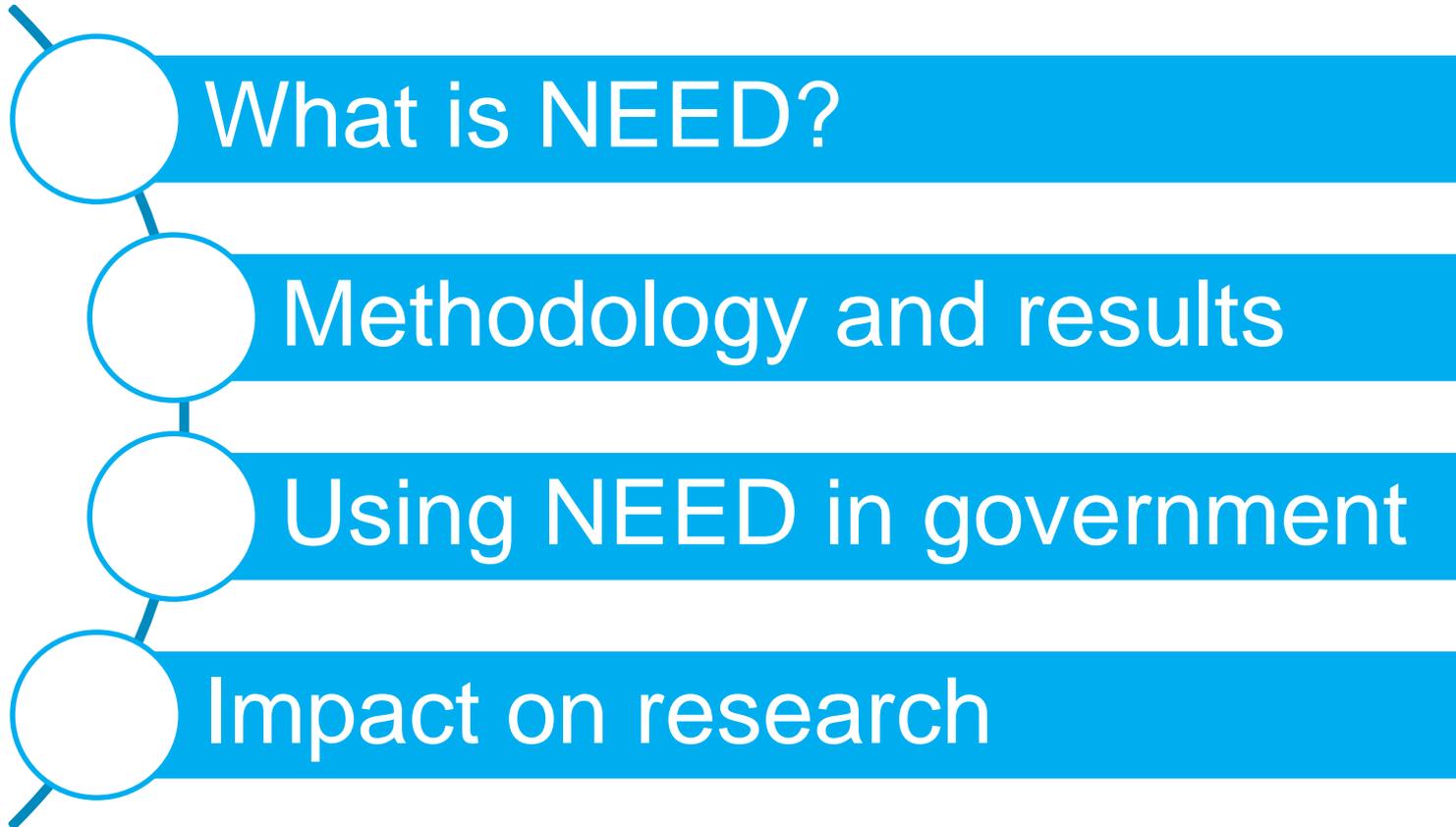


The UK Government's NEED data framework and how it influences policies

Chris Nicholls

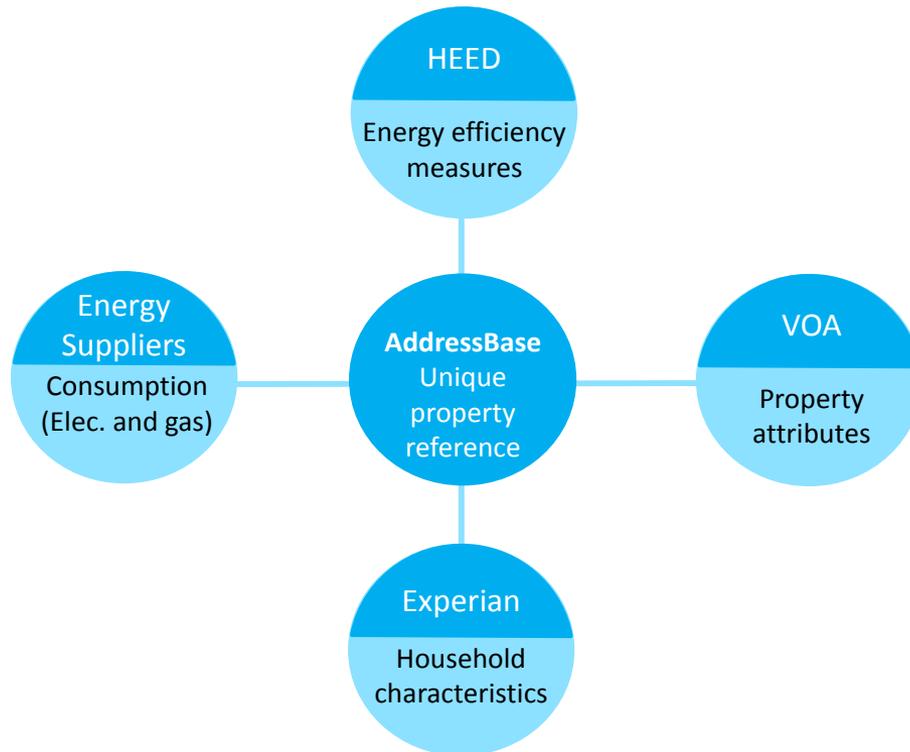


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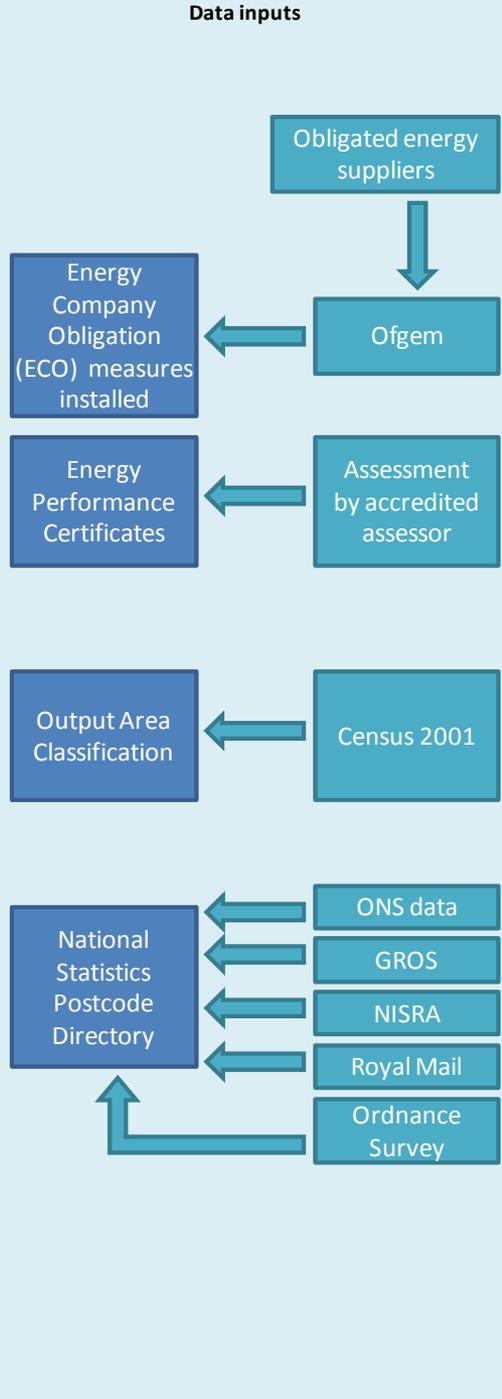
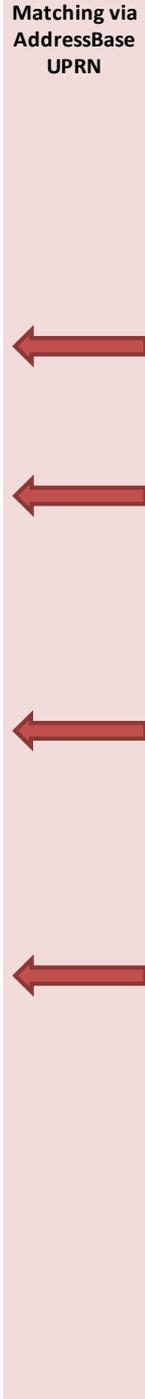
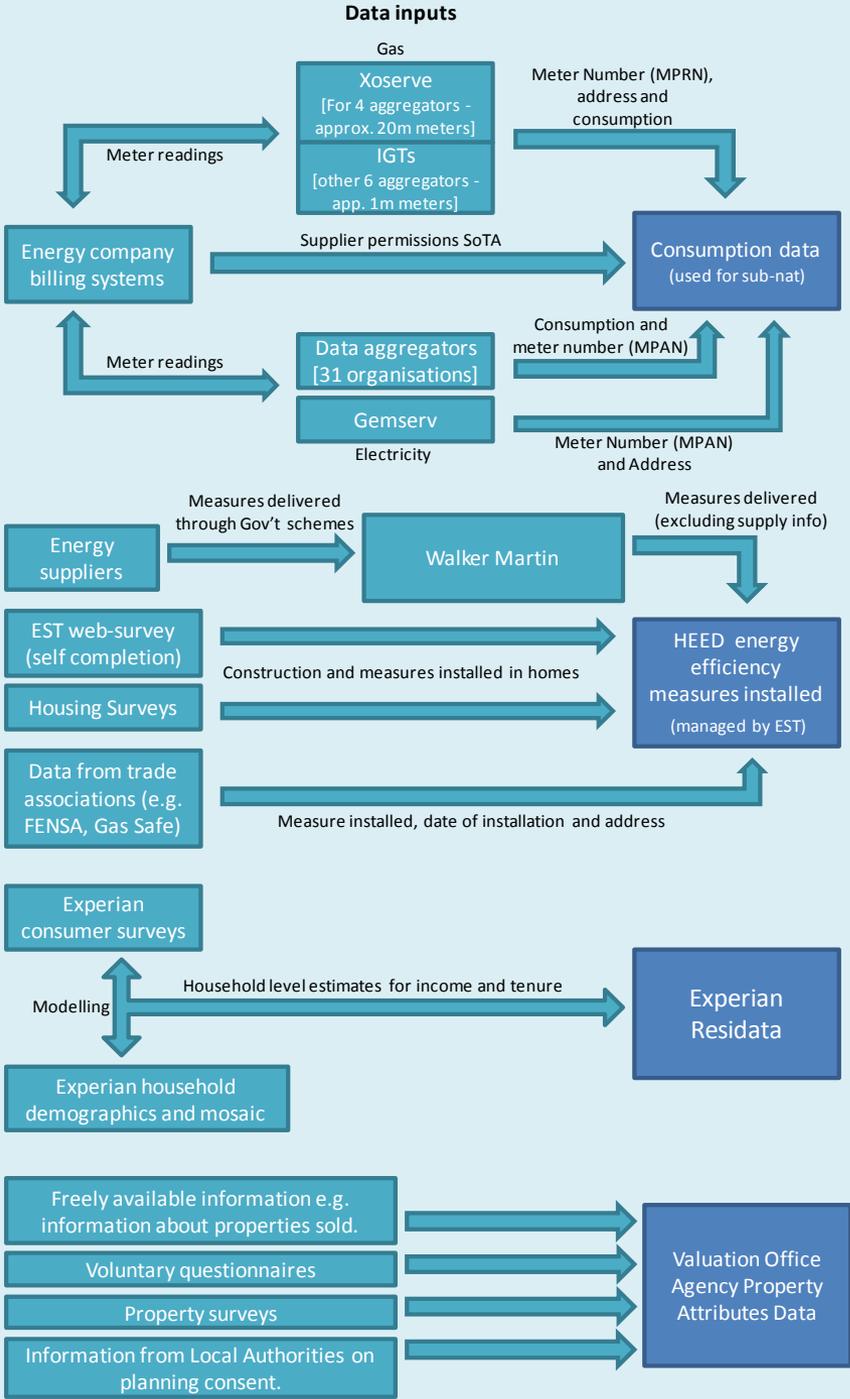




What is domestic NEED



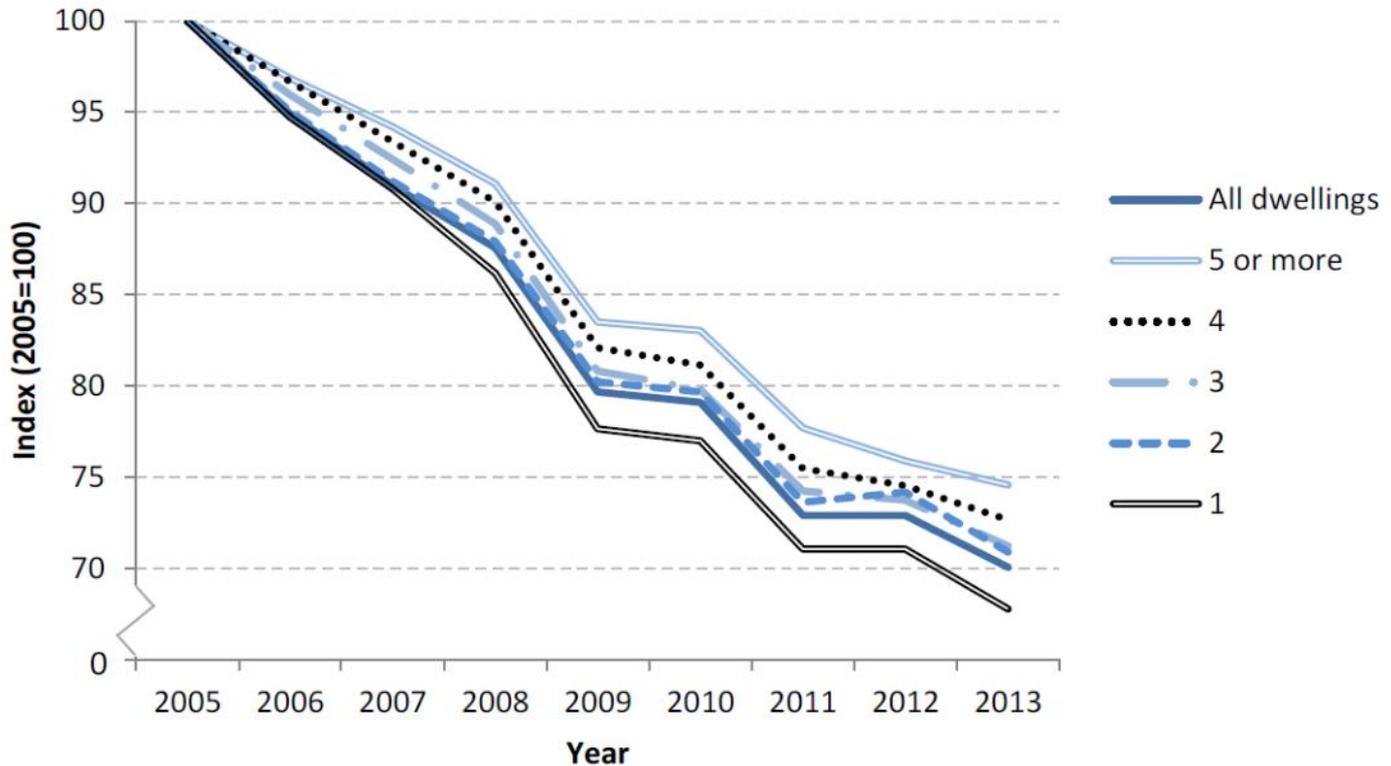
- Framework for combining data from existing sources
- Provides insights into how energy is used
- Impact of installing an energy efficiency measures on gas consumption





Results – domestic consumption

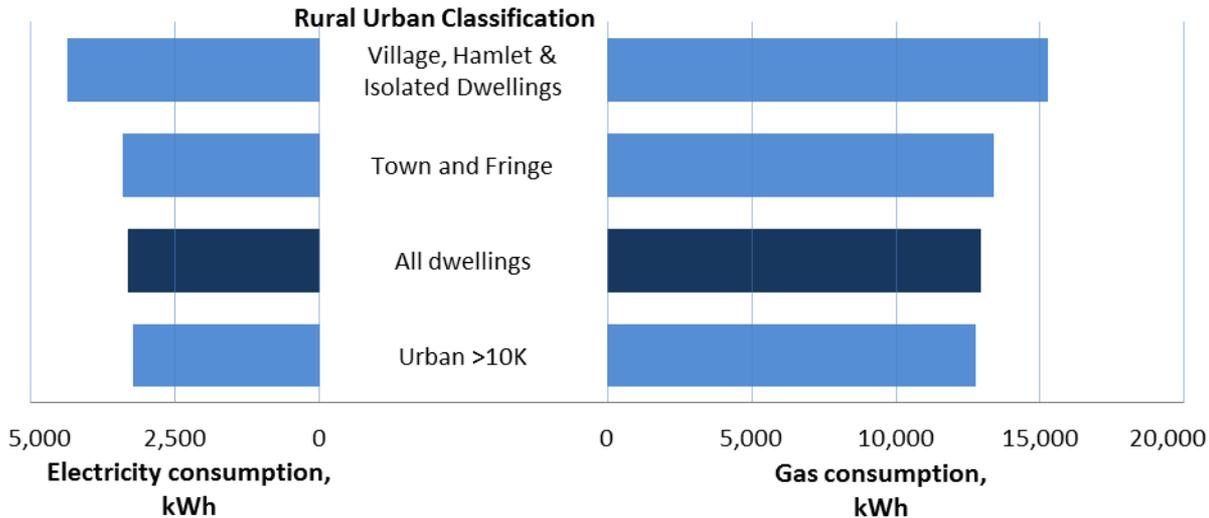
Figure 1.1: Median gas consumption by number of adults in a household, 2005 to 2013 (2005=100)





Results – domestic consumption

Consumption, 2012, by rural urban classification

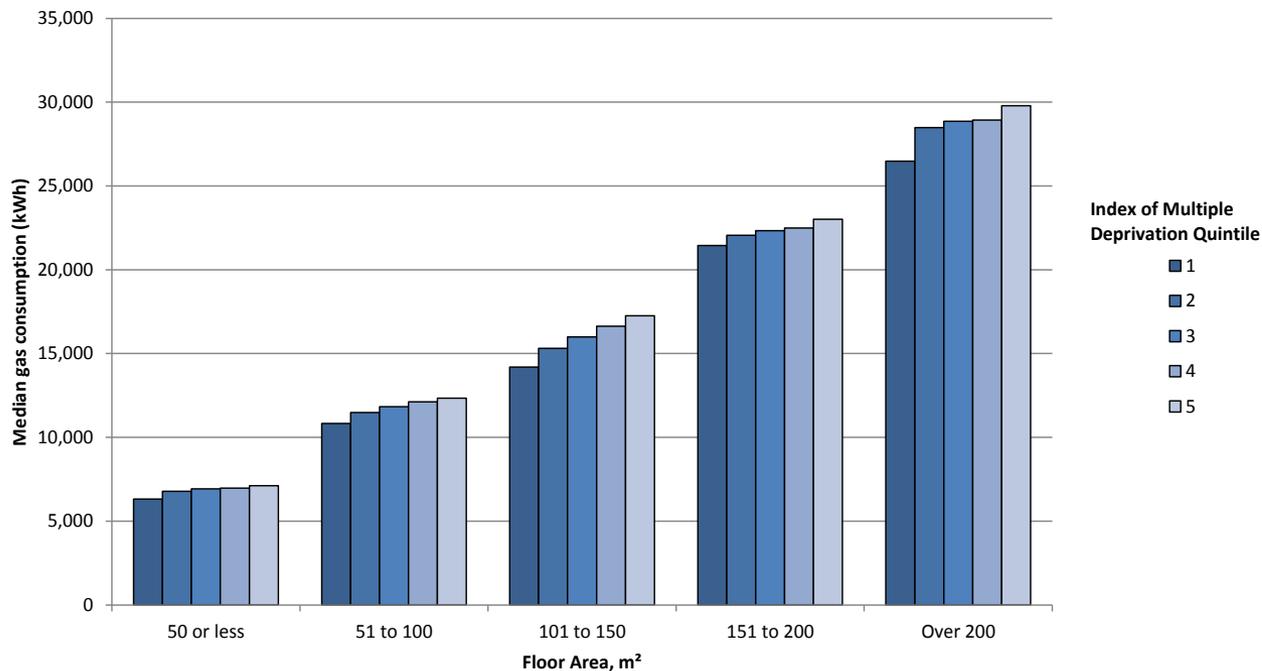


- Rural properties typically consume the most gas and electricity
- Driven by property size
- Off gas properties in rural areas



Results – domestic consumption

Gas consumption, 2012, by floor area and index of multiple deprivation

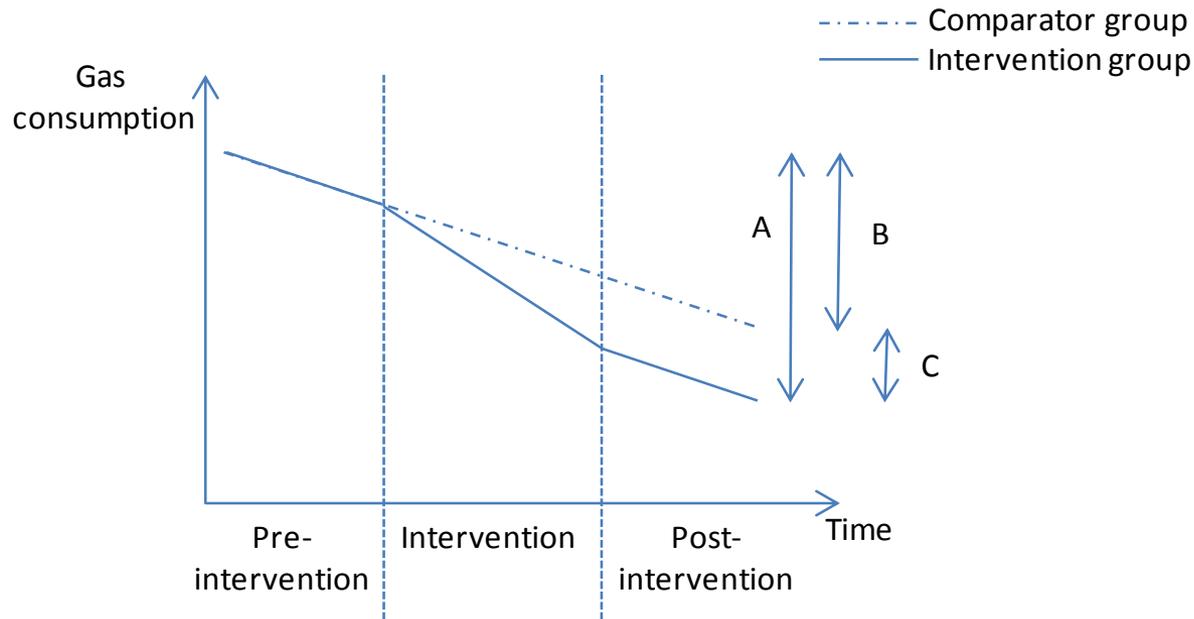


- For each floor area band, consumption higher for less deprived properties
- Deprived areas are more likely to be social housing - more energy efficient, could be under-heating



Impact of measures methodology

- Difference in differences approach

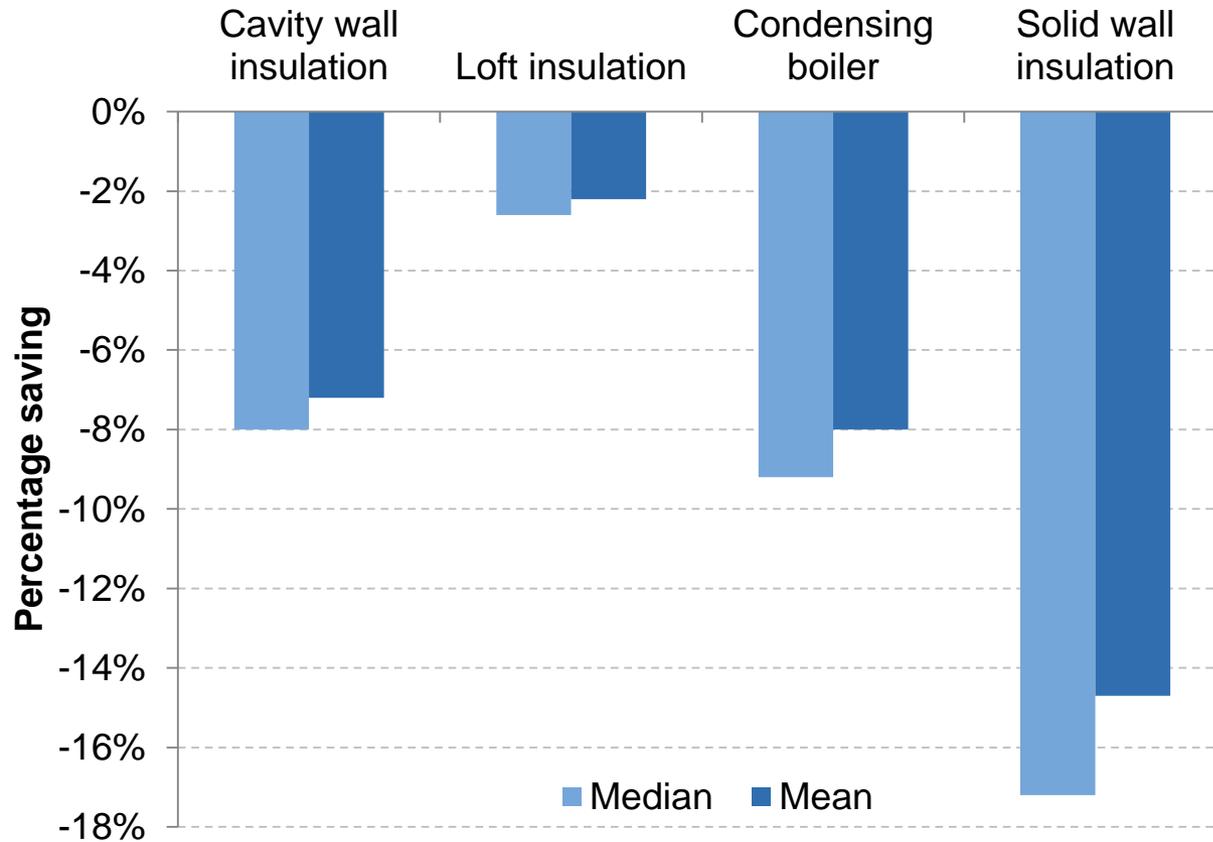


- Each property in the intervention group is also matched to an equivalent property in the comparator group to allow comparisons of median, and distributions.



Results – impact of measures

Annual gas consumption savings by type of measure, 2012





Results – impact of measures

Annual gas consumption savings by type of measure, 2012

Energy Efficiency Measure		Percentage Savings	Saving (KWh)
CWI	Median	-8.4%	-1,200
	Mean	-7.1%	-1,300
Loft Insulation	Median	-2.6%	-400
	Mean	-2.2%	-400
Condensing Boiler	Median	-9.2%	-1,300
	Mean	-8.0%	-1,500
Solid Wall Insulation	Median	-17.2%	-2,200
	Mean	-14.7%	-2,100



NEED's influence on DECC's policies

- Green Deal and ECO: estimates of savings from insulation measures to inform in-use factors for carbon savings delivered
- Revisions to carbon savings delivered by previous schemes (eg. CERT, CESP)
- Fuel poverty: consumption by income and tenure to inform policy
- Inform development of other policies: heat; RHI, FITs, future policies etc.
- More accurate understanding of the impact of policies on Carbon Budgets



NEED-related research

- Consumption by property attributes:
 - determine under-heating
 - rebound effects
- Linking to other data:
 - EPCs: link between EPC ratings and energy consumption
 - Green Deal evaluation: energy efficiency behaviours and intentions
 - Behaviours of high/low consumption households
 - Serial installers
 - Motivators



Department
of Energy &
Climate Change

Thank you

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