



***What works in changing energy using
behaviours in the home:
a Rapid Evidence Assessment***

Flavia Tsang
Presentation at BECC 2012

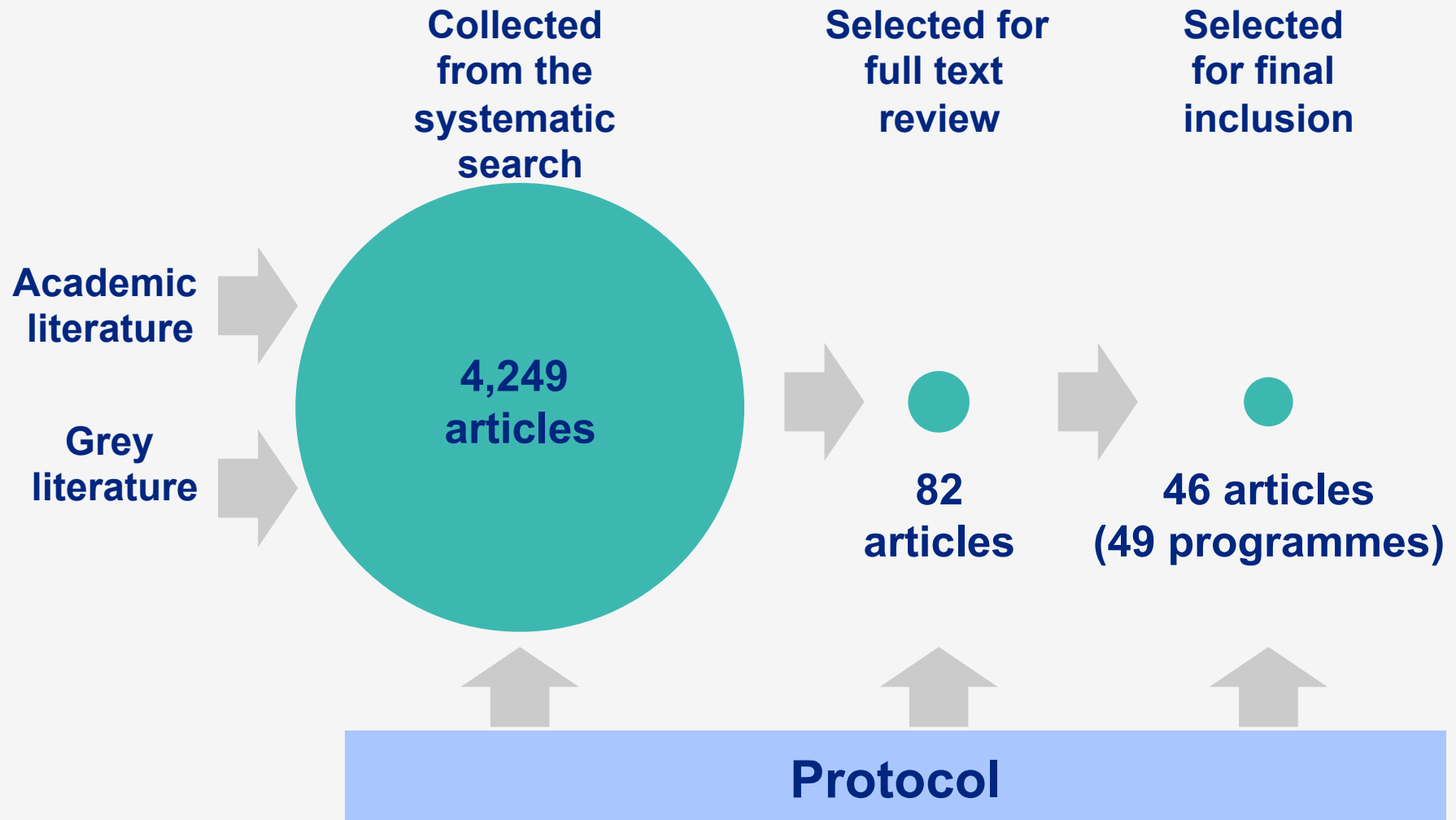
12 Nov 2012

British science writer Ben Goldacre in TED

“Well, I quite like this paper and I like that paper, and this one’s written by my friend, and this one validates my pre-existing prejudices. So I’ll just put those into a chapter and write about it.”



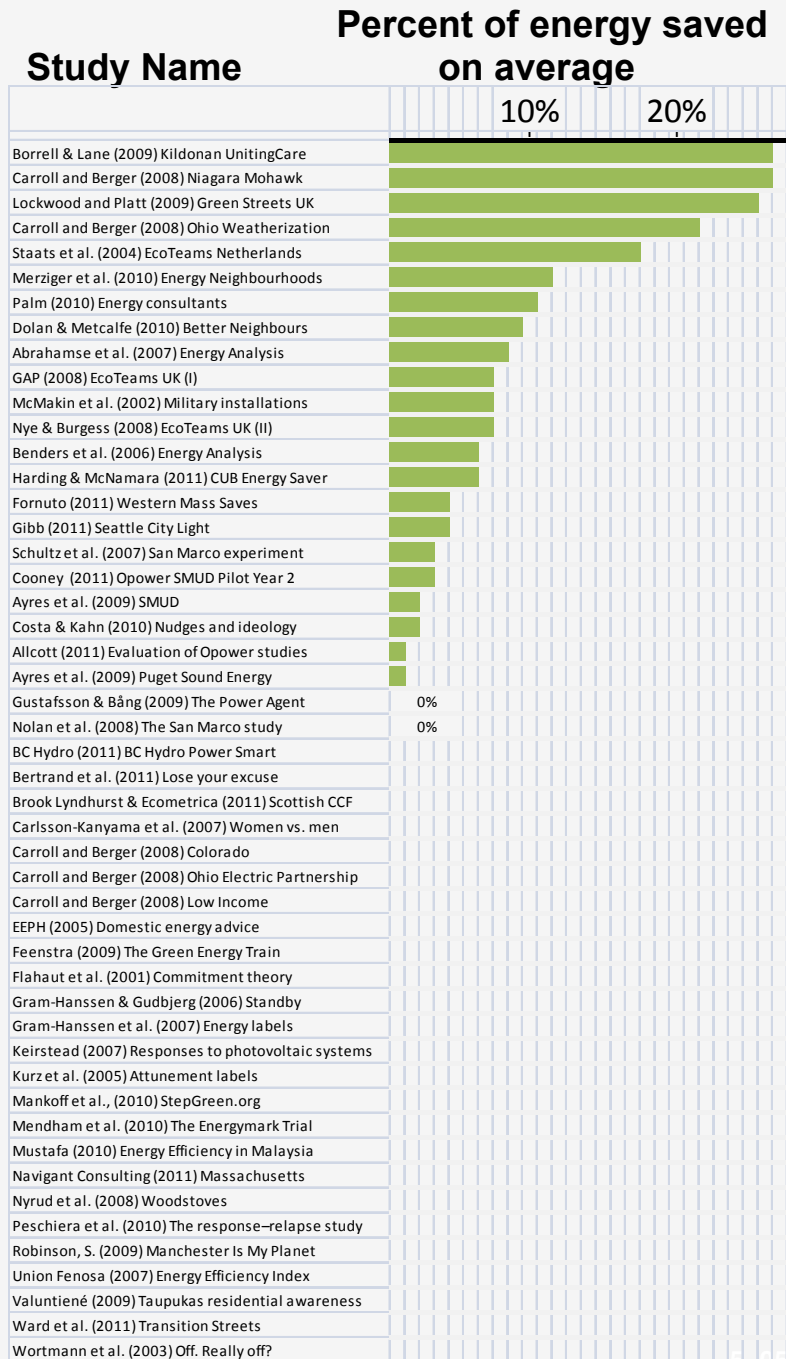
A Rapid Evidence Assessment is a highly systematic process



We defined explicit criteria to guide the paper selection process at the outset

- Targeted energy using behaviours **in the home**
- Not feedback alone; not the use of pricing strategies to shift or reduce demand; and not one-off purchasing decisions
- Considered **at least one intervention**
- Measured a behaviour change **in a real-world setting**, either observed or self-reported
- Made a **comparison** between groups

What did the evidence say?

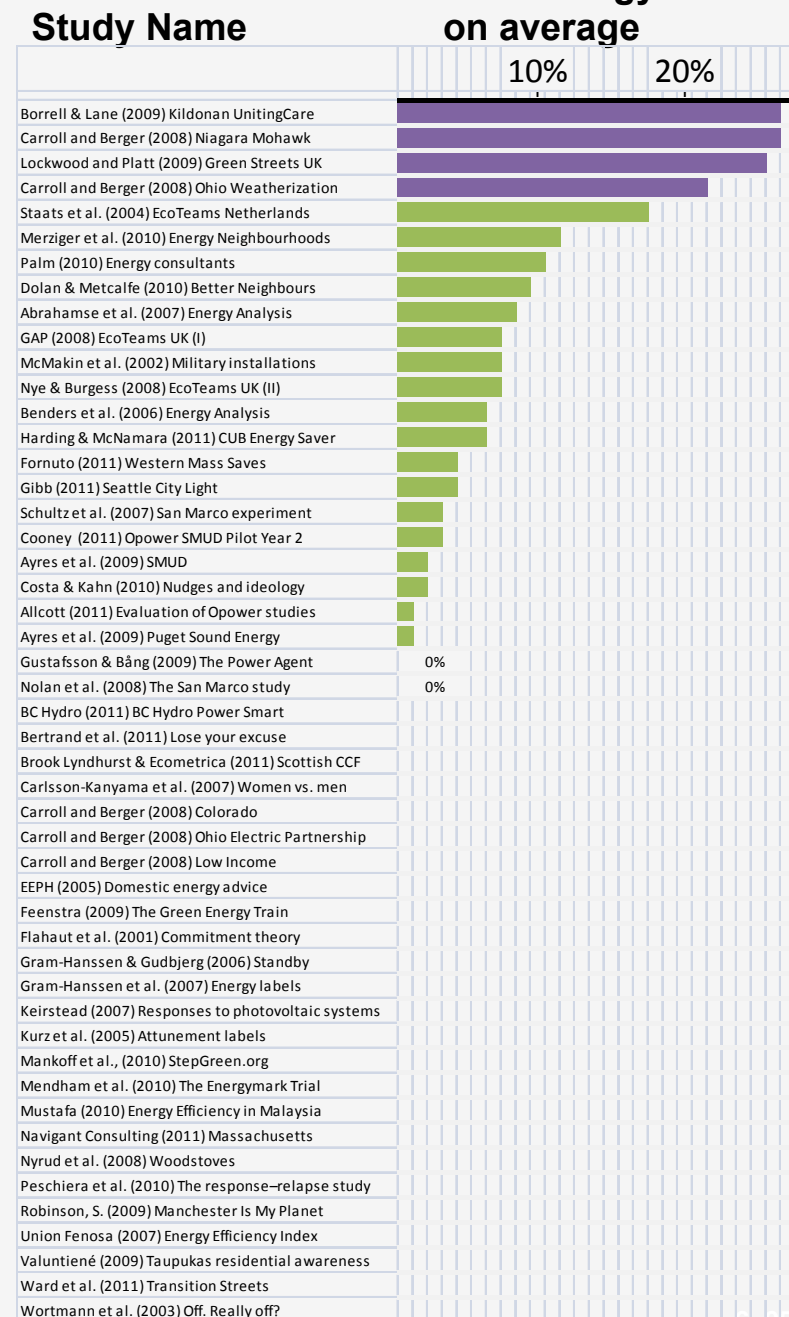


What did the evidence say?

20+%

- Only possible when behavioural strategies are combined with insulation and/or replacement of appliances

Percent of energy saved on average

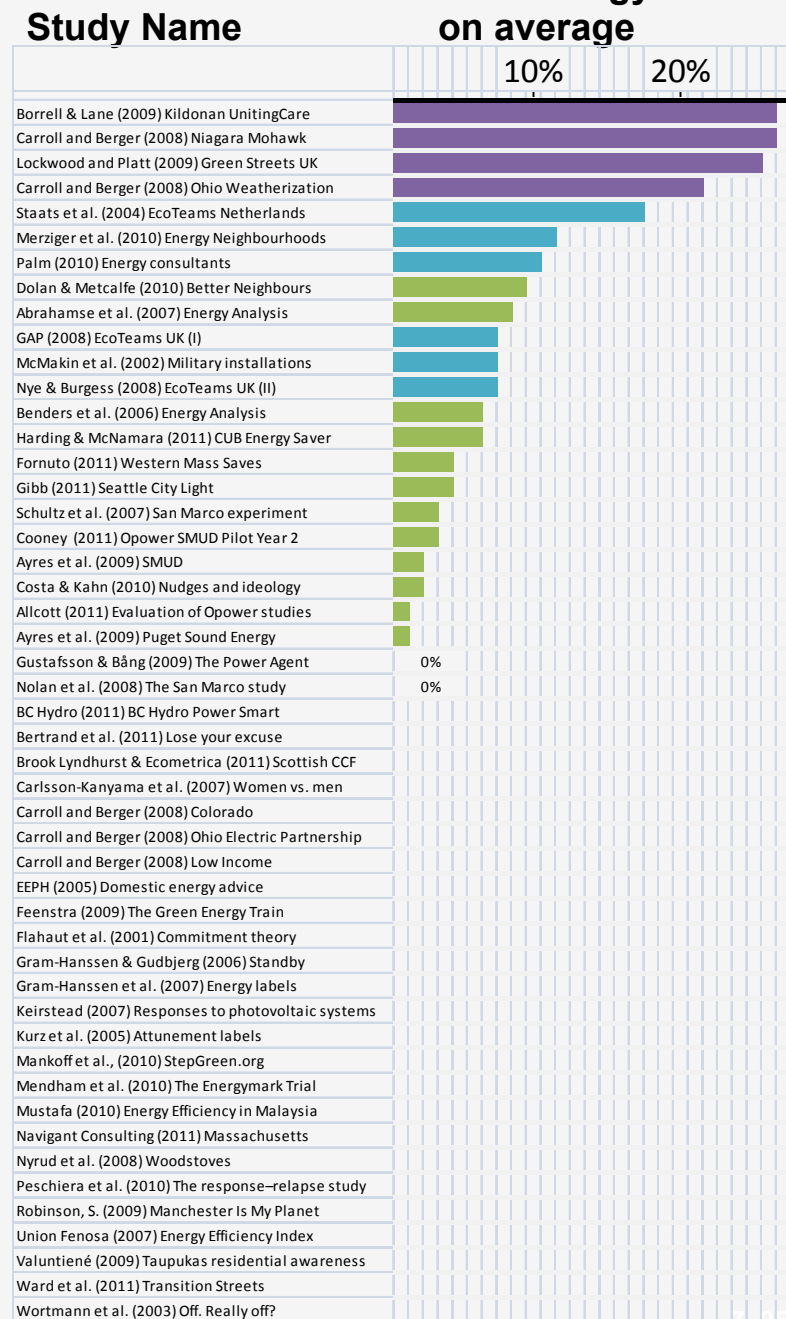


What did the evidence say?

7%-17%

- Community-based social marketing programmes , e.g. EcoTeams

Percent of energy saved on average

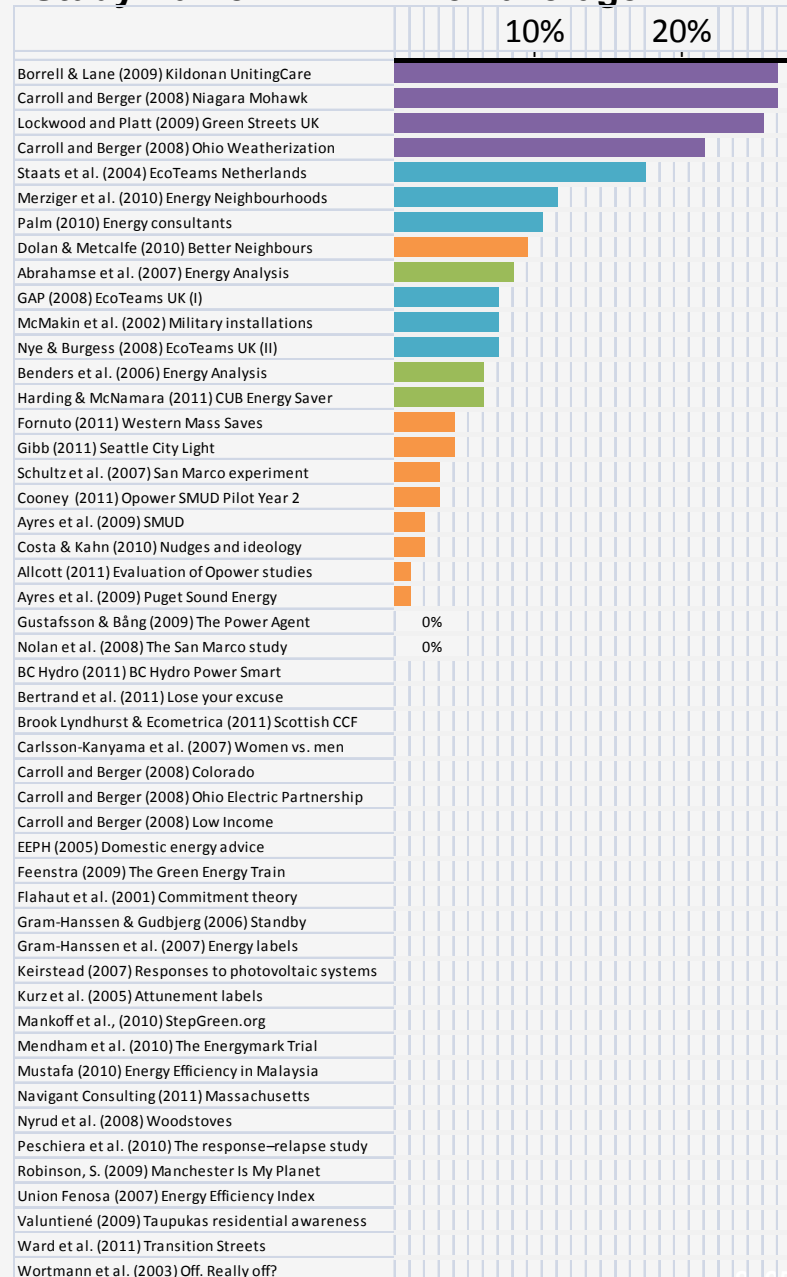


What did the evidence say?

1-3%

- Feedback + social comparison + instructions, i.e. Home Energy Reports

Percent of energy saved on average



Too often the best available evidence is inconclusive

Energy savings not reported

- Studies that reported on the different actions participants have taken

Percent of energy saved on average



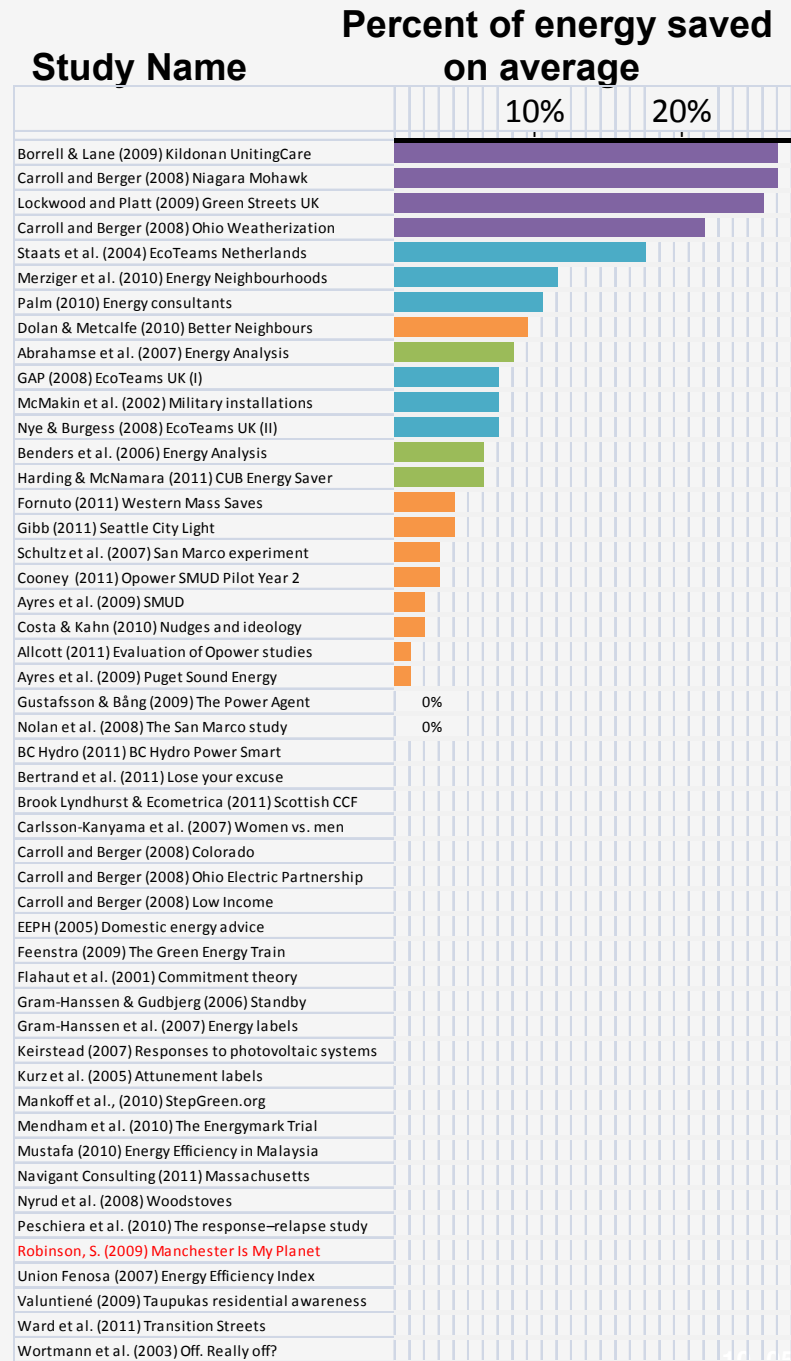
Too often the best available evidence is inconclusive

Making a pledge

- One study in Manchester UK reported:
 - “95% of pledgers said that they took actions”

Energy savings NOT reported

Reliance on self-report

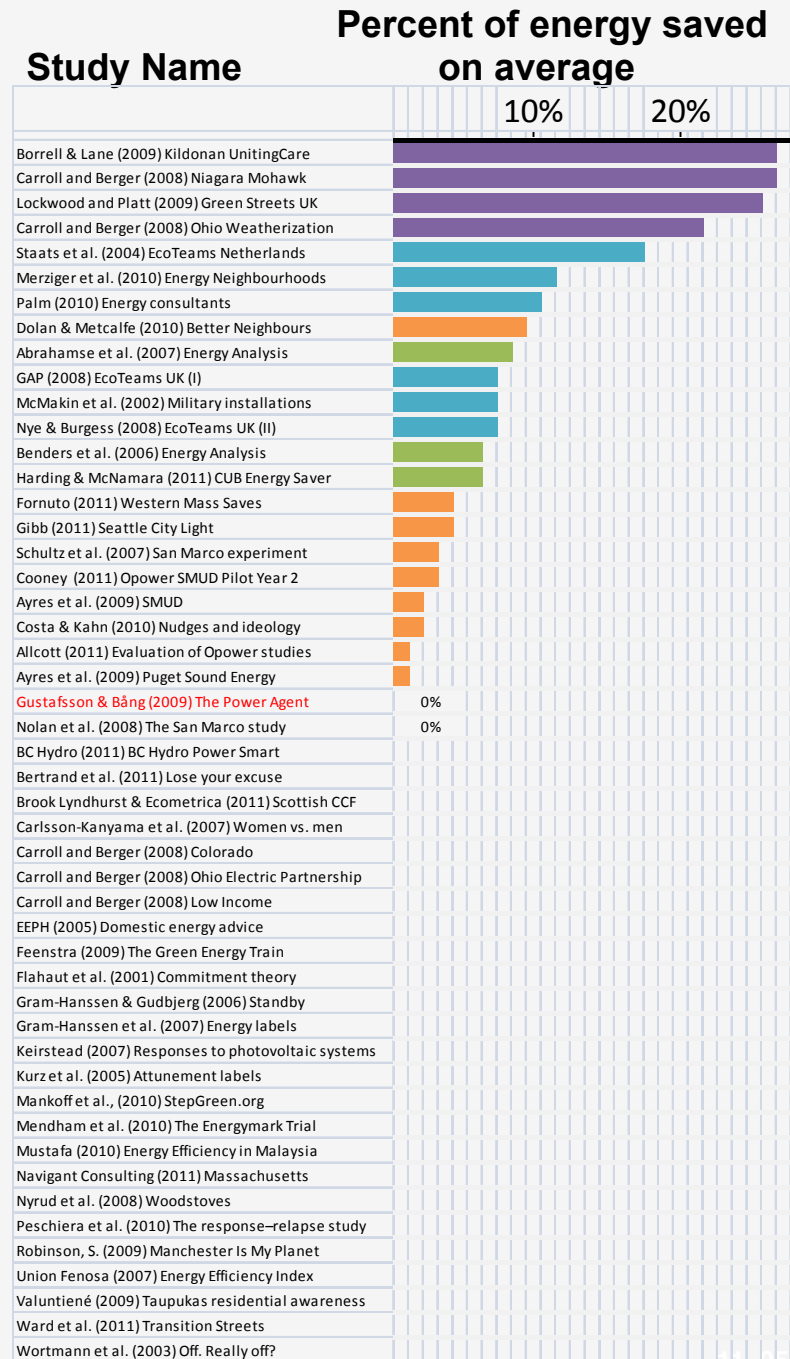


Too often the best available evidence is inconclusive

Mobile phone based games

- Extreme tactics – that were clearly non-durable - were used by participants
 - e.g. using candles for illumination; ordering pizza instead of cooking at home
- Only 6 teenagers and their families were studied

Insufficient sample size



Where we are now

- Too few studies collected independently measured, rather than self-reported, outcome data (17 out of 49)
- Too few studies reported confidence intervals of the results (9 out of 49)
- Too few studies examined the actions that underlie the observed energy reduction (10 out of 24 studies that measured energy saved)
- Too few studies reported cost effectiveness (4 out of 49)

Towards a more evidence-based evidence base

- 1.** When designing behaviour change programmes, consider:
 - Appropriate comparison group
 - Independently measured data
 - Randomised Controlled Trials (where possible)
 - Do not forget to report on the costs of the programme

- 2.** When reviewing and summarizing evidence, consider:
 - using the Rapid Evidence Assessment approach



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The UK context

- **The 2008 Climate Change Act sets legally binding targets to reduce the UK's greenhouse gas emissions to at least 80% below 1990 level by 2050**
- **Domestic energy consumption accounts for more than 30% of all energy used in the UK**
- **Much of that energy use is habitual - can behaviour change programmes play a role in driving down this demand?**
- **This study reviews existing trials and evaluations in order to assess the state of knowledge in:**

“What works in changing energy using behaviours in the home?”

- **The output of this research will be used to inform DECC's preparation of the new energy efficiency strategy, which will be published this month (November 2012)**