

# What is *energy know-how* and how is it acquired by householders?

**ECEEE Energy Efficiency Summer Study  
Belambra "Les Criques", 1-6 June 2015**

Kevin Burchell\*, Ruth Rettie and Tom Roberts\*\*

*Behaviour and Practice Research Group, Kingston University*

(\*Now Policy Studies Institute, University of Westminster; \*\* Now ESRC)



# **Energy know-how**

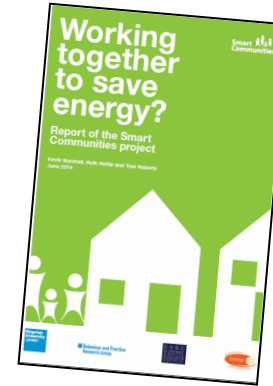
The things that it is helpful for  
householders to know if they  
want to reduce their energy  
consumption at home

# Objectives

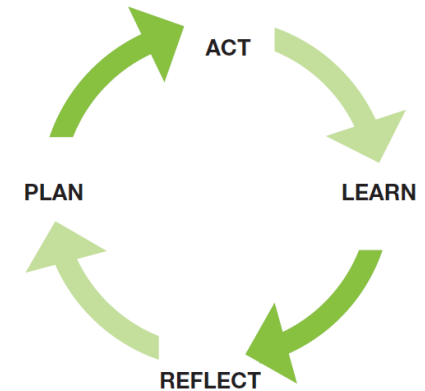
- Make some conceptual-empirical-policy comments relating to energy know-how
  - Characteristics
  - Acquisition by householders
  - Practice and policy

Literacy approaches	Know-how approaches
Energy Literacy (DeWaters/Powers) and Carbon Capability (Whitmarsh/Seyfang)	Wilhite/Wallenborn/Royston/Simcock et al/ Catney et al, drawing on Lave/Wenger/ Aristotle amongst others
Social and educational psychology	Ethnography/Anthropology/Sociology Qualitative approaches.
Canon of facts (know-what), attitudes and behaviours (survey measurement)	Practical skills. Tacit and 'sticky'
Top down. Cognition. Knowledge-Attitudes-Behaviour	Experience, practice, sensory, experimentation, tinkering. Demonstration & guidance (P2P & E2L).
Highly codified and standardised	Highly situated and specific. Trust.
Dismay at lack of householder literacy and capability	Recognition of householder knowledge. Recognition of need for more.
Education and mass communications Information: feedback, labelling etc. Carbon budgets.	Local action. F2F, tailored specific advice Demo homes and home energy visits
Mainstream policy approach	Beginning to be supported through policy.

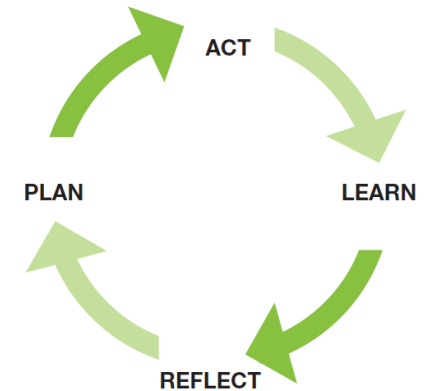
# Smart Communities



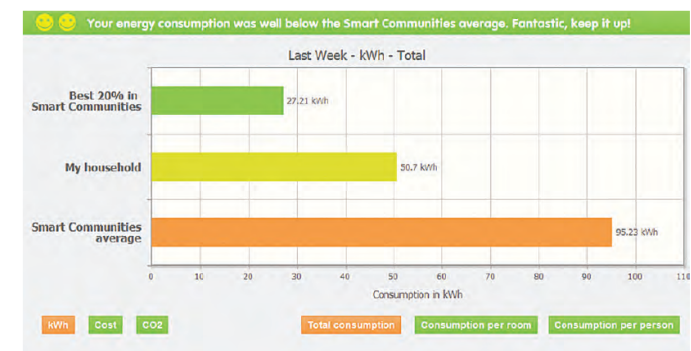
- A demand-side or 'behaviour change' community energy project
- Relatively affluent suburban area
- Action research: participation and change
- Two years of complex action: May 2011 to May 2013
- Research: fifty interviews, survey, action and member database



Don't forget to tell your neighbours! 



1. Action research: opportunity to examine concepts in practice.
2. Combination of 'literacy approaches' and 'know how approaches'
  - i. Energy monitoring and feedback
  - ii. Weekly email communications that prompted specific actions related to energy monitoring and feedback, and consumption reduction.
  - iii. Home energy visits (12). Thermal imaging, action, demonstration, concise reports. Highly situated and specific.



# Key findings 1

- Support for value of know how approaches
  - Greatest impact on households came through the home energy visits.
  - Value of thermal imaging (seeing is believing?)
  - Importance of trust.
  - Yet, these were time consuming to implement; difficult to scale-up.

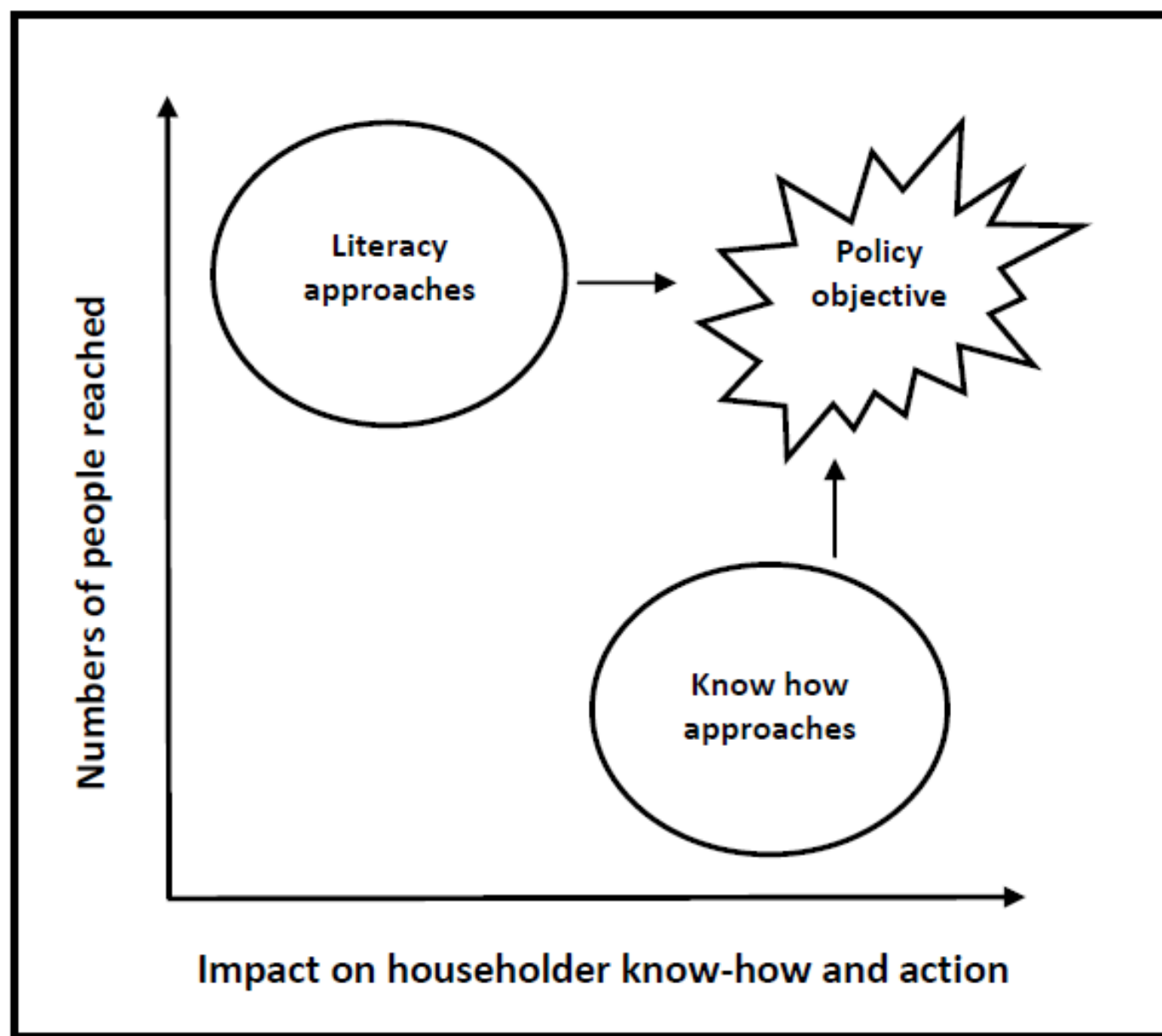
# Key findings 2

- Three forms of energy know-how
  - Ideas; you could do this...
  - Skills; you do it like this...
  - Materials; you have this, so you'll need this and you can get it here...



# Key findings 3

- Action-oriented emails supported engagement and action, including in absence of other activities.
- The emails were able to more easily reach far greater numbers of people.



*Figure 1. Relationships between numbers of people reached and impact*

# Energy know-how

Things that are useful to know

Ideas, suggestions

Practical skills and confidence

Situated, bespoke, tailored x 3

Not easy to share and acquire

Demonstration and guidance (trust)

Short reports can help

Thermal images can help

# Conclusions

- It is important to recognise the importance of know-how, and to make policy accordingly.
- Scaling-up 'know-how approaches' is an important challenge.
- 'Literacy approaches' can be enhanced by taking account of know-how (and are perhaps too readily dismissed by advocates of 'know-how approaches')

I hear and I forget  
I see and I remember  
I do and I understand  
(Confucius)