

Making energy discussable: the role of community knowledge networks

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'Reducing Energy Consumption through Community Knowledge Networks' (RECCKN)



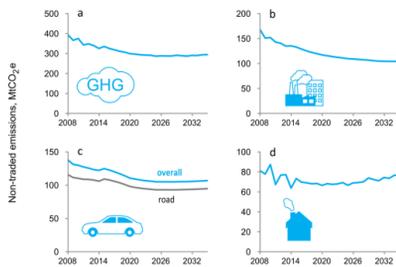
Context

NB: Provisional figures

UK and Crown Dependencies 1990-2014	1990	1995	2000	2005	2010	2013	2014 (p)
Energy supply	242.6	210.8	203.6	218.7	196.4	180.8	153.1
from power stations	203.4	163.4	158.5	172.9	156.6	146.7	121.0
other Energy supply	39.1	47.4	45.1	45.9	39.9	34.1	32.2
Business	112.8	110.1	109.7	97.1	79.3	75.5	70.0
Transport	119.7	119.9	124.9	129.3	119.3	115.7	116.9
Public	13.4	13.2	12.0	11.1	9.7	9.5	8.4
Residential	78.6	80.0	85.1	83.0	84.9	74.7	62.3
Agriculture	7.1	7.2	5.8	5.6	5.2	4.9	4.9
Industrial process	19.5	17.8	17.1	16.4	10.6	12.2	12.0
Waste Management	1.3	0.9	0.5	0.4	0.3	0.3	0.3
LULUCF	2.9	2.2	-0.2	-3.8	-5.1	-6.0	-6.0
Total CO ₂	597.9	562.0	559.5	557.8	500.8	467.5	422.0
Other greenhouse gases	211.5	198.6	193.4	138.8	112.6	100.9	98.5
Total greenhouse gases	809.4	760.6	722.8	696.6	613.3	568.3	520.5

Source: DECC, 2014

Context



Source: DECC, 2016

About RECCKN

- ▶ 2.5 year ESRC and EPSRC funded project
- ▶ Collaboration between Keele University, Marches Energy Agency and PublicSpace Research Dissemination.
- ▶ Research team:
 - Professor Andy Dobson (PI)
 - Dr Phil Catney (Keele)
 - Dr Sheryllyn MacGregor (Keele – Now Manchester University)
 - Professor Mark Ormerod (Keele)
 - Dr Zoe Robinson (Keele)
 - Mr Simon Ross (Marches Energy Agency)
- ▶ Research assistants:
 - Dr Sarah Royston
 - Dr Sarah Marie Hall
 - Dr Neil Simcock

Research questions

- ▶ Where and how do people learn about domestic energy usage?
 - ▶ Could energy knowledge be more effectively shared and communicated? If so, how?
 - ▶ What is the potential for “community knowledge networks” to aid in sharing energy knowledge?
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Project Overview

- Analyze how knowledge about energy reduction ‘circulates’ in different types of community
 - Using participatory methods, examine and compare two communities:
 - ‘Switched-on’ (Shrewsbury)
 - ‘Hard-to-reach’ (Cross Heath & Knutton/Silverdale)
 - Work with participants to develop community-appropriate strategies for achieving reductions in energy consumption and carbon emissions
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The Need for Social Learning

- ▶ Various academic theories have noted the importance of interaction and communication as the basis of social learning:
 - Communities of Practice (CoP) (Lave & Wenger, 1991; Wenger, 1999)
 - Social network theory (Gilchrist, 2009)
 - Deliberative democracy (Young, 1996; Smith, 2003; Dryzek, 2010)
 - Experiential learning theory (Baker et al., 2005)
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Social Learning: Definitions

- ▶ ‘...a change in understanding that goes beyond the individual to become situated within social units or communities of practice through social interactions between actors within social networks.’ (Reed et al., 2010: r1)
 - ▶ ‘[Arises from] ...collective action and reflection that occurs among different individuals and groups as they work to improve the management of human and environmental interrelations’ (Keen et al., 2005:4)
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The (conventional) process of communication: the 'top-down' approach

- ▶ Top-down approaches
 - Provider determines what is given, when it is given
 - Flow of communication one-way – about 'transmitting' information.
- ▶ Problems:
 - Leads to banal or irrelevant advice, patronising process.
 - Ineffective at building trust – can actually harm
 - Sense of imposition – door-knockers, cold callers etc.

Community knowledge networks

- Effective environmental knowledge transfer is not simply a question of delivering information
- Knowledge systems are *co-produced* through practice in specific social contexts
- 'Communities of practice' (CoPs) are *places* where information is learned, shared and becomes a source of community cohesion

The 'interactive' alternative: Community Knowledge Networks

- ▶ Interactive = a two-way flow of influence. *Exchange*, rather than transfer.
- ▶ People tended to talk about this implicitly
- ▶ 'Positives':
 - Relevance/contextualised – people can select what info they get, how much they get.
 - Can help build trust – gives the chance for scrutiny of information and its source.

See Catney et al. (2013) 'Community knowledge networks: an action-orientated approach to energy research', *Local Environment*, 18(4): 506-520

Social Learning in Everyday Settings

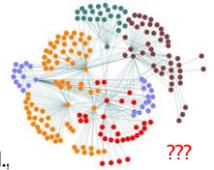
- ▶ Based upon 'situated learning' (Lave and Wenger, 1991)
- ▶ Explores learning in everyday life
- ▶ Emphasises that learning is tied to ongoing activities and practices and these are done by communities of people through *social interaction*, rather than isolated individuals.
- ▶ CoPs usually focused on organisations and small group settings.
- ▶ Our project attempted to apply these concepts to a community setting.

Learning (cont.)

- ▶ Deliberative democrats similarly highlight the potential that collective discussion settings have for learning.
- ▶ Early deliberative theory stressed the role of formal settings and tied this to high standard decision procedures.
- ▶ More recent work emphasised the wider 'deliberative system', allowing for the incorporation of everyday conversation (e.g. Mansbridge, 1999; Hendriks, 2006, Goodin, 2008, Mansbridge et al., 2012)

The Problem of Measurement

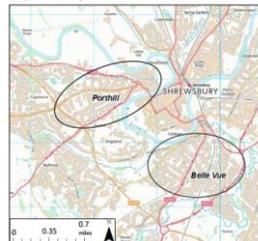
- ▶ Key problem: How to measure social learning in a deliberative system?
- ▶ Social network analysis? Possibly, but difficult to operationalise.
- ▶ We opted for a 'soft' results (Wals et al., 2009) – how participants evaluated changes in their own perspectives and their sense of enhanced competence to engage in discussion with other people in their community about energy conservation.



Case Study Areas

Shrewsbury

Map 1: Location of the Belle Vue and Porthill areas³



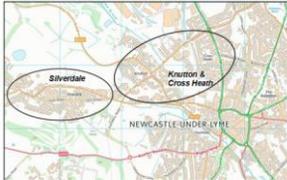
Porthill, Shrewsbury



Belle Vue,
Shrewsbury

Newcastle-under-Lyme

Map 2: Location of the Silverdale and Knutton & Cross Heath areas³



Silverdale, Newcastle-under-Lyme



Knutton, Newcastle-under-Lyme

Table 1: Key statistics of the four case study areas

	Belle Vue	Porthill	Knutton	Silverdale
Population ¹	4,550	4,558	4,313	3,617
Unemployment rate ¹	3.7%	2.9%	5.5%	4.9%
People aged 16 and over with no formal qualifications ¹	15.5%	13.6%	39.4%	34.7%
Estimated average income ²	£500/week	£530/week	£410/week	£420/week

Participants

Table 1: Participant numbers in relation to key variables

	Silverdale (NuL)	Knutton (NuL)	Belle Vue (Shrews)	Porthill (Shrews)	Total
No. of female participants	10 (77%)	6 (50%)	13 (72%)	7 (58%)	36 (65%)
No. of male participants	3 (23%)	6 (50%)	5 (28%)	5 (42%)	19 (35%)
Participants aged 20-40	1 (8%)	1 (8%)	3 (17%)	2 (17%)	7 (13%)
Participants aged 40-60	7 (54%)	5 (42%)	7 (39%)	3 (25%)	22 (40%)
Participants aged 60-80	5 (38%)	6 (50%)	8 (44%)	7 (58%)	26 (47%)
No. in flats	-	2 (17%)	2 (11%)	2 (17%)	6 (11%)
No. in bungalows	2 (15%)	4 (33%)	-	1 (8%)	7 (13%)
No. in terraced housing	2 (15%)	4 (33%)	6 (33%)	1 (8%)	13 (24%)
No. in semi-detached	8 (62%)	2 (17%)	7 (39%)	6 (50%)	23 (42%)
No. in detached housing	1 (8%)	-	3 (17%)	2 (17%)	6 (11%)
No. in social housing	-	4 (33%)	1 (6%)	1 (8%)	6 (11%)
No. private renters	2 (15%)	-	2 (11%)	1 (8%)	5 (9%)
No. home owners	11 (85%)	8 (67%)	15 (83%)	10 (84%)	44 (80%)

Methods

- ▶ We wanted to gather data on:
 - Where and how householders learnt about energy
 - How they felt about different forms and sources of energy information
 - Whether and how they shared energy information and their own knowledge with others.
- ▶ Largely qualitative approach
 - Individual interviews with a representative from a household
 - Community-based focus groups
 - Information record keeping (items from newspapers, leaflets, etc).
 - But we did examine the physical characteristics of the houses, any energy saving infrastructure in the house.
 - Also installed an electricity display monitor (EDM) to help participants keep track of energy consumption. The RECCKN team took measures from the data for statistical analysis.

Focus Groups

- ▶ Three focus groups in each case area:



Porthill Focus Group



Knutton Focus Group

- ▶ **1st wave:**
 - i) Participants' experiences with EDMs – and whether they had discussed it with friends and family;
 - ii) how did participants learn about energy consumption & saving.
- ▶ **2nd wave:**
 - i) ongoing experience with EDM;
 - ii) whether first FG had influenced participants' knowledge & behaviour around energy;
 - iii) Proposing & developing ideas for 'interventions' in local area
- ▶ **3rd Wave:**
 - i) Reflections in interventions;
 - ii) feedback on participating in the RECCKN project

The Process of Communication

“When you feel as if people are pushing it down on you, you go the opposite way.” (Female, 50s)

“You don't want to [have] a conference or something like that [to share energy information] because people aren't going to come along ... they will think, oh conference, that means I have got to sit down and listen to a load of people talk.” (Male, 40s)

The Process of Communication (cont.)

“I can't waste time just going listening to burbling on. I think it's good if people submit questions and then they were answered. That could be done by email, but I think sometimes getting together and sharing ideas would be quite good.” (Female, 60s)

“I was wondering about the possibilities say of a public meeting... I like to hear people face-to-face and hear them respond to arguments, because then I think you are getting a fairer view, than if you're just being pressured from one side.” (Female, 80s)

The Problem: Making Energy 'Discussable'

Facilitator: “Well it seems none of you want to leave! Everyone wants to stay and talk about energy.”

Community member: “Well where else are we going to go? Where else are we going to talk about energy?”

Making Energy ‘Discussable’

- ▶ Part of the benefits of discussability:
 - Part of addressing justice concerns (part. recognitional) requires making issues such as energy poverty discussable.
 - Educative/empowering role – developing the capacity of individuals to engage in civic and associational action.
 - ‘Could also act to share positive meanings about reducing energy consumption or being energy efficient.

The Barriers to ‘Discussability’

- i) Energy as a ‘private matter’: perceptions of ‘normality’.

“It’s not really a trendy thing to talk about, is it, energy saving?”

“It’s something you’d say in passing, like ‘Oh by the way...’ I’m not going to ring D and go ‘Let me talk to you about energy.’ You might have a pint with him say. It’s not a real ‘Oh I must ring him about energy.’”

“You only talk to the people you talk to, families and just people you know. You won’t suddenly go into a shop and just say [let’s talk about energy]”

Barriers to ‘discussability’

- ii) Fears of embarrassment and stigma

- ▶ N7: *I think if you went to the council or somewhere like that and you said you were having difficulties with this and that, they want to know the ins and outs and a lot of information and a lot of people don’t want to go and give them a lot of information why you’re in difficulty because a lot of people don’t like to admit...*
- ▶ N18: *They’ve got pride, they’ve got pride.*
- ▶ N9: *They might live in a deprived area as such but people have got pride, so ...*
- ▶ N7: *Yeah that’s why most people won’t go to council or Age Concern or CAB and benefits and just sit on it and hope it will go away. (Quote from Knutton focus group 2)*

Barriers to discussability

- iii) Lack of confidence

“[I wouldn’t mention to friends about my electricity display monitor because] I’d be afraid of somebody asking me questions I couldn’t answer.”

“I don’t think there’s anybody who’s got any particular expertise so no [I wouldn’t ask friends or colleagues for advice on energy].”

Barriers to discussability

iv) Lack of commonality

"...it would depend, I am good friends with Jude next door, she is a single mother with two kids, so it is not necessarily anything I would want to advise her on. I think she has got a hard life bringing up two kids on her own, so there are things that I can do that you just wouldn't be able to do ... So there is a difference between you with your personal circumstances."

Making Energy Discussable

- ▶ Creating spaces for discussion
- ▶ A 'culture' of knowledge sharing and equality
- ▶ A sense of commonality between participants
- ▶ A convivial atmosphere
- ▶ Face-to-face participation
- ▶ The role of 'honest brokers' and intermediaries



Face-to-face dialogue allows 'hand-on' demonstrations



Collective discussion at Porthill coffee morning



The Energy Question Time encouraged audience participation

The Role of Intermediaries

"Well the group wouldn't have spontaneously happened. It needed a catalyst in terms of project ... people are busy and have lives and children and jobs and school runs and so forth, that there'd need to be some management, definitely at least in the starting." (Female, 30s)

The Community 'Interventions'

- ▶ Porthill: Energy coffee morning.
- ▶ Belle Vue: Community Energy Advice Stall.
- ▶ Silverdale: Energy Question Time. Based on the BBC's 'Question Time' format, a panel of experts answered questions that had been collected from local residents and project participants prior to the event.
- ▶ Turnout at energy-specific events poor – better engagement on the back of other events.

Conclusions

- ▶ Current approaches to energy information suffer from an 'information deficit' perspective.
- ▶ Need new alternatives – tailored advice, trusted yet knowledgeable sources, and interactive processes.
- ▶ However, we found a number of barriers to why knowledge failed to circulate.
- ▶ The need for a 'public space' for energy issues necessary - but how?

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▶ <http://www.recckn.org.uk/videos.htm>