

An Evaluative Investigation into Employee Attitudes to Energy Management in the Food Retail Environment.

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- ▶ **Motivation**
- ▶ **Project Background**
- ▶ **Evaluative Methodology**
- ▶ **Findings from Qualitative Research**
- ▶ **Designing Process Change through Evaluation findings**
- ▶ **Trial Assessment Methodology**

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- ▶ **Large non-energy intensive UK organisations account for 10% overall UK consumption.**
- ▶ **Commercial factors:**
 - ▶ **CSR commitments on emissions**
 - ▶ **Cost/supply of fuel**
 - ▶ **Cost of UK carbon taxes**
- ▶ **Existing research:**
 - ▶ **User activities are key to moderating use**
 - ▶ **Most behavioural academic research is domestic**

Carrico and Riemer, 2011

Gram-Hanssen, 2009

DTI, 2007

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▶ Project Background



500,000
staff
globally



- ▶ UK's biggest retailer.
- ▶ Qualitative evaluation.
- ▶ Leading to organisational changes.



Project Background

Organisational Background:



- ▶ Individual stores manage energy use according to a set budget.
- ▶ An Energy Champions system is in place to inspire correct behaviours.
- ▶ Staff energy management behaviours are perceived to be below standard.

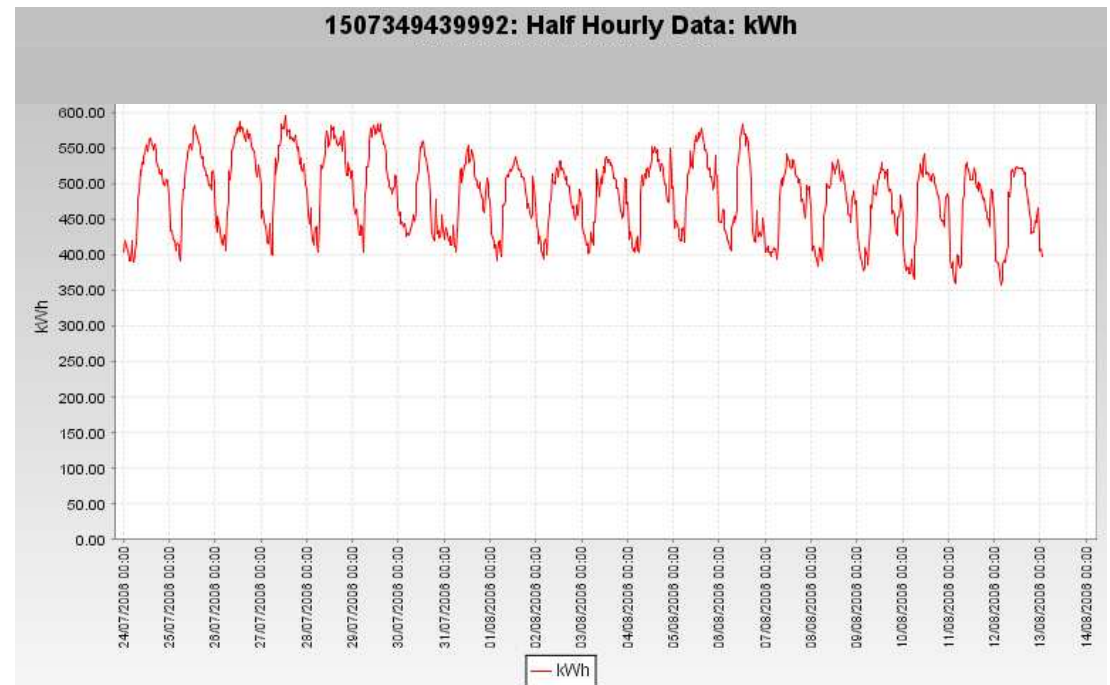


Project Background

Problems with Behavioural Evaluation:



- ▶ Noisy Estate;
 - ▶ Constant change
 - ▶ Technical innovations
 - ▶ Weather
 - ▶ Sales etc.



- ▶ Baseline for great behaviour not established.

- ▶ Can the 'right' behaviours make a difference?



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► Qualitative Evaluation Methodology



**10 focus
groups in
10 stores**



Crucial to understand the view of those who actually operate the equipment.

Using collaborative methods is a key design principle in socio technical design (Waterson et al., 2002).

Thematic analysis approach applied (Yin, 2009).

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► Findings - Multiple Goal Conflict



"You're so busy all the time, you are running from one task to another, and you don't think about switching off the lights or anything"

"We are always told to put the customers first....we just do things as quick as we can, and we don't really think about the energy I suppose"

"if you ask the area manager about electricity he's going to say what are you talking about, what's the figures for sales?"

Multiple goal environments can bring a perception of goal incompatibility, leading to goal conflict (Cheng et al., 2007).

Perceived goal conflict is directly linked with reduced performance (Cheng et al., 2007).

Energy management is vulnerable to multiple goal conflict

► Findings - Goal Complexity



"CO2 what does that look like anyway? and what does it really do? you know its greenhouse gas or something."

"Just numbers, figures whatever, some people like it some don't"

"we do have the thingy, the dooberry, the computer thing outside, it would be good if you knew what it actually means."

An over-complex or unclear goal will impair performance (Locke and Latham, 2002).

A difficult goal can be counter-productive in a multiple goal context (Cheng et al., 2007, Emsley, 2003).

Energy management is vulnerable to goal complexity

► Findings - Task Control

“As an energy champion it was hard to get people to do things that they were supposed to..... it was hard to get people on board”

“biggest fight at all is to stand up to the higher ones, to make them stop and listen, just getting someone to take note”

“Nick (Store Manager) tells us what to do and why we need to do it, but then its easy to forget, and we just do other things and forget the energy things, easily done”

Process is complicated by making it an influencing rather than action task.

Incorporating tasks into routine is important to ensure performance (Warde, 2007)

Processes don't feel appropriate to the task performance

► Findings - Task Alignment



"The energy champion role was foisted on me, you haven't got time to do your own job without taking on extra responsibilities,

"should make it personal to someone's own job and to an area they can actually affect, so don't tell Nathan how much it costs to run a check out belt because it doesn't personally affect him"

"Everything apart from energy is measured by department, not by store"

Organisational literature recognises consistency of culture to be conducive to success (Kotrba et al., 2012).

Norming difficult goals is hypothesised to lower the perception of goal difficulty, and conflict. (Cheng et al., 2007).

Energy tasks are not aligned to the store norms

► Findings – Personal Benefit



"it's hard to understand how we impact on the environment, you can't measure it personally, boils down to what comes out of my wallet"

"I've just got an EON meter, I didn't really think about it, then he bought one of these and I nearly died, I nearly died"

"I would be cross if (the organisation) spends too much on energy, that's our shares and that's our overtimes"

Economic self-interest is motivating in a domestic context (Whitmarsh et al., 2009).

Energy efficiency was seen to have a bearing on quality of work-life.

Personal Benefit is a strong driver

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Designing Process Change through Evaluation findings



Energy management is vulnerable to multiple goal conflict

Energy management is vulnerable to goal complexity

Energy tasks are not aligned to the store norms

Personal Benefit is a strong driver

Processes don't feel appropriate to the task performance

Process changes:

Alignment to structure: Responsibility from Energy Champions to Dept. Managers

Task strategy: Simplifying the energy tasks

Training changes:

Alignment to structure: Training simplified and delivered by store personnel

Communication changes:

Alignment to norms: Communication documents simplified, with an emphasis on share price value through energy savings



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Design

Test



VS

Control



**8 Week trial amongst 34 stores
with matched control stores**

Measures

1. Overall energy consumption by sub-meters
2. Energy task completion
3. Energy-related maintenance work orders raised.

▶ Any questions/ advice?

