



# **UK Case Studies**

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- Summary of four case studies:
  - The Energy Demand Reduction Trial
  - E.ON Thinking Energy Trial
  - Customer Led Network Revolution
  - Low Carbon London

# Energy Demand Reduction Trial

- Customer Group: Residential customers including those in fuel poverty
- Interventions: Static ToU, feedback displays

## Key Learning Points:

- Combining Smart Meters and IHDs was a significant tool in helping customers reduce energy usage- depending on how helpful they find the IHD
- More difficult to reduce peak consumption in households with more people
- Customers prefer immediate feedback via display than retrospective paper based feedback

# Energy Demand Reduction Trial

## Key Barriers:

- Difficulties in transition to Smart Meters- both relating to practicalities of installation and customer related issues
- Further research is needed into customer preferences for IHDs
- Clarification of best communication technologies

# Energy Demand Reduction Trial

## Customer Willingness

- Customers want to receive advice on energy efficiency, even if it repeats information they already have
- Limited number of customers will fit an IHD
- Too many interventions reduces the overall effectiveness
- Information on websites was rarely accessed

## Customer Engagement:

- Customers recorded little engagement with paper based advice, but a reduction in energy consumption was still observed
- Greater awareness of IHD didn't necessarily equate to greater energy savings
- IHDs with alarms were very unpopular, traffic light systems were found to be most useful.

# E.ON Thinking Energy Trial

- Targeted at general household consumption
- Interventions: Home Energy Management System, heating controls, end use monitoring and feedback

## Key Learning Points:

- Customers valued ability to have extra control over their energy use
- Many commented that they were able to achieve greater comfort from their heating system with additional controls
- Lifestyle improvements valued more than energy saving

# E.ON Thinking Energy Trial

## Customer Willingness:

- Trial was oversubscribed

## Customer Engagement:

- Trial participants readily engaged with the technology

# Customer Led Network Revolution

- Lots of different test cells- including ToU tariffs, heat pumps, electric vehicles, smart appliances and SMEs
- Interventions: static ToU tariffs (no control), static ToU (automated load control with override option) and direct control (no override)

## Key Learning Points

- ToU tariffs have achieved some peak load reduction but simply displaces the peak
- Importance of 'customer experience' stressed by smart appliance supplier, e.g. include an override option
- SME customers appear to unwilling to accept changes that could impact business operation (either ToU tariffs or direct load control)
- Businesses taking part have been motivated by both environmental and financial concerns



# Customer Led Network Revolution

## Key Barriers:

- Lack of deployed low carbon technologies (EVs and heat pumps) has reduced ability to trial DSR with these technologies
- Lack of available white goods with direct load control functionality
- Difficulty in recruiting SME customers when impact on their operations is considered too large a risk
- Difficult to reach the key decision maker within SMEs
- Broadband (used for monitoring) penetration in some sectors is lower than average- particularly social housing

# Customer Led Network Revolution

## Customer Willingness:

- Difficult to recruit SME customers to elements of the trial involving load control
- Residential ToU customers motivated by financial savings rather than environmental benefits.

## Customer Engagement:

- Results not yet available

# Low Carbon London

- Trial involving domestic households both with and without on-site generation
- Working with electric vehicles and heat pumps

## Key Learning Points:

- Customers required an incentive to take part (£100 for signing up, £50 for completing the trial) and security that their bills wouldn't increase as a result of the tariff

# Low Carbon London

## Key Barriers:

- Recruitment of participants has been difficult due to lower ownership levels of heat pumps than expected- this trial was discontinued
- Customers receiving conflicting messages from the industry made recruitment more difficult- e.g. government and regulator calls for “simpler tariffs” whilst recruiting customers to ToU tariffs.

# Low Carbon London

## Customer Willingness:

- Difficult to recruit customers onto some trials
- Customers required bill protection when agreeing to a ToU tariff

## Customer Engagement:

- Results not yet available

# DISCUSSION

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