Designing the SAVE Trials

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Engineering & Environment (Energy & Climate Change)





SAVE Objectives

• Test efficacy of demand response via:





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SAVE Design Criteria

Statistically robust:

- => Random sample
- => Large enough sample

Generalisable:

• => Representative sample

Controlled

• => Randomly allocated trial & control groups







SAVE: Study Design



Recruitment process

Select study area

• Hampshire, Isle of Wight, Southampton, Portsmouth

Select Addresses

- Stratify census areas by deprivation quintile
- Randomly select n census areas within deprivation quintiles
- Randomly select 50 address per census area from PAF

Contact

• Letter sent by research agency

Survey & install kit

• Field visit: research agency staff





What was done

- Install Meter Clamp
 - 15 minute Wh
 - 10 second W
- 20 minute household survey
 - Deferred to telephone/web
 - Repeated annually
- Control Group
 - Nothing else
- Trial Groups
 - Interventions





Survey outcomes

Source: UoS analysis of SAVE vs Understanding Society Wave 4 sample for South East England (weighted for non-response)

Occupancy

Age



Survey outcomes

Source: UoS analysis of SAVE vs Understanding Society Wave 4 sample for South East England (weighted for non-response)

Income

Eco attitudes



Outcomes by trial group

Source: UoS analysis of SAVE data

Eco attitudes

Log mean Wh



Illustrative results: daily profiles



Illustrative results: daily profiles





Trial 1 4-8: Preliminary results

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- Series of weekly coms
 - Jan Feb 2017
- 16:00 18:00 period
 - Control Group
 - Nothing
 - Group 2
 - Messages
 - Group 3
 - Messages +
 - £ Incentive

- Specific Day
 15th March 2017
- 16:00 18:00 period
 - Control Group
 - Nothing
 - Group 2
 - Messages
 - Group 3
 - Messages +
 - £ Incentive

PLEASE USE LESS ELECTRICITY



We're anticipating a peak in electricity consumption in your local area this Wednesday. So please help us manage this by shifting any non-essential electricity use to before 4pm or after 8pm on Wednesday.

If everybody uses just a little bit less at peak time the effect will add up and ease pressure on the network. We've set a target of 10% below your usual usage. We'll let you know if you managed to beat it!

Thanks from Tawanda, Jasmin and the team.



Southampton Trial 1 4-8 Event: Preliminary results



Trial 1 4-8 Event: Preliminary results



Trial 1 4-8 Event: Preliminary results

