



A Brave New World – Customers and the DSO

Lessons from Low Carbon London

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**UTILITY OF
THE YEAR**

**Imperial College
London**



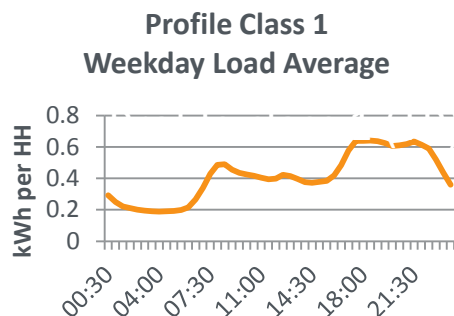
Presentation overview

- DNOs and the residential customer sector
- A new 'profile class 1'?
- LCL trial customer engagement strategies and feedback
- Delivering a network dToU tariff scheme
- Smart meters, smart engagement

DNOs and residential customers

When does the DNO interact with domestic customers?

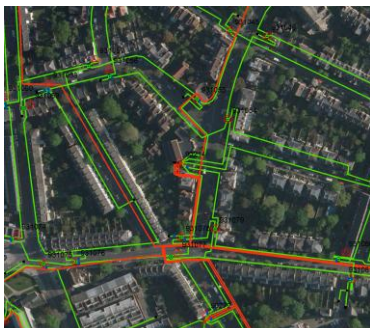
1. New Connections



2. Meter cut-outs



3. Outage Management



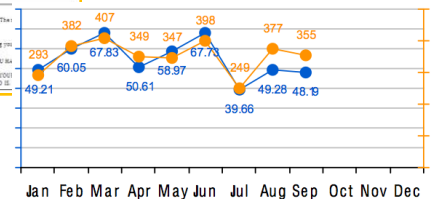
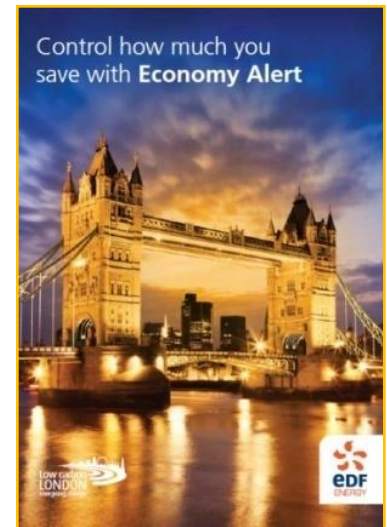
4. Power quality investigations



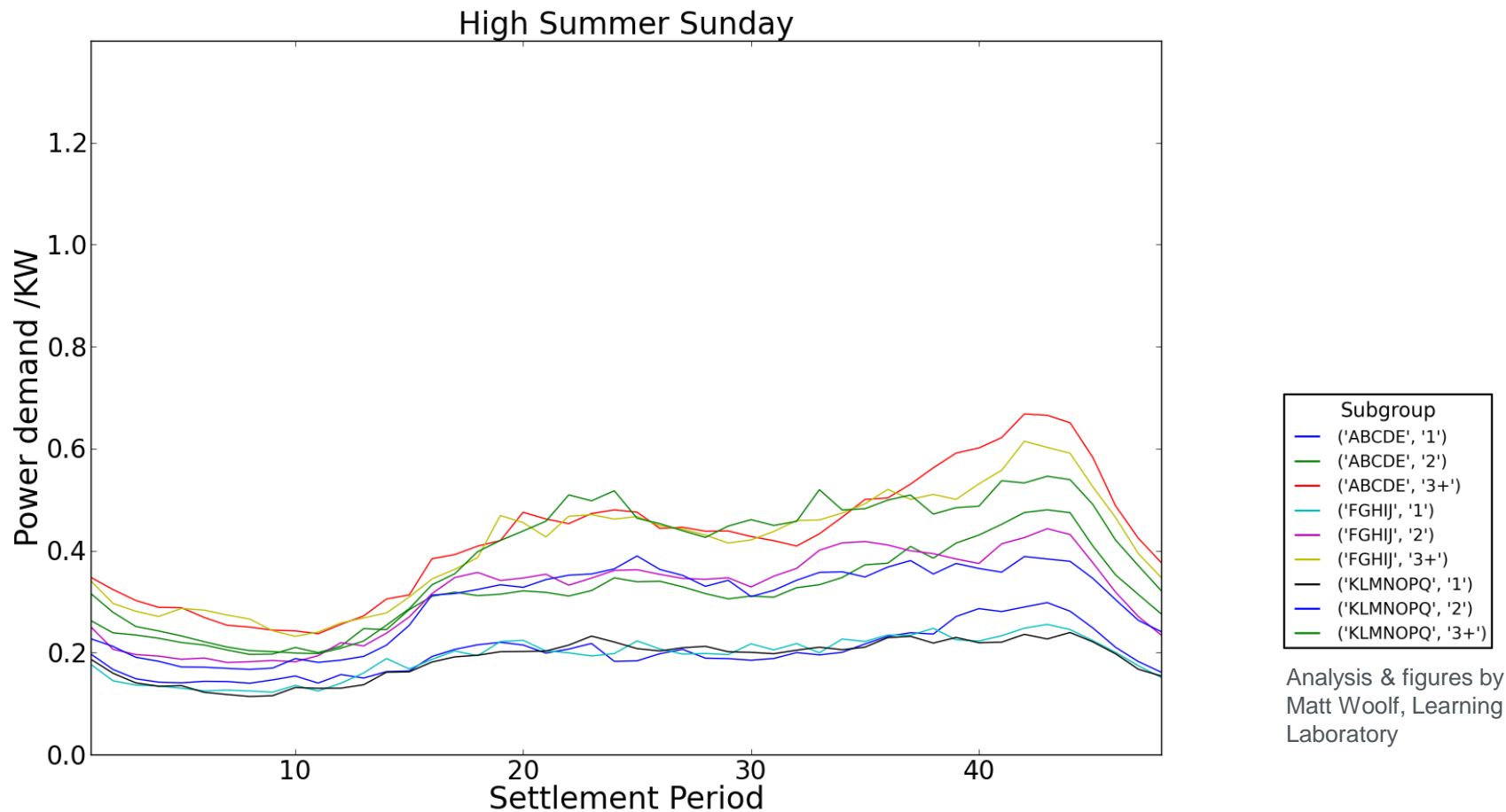
Low Carbon London Trials

Customer engagement strategies

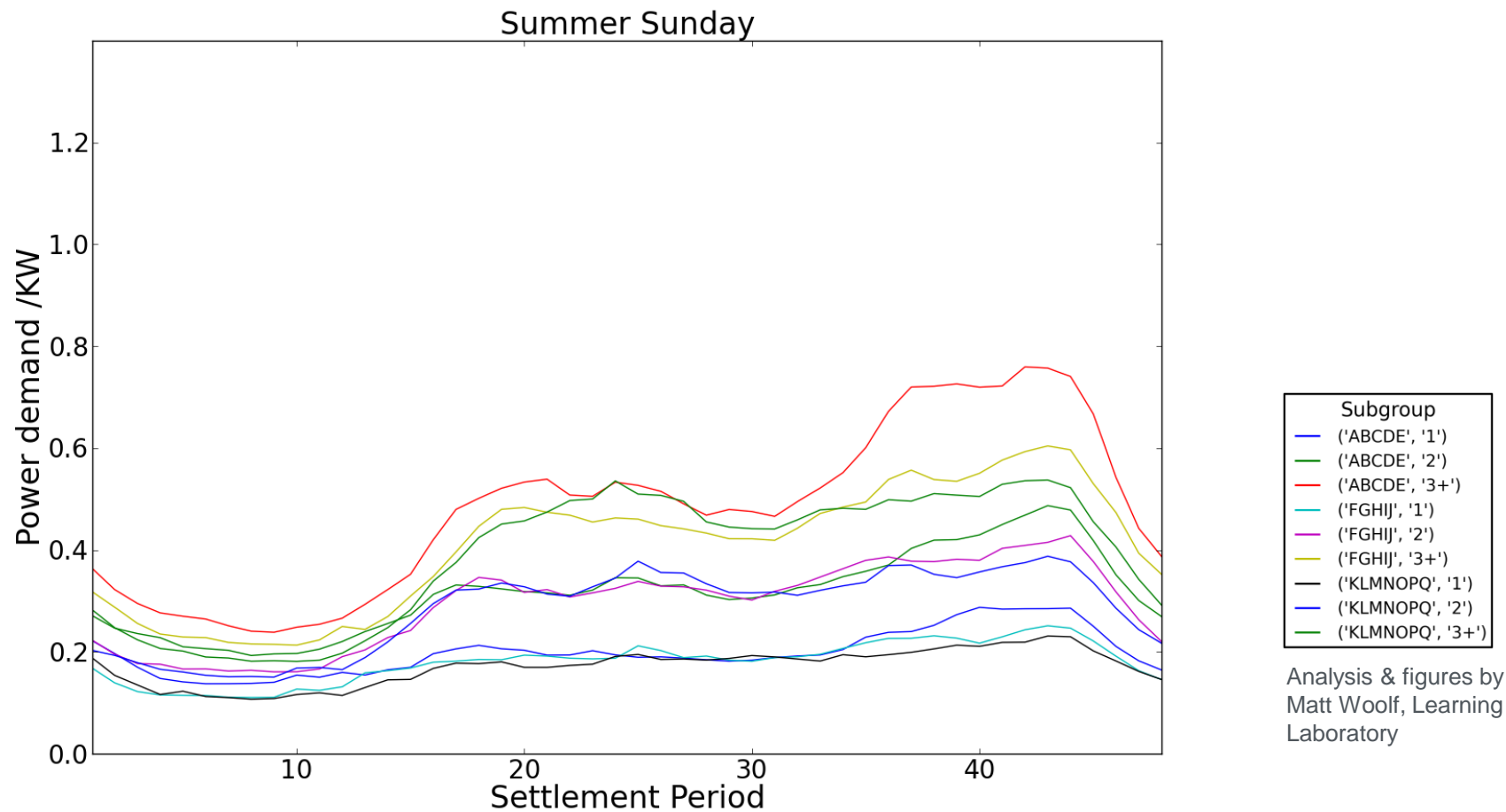
Smart Meter Sample	5,815 residential customers - LPN
Trial period	Recruitment: <ul style="list-style-type: none"> Q4 2011 – Q3, 2012 Data collection: <ul style="list-style-type: none"> until Q4, 2013
Recruitment	<ul style="list-style-type: none"> Supplier-led, opt-in Balanced, representative sample
Survey	2,140 surveys completed, detailing customers': <ul style="list-style-type: none"> Demographics Household characteristics Installed appliances & loads



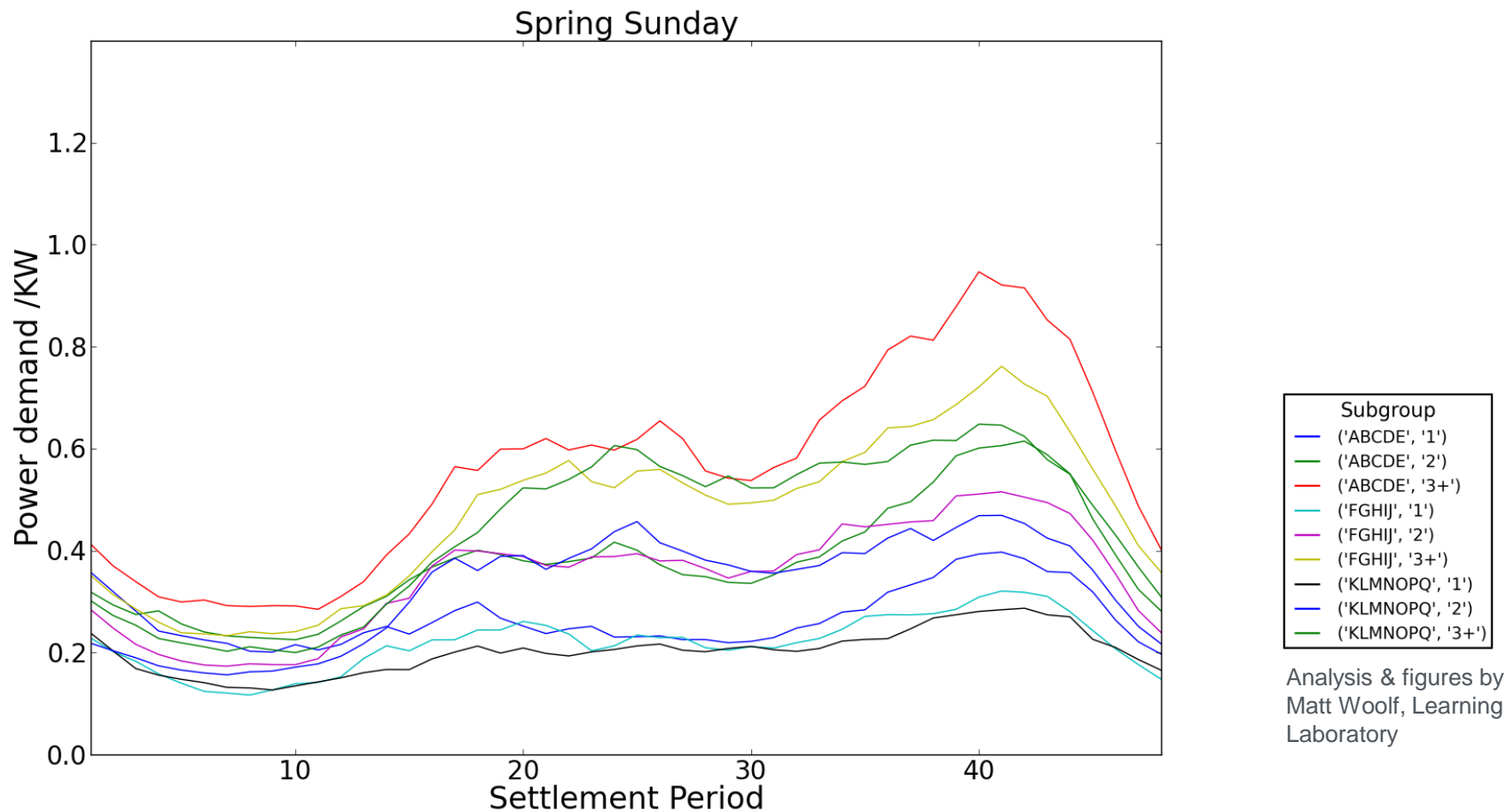
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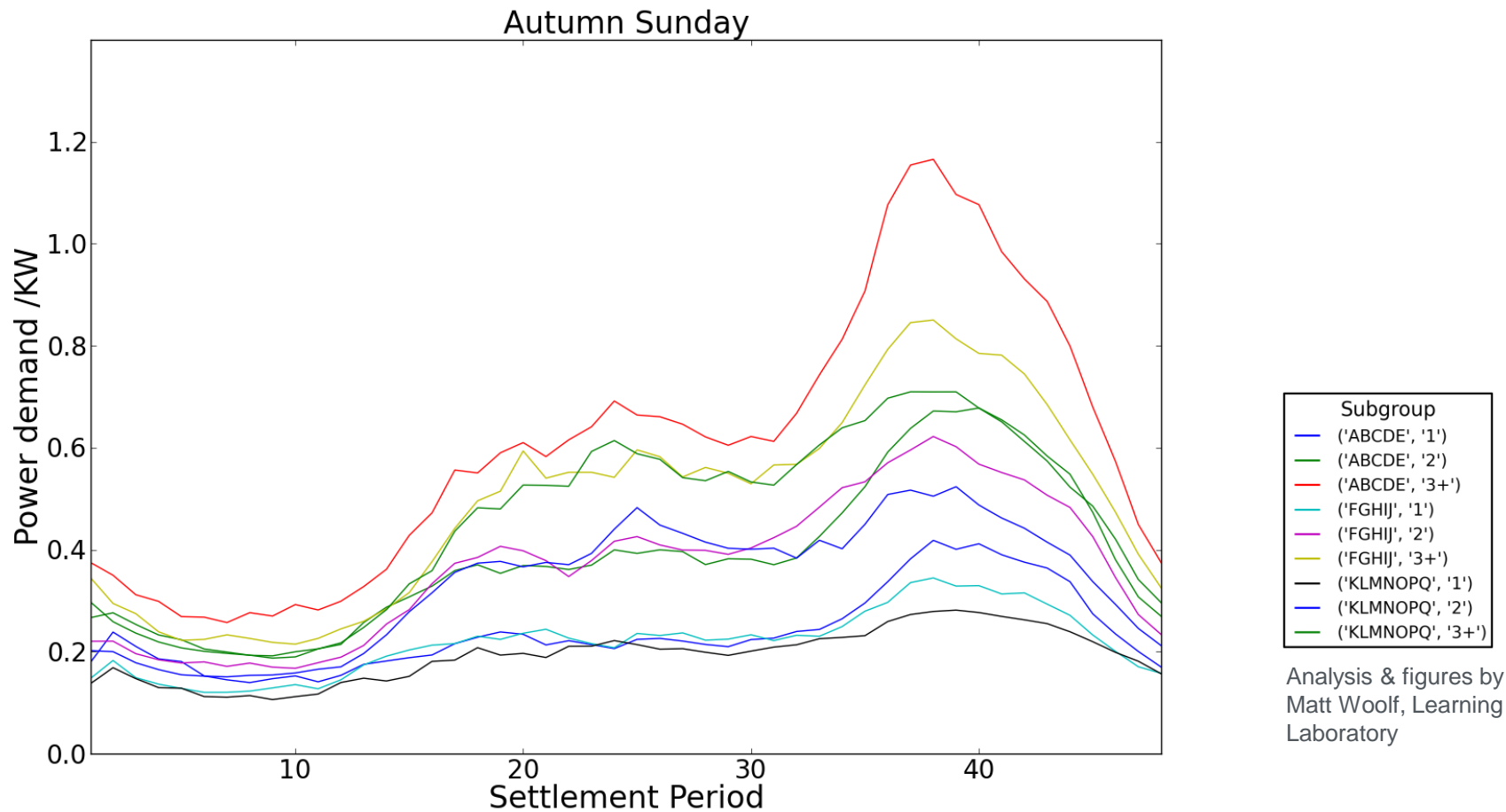
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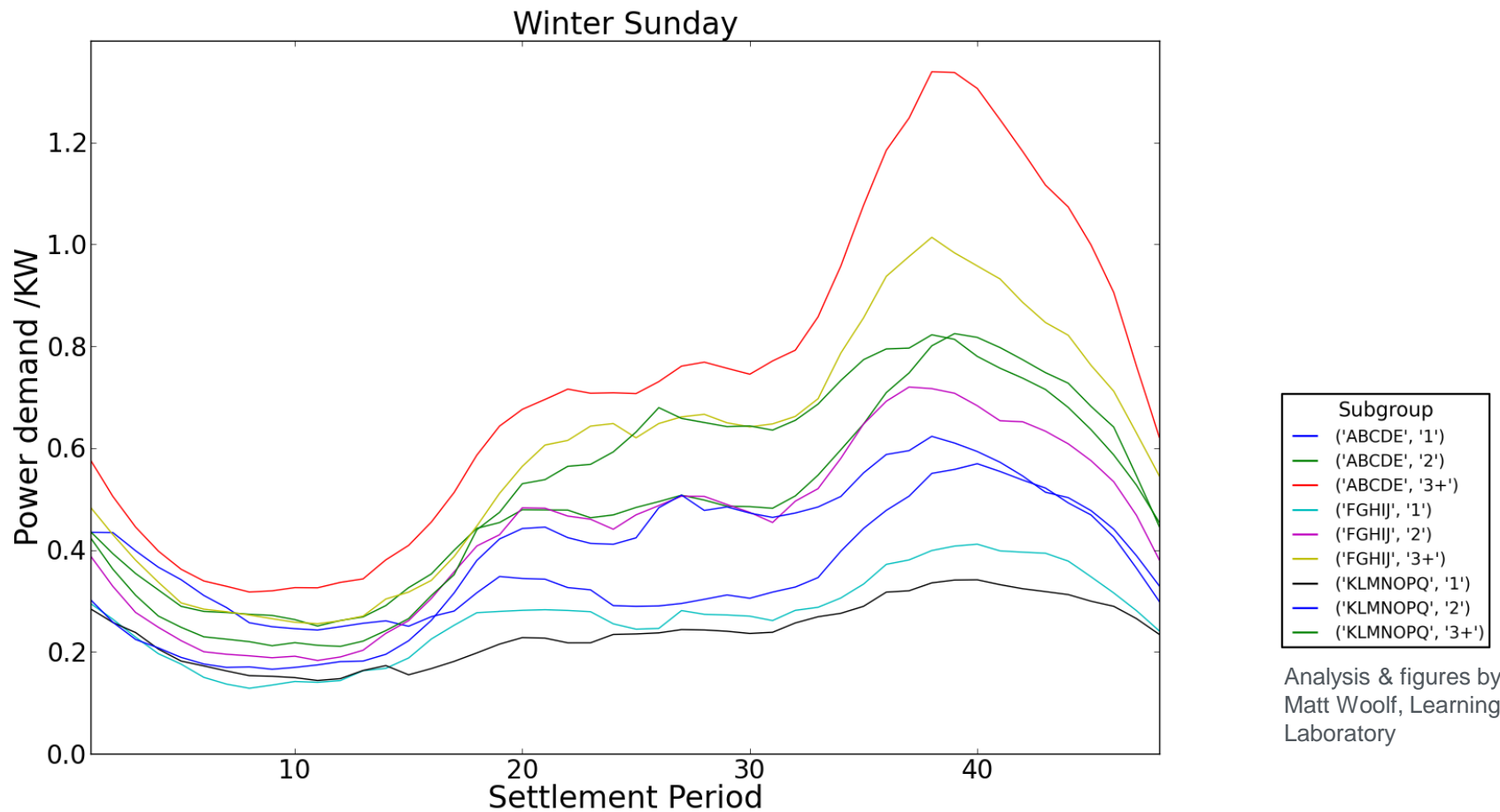
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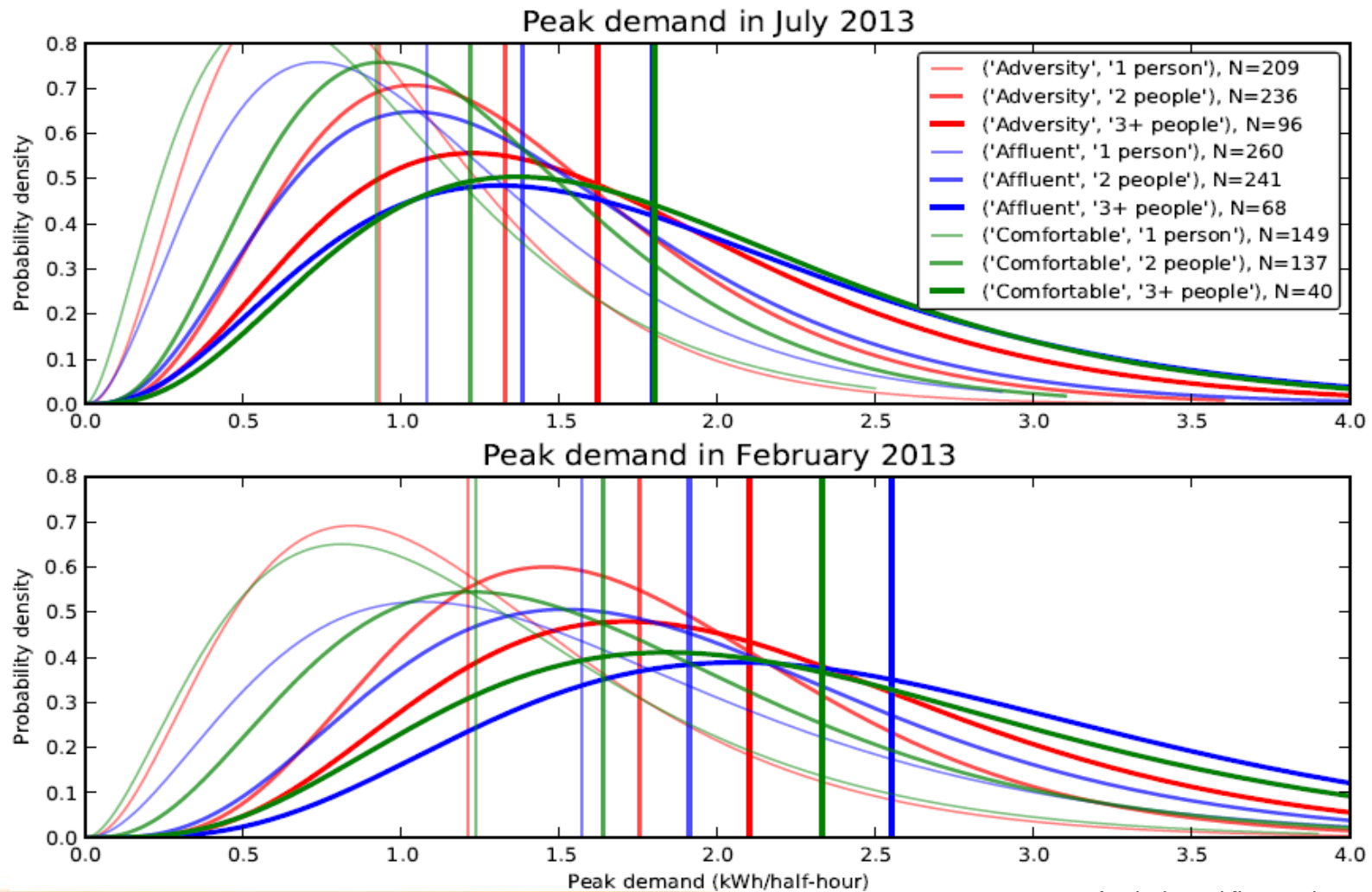
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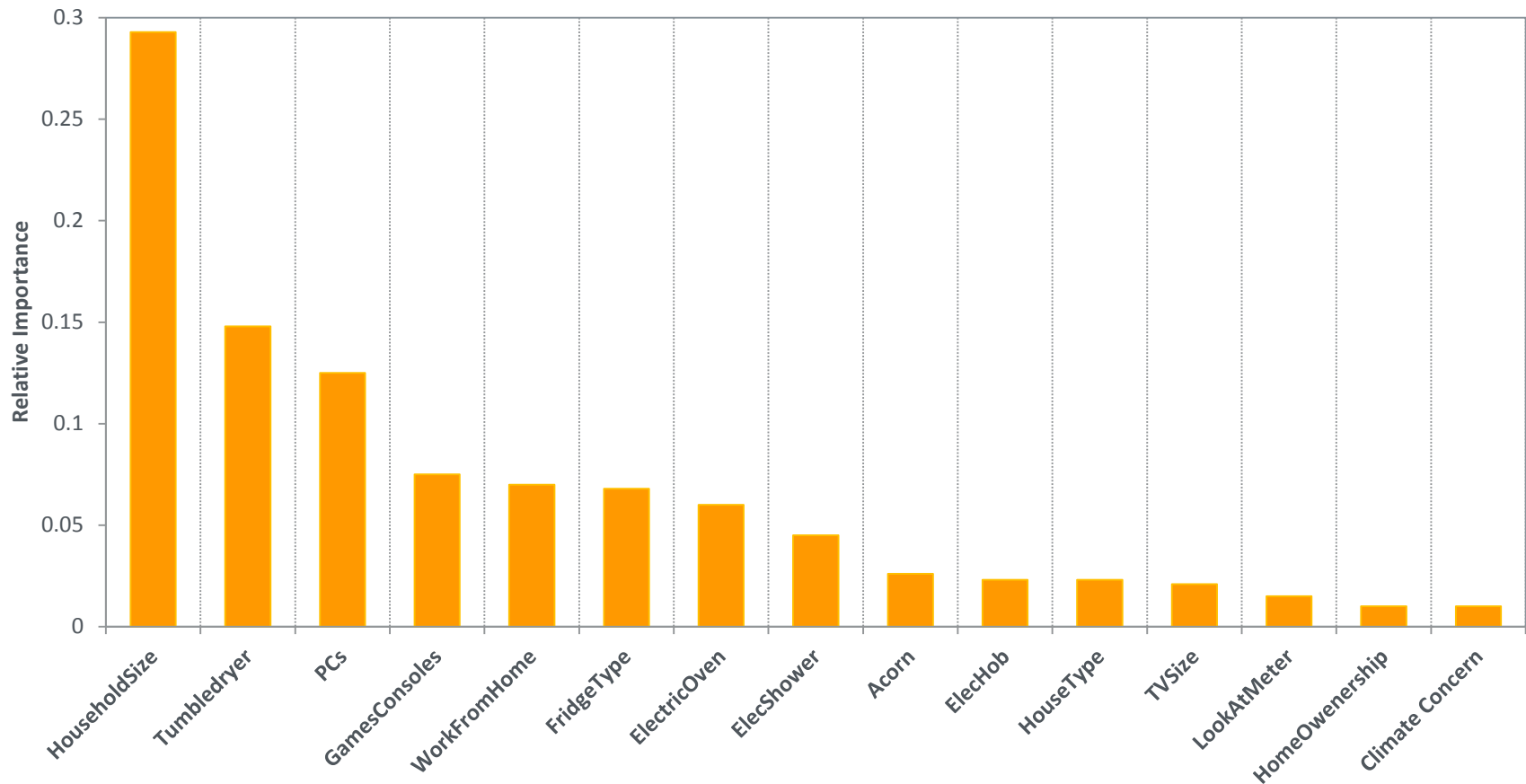
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Analysis and figures by
James Schofield, Learning Laboratory:

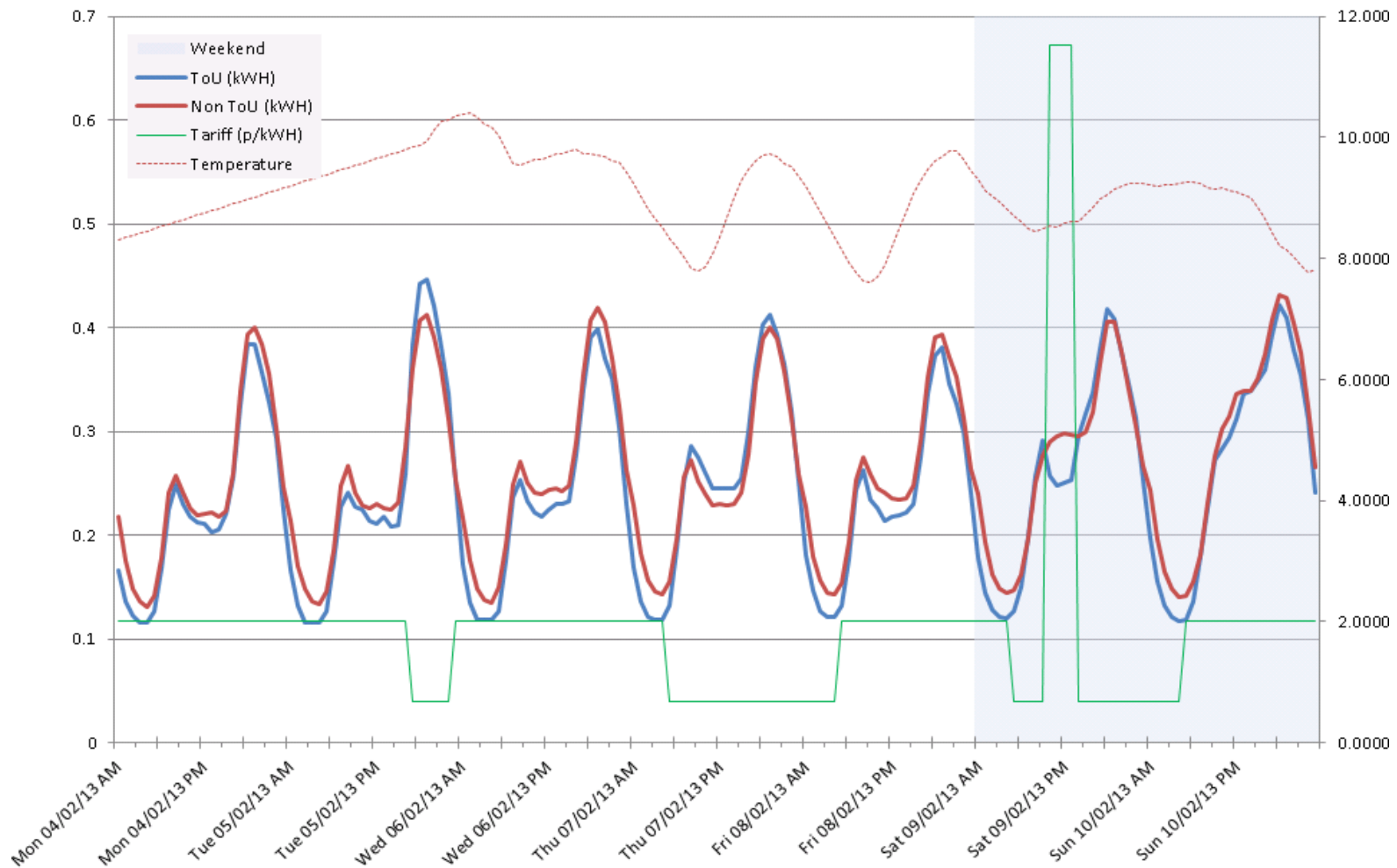
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Appliance Survey - Relative Importance



Analysis by : Alex Whitney, Mark Bilton
and Goran Strubac , Learning Laboratory

Delivering a network d ToU tariff scheme



Consumer engagement & the LCL Residential Dynamic Pricing Trial

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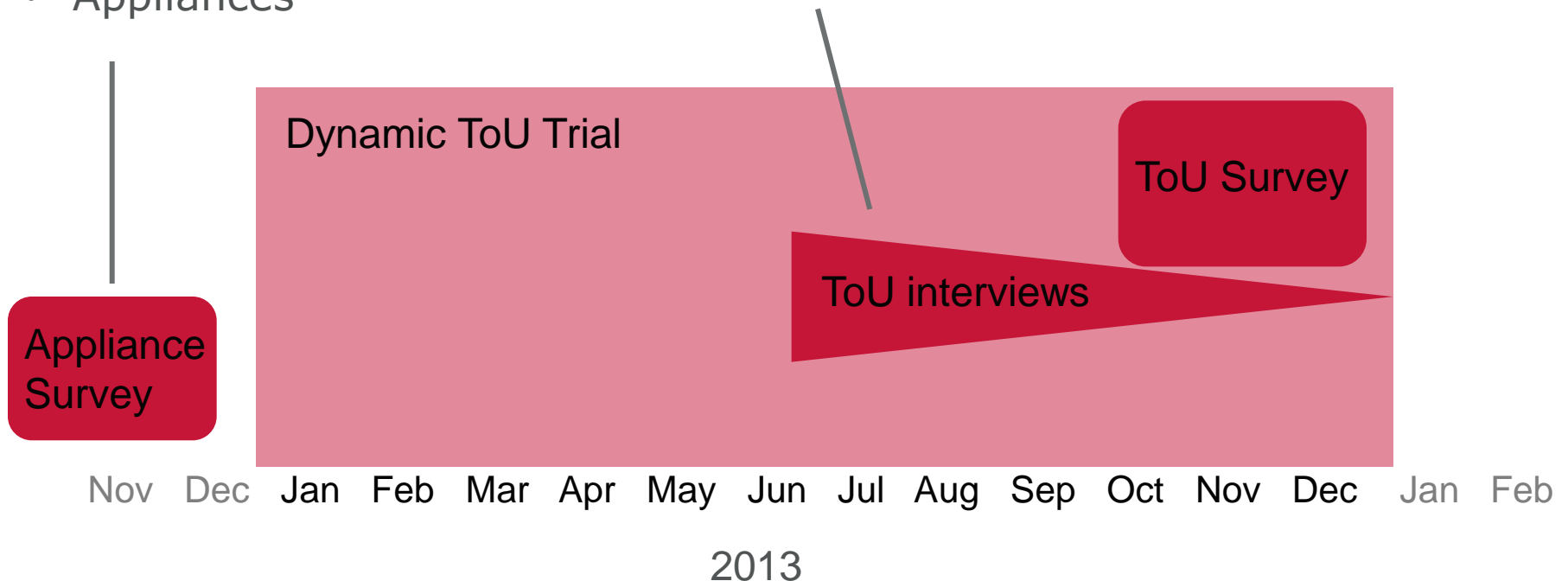
Dr Richard Carmichael

(with thanks to James Schofield & Dr Mark Bilton)

Data collection

- Household data
- Appliances

- face-to-face/telephone
- range of households
- broad range of topics
- June–Dec
- ~26 so far



Early findings – customer savings

Economy Alert Vs Standard Variable Tariff

- dToU costs to date = £384.99 /household
- Standard Variable Tariff costs to date = £400.33 /household
- dToU is ~4% cheaper
- Range –25% to +11%



ToU Interviews – early insights

1. Tariff complexity

“**it wasn't complex** because they told you when it was high and when it was low, the costing you know, it's only with kids that because we have got kids that that it wasn't for us.”

“Yes, I don't think it is ... **it doesn't come across to me as complex**, in fact what I was saying to this guy on the phone was I would love to be able to see some options.”

2. Explanations wanted – will assume the worst if not

“**I don't feel, how do I say, this is all been done with consumers in mind** or with the environment in mind and I expect there is also a healthy amount of, well if we play around enough, we will probably be able to increase our profits in the future because people won't really know what's happening.”

“**I just need to know that it's been done for an efficient reason...**”

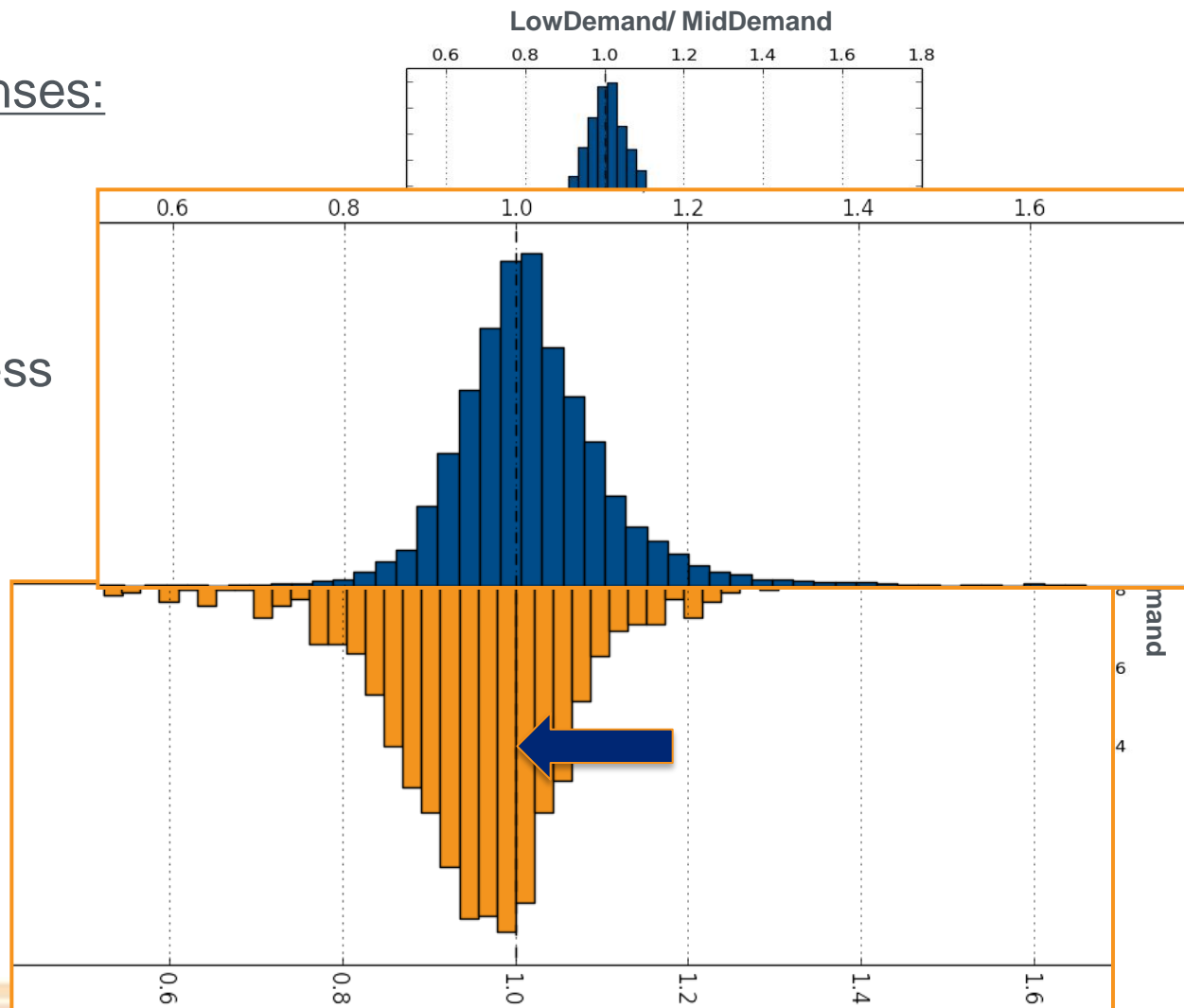
3. Division of labour and behaviours

“**I suppose, it's the washing machine, it's me!**” (female trialist)

Delivering a network $dToU$ tariff scheme

Clear customer responses:

- Robust sample
- Marked responsiveness
- Observed HIGH price flexibility: 11%



Delivering a network dToU tariff scheme

LCL Trial - Flexibility and performance

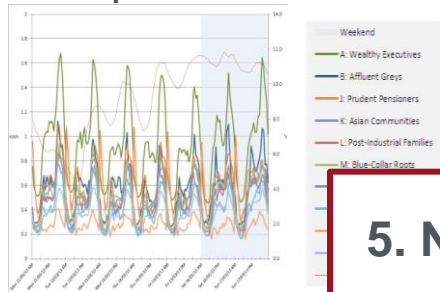
Participants	Sample flexibility (%)	Individual Response (kW)	Total Response
1,107	11	0.07	77 kW

Smart meters, smart engagement

How does a DSO interact with domestic customers?

1. New Connections

Multiple Load Profiles



2. Meter cut-outs

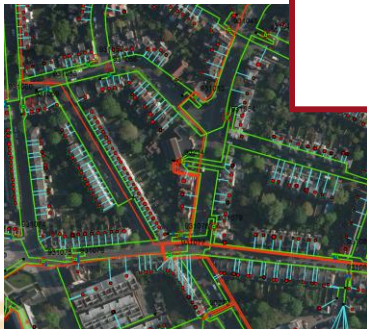


2% DNO
intervention
rate for national
smart meter
rollout

5. New, active services

...network-driven
ToU tariffs?

3. Outage Manager



4. Fault investigations



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- Come and talk to us on our stands here at the conference
- Visit our new website ukpowernetworks.co.uk/innovation
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Thank you

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