



Pilgrim Beart

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joint talk given at HEAT Conference 2009
run by Cambridge Investment Research
www.hvm-uk.com

Today's agenda



- Who are we?
- The situation
- Introducing GEO
- Introducing AlertMe
- Co-opitition and a Cambridge Cluster?
- 2020

- Simon Anderson
 - COO Green Energy Options
 - Making energy visible
 - Engaging users in the home, at work and in school
 - Emphasis on displaying information, but includes control
 - Business model: product led brand
 - Channels: Utilities, Commercial, Communities
- Pilgrim Beart
 - CEO AlertMe
 - Measure and control by all modern means
 - Home Energy Management service
 - Business model: platform play, monthly revenue
 - Channels: Telco's, Retail, Utilities

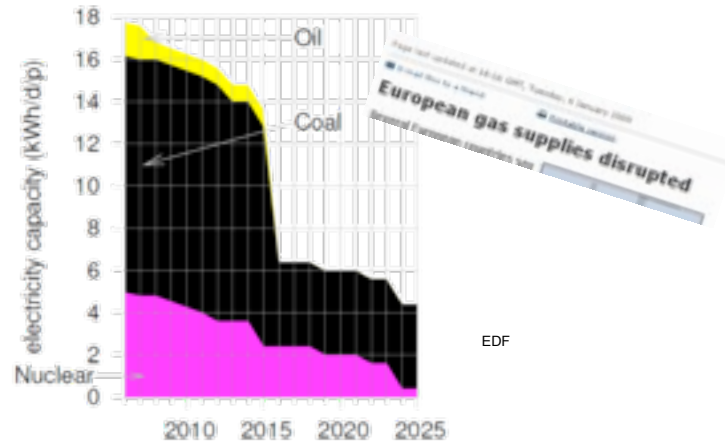


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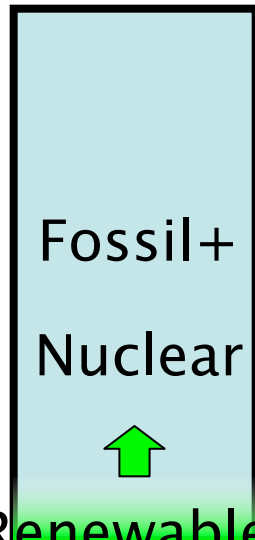
The Situation

Government Push

- Energy Security
- Climate Change

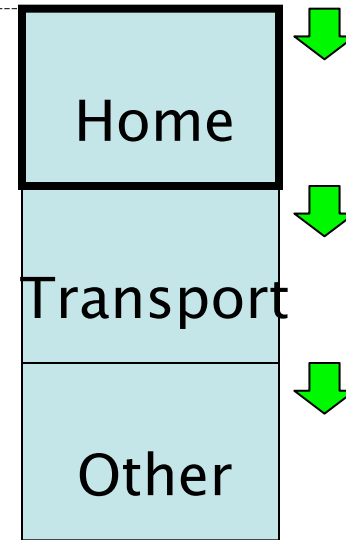


Supply

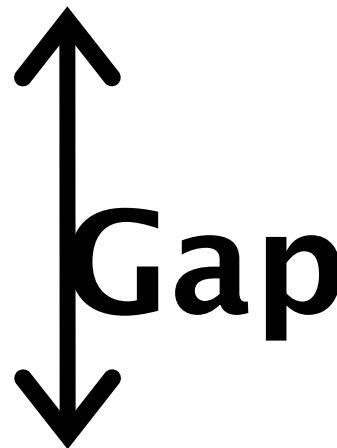


15% in
4.6% in
2015
BERL 2008

Demand



29%



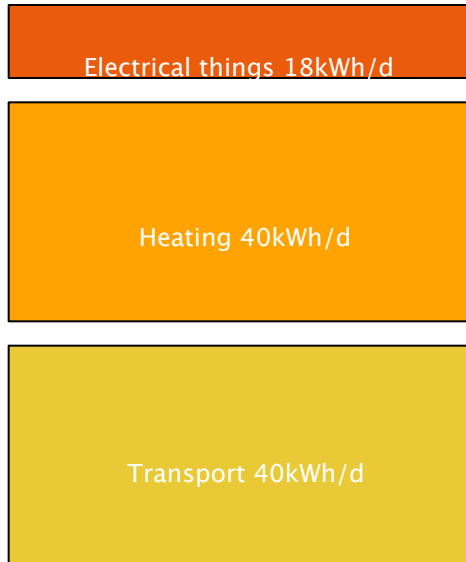
- **Average UK household:**
 - **Disposable income £14,520**
U-switch press releases, 6 June 2008
 - **Domestic energy bill £1,213 (8.3%)**
U-switch press release 26 Aug 2008)
- **90% of consumers concerned about energy bills**
OnePoll Survey of 1000 broadband users, Sep 2008

- £1bn/year towards energy efficiency
 - Otherwise windfall tax, or lose license
- Energy-saving: saturated?

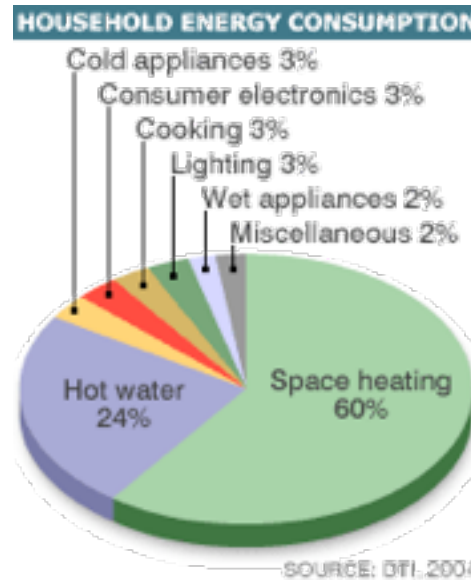
Insulation measure	Households with this	
	1976	2005
Loft insulation	51%	95%
Double glazing	10%	84%
Hot water tank insulation	74%	95%

- Energy is a commodity
 - Centrica pays 75% tax on supply
 - <50% of 2008 revenue was from supply

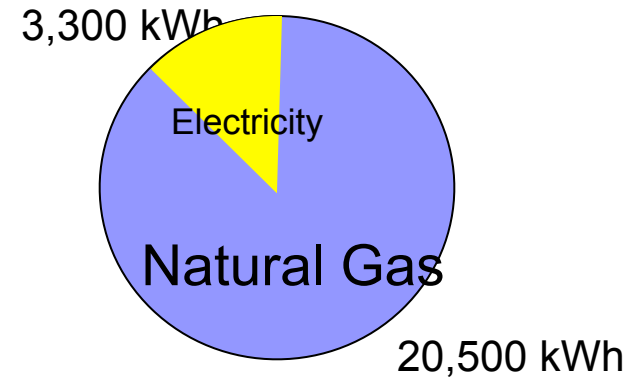
Where does UK energy go?



SEWTHA



SOURCE: DTI, 2004



USWITCH JUNE 2008

Personal
energy consumption

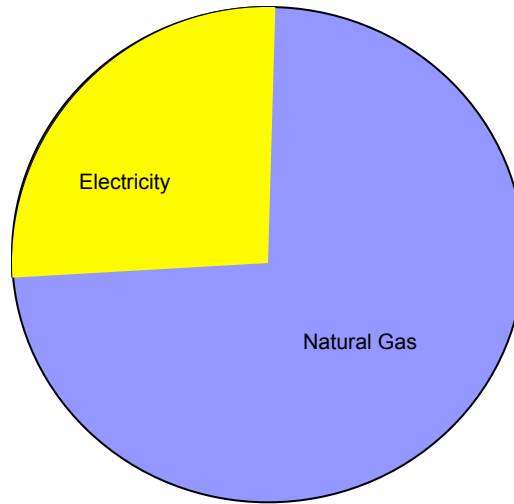
Household
energy consumption

“Approximately 10% of domestic electricity consumption is wasted by appliances left on standby”

UK is pretty typical (vs. e.g. California)

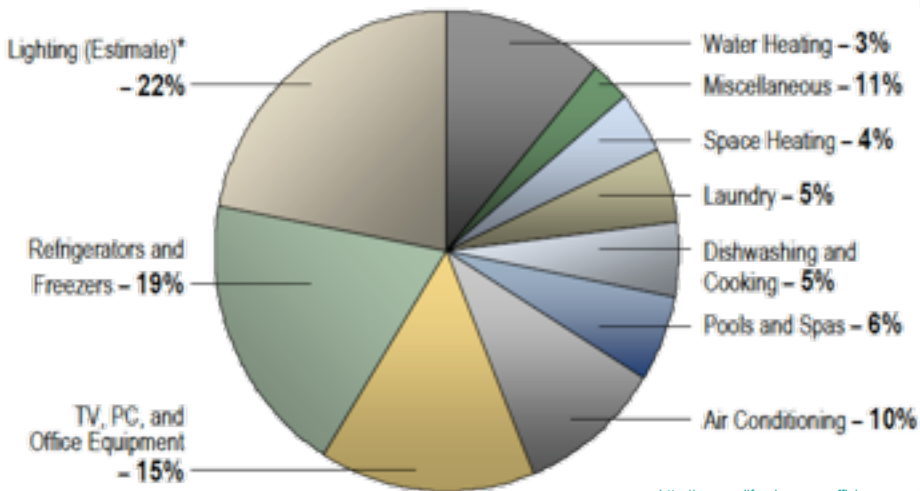


5914 kWh

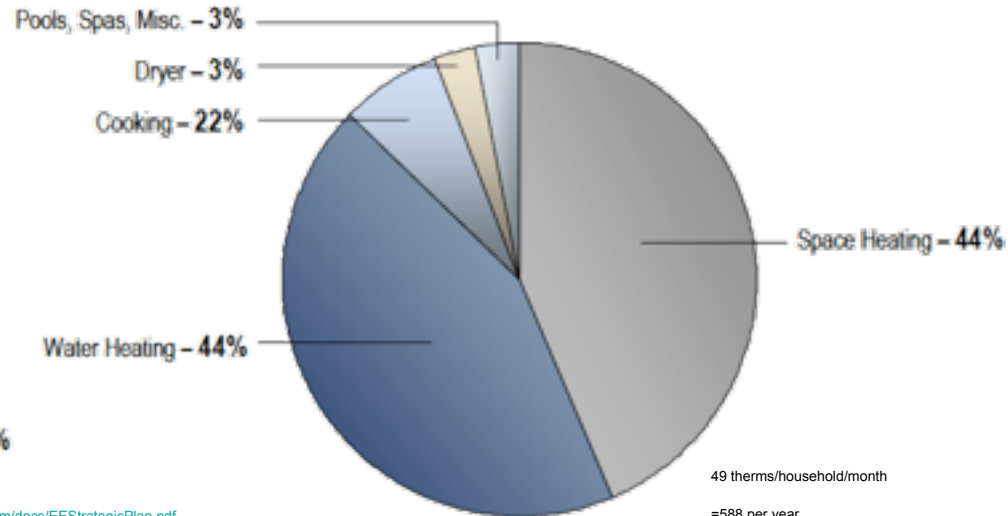


17000 kWh

Statewide Average Electricity Use Per Household
(5,914 kWh per Household)



Statewide Average Natural Gas Use Per Household

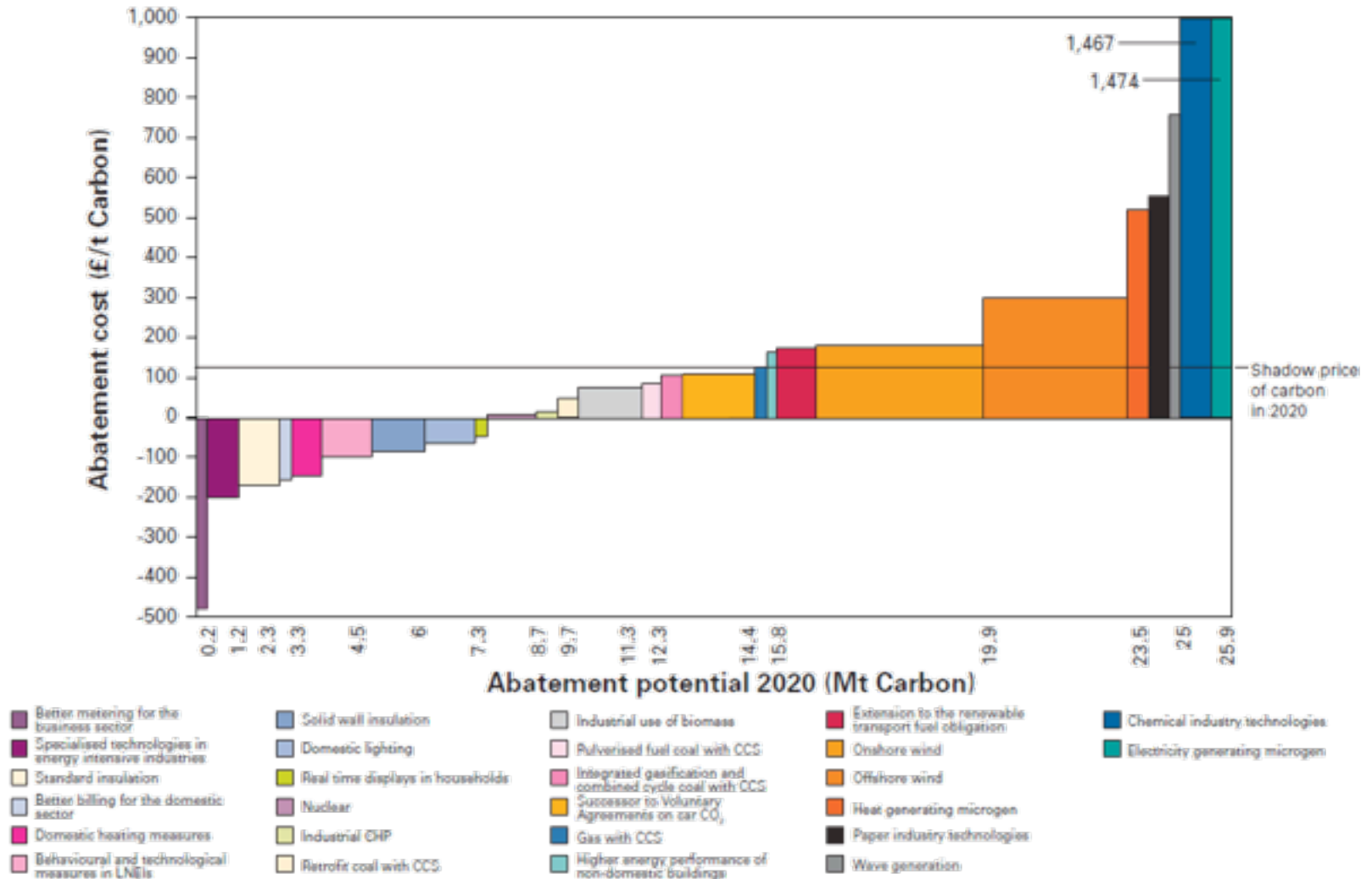


49 therms/household/month
= 588 per year
= 17,000 kWh

<http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>
<http://www.pge.com/about/environment/calculator/assumptions.shtml>

Abatement cost

Chart 2: Marginal abatement cost curve 2020 with new shadow price of carbon (SPC)



- Energy efficiency is the lowest-hanging fruit
- 3 types of reaction:
 - Denial (no plan)
 - Accept the inevitable, but grudgingly (financial issue)
 - Enthusiasm to seize the game-changing opportunity
- Early market
 - No-one knows how it's going to end
 - But everyone's realising they can't wait to find out
- UK is deregulated energy market
 - The consumer really matters
 - Other channels can play, besides utilities

What progress?



- Renewables?
- Smart Metering?
- Government initiatives?
- Displays?
- Consumer engagement...

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Introducing GEO



Introducing GEO



- User engagement
- A progressive activity
- Two types of display



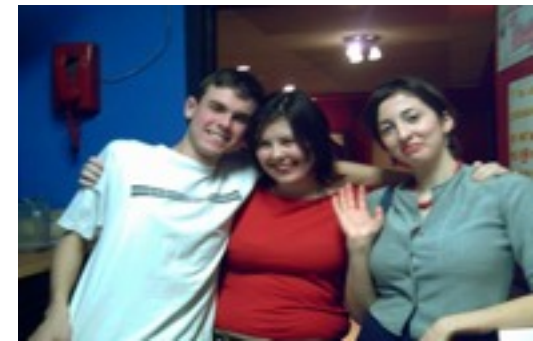
Push Displays

- Always on
- Simple
- Low cost



Pull Displays

- Call for information
- Richer, multi function environment
- Higher cost



Stage 1: engagement

A push display (RTD)

- Low cost
- Simple to install and maintain
- Educational

But has to be:

- Engaging
- Simple to understand
- Have enduring value

Stage 2: encouragement

An In-Home Display (IHD)

- Increased functionality: e.g. simple controls
- Multiple display options
- Relationship building

Delivering:

- Retail income
- Service Income
- Brand loyalty

Stage 3: advanced controls

The smart home



Last points

- Its about people
- It can be done now – in advance of a smart meter roll-out
- Momentum is building





Introducing AlertMe

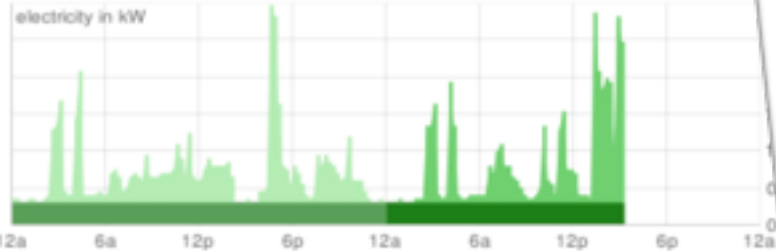
AlertMe Energy - today



Google PowerMeter: Ben's Home

Electricity used Nov 2–Nov 3

Day [Week](#) [Month](#)



← Previous day

Monday Nov 2	Tuesday Nov 3
16 kW·h used	12 kW·h used
Approx. \$580/year ?	Approx. \$681/year ?
■ Always on: 7.2 kW·h used	■ Always on: 4.4 kW·h used

Compared to others



Compared to past usage

7% under expected usage so far today ?



[Manage](#) [Discuss](#) [Help](#)



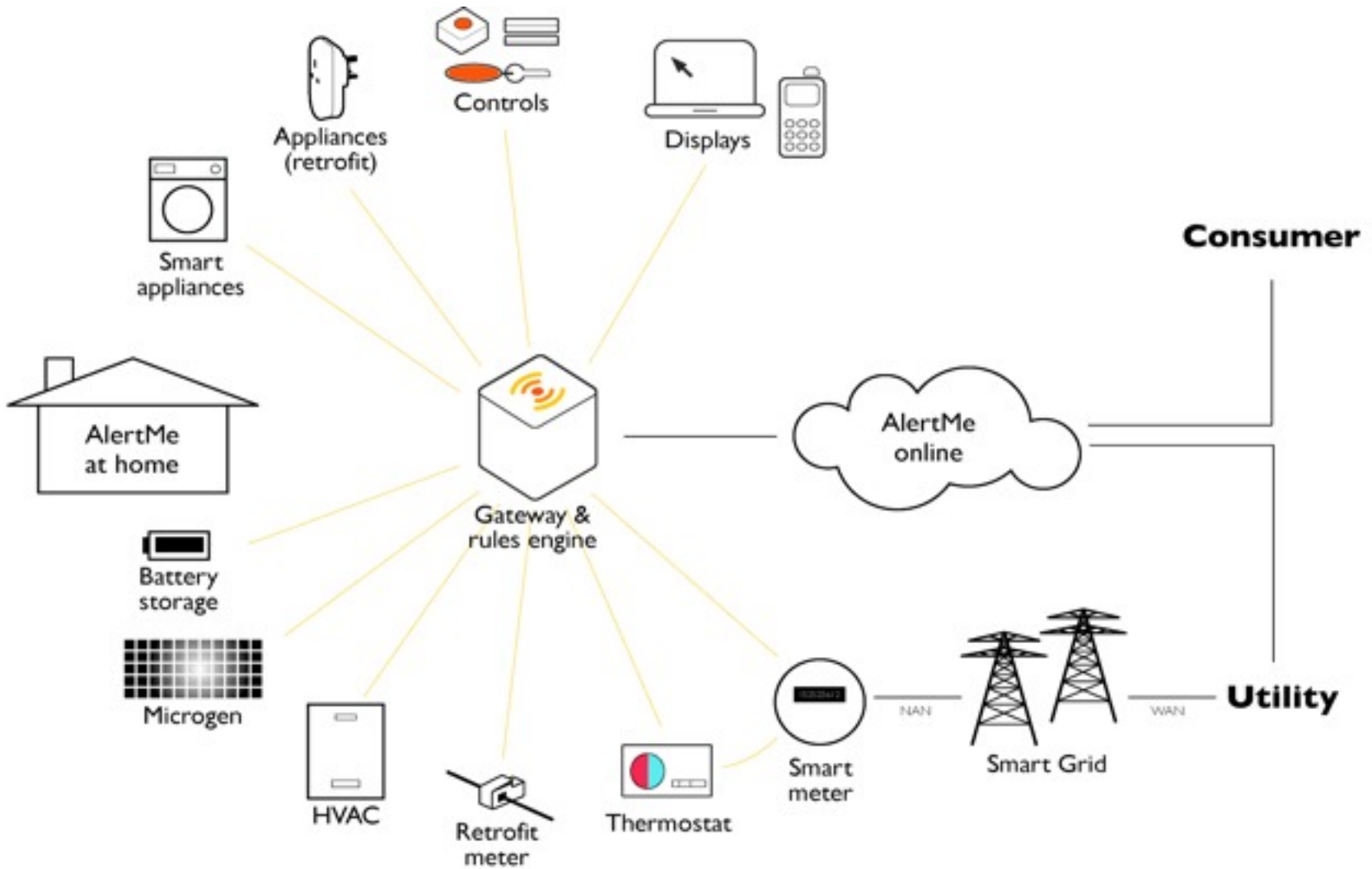
AlertMe applications - Today



- Whole-house electricity
- Per-appliance electricity
- Online Heating



Home Energy Management



- Engaging the consumer via
 - Utilities
 - Telco's
 - Retail
- Partnering with
 - Controls mfrs
 - Heating & Cooling
 - Microgen mfrs
 - PV, Solar Thermal. MicroCHP
 - Online Services
 - Web services (Google Powermeter)
 - IPTV
 - AMEE



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Values and Differences

- Part of energy revolution
 - Good place to be!
- Demand-side
- Consumer-oriented
 - Domestic homes
 - Create consumer pull
- Making energy visible
- Speed, “just do it” - don’t wait for Smart Meters
 - But work with them when they come
 - Therefore want open architecture

Ways we are different



- Product vs. Service
- In-home vs. In-pocket
- Local vs. Online
- Lowest-cost vs. Platform

...but these are complementary - a spectrum



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Co-opitition

- Market creation
 - This will be a massive market, but first it needs creating
- Speed
 - First mover advantage
 - Before the big boys move in
- Focus
 - As small businesses each of us can't do everything
- Cost, scale, volumes
 - Which translates into:
 - Price
 - Margin
 - Re-investment

- Customer choice
 - Creates a vibrant market
- Innovation
 - No one business knows all the answers!
- Speed and flexibility
 - Faster decision loops
- Challenge
 - Competition is good! It keeps you on your toes...

Co-opitition: an example



The four 'I's

- Intelligence
 - Sharing information and understanding
- Inter-working
 - R&D, 'internals', firmware etc
- Integration
 - Ensuring our products can work together out of the box
- Interoperability
 - Complementary functionality creating a bigger system

A Cambridge Cluster



- Not limited to the two (three) of us
- Driven by business rather than research...
- Not meetings, but joint projects
- Not waiting for leadership: providing it



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2020 – a vision

- Consumers will have been increasingly **MOTIVATED**:
 - by rising energy prices,
 - Smart Meters,
 - Time of Use pricing etc
- We intend to make sure they are increasingly **ENABLED** too:
 - by making energy visible and controllable, including microgen
- Consumers will be both **MOTIVATED** and **ENABLED** and a revolution will be in progress;
 - driven - like all tech revolutions - by "consumer pull"

Thank you!



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