



# Utility Control to Consumer Choice ...

## A Better Path for Smart Metering & Energy Data

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# This presentation

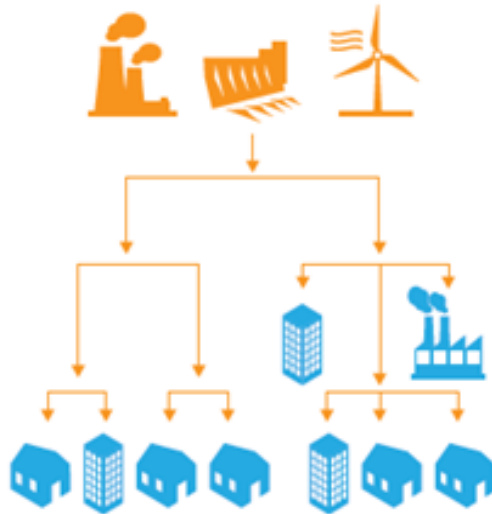


- Technology available now enables moving well ahead of regulated utility control of energy use data
- To reduce consumption, consumers need to own and control their energy use, and/or share access with energy service providers for market participation
- Unlocking consumer data creates a new, future-ready set of energy service opportunities on the path to:
  - Networking distributed clean energy generation
  - National energy saving scheme with tradable certificates
  - Metrics and incentives for low/zero emission buildings
  - Merging the 'Smart Grid' with the 'Internet of Things'

# The future we want (1)

today

Centralised  
(flexible supply)



Utility command and control. Very little is known about energy-use past the meter box.  
**It's a wholesale market.**

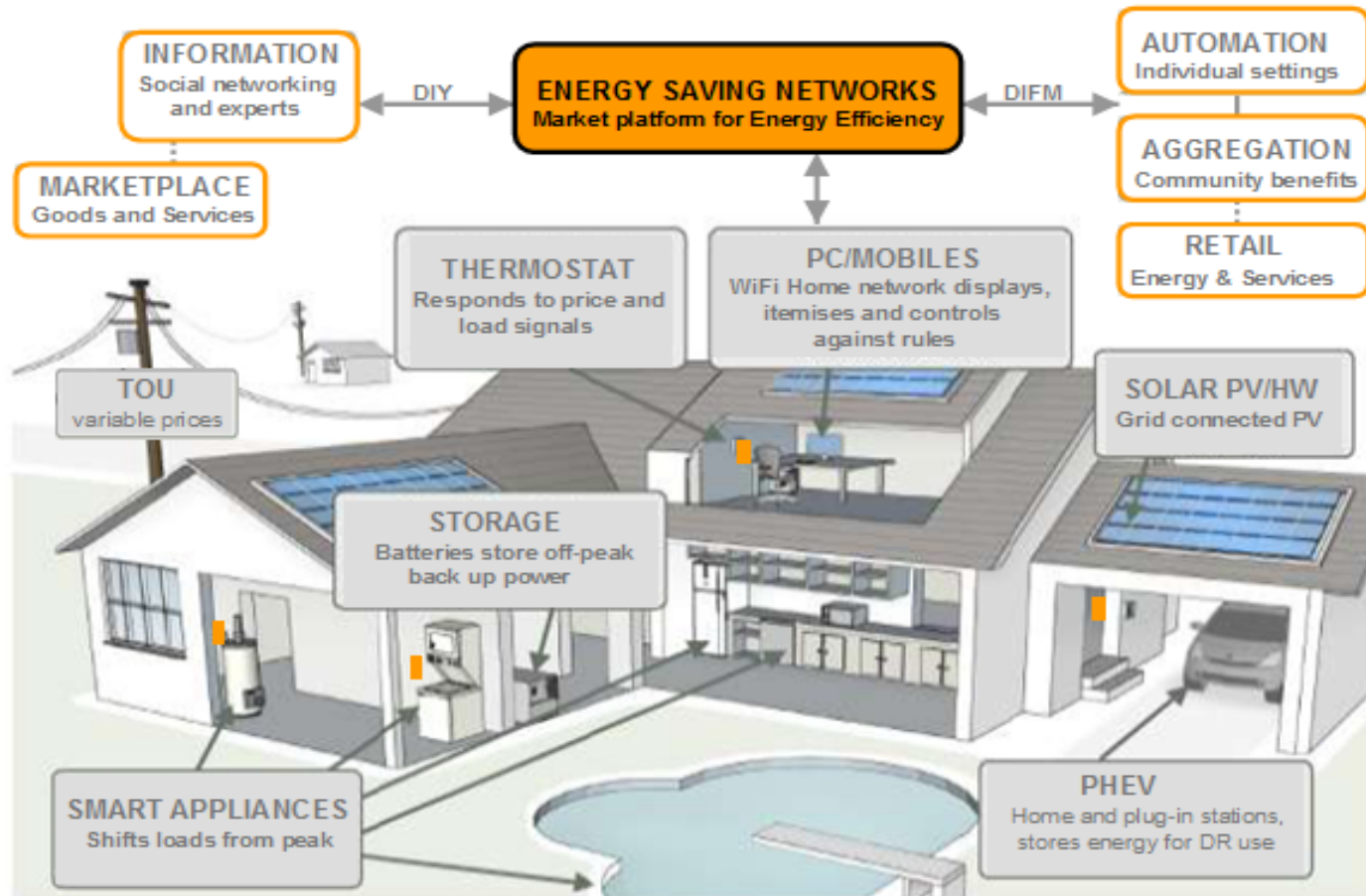
tomorrow

Distributed  
(flexible demand)



Distributed generation, intermittent renewables, EV's, storage, energy optimisation, automation.  
**It's a retail market**

# The future we want (2)



\* automated, optimised energy services with an itemised energy bill

# Unblocking data barriers



- Free-market dysfunction:

***‘Barriers to energy data access are stifling the development of a vibrant ESCO sector.’***

*Sapere Research Group for Department of Resources, Energy and Tourism, August 2012  
(Scoping study for a consumer energy data access system – CE data)*

- Who to trust?

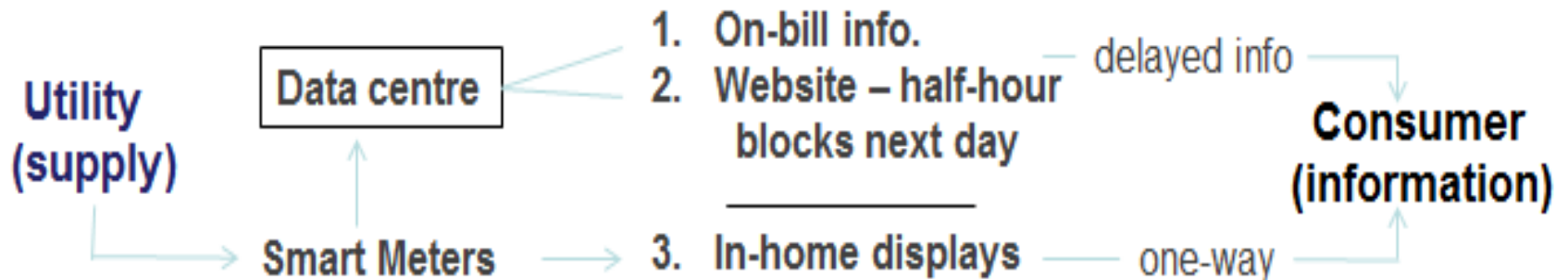
***‘The industries least trusted to act in the public interest were power companies (18%), the media (30%), mining (32%) and banking (33%).’***

*Essential Media poll, published January 21<sup>st</sup>, 2013*

# Current model

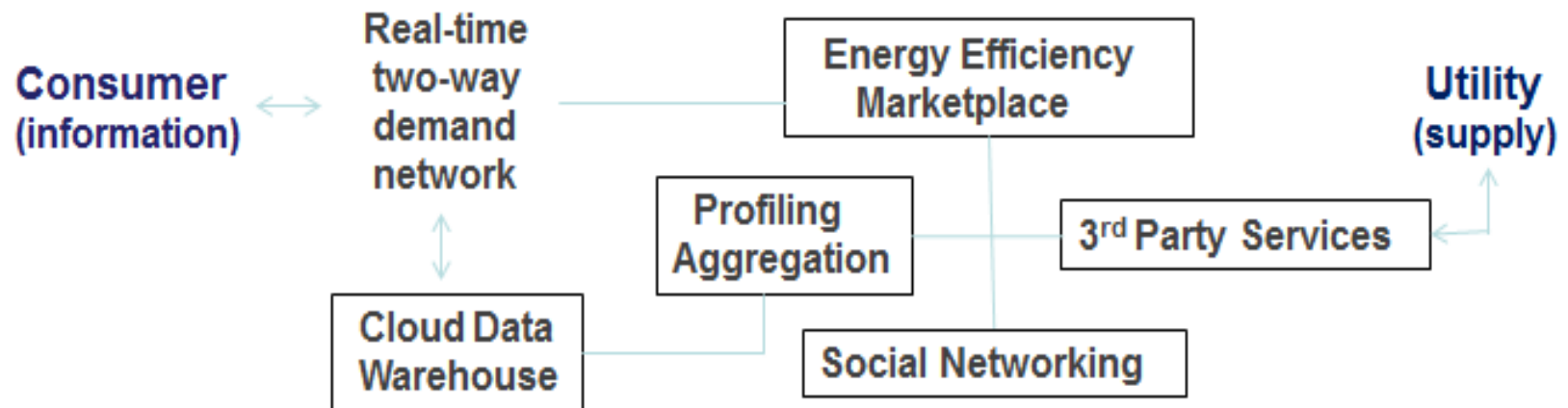


- **Supply driven**
- Reliant on utilities & industry 'smart meter' rollouts
- Consumers are 'last in line'
- Limited access to data retards competitive energy services
- Developing at slow pace in a highly regulated environment



# Better model

- **Demand driven**
- Puts consumers in control of their energy use
- Data access shared at customer's choice
- Enables innovation in energy services
- Independent of utilities - faster, cheaper, cleaner



# The connected world: householder example



**energy use**

Whole building, circuits and major appliances



**auditor<sup>®</sup>**

energy management meter

Consumers have their own 'very smart' meter.



**cloud**

Energy consumption is hosted and analysed



**smartphone**  
(or PC's, tablets)

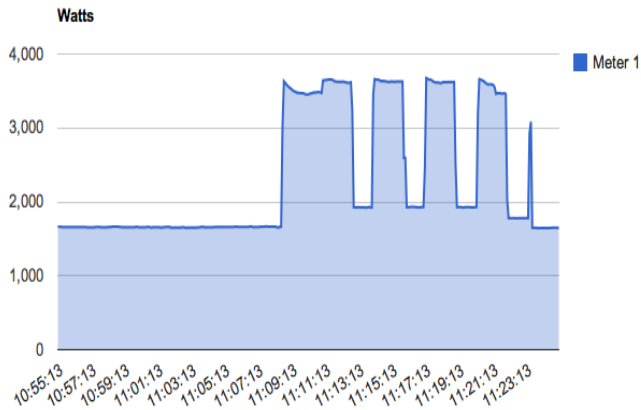
Information is sent back in easy, actionable formats



# Real-time energy data is immediately useful for consumers themselves ...

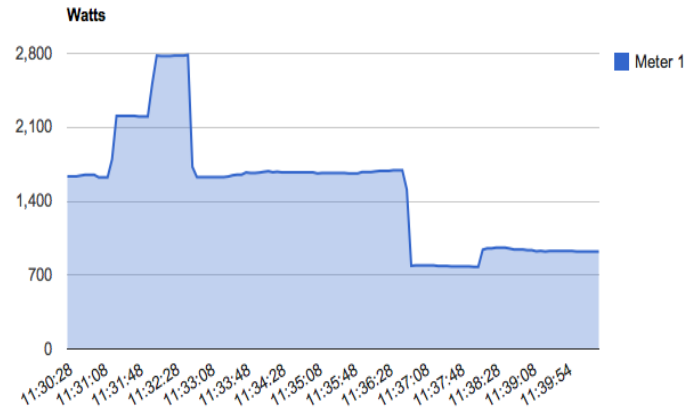


My Live Data - Meter 1



Clothes Dryer

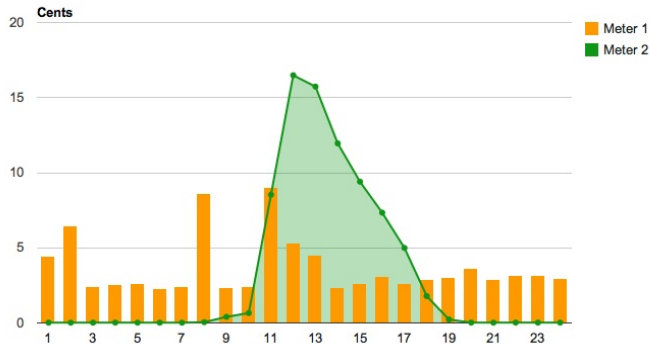
My Live Data - Meter 1



Heat Lamps & Pool Pump

Energy Analysis - Meter 1

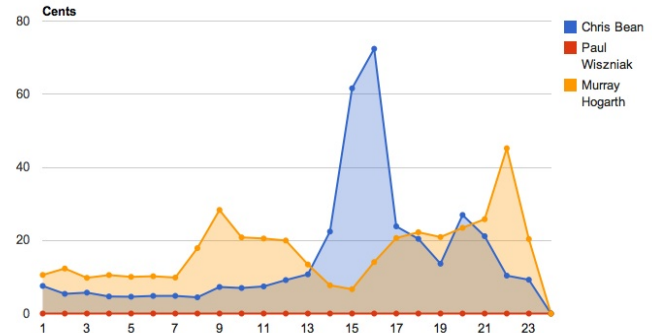
Selected date is: March 9, 2012



Solar over Electricity Use

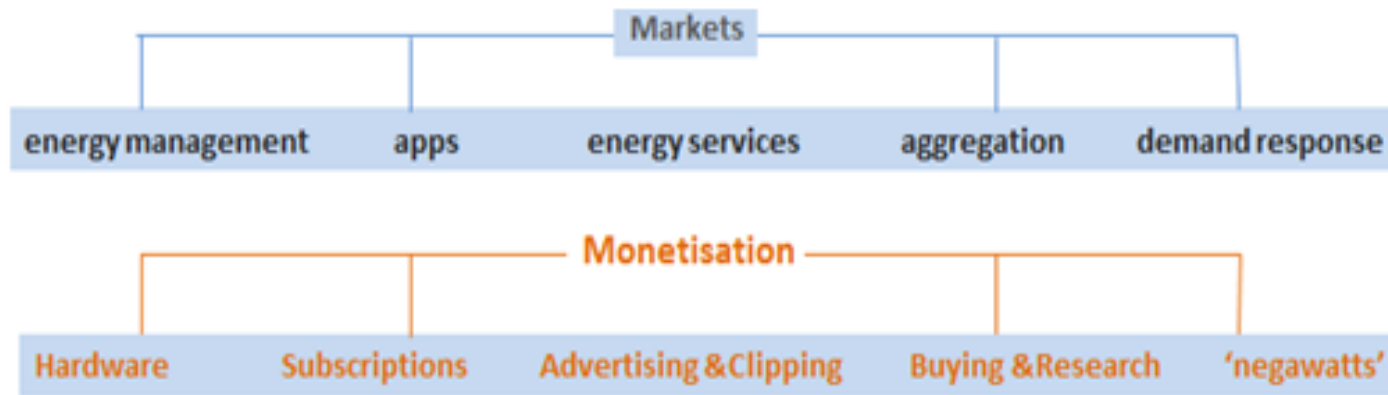
Energy Analysis - Meter 1

Selected date is: March 23, 2012



Compare With Friends

# ... and there are many ways to create and monetise 3<sup>rd</sup> party services



Market starts here for consumers

- |   |  |   |  |   |
|---|--|---|--|---|
| <ul style="list-style-type: none"> <li>• <b>IP metering</b></li> <li>• Installation</li> <li>• <u>Add ons:</u> <ul style="list-style-type: none"> <li>-plugs</li> <li>-thermostats</li> <li>-lighting</li> <li>-security</li> </ul> </li> <li>• Automation</li> </ul> | <ul style="list-style-type: none"> <li>• Energy use</li> <li>• Budgets/alerts</li> <li>• Remote control</li> <li>• Comparisons</li> <li>• Calculators</li> <li>• Auditing</li> <li>• Advice</li> </ul> | <ul style="list-style-type: none"> <li>• 'Marketplace' for EE products/services:</li> <li>• Auditing</li> <li>• Monitoring</li> <li>• PV</li> <li>• Hot water</li> <li>• Storage</li> <li>• Appliances</li> </ul> | <ul style="list-style-type: none"> <li>• 'Communities'</li> <li>• Retail Energy</li> <li>• Appliances</li> <li>• Bundled offers</li> <li>• Household services</li> <li>• Energy Plans</li> <li>• Private &amp; Govt. research</li> </ul> | <ul style="list-style-type: none"> <li>• Intermediaries</li> <li>• Peak control</li> <li>• Constrained areas</li> <li>• <b>Shaping customer-side/ internet alternative to Utility 'smart' meters</b></li> </ul> |
|---|--|---|--|---|

Market starts here for Government

# Benefits of demand-driven model



- **Consumers:** information and choices to save - and participate in the market
- **Energy Services:** accurate, real-time customer data to innovate & help make energy a controllable cost
- **Utilities/grid managers:** granular data for demand forecasting
- **Distributed generation:** ‘communities’ for aggregation and demand-side response
- **Low/zero emissions:** feedback data for modelling, ratings and incentive verification

# Summary



- Alternative model to utility control of data needed now for customer participation and a competitive energy services sector to grow
- Key infrastructure for ‘internet of energy’ model already exists
- Rapidly rising power prices is a BBQ conversation ... so
- Govts, businesses and households all want to save energy
- Like telco’s of 1980s, energy use data behind-the-meter will transform the market from volume (supply) to value (services)
- Do we act now ... or wait another decade for utilities?