

Non-Traditional Business Models

...and their relationship to municipal and city energy

Dr Stephen Bass

(stephen.bass@ofgem.gov.uk)

Head of Sustainable Energy Policy, Ofgem

24/03/15



To make a positive difference for all energy consumers, both now and **in the future**

THROUGH

The independent regulation of the electricity and gas **system in Great Britain**

Non-traditional business models: Supporting transformative change in the energy market

Discussion paper

Evidence of NTBMs

Licence Lite queries

- 70+ organisations have directly enquired about Licence Lite in the last 12 months
- A number of these relate to Industrial and Commercial customers
- Diverse drivers but strong representation from organisations that are at least partly motivated by social and environmental concerns – **eg municipal energy**

Actor Category	License Lite enquiries (Oct 13 – Sept 14)
Public sector (Local authorities, NHS)	8
Not for profits and Registered Social Landlords	3
Community Energy Organisations	5
Independent (RE) Developers/Generators	5
Consultants and Legal Advisors	13
TPIs and organisations diversifying	5
Existing suppliers	3
Researchers and general	10

Drivers

- Maximising social and environmental benefits
- Engaging customers and linking generation and supply locally
- Achieving a better price for output (CHP or intermittent RE)
- Lack of access to offtake contracts/networks
- New business opportunities

- New suppliers
 - Tempus energy model (smart demand customers following wind availability)
- RMR derogations [6 currently in place]
 - Good energy discount and share of windfall profits from local windfarms
 - Ecotricity electric vehicle tariff
 - Flow Energy micro-CHP tariff (pays back cost of CHP unit over 5 years)
- White Labels [12 in operation, 7 domestic, 5 non-domestic]
 - Ebico zero standing charge tariff + wider fuel poverty aims
 - Ovo Community Energy proposition
- Renewable subsidy schemes
 - 600k+ PV prosumers (4.2GWp installed capacity)
 - Emerging business models such as rent-a-roof scheme
- Energy efficiency
 - Green deal + ECO
 - Renewed interest in alternative models (eg E-Serve SMT paper)
- TPIs [many hundreds of organisations, particularly in **non-domestic sector**]
 - Increasing numbers of TPIs are entering the market (for example supplier in a box).

Business models offering new products or services, or new ways of delivering these, that are different to those traditionally provided in the existing energy market. Those offering such services have diverse motivations (technological, social and environmental as well as financial) and ownership arrangements, and operate at various scales. Over time NTBMs have the potential to transform the existing energy system.

1. Low carbon energy transition
2. Rapid technological innovation
3. Lack of consumer engagement and trust
4. A greater focus on affordability and supporting vulnerable consumers

- Local Authorities' aim is achieving residents' wellbeing
- What are LA / council energy programmes seeking to achieve?
Anecdotally:
 - Addressing fuel poverty
 - Achieving greater control of partnerships
 - Integrated services
 - Income opportunity
- Is municipal energy supply the way to address these issues?
 - Insulation
 - Energy efficiency programmes
 - Installing microgeneration
 - “Deep” energy efficiency
 - Consumer engagement & flexibility

- Issues to consider:
 - Domestic or non-domestic supply
 - Supply for all residents or only selected groups
 - Obligations which scale in line with the number of customers
 - Commercial viability given the overheads and risks of any given model
 - Need for technical expertise
 - Separation of functions to allow profit
- Energy programme options:
 - Private wire
 - Exempt supply
 - White label
 - Licence Lite
 - Full licence

Our understanding of NTBMs

Local services

Community Energy
(1000's organisations +
Ovo Communities)

Municipal Energy (eg
London, Nottingham,
Bristol, etc)

Housing Associations (eg
Carbon Savings Alliance)

Bundled services

Energy service
companies (ESCOs)
(eg Woking)

Multi-service providers
(eg Utility warehouse)

Market services (eg
supplier-in-a-box
provider Utiligroup)

Customer participation

Peer-to-peer energy (eg
Open Utility)

Demand-side flexibility
(eg Tempus Energy)

Prosumers (eg Rent-a-
roof PV)

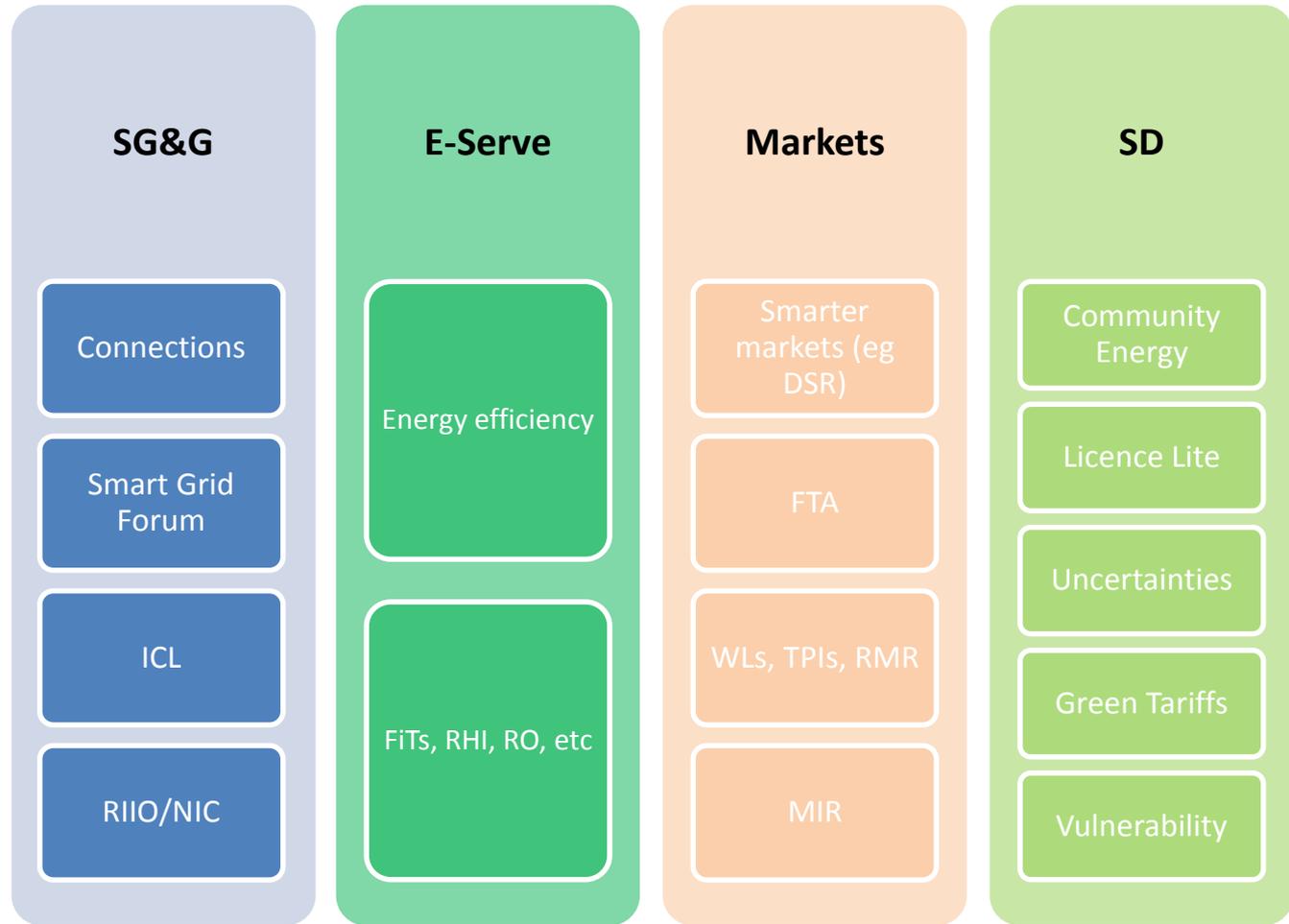
Next gen intermediaries
(eg Power of attorney
sites)

NTBMs ask interesting questions!

A NTBM, such as a CE project, which has multiple objectives, eg,

- Generation
- Supply
- Local balancing
- Energy Efficiency
- Fuel Poverty
- Wider social objectives

...finds it difficult to engage with different parts of Ofgem (a combination of expertise and resourcing issues). The NTBM is looking for a single response to a variety of questions answered by different divisions.



- Stakeholder engagement through March
 - 2000+ website hits and 800+ document downloads
 - Events, bilaterals, workshops, twitter
 - Two responses already and plenty more promised
- Summary of responses + next steps in summer 2015

CO2Sense

Involved in #communityenergy and frustrated with the #grid? Respond to @ofgem discussion paper on new business models

Matt Hannon (Imperial College)

timely @ofgem consultation on importance of non-traditional business models for transformative energy market change

Katy Roelich (Uni of Leeds)

Really interesting new discussion paper on non traditional business models in energy from @ofgem

Martin Nesbit (IEEP)

Consumers at the heart of #EnergyUnion? Good to see regulator @ofgem thinking about non-traditional business models.

AMEC (Australian Energy Market Commission)

We are undertaking a similar process in Australia, thinking about how regulation needs to evolve in the light of new business models and technologies.

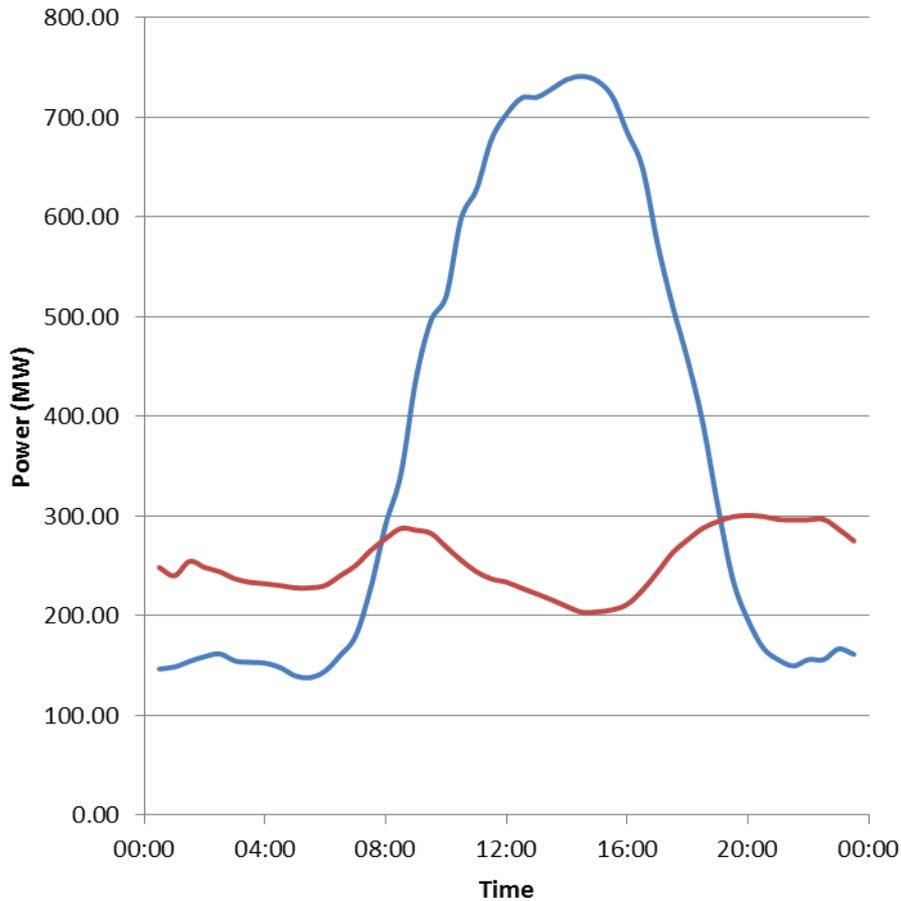
ANNEX 1: NTBM Benefits and costs

Direct energy system <u>benefits</u>	Economic	<ul style="list-style-type: none"> • Consumer bill reductions through increased engagement and competitive pressure • Avoided/reduced network costs: losses, connection, reinforcement, transmission, distribution • System balancing cost reductions: eg if NTBMs enable greater demand management • System diversity, flexibility and reliability/resilience • Innovation effects: new products, services and processes may drive down costs and enhance consumer choice • Increased market engagement may have knock-on effects: eg, success rates for energy efficiency projects, demand reduction, behavioural change, etc
	Environmental	<ul style="list-style-type: none"> • Carbon impacts through both fossil fuel and demand displacement • Additional environmental impacts: eg air quality (and associated health effects), impact on natural beauty
	Social	<ul style="list-style-type: none"> • Increased energy 'literacy' may lead to greater support for renewables deployment and demand-side programmes • May focus particularly on vulnerable, fuel poor or 'hard to reach' energy consumers
Direct energy system <u>costs</u>	Economic	<ul style="list-style-type: none"> • Additional grid connection costs (connection and potential reinforcement) • System integration costs: eg more back-up generation required or better distribution system management (such as local balancing) • Higher coordination costs due to increase in number of market participants • Equipment costs: eg in consumer premises • Increased costs associated with managing greater system flexibility eg reliance on higher levels of intermittent and distributed generation • Potential risks to personal data, privacy, consumer protection, etc
	Environmental	<ul style="list-style-type: none"> • Carbon impacts • Additional environmental impacts eg air quality (and associated health effects), impact on natural beauty
	Social	<ul style="list-style-type: none"> • Potential marginalisation of vulnerable consumers and others not able to access new (digital) services and products
Wider indirect <u>benefits</u>	Economic	<ul style="list-style-type: none"> • New jobs and enhanced local skills • Economic development (potentially in areas with fewer opportunities) • Regeneration of local areas and enhancement of investment potential
	Environmental	<ul style="list-style-type: none"> • Greater understanding of low carbon energy may have knock-on effect on other behaviours: eg heating and transport choices • Community and municipal energy projects may lead to broader environmental awareness and schemes focused on the enhancement of green infrastructure and biodiversity
	Social	<ul style="list-style-type: none"> • May provide funds for non-energy-related projects through community funds/trusts • Wider social impacts on local communities: eg social cohesion or community development

- What is your view on our definition of non-traditional business models?
- Are there other important drivers for NTBMs?
- Do you have any thoughts on the characteristics and types of NTBMs?
- We're interested in NTBM case studies, can you help with us identify them?
- What are the benefits, costs and risks of NTBMs? Who do these accrue to?
- How could NTBMs potentially transform the energy market and what fundamental challenges to regulatory arrangements could this entail?

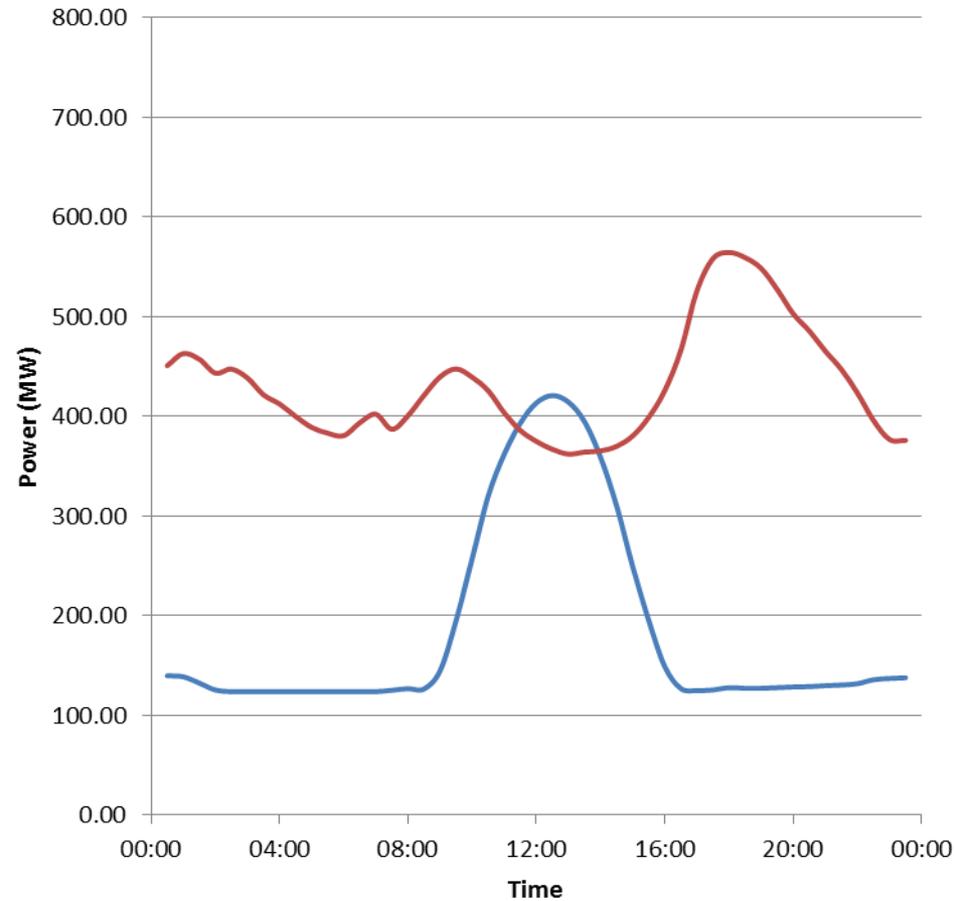
Cornwall demand & generation profiles (source- WPD)

Typical Summer Day



— Connected and Accepted Generation — Demand

Typical Winter Peak Demand Day



— Connected and Accepted Generation — Demand

Ofgem is the Office of Gas and Electricity Markets.

Our priority is to protect and to make a positive difference for all energy consumers. We work to promote value for money, security of supply and sustainability for present and future generations. We do this through the supervision and development of markets, regulation and the delivery of government schemes.

We work effectively with, but independently of, government, the energy industry and other stakeholders. We do so within a legal framework determined by the UK government and the European Union.