

**APSE Renewables and Climate
Change Advisory Group,
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Manchester**



Can local authorities be energy utilities?

**Mark Bramah, Director of APSE
Energy**



1. BACKGROUND

APSE Energy - Our Vision



“The vision is to form an effective collaboration of a large number of local authorities to enable and facilitate the local municipalisation of energy services. By this we mean the public and community, as well as private, ownership and managerial control of local energy generation, distribution networks and delivery of energy efficiency works. Local authorities working together in this way would have great influence and would be able to deliver economies of scale in green energy to promote economic growth and combat fuel poverty.”

The Holy Grail



History of the Energy Market



1881

The world's first public electricity supply company is created for **Godalming in Surrey**. Electricity was generated by a water wheel on the **River Weyand**. This was used to power street lighting and lights in local shops and businesses.

1882

Electric Lighting Act allowed individuals, companies or local authorities to establish their own electricity supply systems.

Emergence of distributed energy systems

1880s – 1920s

1948

UK electricity supply industry nationalised. All private and community-owned electricity generation and supply utilities were replaced with the **British Electricity Authority** (responsible for all electricity generation) and fifteen **Area Electricity Boards** (responsible for supplying customers).

Note: Even today, the **Big Six** energy companies reflect the shape of the **Area Boards**, whose regions they inherited at privatisation.

1920s – 1980s

Centralisation and nationalisation

1920

750,000 electricity customers

1926

Government created the **Central Electricity Board** to standardise electricity supply across the UK

1926-1938

The **CEB** brought together the various local electricity grids and established a nationwide 132,000 Volt, 50 Hertz network – the **'National Grid'**.

1938

9 million electricity customers.

1990 – 1999

Gradual introduction of supply competition. At the point of privatisation only the largest gas and electricity customers were able to choose their supplier. The thresholds for switching gas and electricity supplier were progressively lowered and competition expanded until in 1999 all types of gas and electricity customers were finally able to freely select their energy supplier.

Privatisation and competition

1980s – 1990s

1986 – 1995

Privatisation of the energy industry, starting with **The British Gas Corporation** in 1986. Electricity was privatised in 1989, when power generation was divided between **National Power, Powergen** and **Nuclear Electric**. The **AEBs** were renamed **Regional Electricity Companies (RECs)** and privatised in 1990.

National Grid was created as a standalone entity in 1990 but remained owned by the **RECs** until the company was floated in 1995.

1995 – 2002

Emergence of the **'Big Six'** vertically integrated energy companies.

2001 – 2004

Market reforms. In response to a perceived lack of price competition and few new entrants in energy supply, **Ofgem** introduced a set of reforms to the wholesale energy trading market in 2001, the **'New Energy Trading Arrangements'**. This was followed by the **'British Electricity Trading and Transmission Agreements'** in 2004, which created a single energy market covering the whole of the UK.

1990s – today

Consolidation and the re-emergence of distributed energy

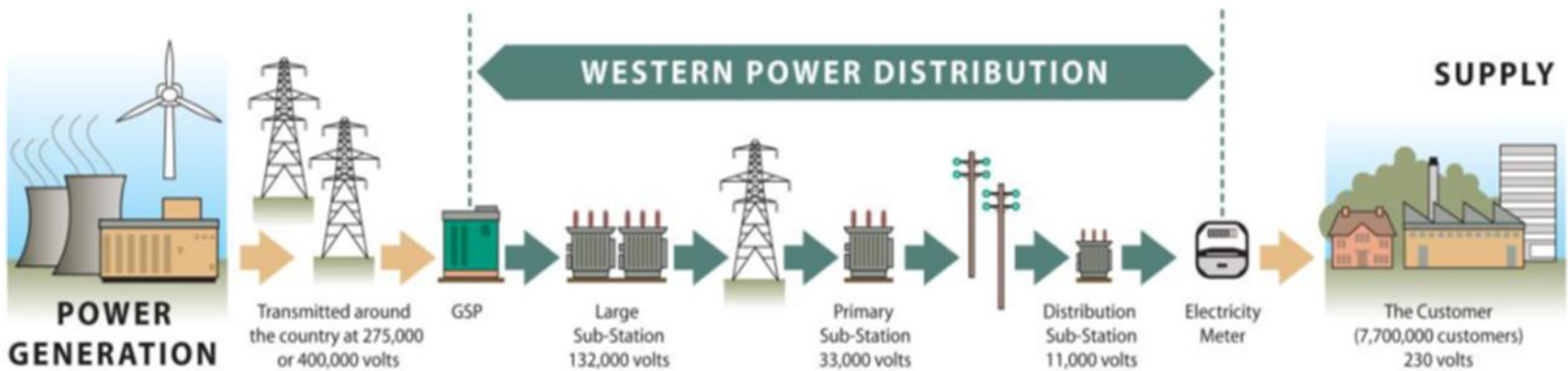
1990s – today

Greater focus on energy efficiency and the environment. In 1994 the **Energy Saving Trust** and **Ofgem** introduced **Energy Efficiency Standards of Performance**, which required energy suppliers to support their customers with energy efficiency measures. This programme has evolved into what is now the **Energy Company Obligation**.

2007: EU set targets for a 20% reduction in CO₂ (versus 1990 levels) and 20% of energy to come from renewable sources by 2020.

2008: Climate Change Act, which committed the UK government to an 80% reduction in CO₂ emissions by 2050

The Energy Industry in the U.K.



Energy suppliers generate electricity or import gas to sell to customers

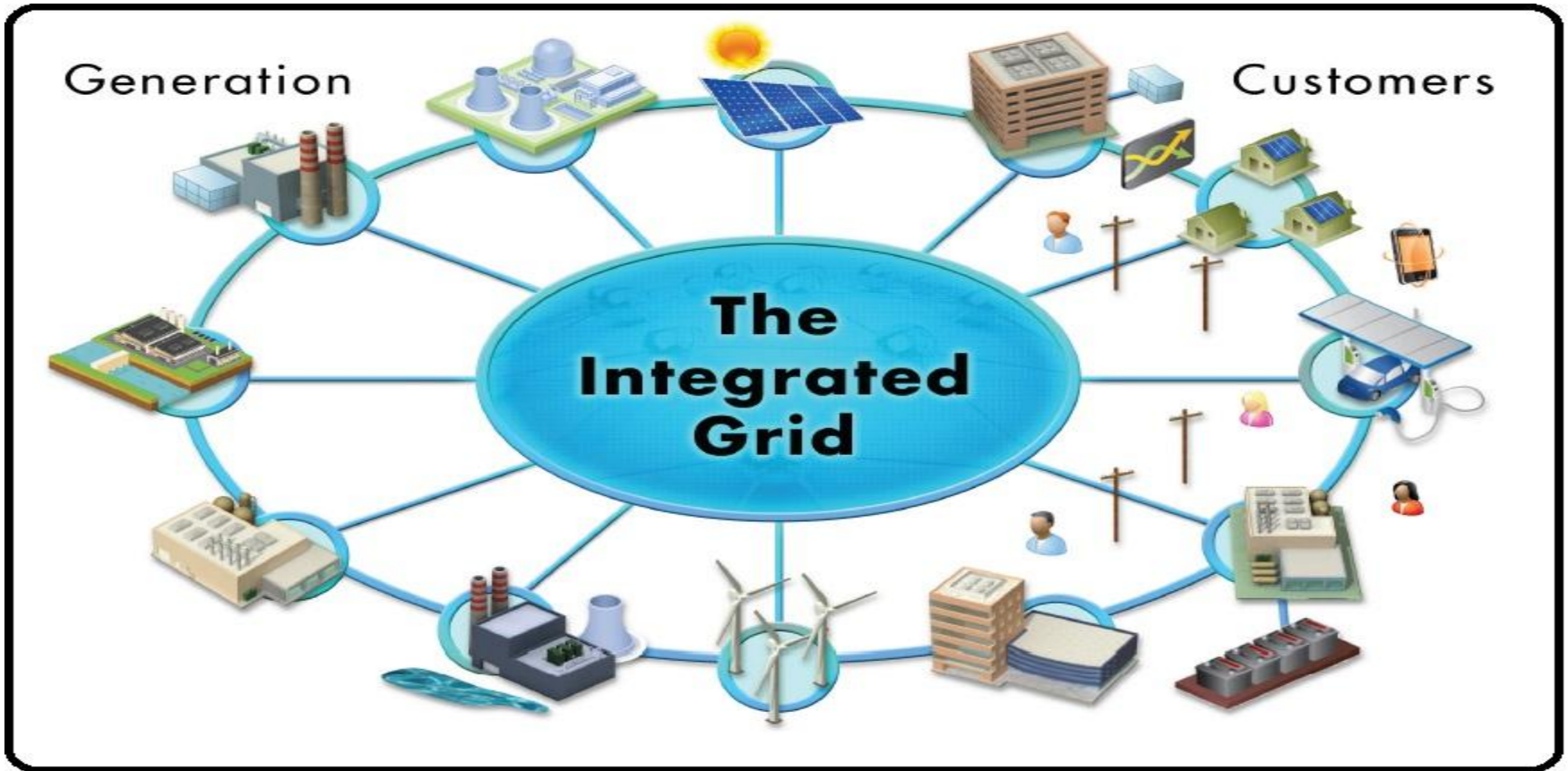
- Competitive
- Prices not heavily regulated
- Own mostly generation assets
- The "Big Six" supply both electricity and gas

Transmission operators move electricity over long distances at high voltages or gas at high pressures

- Regional monopolies
- Electricity: National Grid Electricity Transmission
- Gas: National Grid

Distribution Network Operators (DNOs) own the infrastructure that move electricity at medium voltages from transmission networks to consumer premises.

The way the grid might look in the future

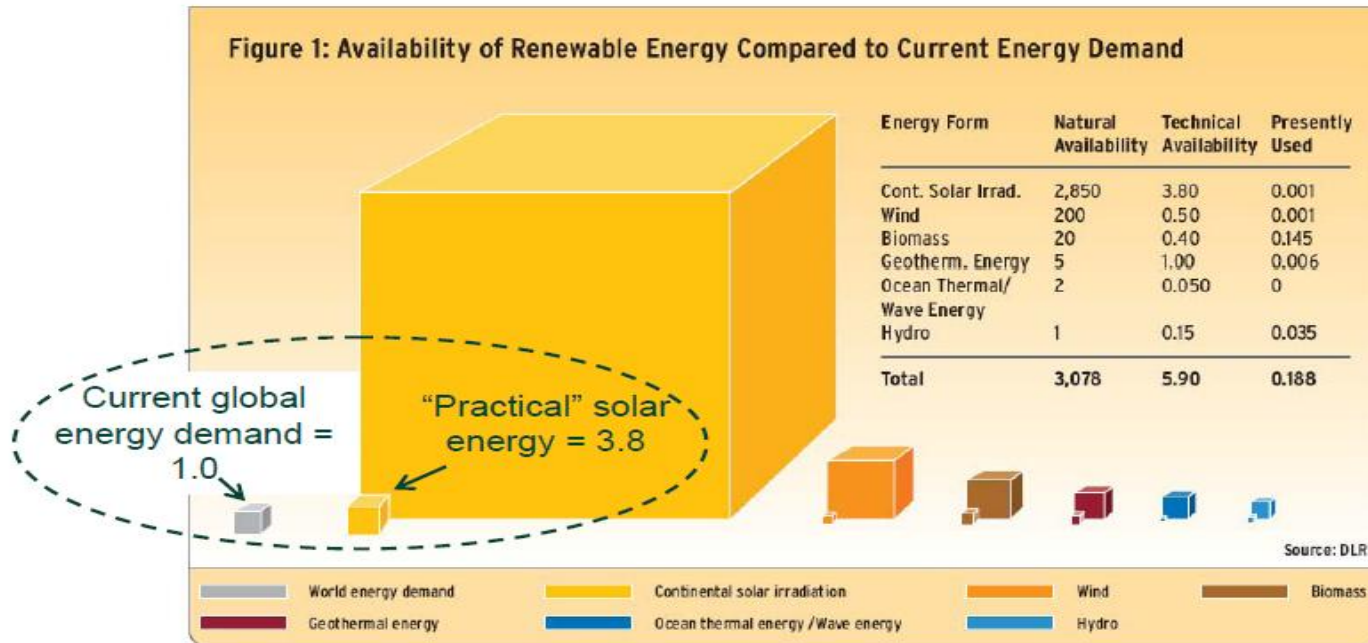


Availability of Solar Energy



Solar is the most abundant of all renewable energy sources

Figure 1: Availability of Renewable Energy Compared to Current Energy Demand

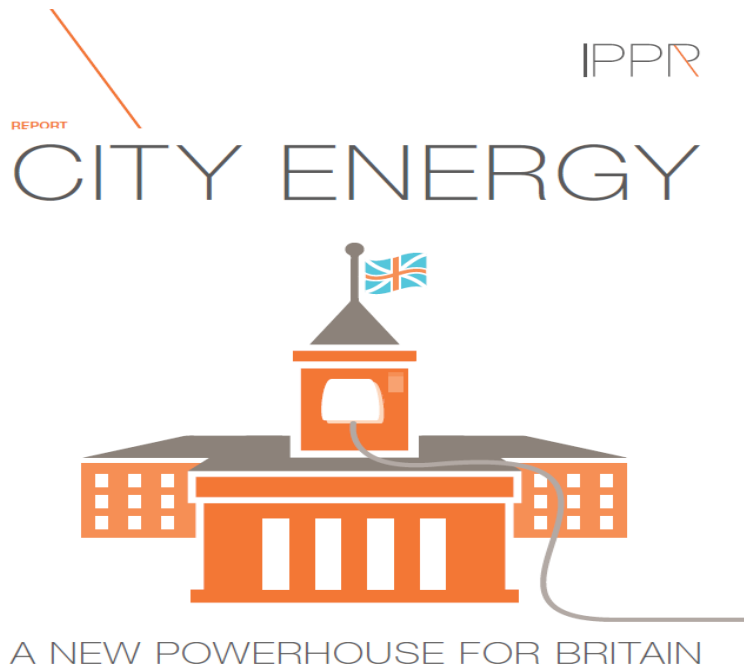


Rear cubes: The natural availability of renewable energy is extraordinarily large. Front cubes: The technically available energy in the form of electricity, heat and chemical energy carriers exceeds the present-day energy demand (grey cube, left) by a factor of six.

Solar energy can supply almost 4 times total current global energy demand (including only solar energy that is practical to harness)

Source: David Owen, Solar Energy U.K.

IPPR Report July 2014



Reg Platt,
Will Straw,
Jimmy Aldridge
and Jack Williams
July 2014
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Institute for Public Policy Research

It is time for the cities to act

The cities want more powers from national government so that they can become powerhouses of the British economy. At the same time, the energy system is being radically transformed by the need to decarbonise and the emergence of new, clean energy technologies.

There is a clear opportunity for cities to be at the forefront of the changes that are happening in the energy sector. They can achieve this by engaging in energy supply and investing in low-carbon infrastructure. Through these actions cities can boost their local economies, demonstrate that they have the ingenuity, skills and capacity to take on more powers, and raise their influence at the national level.

Ambitious cities



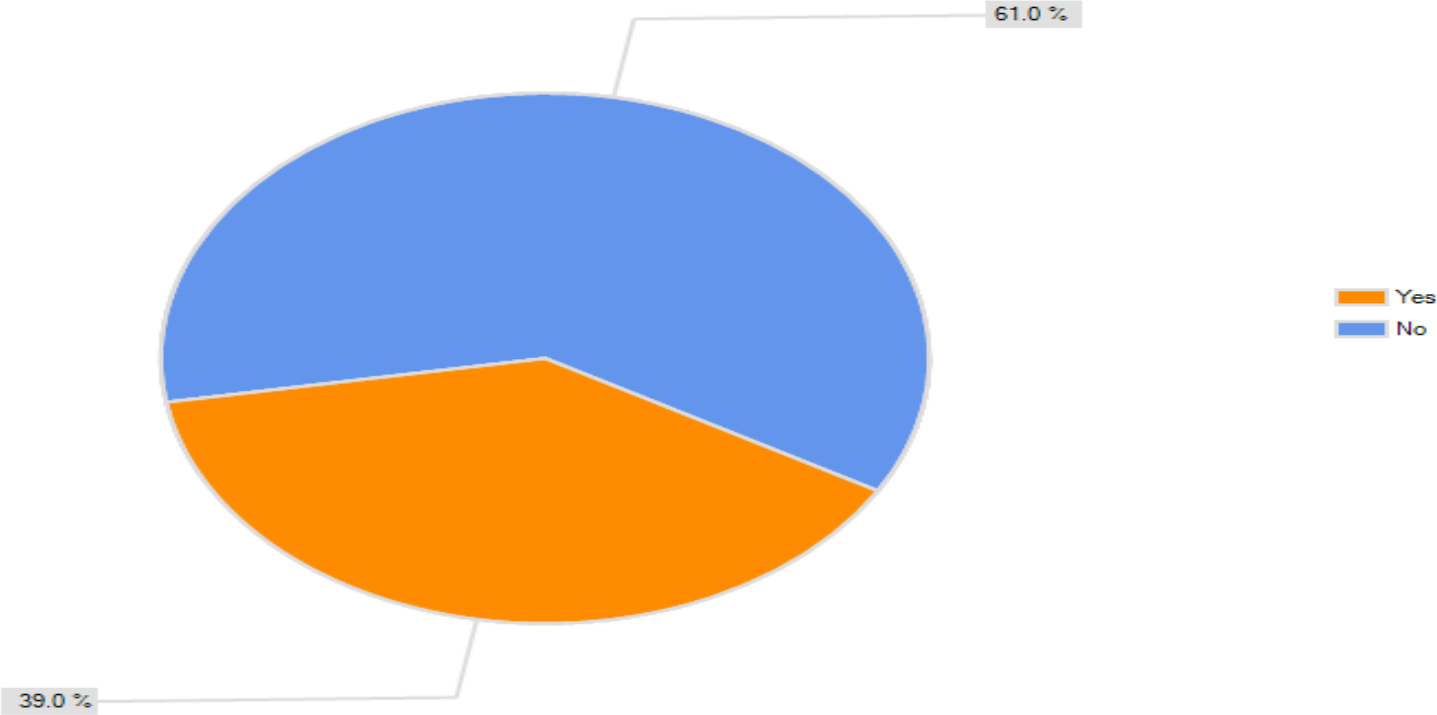


2. BARRIERS AND POWERS

Survey on the barriers to local authority involvement in municipal energy schemes



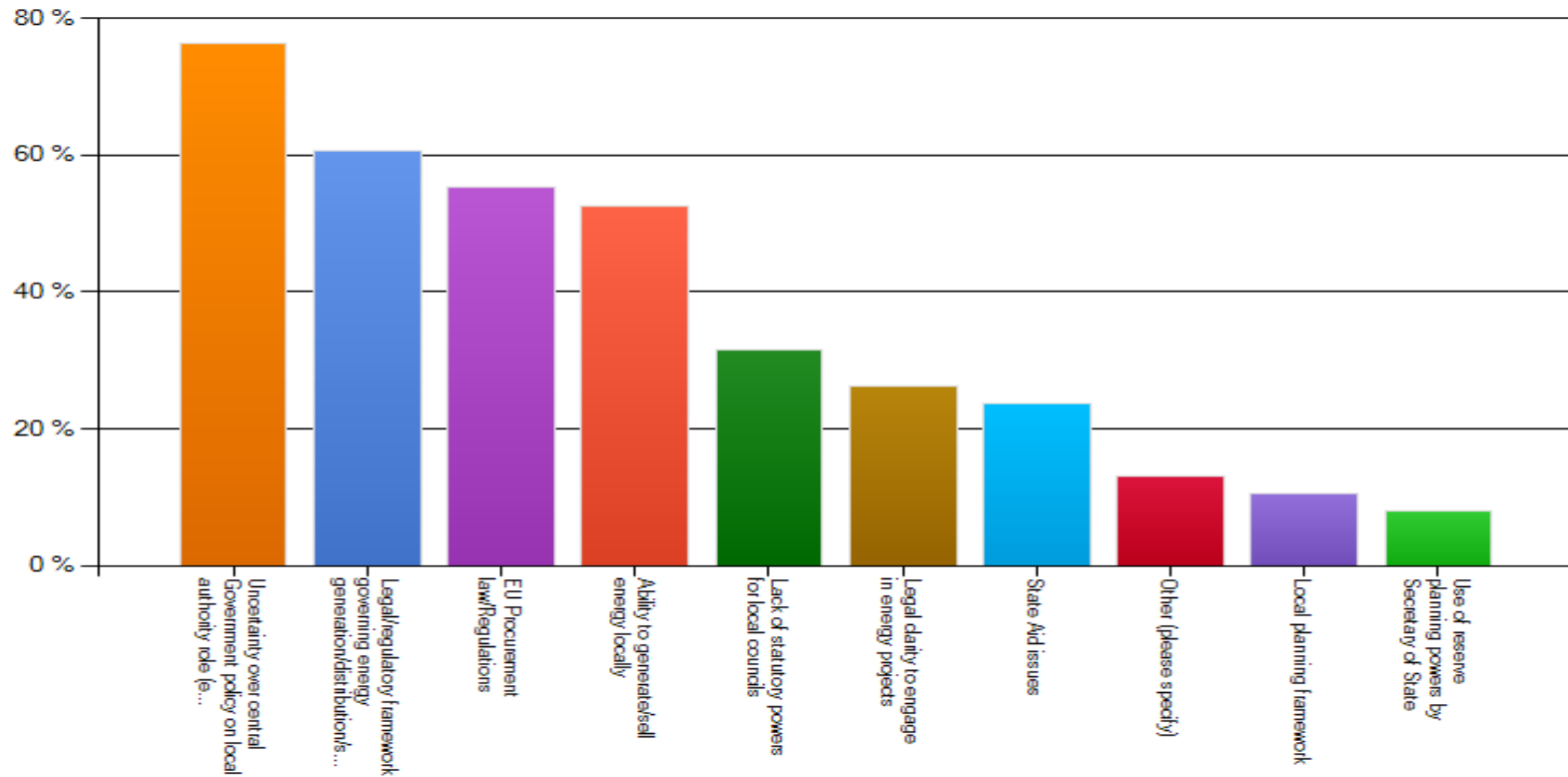
Do you feel that local authorities have sufficient statutory/legal powers available and legal certainty to undertake local energy projects?



Survey on the barriers to local authority involvement in municipal energy schemes



What in your view are the main statutory/legal barriers facing local authorities ? (Choose up to 5 options)



Powers for local government



Local Authority Trading

- The Local Government Act ("LGA") 2003, s.95 provides a power to trade for commercial purposes providing there is no statutory duty to provide the services and no other statutory power to trade

Localism Act

- The Local Government Act 2000 s.2 (1) repealed the wellbeing power but introduced a general power of competence which would be the power used to set up an ESCO.

Other powers

- Incidental powers LGA 1972 s.111 and investment powers LGA 2003 s.12.
- The Sale of Electricity by Local Authorities (England and Wales) Regulations 2010 (SI 2010/1910). Sale of renewable electricity without heat.

What is an Energy Services Company (ESCO)?



“The term ESCO is sometimes used to refer to an entity which has been set up by a public sector organisation (with or without private sector participation) for the purpose of delivering energy efficiency, energy savings and/or sustainable energy, whether through a variety of different initiatives or through a particular initiative, such as a CHP scheme. Such entities may well have a public body or quasi-public body nature. ESCOs of this nature may use a variety of means of delivering the services which they have been set up to perform, including contracting with the private sector.”

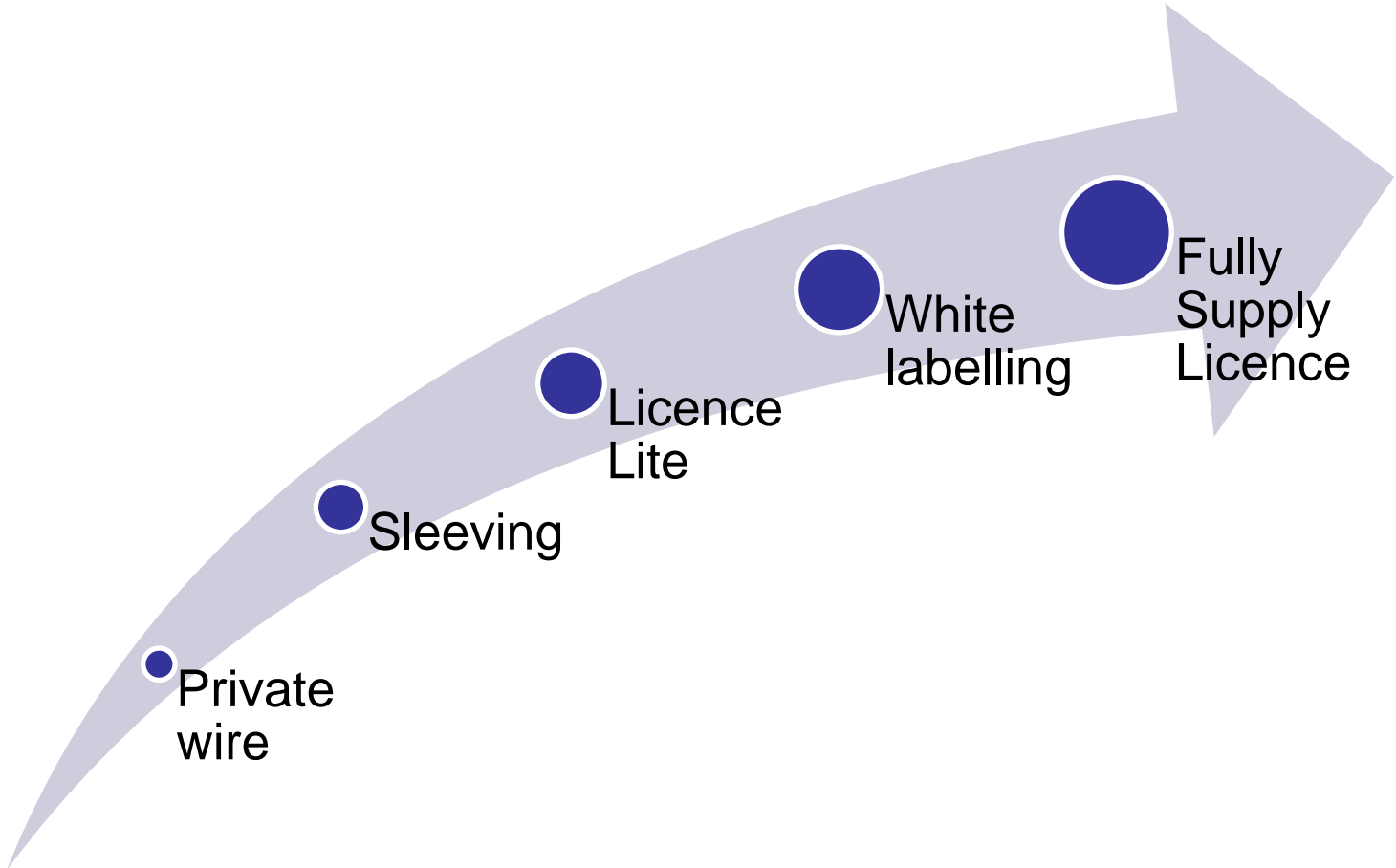


London Energy
Partnership



3. OPTIONS FOR ENERGY SUPPLY

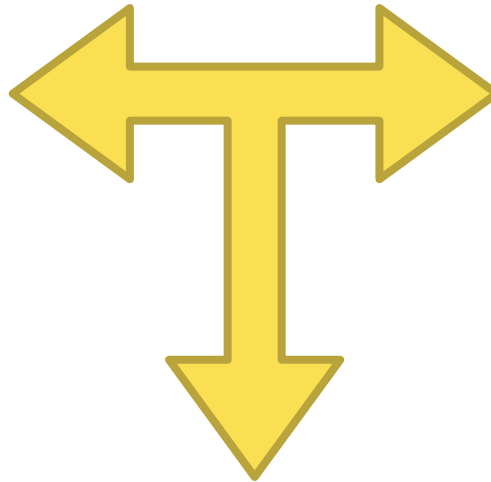
Options for selling electricity



Private wire network



Electricity Generation facility



Consumer



DNO

Third party netting or sleeving



Third party generator



Consumer



License Lite



Third party generator



GREATER
LONDON
AUTHORITY

Electricity supply
license



Consumer



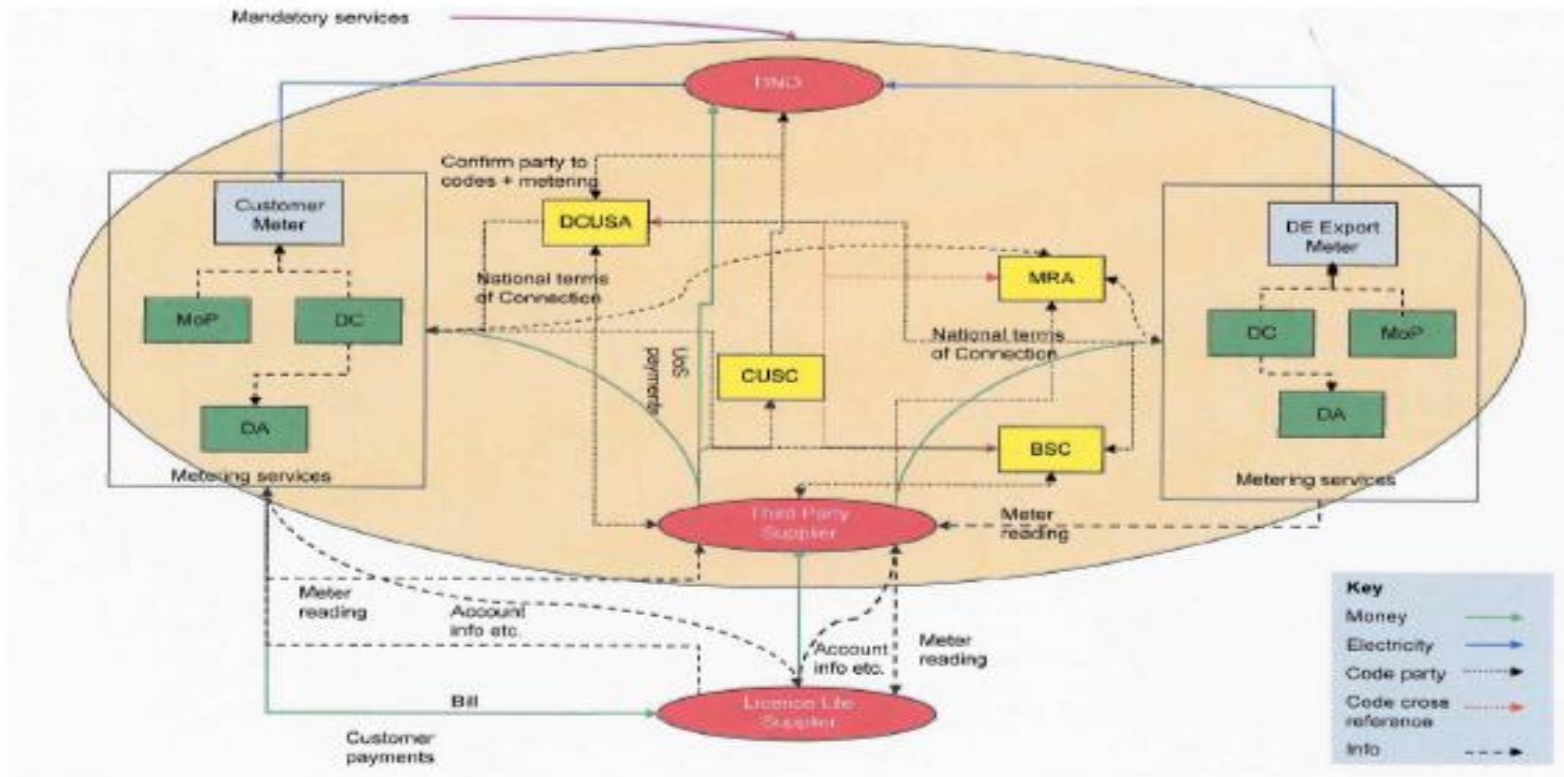
Fully licensed supplier

Development of Licence Lite



- Nov 2006 – DECC/OFGEM Review distributed energy generation.
- May 2007 – Energy White paper “*meeting the energy challenge*”.
- Dec 2007 – Consultation on flexible market and licencing arrangements.
- June 2008 – Offtake arrangements and market access for small distributed energy generators.
- June 2008 – Further consultation on licensing and flexible market arrangements.
- Feb 2009 – Final ‘Licence Lite’ proposals and statutory consultation.
- March 2009 – Electricity supply licence modified to permit ‘Licence Lite’.
- March 2013 – GLA applies to OFGEM for licence Lite
- March 2014 – OFGEM call for evidence on ‘White label providers’.
- 2015 – GLA becomes Licence Lite supplier ????????????

Licence Lite contractual matrix headache



“White labelling”



M&S
Energy

Unlicensed company



Licensed supplier





Partnering



Option 1: Full Service Energy

- You choose what to offer, to whom, and at what price; we provide all the services you need to deliver your offer

Option 2: Customer Partnership

- The same as option 1, except you take responsibility for frontline customer service and written communication with customers

Option 3: Your own licence

- You apply for your own licence (full licence or Licence Lite) and we provide any services you need, including power procurement and trading

Local authority Energy supply company



- Customer base.
- Generation capacity.
- Balancing and settlement.
- Risk.
- Competition and state aid.
- Reaction of the big six.
- Local Tariff.
- Economic development and regeneration.

Building a customer base



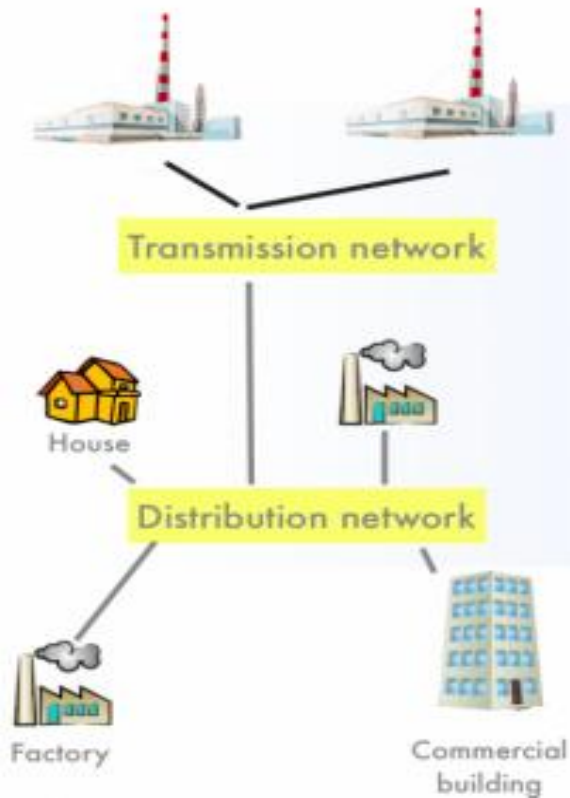
Building generation capacity



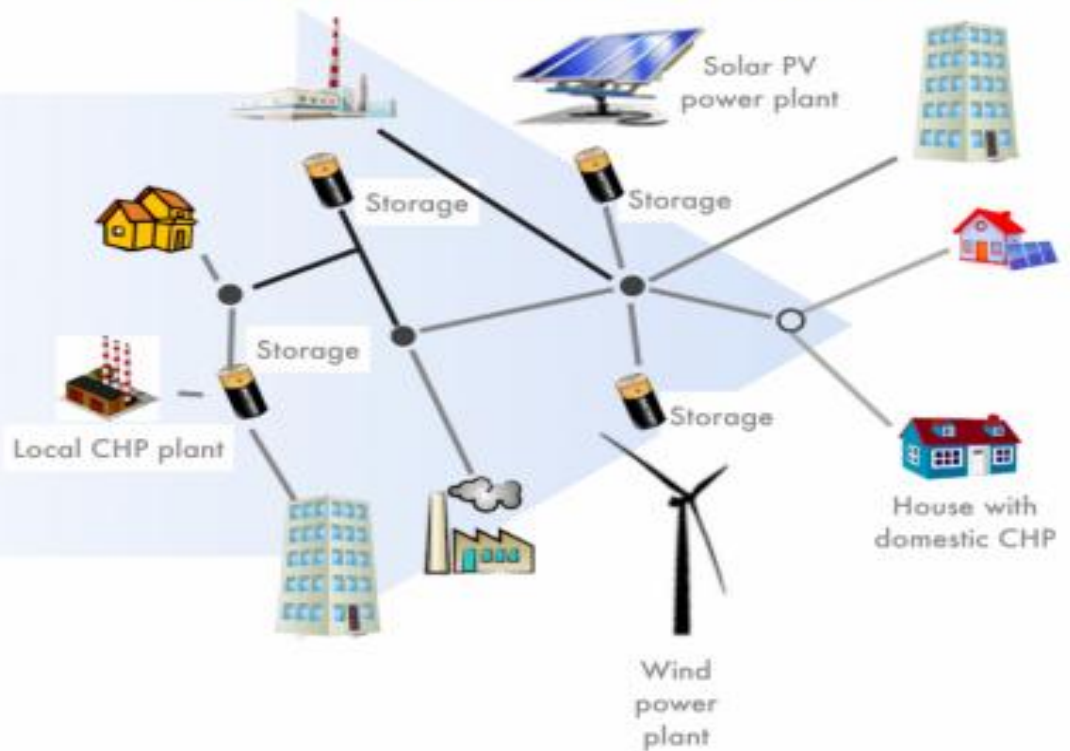


4. WHERE THINGS MIGHT BE HEADING?

Yesterday Centralized Power



Tomorrow Clean, local power



2015 Game Changer



- Greater London Authority – Licence Lite.
- Nottingham Energy Supply Company – Full supply licence (177,000 households)
- Our power – Industrial and Provident Society (9 housing Associations, local authorities, community organisations 133,000 potential customers)

Looking to the future



- Energy security
- Increased distributed energy capacity
- Smart Grid technology.
- Energy storage.
- Local grids.
- Devolution.
- Combined authorities.



5. JOIN THE ENERGY REVOLUTION

APSE Energy – House of Commons launch 11 June 2011



- Over 60 people from a range of organisations including member local authorities, DECC, TCPA, LGA, Climate U.K. IPPR attended the launch.
- Addressed by Rt. Hon Ed Davey M.P. Secretary of State for Energy and Climate Change and Dr. Alan Whitehead M.P. the Chair of the All-party Parliamentary Renewables and Sustainable Energy Group (PRASEG).



Aims



The aims of **APSE energy** are to support councils to deliver the local municipalisation of energy services and in doing so:

- address social objectives and deliver community benefits, such as a reduction in fuel poverty and increases in jobs and skills;
- save money and make money for local authorities to safeguard local services.



Aims

- People
- Poverty
- Pounds

Members of APSE Energy



1. Aberdeen City Council
2. Barnsley Metropolitan Borough Council
3. Bradford City Council
4. Bridgend County Borough Council
5. Buckinghamshire County Council
6. Cardiff City Council
7. City of Edinburgh Council
8. Cumbria County Council
9. Darlington Borough Council
10. Doncaster Metropolitan Borough Council
11. Derbyshire County Council
12. Dudley Metropolitan Borough Council
13. East Dunbartonshire Council
14. East Riding Council
15. Flintshire County Council
16. Gedling Borough Council
17. Guildford Borough Council
18. Knowsley Metropolitan Borough Council
19. Lancaster City Council
20. Middlesbrough Council
21. Newcastle City Council
22. Nottingham City Council
23. Nottinghamshire County Council
24. North Ayrshire Council
25. Northumberland County Council
26. Oxford City Council
27. Peterborough City Council
28. Portsmouth City Council
29. Preston City Council
30. Reading Borough Council
31. Stevenage Borough Council
32. Southampton City Council
33. South Lanarkshire Council
34. Stockton-On-Tees Borough Council
35. Swansea City and County Council
36. Warwickshire County Council
37. Wolverhampton City Council
38. York City Council



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INVESTOR IN PEOPLE



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