School of Earth & Environment SUSTAINABILITY RESEARCH INSTITUTE



Local Energy Supply: Opportunities, archetypes and outcomes

Dr Stephen Hall and Dr Katy Roelich

APSE Southeast Workshop 16th July 2015

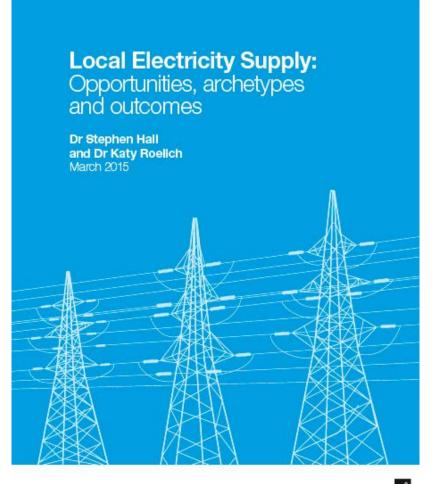


Report structure

- 1. Motivations
- 2. The four opportunities of local supply
- 3. Archetypes of local supply
- 4. Barriers
- 5. Recommendations

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Infrastructure BUsiness models, valuation and

innovation for



Methods



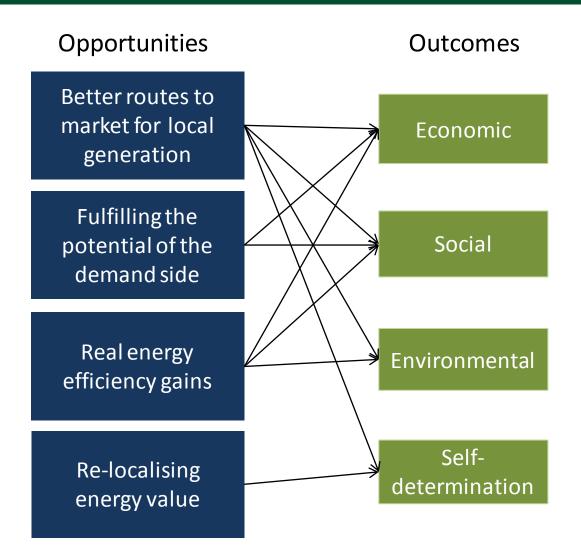
- Literature review
- Local Supply Working Group Written submissions
- Local Supply Workshop outputs
- 12 Primary interviews

Motivations

| Area | Outcomes | |
|---------------------------------------|---|---------------------|
| Economic | Competitiveness and economic growth | UNIVERSITY OF LEEDS |
| | Job creation | |
| | Revenue generation | |
| Social | Fuel poverty reduction | |
| | Regeneration | |
| | Skills and education | |
| | Social cohesion | |
| | Fairness e.g. tariff discrepancy | |
| Environmental | Carbon emissions reduction | |
| | Air quality | |
| Self-governance or self determination | Local accountability & control | |
| | Energy independence | |

The four opportunities of local supply





Archetypes



- Current archetype
- Local white labelling
- **Energy local**
- Licence light
- Municipal utility
- **Municipal ESCo**
- Multi-utility service company
- Peer to peer
- Peer to Peer with Local Balancing Unit
- Not for profit national administrator

Diagram: The current archetype

Key

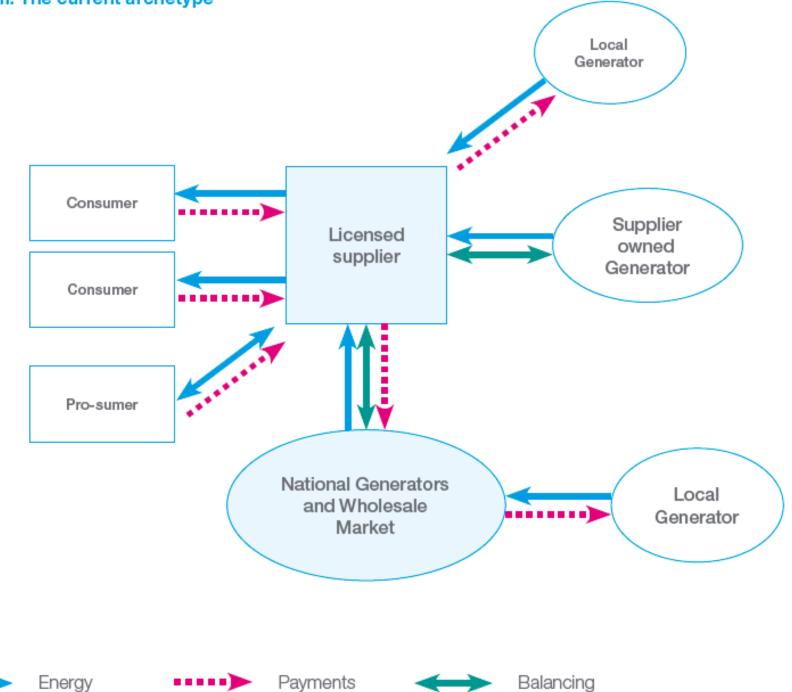


Diagram: The local aggregator archetype

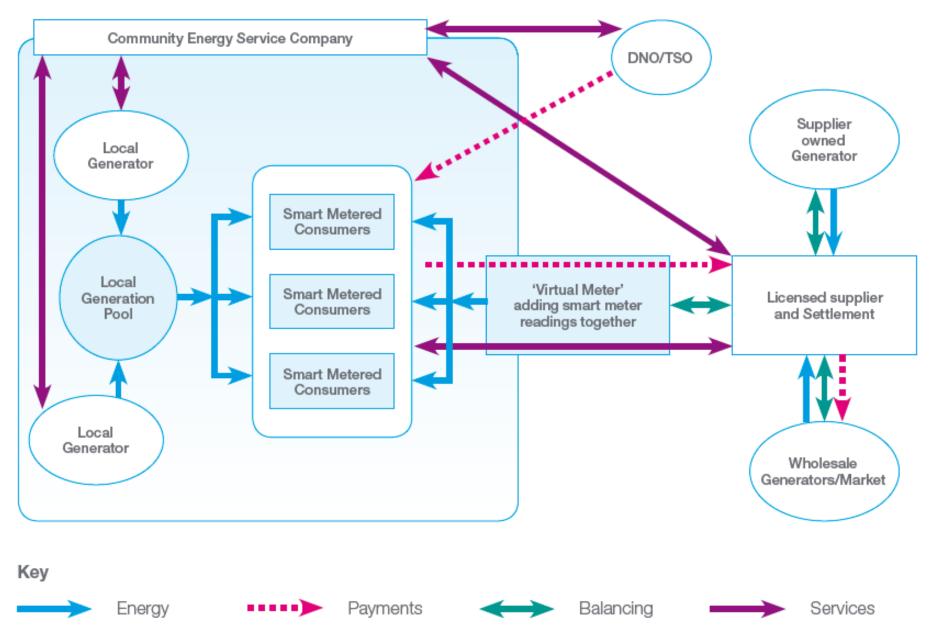


Diagram: The Municipal ESCo Archetype

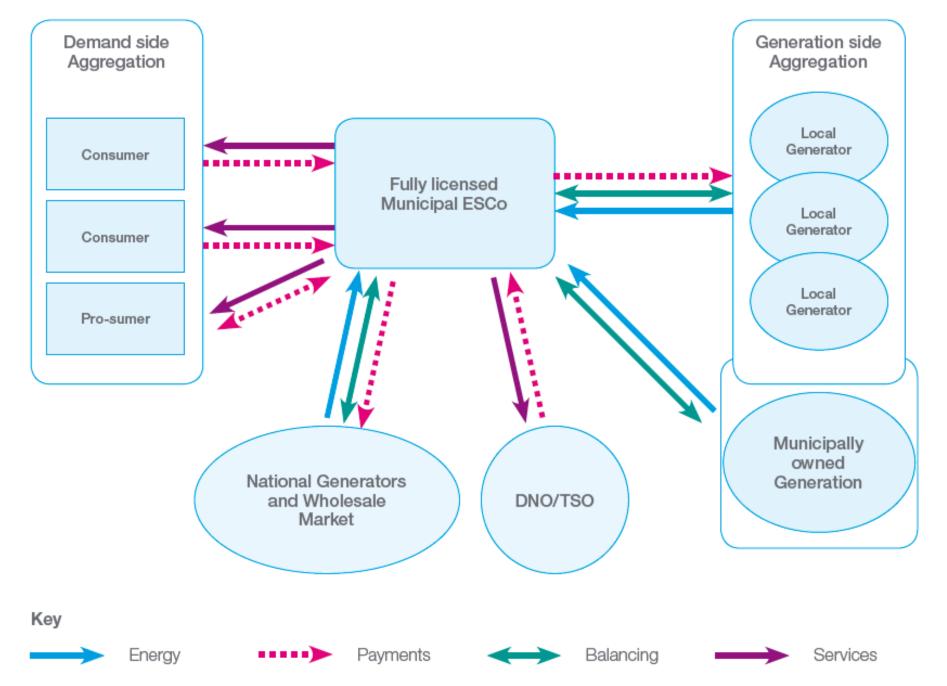
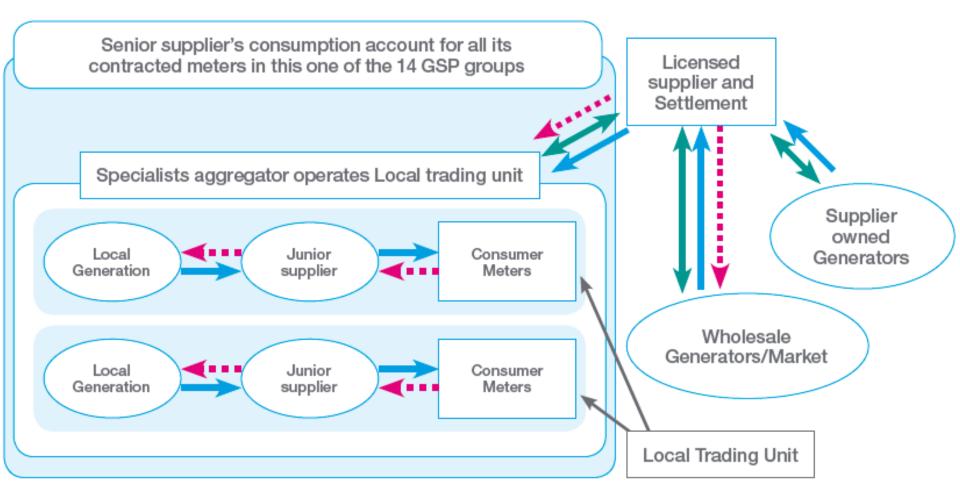


Diagram: Peer to Peer with Local Balancing Unit



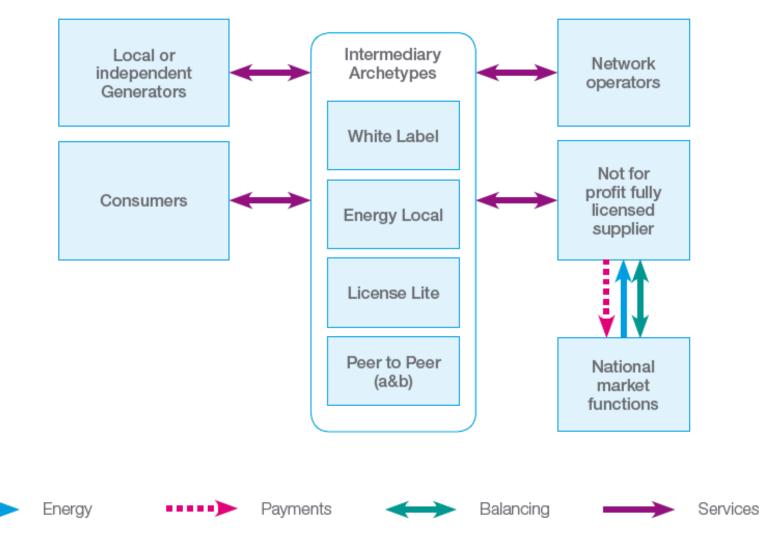


Archetypes – NFP national administrator



Diagram: Not for Profit National Supplier

Key



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Mapping archetypes to opportunities



| | | Opportunities of local supply | | | |
|--|--|--|---|---------------------------------|-------------------------------|
| Archetypes | Enabling Mechanisms | Better routes to market for local generation | Fulfilling the potential of the demand side | Real energy efficiency gains | Re-localising energy value |
| Current Archetype | Full Supply License | | - | | |
| Local White Labelling | Third Party Licensed Supplier Partnership (TPLSP) | + | - | - | -/+ |
| Local Aggregator | TPLSP | ++ | +++ | + | + |
| Local 'Pool and Sleeve' | License Lite with TPLSP | + | -/+ | - | + |
| Municipal Utility | Full Supply License | +++ | + | | ++ |
| Municipal ESCo | Full Supply License | +++ | ++ | +++ | +++ |
| MUSCo | Full Supply License | +++ | ++ | +++ | + |
| Peer to Peer | TPLSP | +++ | -/+ | -/+ | + |
| Peer to Peer with Local Balancing Unit | TPLSP With local settlement unit | ++ | ++ | -/+ | ++ |

Barriers



| Archetype | Regulation | Capacity | Experience |
|-------------------------------|------------|----------|------------|
| | | | and risk |
| White Label | Low | Low | Low |
| Local Aggregator | Medium | Medium | High |
| License Lite | Low | High | High |
| Municipal Utility | Medium | High | High |
| Municipal ESCo | Medium | High | High |
| Multi Utility Service | High | High | High |
| Peer to Peer | Medium | Medium | High |
| P2P with Local Balancing Unit | Medium | Medium | High |
| NFP national supplier | Low | Medium | Medium |

UN



| | Local supply innovation fund |
|----------------|--|
| Short-term | A 'portal of power' |
| | Resource Local Supply Working Group |
| | Exemption from requirement for national supply |
| Medium Term | Amend tariff limits for local supply archetypes |
| | Allow for 'local balancing unit' |
| | Exempt service-oriented models form switching |
| Long term | requirements |
| | Investigate treatment of demand reduction centred business models in regulation and policy |

Reccomendations

Existing impact

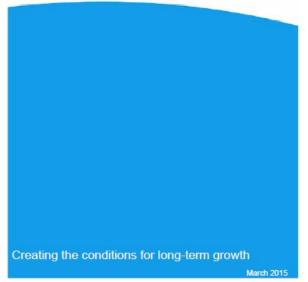
- UNIVERSITY OF LEEDS
- 4.9. In collaboration with Leeds University⁹ and through engagement other stakeholders interested in 'local' energy issues, a numb models have been identified. Some are already operating, oth and others are ideas for potential future approaches.
- 4.10. The business models are diverse, including locally-focu partnerships (see Case Study 8), local pooling and aggregatic peer supply and a range of municipal level activities including licensed suppliers, energy (and other utility) service providers regulatory environment, the business models typically require licensed supplier to ensure that necessary industry, system in protection measures are discharged. Stakeholders also identi bespoke licenced community energy supply company to unde requirements on behalf of small community energy schemes.

Case Study 8: OVO Communities

In April 2014 the independent energy supplier OVO Energy laur programme with local councils, housing associations and comm called "OVO Communities". The platform is an innovative solution the tools they need to roll out integrated packages of energy ser affordable tariffs, smart metering, energy efficiency installations distributed generation.

Department of Energy & Climate Change

Community Energy Strategy Update



⁹ Hall, S., Roelich, K., (2015) Local Electricity Supply; Outcomes, Opportunities and Archetypes, Draft independent report to DECC, iBuild Consortium.



Thank you for your attention!

Contacts:

<u>s.hall@leeds.ac.uk</u> <u>k.e.roelich@leeds.ac.uk</u>

Website:

http://sure-infrastructure.leeds.ac.uk