### School of Earth & Environment SUSTAINABILITY RESEARCH INSTITUTE



# Local Energy Supply: Opportunities, archetypes and outcomes

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APSE Southeast Workshop 16<sup>th</sup> July 2015

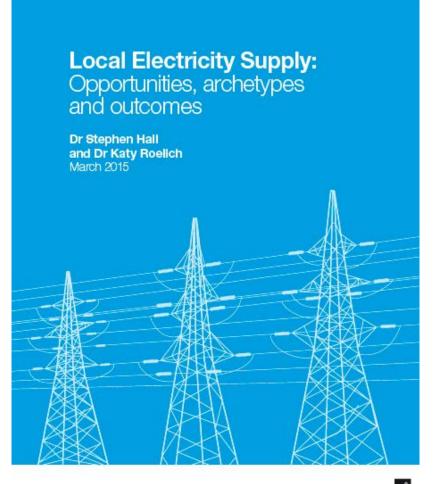


### Report structure

- 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



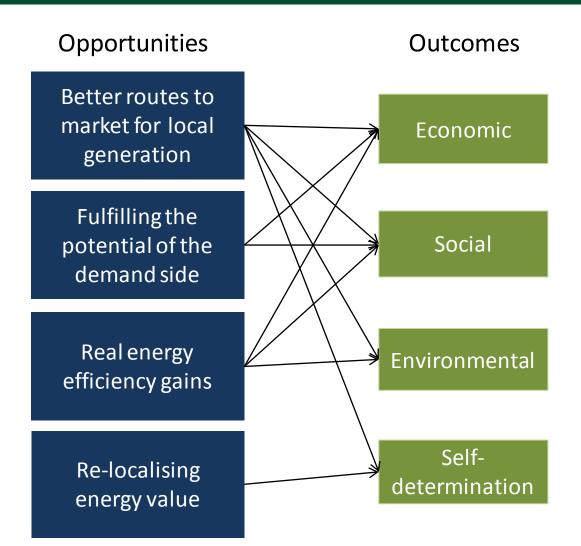
- Literature review
- Local Supply Working Group Written submissions
- Local Supply Workshop outputs
- 12 Primary interviews

## Motivations

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

## The four opportunities of local supply





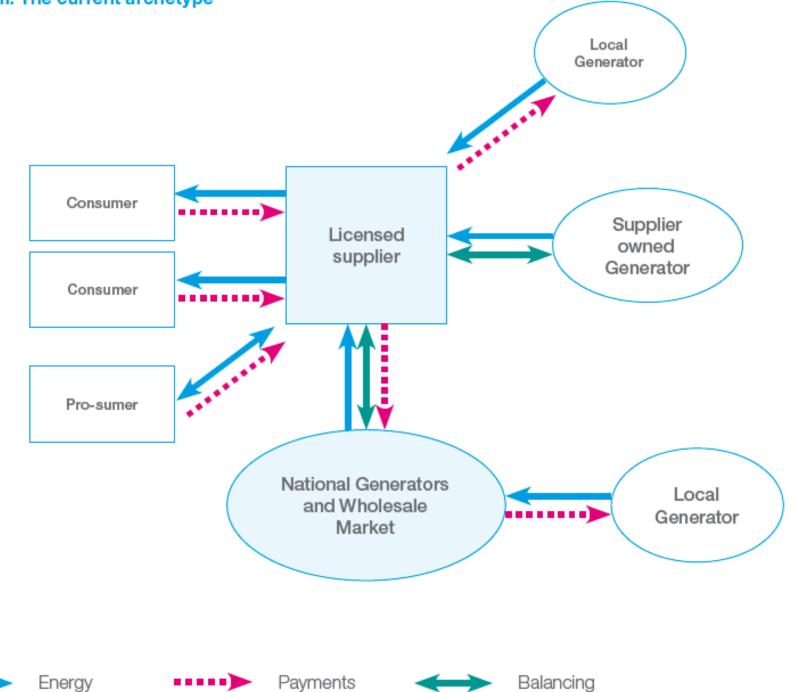
### Archetypes



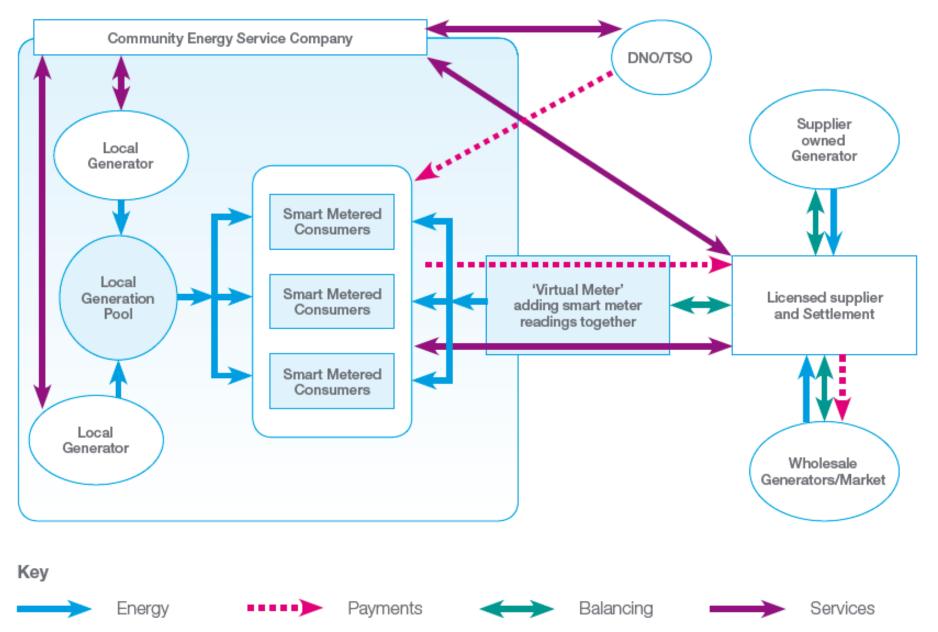
- Current archetype
- Local white labelling
- **Energy local**
- Licence light
- Municipal utility
- **Municipal ESCo**
- Multi-utility service company
- Peer to peer
- Peer to Peer with Local Balancing Unit
- Not for profit national administrator

#### Diagram: The current archetype

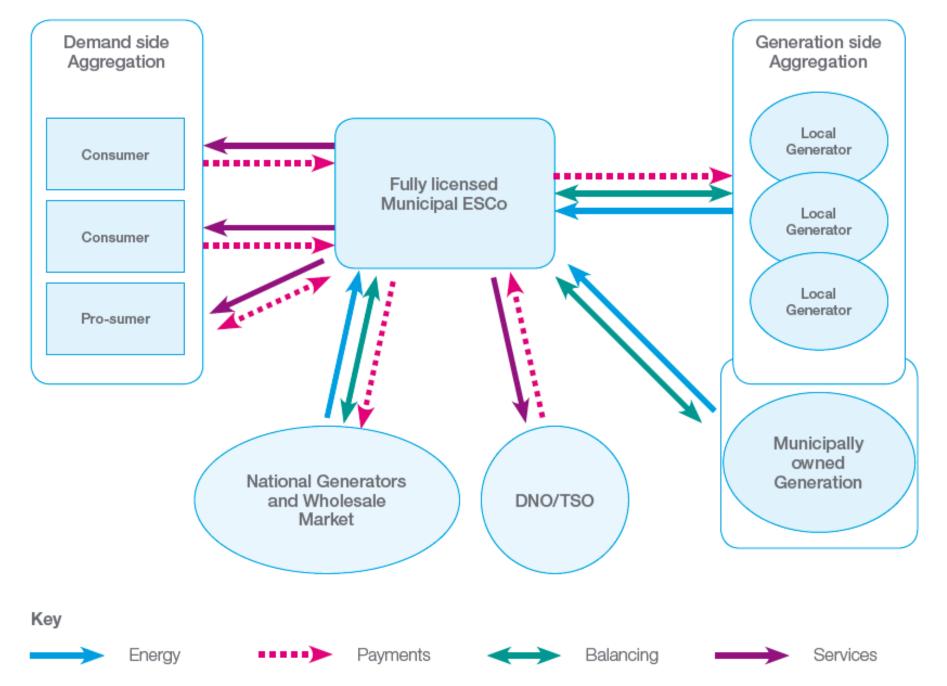
Key



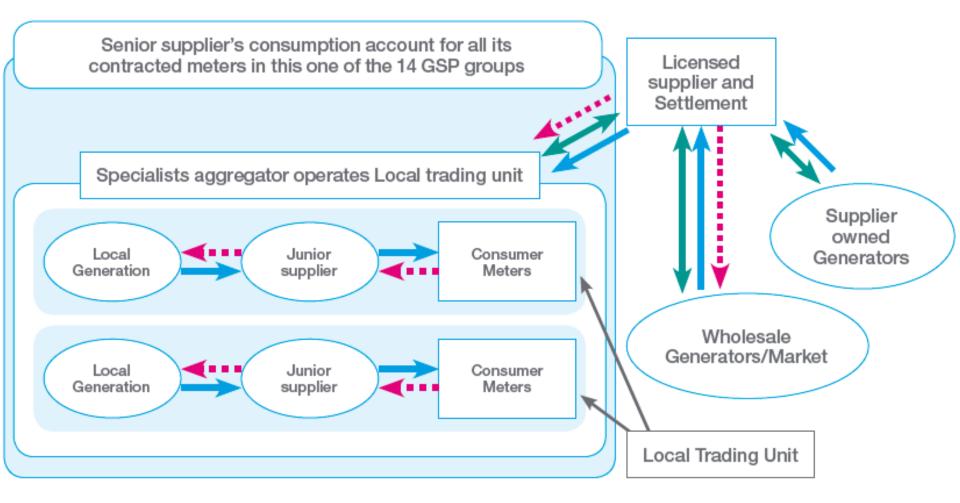
#### Diagram: The local aggregator archetype



#### Diagram: The Municipal ESCo Archetype



#### Diagram: Peer to Peer with Local Balancing Unit



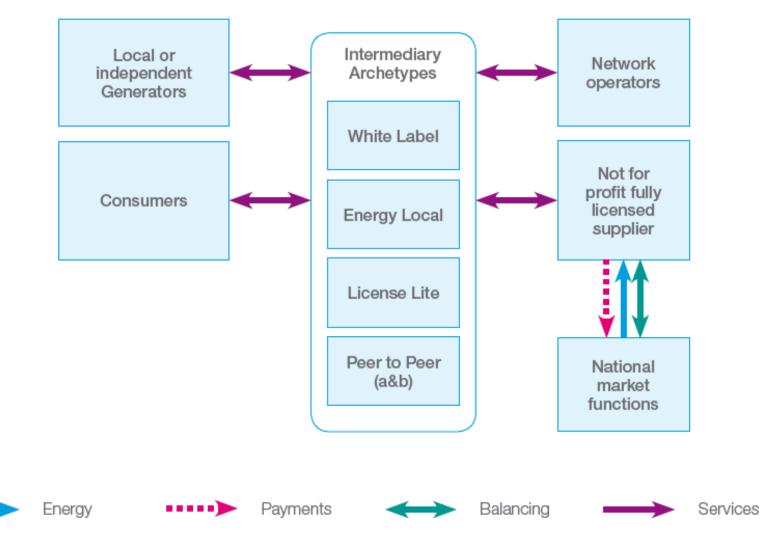


## Archetypes – NFP national administrator



Diagram: Not for Profit National Supplier

Key



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## Mapping archetypes to opportunities



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

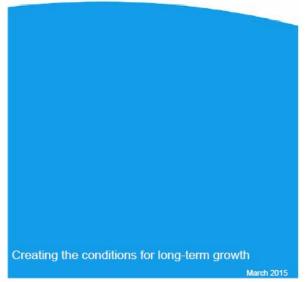
- UNIVERSITY OF LEEDS
- 4.9. In collaboration with Leeds University<sup>9</sup> and through engagement other stakeholders interested in 'local' energy issues, a numb models have been identified. Some are already operating, oth and others are ideas for potential future approaches.
- 4.10. The business 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



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



## Thank you for your attention!

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