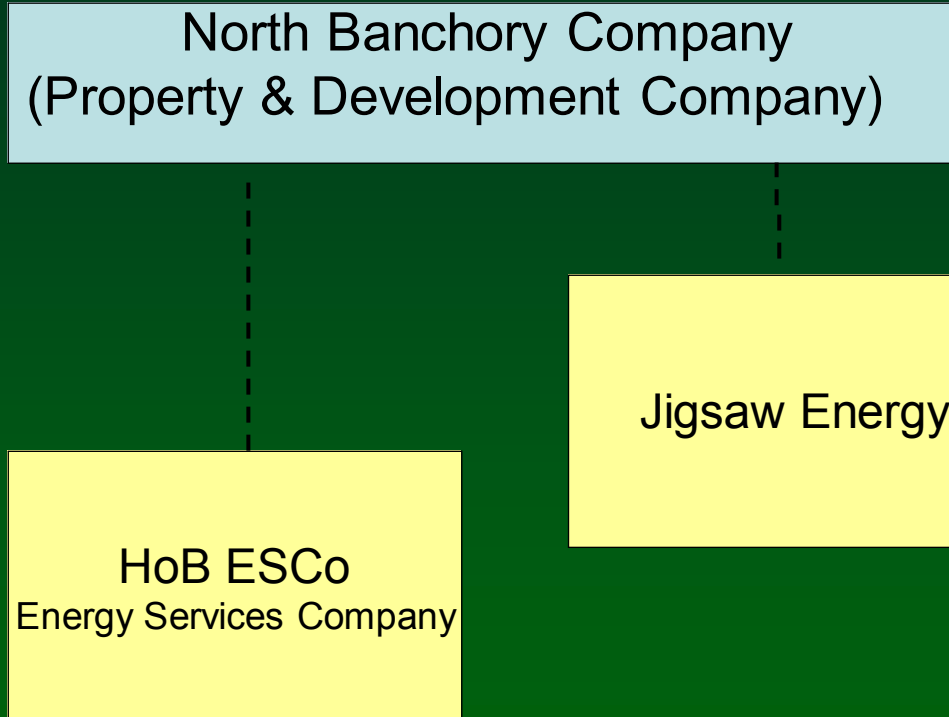




Decentralised Energy Planning Practical Implications

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Woodend Barn, 21st April 2010

Company Landscape



Current UK Energy Situation

Mainly Centralised Energy generation

- fuelled by imported fossil fuels or nuclear
- one-way transmission along the National Grid
- Grid balanced by the National Grid and District Network Operators
- Regulated by Ofgem

Decentralised Energy

- 1) What is it?
- 2) Why is it important?
- 3) Energy Planning
- 4) What should be the next steps?

1) What is Decentralised Energy?

What is Decentralised Energy?

Heat and Electricity generated in close proximity to where it is used.

Both Individual Consumer

eg household

And Collection of Individual Consumers

eg District Heating Scheme or Electricity Network

2) Why is Decentralised Energy Important?

2010-2020: Unique window of critical opportunity

- UK Energy gap: Old coal and nuclear expire
- “Peak Oil” expected
- Ofgem expects 25% increase in energy prices
- Energy Security: Overreliance on foreign gas

- New rules of the game: uncertainty
- Government Policy drivers: RHI, FiTs, ROCs, Zero Carbon Homes, Smart Grid, Energy Efficiency, CRCs, EU 2020 targets

3) Energy Planning

Energy Planning

Energy planning requires us to conceptualise a whole *energy system*.

- infrastructure associated with the generation of electricity, energy supply and distribution
- energy sources and fuels
- transportation of fuels and heat
- transport network and vehicles
- homes, buildings, commerce and industry and their demand for energy
- how we use and manage our buildings, vehicles and goods

Decentralised Energy Providers

- Energy Supply Company or ESCo
- Electricity and Heat generated on-site or near-site by the consumer or an Energy Supply Company (ESCo)
- The viability of the ESCo determines the viability of the development

Energy Partnerships

- Decentralised Energy opens opportunities for innovative collaboration
 - Both on Supply-Side
 - local employment sustained in Biomass, Anaerobic Digestion and Waste supply chains
 - And Demand-side
 - District networks
 - Energy Savings- social benefits

Practical Considerations Planning Ahead

- Sustainable Energy planning takes longer to timetable
- Programming of development to ensure energy balance during the life-time of the development.
- Design and Build stages more complicated
 - Integrate a district heating network
 - Structuring finance-side
 - Connection to grid network or private wire
 - Planning System

4) What should be the Next Steps?



- Energy mapping or scoping studies
 - heat mapping
- Stakeholder engagement- large users, fuel suppliers, developers, consumers, community involvement
- Feasibility Studies
 - Technical
 - Financial
- Establish Management vehicle- ESCo
- Design and Project Management

