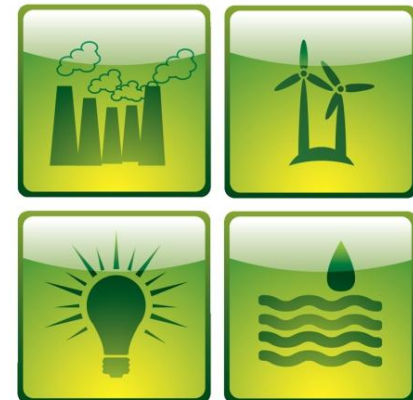




The
University
Of
Sheffield.

Development of a proposal for a wood-fuelled community district heating (DH) scheme

James Williams



E-Futures

Development of a proposal for a wood-fuelled community district heating scheme

- Initial Plans- A full feasibility study
- The Five main areas
- Wood fuel
 - Types
 - Volume
 - Sources
 - Availability
 - Future costs
- CHP technologies available
- Locations of a plant and district heating scheme
- The next two months
- Costing of everything
- Funding and grants

Initial Plans

A full feasibility study

Securing a wood supply route

Ownership rights

Plant location

Gaseous and particulate emissions

Capital Costs

Peak Park Authority regulations

Drying techniques

Funding

Planning regulations

Most suitable moisture content of wood

Wood fuel types

Technologies available, most suitable

Five main areas

1. Securing the supply of wood
2. Assessing the technologies
3. Determining the plant location
4. Costing
5. Funding

[1]



[2]



[5]

ACT ON



2



30	815,073,273	30	1,213,553,540
30	549,630,000	30	928,095,333
1	384,741,000	30	549,630,000
	1,076,839,5	30	1,319,322,327
	677,850,6	30	669,160,268
	591,625,9		
	395,67		
	549		

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Wood fuel

- Types
- Volume
- Sources
- Availability
- Future costs

[8]



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[1]

CHP technologies available



Bioenergy Technology Ltd

Power Output: 80-500kW

Eco-Heat

Power Output: 700kW



Locations of a plant and district heating scheme



- 36 homes already identified
- Possibly the local pub
- Ease of access for delivery of fuel
- Out of sight and low noise
- Planning permission, Peak Park Authority
 - New buildings (storage of wood included)
 - Chimney height

The next two months

- Secure fuel supply
- Building regulations
- Costing of everything....
- Grants and funds....

Costing of everything

- CHP costs:
 - Boiler
 - Turbine
 - Generator
 - Chimney
 - Storage silos
 - Building to house everything
- Pipe lengths for DH scheme and costs
- Maintenance
- Fuel costs
- Funding and grants.....

Funding and grants



[11]

Forestry Commission

Bio-energy capital grants (wood)



energy saving trustTM

[6]



[5]



DEFRA (CHP)

[12]

References

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Thank you for listening. Are there any questions?

Sustainable Youlgrave

"It's about our local community taking control of its own future."