

Technical Option Focus Group
2nd October 2008 6.30 -7.30 Parish Rooms, West End

Notes from the meeting. These should be read together with the presentation given at the meeting, to which many of the points raised refer.

Those attending:

Project Team: Roy Alexander (RA), Mary Gillie (MG), Jen Carter (JC), Tamara Hunt (TH).

Focus Group: George Garner (GG), Andrew Yarwood (AY), Andrew Cross (AC), Garry Charnock (GC).

Also attending: Laura Chellis (LC), Matt Taylor (MT), representing Carbon Connections

RA introduced everyone and the structure of the evening.

MG gave a presentation on the Technical Options that are being considered for Ashton Hayes. MG made it clear that at this stage they are only ideas and feedback from as many people in the village as possible is vital. MG encouraged everyone to take away additional copies (printed) of the presentation to circulate among friends and neighbours.

An overview of the options being considered include: wind power behind the school, solar energy on community buildings such as the church, school, the village hall and individual households, a hydro scheme on the Ashton Brook, and a combined heat and power (CHP) biomass boiler.

Hydro

RH asked about pump storage; near the church there's a dip that may be suitable for a storage pond for hydro power. Depending on the head height and or flow this could be a possibility. Action: RH to look if there are any figures available.

RH asked if it would be possible to construct a weir if the drop height is sufficient, or use the stream's flow for hydro power. MG said that it would be more likely to use the flow of the brook for power generation rather than the height - it might be interesting to combine the two ideas – 'run of the river' and a storage pond.

Chester and Bollington are investigating the opportunities for hydroelectricity with their respective rivers. – Environment Agency may have data on speed flows, head height etc. Who owns the brook will need to be investigated? It may be Peel Hall? Storm drains feed into the brook but further south in the village – increasing the flow rate after storm periods.

Biodigester

SB asked if there were any further developments of the biodigester that had been discussed with United Utilities and if that could be another option to consider.

MG stated that this would have to be located by the pumping station near the scout hut. UU had done some calculations. MG will chase up and look at whether this could be a viable option, there was also an idea that if compost were added to the sewage it could make this an option. There would also be the issue of transporting the waste from individual houses to a main collection point.

Biomass

GC said that the Woodland Trust would be able to offer a wood supply to power a biomass boiler. The biomass boiler at the school would need somewhere to store the supply and Rob Ford (Ashton Hayes Primary School Headteacher) was concerned about the amount of effort to maintain the boiler. It would need to be automated and incorporate a maintenance service.

Questions raised about the environmental effects of a biomass boiler included: How much smoke would be created? The plume of smoke may be comparable to the plume seen from a condensing boiler.

Would it require a large unit? Would the flue need to reach a certain height? The flue would be a 'forced flue' effectively pushing the smoke out so should reduce the likelihood of it staying at a lower level in the air. Perhaps take a visit to Kingsmead Primary School, Northwich that has a biomass boiler.

Ashton Hayes School needs a new boiler – but needs to look at ways to finance it. Could the ESCO own the boiler and sell the generated power and heat to the school? Issues regarding the day-to-day management were also raised - Would there be a lot of ash to dispose of and would this be classed as waste? One suggestion was to give the ash to the gardening club. The ash would only be classed as 'waste' if for example wood (e.g. from old pallets) had been burnt in the boiler. It shouldn't be a problem for virgin wood. A typical domestic burner only needs the ash emptying 2/3 times during the winter period.

Seasonal heat storage – an underground system that stores heat generated as a by-product of power generation in the summer months and also heat generated during the weekends and holidays. Existing systems are currently in operation in Canada and the Netherlands. Any system needs to be innovative and practical; there are Swiss gravel heat storage systems, which can be used in the winter to draw upon the heat reserves stored over the summer.

Wind

MG gave an update on national data on wind speeds available from The British Wind Energy Association (BWEA), which suggests that this site (behind the school) lies within a margin of being viable. However, the data represent an area of a square kilometre; subject to planning permission and the installation of monitoring equipment, actual measurement data will be taken more locally and will be important for assessing the viability of wind power.

MG asked the group what the general feeling in the village was towards wind power – how many people would be in favour of a wind turbine being erected? DO commented that they were not sure how people feel about wind, but are likely to be more favourable and positive than previously, before the start of the AHGCN project. At the possible site, they (wind turbines) would not be very visible and if anything noise is likely to be the main concern of residents.

Perhaps a photo mock up of how it would look would help people visualise the field with wind turbines and the visual impact it would have on the landscape would be useful. Most agreed that it may even enhance the appearance of the landscape.

The wind turbines being considered are Proven wind turbines. If the group wishes, a trip to a local wind turbine site could be organised. Could we look at the reduction in costs (fuel

bills) by using power from the wind turbines, rather than how many houses it could power? What other ways can be of benefit householders? Could nearby residents get additional benefit?

It was commented that wind turbines are more attractive than the current electricity pylons, yet everyone is used to these across the landscape. There used to be windmills; wind turbines are the 'newer version' in time people will come to accept them as a part of the landscape.

The record of planning applications in the village to date have been granted and supported by the City council. The planning proposal for the Windsave turbine on the school was granted permission and similarly some individual properties.

Could micro wind turbines on individual households be added to the potential energy source of the microgrid? MG replied that the wind patterns around a house are very different from those across a field. Also the efficiency of these (micro turbines) is unproven and they are likely to be less cost effective? The wind turbine on the school generates a small proportion of the total energy; there are no data on the performance of Windsave turbines.

When the initial planning application for the school was submitted residents of Church Close were concerned about the noise it would create. GC also commented that there was a lack of understanding with regard to what a wind turbine is, some thought that it may even blow wind towards their house! Need to ensure that people understand what the options entail.

MG indicated on the aerial photograph and the map where the location for a wind turbine, within the field backing on to the school may be. People commented that although it would be obvious from the footpath that runs alongside the field, it is unlikely that any house would see it directly.

How would the wind turbine be connected to houses and the grid network? It would use a low voltage network with an underground cable, the only visible component would be the turbine. MG commented that projects with ScottishPower are ongoing into developing a system to connect it to their grid.

Solar PV

The church roof is likely to be suitable for PV panels, although it is slightly too steep and shaded by trees. The church spire is also an option.

Another possibility is the school roof, although it is a flat roof, the PV panels could be mounted at the desired angle. Or PV may be incorporated as part of a green building at the school.

AC suggested using a farm field with a bank of solar panels; pay the landowner an income in return for the use of the land. Creating an 'Energy Farm' which could include a combination of PV panels and wind turbines. The energy farm idea could be another option as a proposal for income. Some people may volunteer land without any costs incurred.

Matters arising in the ESCO Ownership & Management group.

The following ideas were raised in the above focus group but are worth consideration in the technical group.

GC questioned whether a traffic calming measure could help generate electricity, referring to the nightclub in London that uses the movement of people on the dance floor to generate electricity, would there be a possibility in something that would encourage people to slow down and generate electricity?

If a farmer was willing to change land use of a field from crop to energy production could they sell this to the ESCO? This may be considered a private enterprise and not a community venture – this needs further investigation.

Date of next meeting: 6-8 weeks.

GC said that there is also a possibility of having 10min to talk at the next parish council meeting – wider discussion through the audience.

Questions will be circulated with the venue details of the next meeting.

All agreed that Thursday was a suitable day for the meetings. Possible dates – 13th, 20th or 27th November.

The next meeting will take place on Thursday 20th November from 6:30pm to 7:30pm in the Parish Rooms, West End.