

Minutes of Spaunton and Appleton Community Energy Group meeting  
Held at Appleton-le-moors Reading room, Jan 25 2005.

Present: Dave Rawlings(chair) David Grewer (treasurer) Nelly Trevelyan(secretary)  
Jim Hall, John Marsden, Geoff Cawood, Vicky Shaw,(N.Y.M.N.P.) Judy ? Mr Woods  
and Tom Chadwick from Danby

The minutes of the last meeting were read and approved.

Matters arising: Following on from Victor Buchanon's talk, there is a one day training event at Ampleforth, on Wednesday 9 March. Nelly has the contact sheet, but can't go. Is anyone else able to attend what should be an informative day? Cost £5 repayable from group funds.

Dave Rawlings had looked at a few figures on usage. Converting into Kilowatt hours his household used 14.576, David Grewers 9.301 and Jim Hall 7.787. The UK average is 25 .00 In the last thirty years, energy usage for heating has gone up a little, water heating down, cooking down and use of appliances up. Most oil is used in the winter months. 5700klwH for Jan with an input of 15 klw for 12 hours a day for 100 houses.

Vicky: Suggested that the group had a clear environmental policy,as it was a requirement for 'clear skies 'funding. She showed us a copy of Hinderwell village hall policy, but it was felt not to be entirely relevant as we are not in charge of a particular building. Jim said that he would show it Appleton village hall committee. Ours could be far simpler. Botton are doing a draft version. She told us that E.S.T have a useful Data base. She said that there was an energy study of the N.Y.Ms in the pipeline,, funded through Yorkshire Forward. Botton Village have selected 'Leader' to do their feasibility study over the next few months. Unfortunately we were not able to get hold of the solar panels man this time but hope to get him to come in Feb.  
Jim Hall said that he would discuss the idea of a ringfenced bank account held with the parish council, as it may be the simplest way.(or not).  
Barnaby Friar (YREN) is doing work on legal frameworks and will be able to advise us on this within a few months.

Our speaker, (at the last minute) was Mr Woods from Danby who has fitted and use a variety of technologies in his own house.

His background was that he was born in East Africa where there was no mains power in the countryside, so he remembered that each farm had a device called a Hydraulic Ram if they were near water. This used 80% of the water flow to pump the remaining 20% uphill. He came to Yorkshire as a mining engineer/geologist to do a study for Boulby Mine. He bought a derelict cottage that had a spring, and remembered about Hydraulic Rams. He found a firm in Lancashire that was still making them and has had one in use for 35 years with no upkeep problems.

He also worked in Canada for a few years and was very impressed with a new government building in Toronto that was heated with heat pumps in a much more severe climate than our own. It had two boreholes into the gravel where there was static water. Water was pumped from one to the other, relinquishing some of its heat

on the way, to heat the building. The water in the second hole was thus colder, and was used in the summer to cool the building. The second year the water was warmer to start with and so it was even more effective. This technology was not developed in Britain because we had such plentiful gas at the time.

His spring is at about 12 degrees all year. By lowering the temperature of a large volume of water by two degrees, it is possible to raise the temperature of a small volume of water (such as within a radiator system) by thirty degrees. It pays very well and has greatly reduced his oil purchases (by 2/3). He has had it running now for five years with very little maintenance as there is very little to go wrong. It is simple and saves a lot of C.O.2. One kilowatt to drive the pump creates Four kilowatts of heat. Where there is no spring, old wells are effective. So we should do a well survey of the villages. Alternatively it is possible to use the ground temperature in the same way. Scarborough council did a survey of properties in the Esk valley to ascertain which were suitable. They looked for ponds /springs or enough adjacent land. Originally they needed 200metres at 1.5 meters depth. Now they only need 60 meters. Alternatively ,it is possible to bore straight down. One bore hole is fine though you cannot have too many close together.

His own system works in conjunction with an oil system. In the very coldest weather the oil powered system comes on as a boost. Old houses, such as many of the ones round here ,work like storage heaters and are best run at constant lower temperatures for best efficiency. The heat pump can supply this constant base temperature of about 45 degrees which is then topped up.

He also has made his own solar panels which are fitted into his conservatory roof. The advantages of making his own were mainly cost, but also the fact that they could be made to fit his particular conservatory roof exactly. The only complicated part are the 'collector' plates which are made in county Durham. He was able to buy these and the system ,including plumbers costs cost him £1,000 as opposed to £3,000. There were advantages in siting them on his conservatory roof as they are invisible from a planning perspective. From a practical perspective. if they are sited low down the water does not need to be pumped down as it would if it were on a roof. He encountered a small leakage problem at higher temperatures as he was using a mixture of water and anti-freeze. This he solved by having a small radiator in the conservatory that kept the water in the system above freezing.

Finally he told us about his coppicing activities, by which he supplies 3 woodburning stoves. He has a small alder plantation on some wetland. It is fast growing, and he has an arrangement with a contractor who cuts some each year taking some in payment and leaving some. This is C.O.2 neutral.

Our next meeting is definitely on Monday 28 Feb 7.30pm, at the same venue, and our speaker from the solar panel company has been confirmed.

#### Agenda:

- Minutes from the last meeting
- Matters arising
- Speaker and questions