

Upton Village Hall – Board Discussion paper November 2013

Review of our Energy Management (drafted by PGP 29 Oct 2013)

Current situation

We currently spend around £6000p.a. on energy - gas (£4300) and electricity (£1600). (this equates to four average UK homes).

Sourcing that gas and electricity is NOT the issue in this particular review.

How we currently **manage that energy** –

Our gas central heating has a room thermostat (single temperature setting and located in the main hall); radiator thermostatic valves and a 7-day 3-period programmer. Room thermometer temperature setting (18 – 19°C) and the on/off programmer is set by Norman and reviewed occasionally by him guided by the calendar of events and the season. For November 2013 -

Monday 8-30 to 11-30 am 1.30 to 5-00 pm 6-30 to 9-00 pm
Tuesday 8-30 to 11-00 am 12-00 to 6-00 pm 7-30 to 9-30 pm
Wednesday 7-00 to 12.00 am 1.00 to 6.00 pm 7-00 to 9-30 pm.
Thursday 8.30 to 11.00 am 1.00 to 6.00 pm 7.00 to 9.30 pm.
Friday 8.30 to 11.30 am 1.30 to 6.00 pm 7.00 to 9.30 pm.
Saturday 9.00 to 12.00 am 1.00 to 4.00 pm 7.00 to 10.00 pm.
Sunday 10.00 to 12.00 am 1.30 to 4.00 pm 6.30 to 9.30 pm.

This is not modified on the short scale (eg if a Saturday afternoon is vacant).

The Meeting room is also heated by the same Central Heating circuit. The meeting room is better insulated than the main hall but inevitably its users are sedentary.

All users are requested to leave all radiator thermostatic valves set when they leave. Arriving Users are asked to check.

The main use for **electricity is the lighting**. We seek to encourage users not to waste lighting since the skylights give good daylight. All tubes are reasonably low energy and frequently replaced.

We do get occasional complaints of being too cold – mainly after a sudden cooling of the weather. Other users open windows and doors to cool the hall off.

Main hall insulation was improved during 4-SCORE but we believe the ceiling/roof is our biggest heat loss and we believe there is no cost effective solution to this.

What could we do better

- Smart thermostat programmers (typically £75 and self installed) offer 7-day programme of 6 periods – each period having its own temperature setting. This would need to be mounted where it is tamperproof. A desired temperature profile can then be set up.
- Once a profile has been checked out the need to decide when the heating should come on (to have reached target for when needed) – then the ‘smart’ side of the controller comes into play and it decides when heating should come on to reached target at a specified time. This sophisticated control needs time for it to self-learn the building heat-up characteristics.
- These smart controllers are claimed to ‘save’ energy by reducing waste. (PS – I have recently installed a smart controller and still in the commissioning phase – awaiting some cold weather!!)
- Ideally the meeting room requires its own control system (its users may be sedentary while the main hall uses very active!). A timer/temperature set electric heater may be appropriate in here as a ‘top-up’ – relying on the meeting room users to set temperature (and ‘on’ within defined allowed periods). Base heating would still be its own radiator.
- Further encourage users to be energy efficient aware – maybe a brief ‘start of winter’ campaign ????
- If we modified our control system as discussed above then User Group Organisers would need to be briefed with everyone understanding that we would go through a transition commissioning period (feeling our way).
- Boiler replacement was rejected a few years back after Carbon Trust consultation. Our policy remains to only install a new condensing boiler (hence higher efficiency) once ours fails.
- Regarding electrical lighting - LED lighting is not yet seen as cost-effective but I am monitoring the market.
- Commissioning a consultancy on our energy management is not seen as worthwhile.