

# Glenkilrie climate change focus farm meeting



First discussion group meeting held at Blackwater Hall, Blacklunans on Thursday 27<sup>th</sup> January 2011 at 13.30.

## Meeting theme – Energy use and opportunity for renewables

The theme for this meeting was energy use and opportunity for renewables, both at Glenkilrie and other farms. Peter Lindsay from the SAC Perth office is the Farm Facilitator and acted as chair for the meeting.

Item and Speaker	Content	Actions/Outcomes/Additional info?
<b>Introduction</b>  Peter Lindsay. SAC	Peter introduced the meeting, welcomed the speakers and gave a brief overview of the Farming for a Better Climate initiative.	See <a href="http://www.farmingforabetterclimate.org">www.farmingforabetterclimate.org</a>
<b>Reminder about Glenkilrie</b>  David Houstoun, Farmer, Glenkilrie.	David told the group a bit about the farm for those who hadn't been to Glenkilrie and why he had chosen to be involved with the project. David felt a lot of the aims the project, such as improving efficiencies, reducing inputs and making better use of energy and renewables all made sound business sense.	<i>Read more about Glenkilrie at</i> <a href="http://www.sac.ac.uk/climatechange/farmingforabetterclimate/ccfocusfarms/ccupland/">www.sac.ac.uk/climatechange/farmingforabetterclimate/ccfocusfarms/ccupland/</a>
<b>Topic 1</b>  <b>Micro Hydro on the farm</b> Gordon Black, BabyHydro	Gordon had to leave the meeting after his presentation, so he was first to speak to the group. Gordon gave an overview of how you can assess the potential on your farm for a micro hydro installation to generate energy, making the point that you need to assess head and flow within the burn in the first instance. Gordon reminded the group that under the Feed-in Tariff (FiT) system, you receive a payment for the amount of energy you generate <u>plus</u> a payment for the proportion you sell back to the grid. You will also save on your current electricity spend as you will be using energy generated on farm. Gordon showed an example of a 10kW scheme that could generate around £12k in financial benefits per year (although this will be site specific). Gordon also suggested some useful websites as a	<i>Micro hydro practical guide at</i> <a href="http://www.sac.ac.uk/climatechange/farmingforabetterclimate/fiveactions/kyaction2/">www.sac.ac.uk/climatechange/farmingforabetterclimate/fiveactions/kyaction2/</a> <i>see practical guides on right hand side of web page</i>  <i>British Hydropower Association</i> <a href="http://www.british-hydro.org/index.html">www.british-hydro.org/index.html</a>  <i>BHA micro hydro webpages</i> <a href="http://www.british-hydro.org/mini-hydro/index.html">www.british-hydro.org/mini-hydro/index.html</a>  <i>SEPA guidance for run of river hydro schemes</i> <a href="http://www.sepa.org.uk/water/hydropower.aspx">www.sepa.org.uk/water/hydropower.aspx</a>

	starting point for those considering a micro hydro scheme for their farm – see links opposite.	
<b>Topic 2</b>  <b>Energy use at Glenkilrie</b> Jim Campbell, SAC	Through already established benchmarking figures and analysis of energy and fuel use at Glenkilrie, Jim was able to establish that Glenkilrie was below average in terms of electricity use, but fuel use was around 1 and a half times over what would be expected at a similar farm. This was a good starting point for Glenkilrie and with a bit more investigation, could indicate potential for savings or if additional fuel use was just a feature of the jobs needed and distance between stock on the farm. Aside from general energy efficiency measures, areas to consider on the farm for reducing fuel use include matching tractors with machinery and reducing quad/vehicle use where possible. Taking a note of what fuel you use when refilling farm vehicles and what jobs they are being used for will also begin to give an indication where the majority of your fuel is being used.	<p><i>More information on energy auditing is available at <a href="http://www.sac.ac.uk/climatechange/farmingforabetterclimate/fiveactions/kyaction1/">www.sac.ac.uk/climatechange/farmingforabetterclimate/fiveactions/kyaction1/</a> see practical guides on right hand side of web page</i></p> <p><i>University of Bangor have produced a farmers guide to energy audits. Its free to download at <a href="http://www.calu.bangor.ac.uk/energybooklet.php.en">www.calu.bangor.ac.uk/energybooklet.php.en</a></i></p>
<b>Topic 3</b>  <b>Opportunities for on-farm renewables</b> Jim Campbell, SAC	Jim gave a run through of some of the renewables that could be suitable at Glenkilrie, leaving out any detail for hydro as this had already been covered by Gordon. FiTs make renewables an attractive option with payments for generating energy and selling surplus back to the grid, in addition to using less from the grid, further saving on energy bills. Taking into account the FiTs, Jim ran through calculations for photo voltaic (PV) panels and different sized wind turbine installations on farm and the potential annual income and percentage return on investment, taking into account payback periods. Other issues considered included planning permissions and grid connection. Jim also highlighted an example of a biogas plant in Germany.	<p><i>More information on renewables is available at <a href="http://www.sac.ac.uk/climatechange/farmingforabetterclimate/fiveactions/kyaction2/">www.sac.ac.uk/climatechange/farmingforabetterclimate/fiveactions/kyaction2/</a> see practical guides on right hand side of web page</i></p> <p><i>Feed-in Tariffs (FiTs) <a href="http://www.energysavingtrust.org.uk/Generate-your-own-energy/Sell-your-own-energy/Feed-in-Tariff-scheme">www.energysavingtrust.org.uk/Generate-your-own-energy/Sell-your-own-energy/Feed-in-Tariff-scheme</a></i></p>
<b>Topic 4</b>  <b>Small scale wind on farm – from idea to operation</b>  Neil Butler, Farmer, Stewart Tower Dairy.	Neil, who is also involved in the climate change focus farm initiative, gave us an overview of Stewart Tower and his experience in terms of choosing renewables for his farm. After an assessment of what resources were available on farm, wind quickly became the most obvious option. After some research, Neil opted for a 100kW turbine by Northern Power Systems. Its a direct drive turbine with no gearbox, potentially reducing maintenance requirements.	<p><i>Stewart Tower Dairy <a href="http://www.stewart-tower.co.uk">www.stewart-tower.co.uk</a></i></p> <p><i>More information on renewables is available at <a href="http://www.sac.ac.uk/climatechange/farmingforabetterclimate/fiveactions/kyaction2/">www.sac.ac.uk/climatechange/farmingforabetterclimate/fiveactions/kyaction2/</a> see practical guides on right hand side of web page</i></p> <p><i>Renewable UK (formerly BWEA)</i></p>

	Calculations indicate that this system would payback within 5 to 6 years could save around 130 tonnes/CO <sub>2</sub> /year, plus ongoing income from FITs for 20 years. Currently experiencing difficulty in getting the proposals through Planning via Perth and Kinross Local Authority; ongoing since 2009 and now on 2 <sup>nd</sup> planning application. Rejections have been due to 'visual prominence within an open landscape'. New legislation now in place to ensure public bodies take account of wider Climate Change Act (2009) targets, so this may change the approach taken by P&K.	<i>windspeed map</i> <a href="http://www.bwea.com/noabl/">www.bwea.com/noabl/</a>  <i>Public Bodies Climate Change Duties; new legislation Jan 2011</i> <a href="http://www.scotland.gov.uk/Topics/Environment/climatechange/howyoucanhelp/publicbodies/publicsector">www.scotland.gov.uk/Topics/Environment/climatechange/howyoucanhelp/publicbodies/publicsector</a>
<b>Thanks and close of meeting</b>  Peter Lindsay. SAC	Following questions and discussion, Peter thanked the speakers and closed the meeting.	
<b>Date and location of next meeting</b>	To follow	

### Do you farm and would you like come along to future meetings?

The meetings aim to provide farmers with sensible ideas for their business, from invited speakers and other farmers, to improve business efficiency whilst also reducing the loss of greenhouse gases. It's free to come along and you will be able to influence the topics, speakers or sites to visit for future meetings.

Contact Peter Lindsay for details of the next event at [peter.lindsay@sac.co.uk](mailto:peter.lindsay@sac.co.uk) or telephone the SAC Perth office on 01738 636611.

If you want to keep up to speed with what's happening at Glenkilrie but don't necessarily want to attend all the meetings, ask to be added to the Glenkilrie emailing list to receive notification of the next meetings and notes from previous events; email Peter as above or [climatechange@sac.co.uk](mailto:climatechange@sac.co.uk)

Notes from previous meetings plus information on the other key action areas are available at the website, see [www.farmingforabetterclimate.org](http://www.farmingforabetterclimate.org)

