



Llangattock Green Valleys newsletter

Issue 92
April 2018

<http://www.llangattockgreenvalleys.org/>

ENERGY GENERATION PROJECTS:

By Steve Sharp

The persistent recent rain has been good for hydro generation, with all 5 LGV schemes performing reliably and productively this last month.

Total generation in kWhs at the end of March was approximately:

Cwm Gu:	148,880
Nant yr Hafod:	94,750
Blaen Dyar:	33,290
Abernant:	39,660
Cwm Saerbren:	14,300

NRW has approved the HoF notch adjustment application at Cwm Gu and has issued a new abstraction licence. The changes should result in slightly more water flowing through the system and higher electricity generation. The work includes creation of new fish passes which will need to be carried out after 15th May; we are in discussions with NRW and TGVH re. the scope and details of the project.

A date for your diary: the hydro AGMs will be held in Llangattock on Monday 18th June this year, from 6.30pm (MH-1) and 7.30pm (MH-2) - we hope to see many investors there.

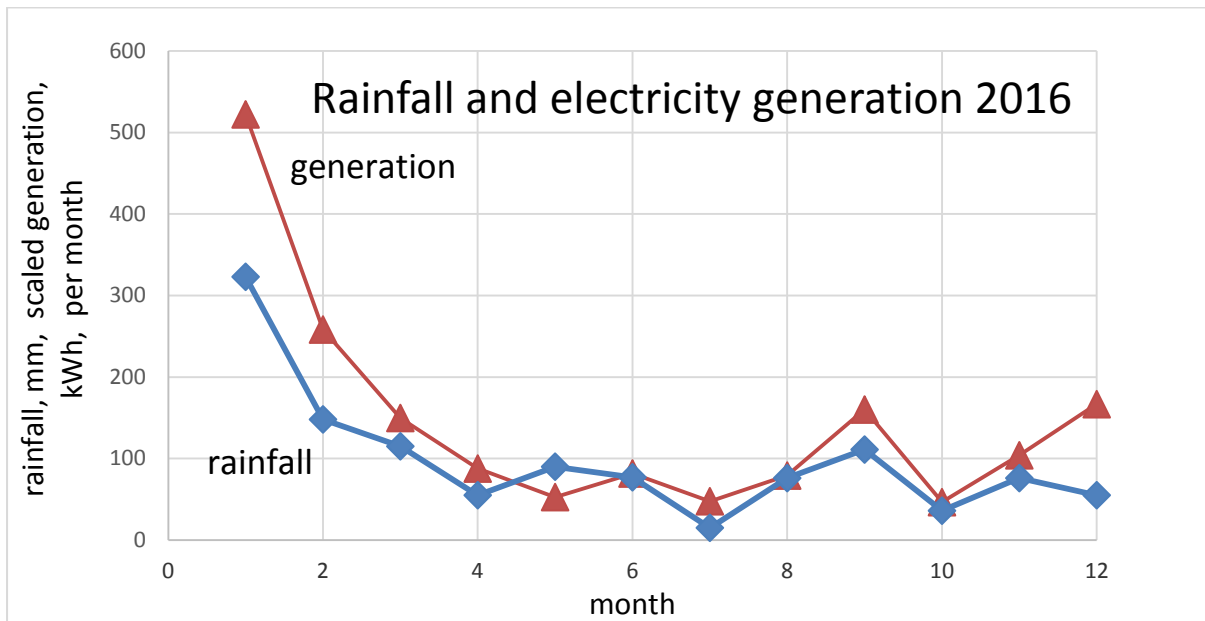
THE CLIMATE PROBLEM

By Peter Blood

Moderating climate change due to human activity is a principal objective of Llangattock Green Valleys (LGV) and a major part of LGV's activities is the generation of electricity using renewable energy sources such as micro-hydro and photovoltaic, leading to a reduction in greenhouse gas emissions.

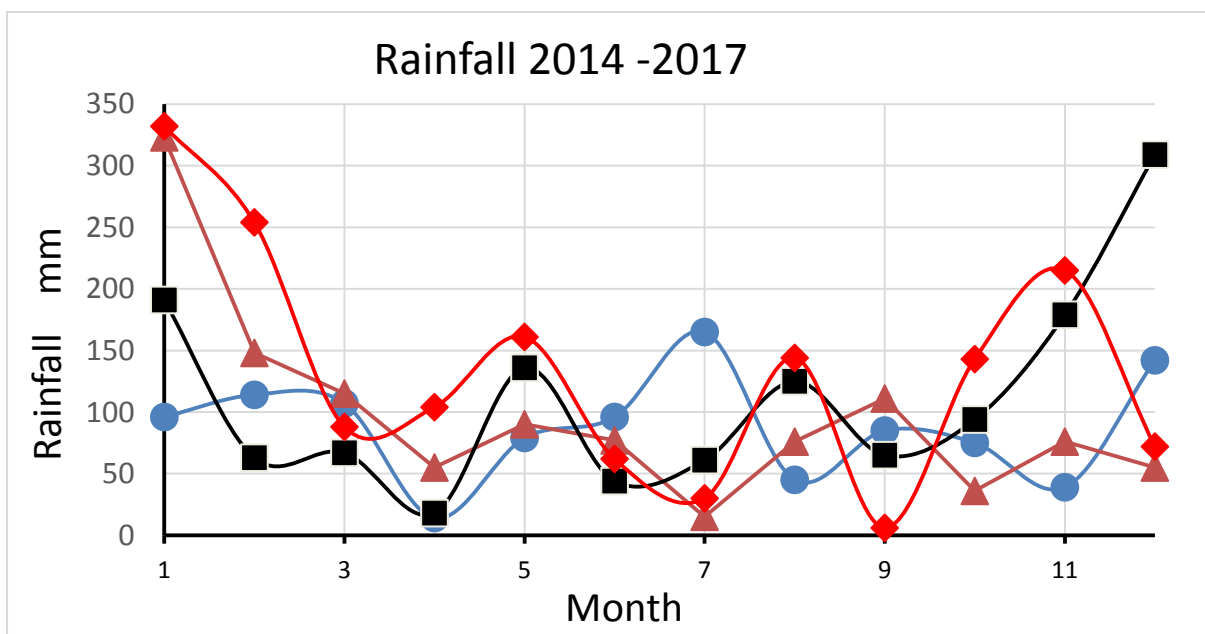
The long-term consequences of climate change, changes in temperatures and sea levels are predicted using mathematical models for the global climate. The same problem is faced when assessing the viability of renewable energy schemes: these are dependent on climatic factors such as rainfall and sunlight, though over shorter time scales. Feasibility studies use predictions of monthly rainfall or solar radiation at the installation site and studies for low-energy buildings also use predictions for air and ground temperatures. Most predictions are based on historical averages over past years, though for buildings with a long lifetime, say 50 years or more, consideration of the predicted effects of climate change becomes important. A lot of effort has been devoted to the mathematical models which produce these climate predictions but just how useful are they? Let's examine one of LGV's hydro schemes in a bit more detail.

The chart below shows measurements of monthly rainfall recorded by one of LGV's directors for 2016, together with the monthly generation by the LGV micro-hydro system at Nant yr Hafod in the same year, scaled to fit on the same axis. This shows that, even though the two locations are a few miles apart, there is a good correspondence between actual rainfall and actual generation – which is not surprising, as it is a hydro scheme after all. In practice, not all the water goes through the turbine because a flow is maintained down the stream, so in periods when the flow is very low there may be no water flowing through the turbine at all, and no generation. This is taken into account in the feasibility studies.



This chart shows a comparison of generation with the actual rainfall in the same year, whereas feasibility studies use predicted flows based on historical average rainfall over several years.

The next chart shows the monthly rainfall measured over four years, from 2014 to 2017. This indicates very different rainfall from year to year in a given month and also wide differences in total annual rainfall. An historical average of this data would not represent the rainfall in any year.



The annual totals for the years in question vary from a high of 1611mm in 2014 to a low of 1057mm in 2017 which, when translated into electricity generation, means significant variations in annual income for each scheme. So while the feasibility studies represent the performance over a number of years, we should not expect the income in any particular year to correspond to that predicted. However, assuming the methodology of the feasibility studies is broadly correct, we should expect the generation and income from Feed-in Tariffs (FITs) averaged over the 20-year FIT period to be close to the prediction. Investment in hydro schemes calls for a long-term view.

With thanks to fellow directors for comment and permission to use rainfall data.

Blaen Dyar Artists in Residence

By [Leona Jones](#) and [Penny Hallas](#)

So much has happened since the last LGV Newsletter – the artists-in-residence project portraying the power of micro-hydro has reached fruition! Fourteen months after the first earth was dug at Blaen Dyar, ‘re:Source’ (audio/visual presentation), the exhibition launch evening, a further LGV- and artist-led walk and the short video about the construction of Blaen Dyar have all ‘gone public’ – and achieved great successes.

‘re:Source’ proved very popular, with well over 200 people recorded as visiting the exhibition. Comments included ‘powerful work’, ‘a visual symphony’ and ‘fascinating’ and many visitors found the connection between the abstract film and the power of water, electricity and micro-hydro intriguing, sparking curiosity about micro-hydro and its potential.

The launch evening, so flawlessly organised by Sue and Jeff, was also a great success, with over 50 people attending. The LGV celebratory cake was cut by Andrew to officially mark the 10th anniversary of LGV and people had a chance to network and chat, as well as be among the first to view the installation.



Penny repeated the walk along the Blaen Dyar site with another appreciative group of walkers. This time Sue and Jeff provided refreshments at the start of the walk and Penny was joined by Simon, who provided highly informative and accessible scientific facts about the micro-hydro process. People appreciated engaging with the site first-hand and many commented how viewing ‘re:Source’ after being on the walk increased enjoyment of both. Jeff accompanied the walk to seek participants’ views for our evaluation.

Jackie was part of the team of volunteers who invigilated ‘re:Source’ at CRiC Studio. All rose to the occasion and looked after the visitors and equipment in a highly professional manner.

Many thanks to Jackie, Steve, Sue, Jeff, Lyndon, Miriam and Anthony who stepped in at very short notice to ensure the presentation could still open to the public following a last-minute hiccup with invigilation cover. Many thanks also to Andrew (stationed with Leona in Tourist Information during the Open Day) who brought his vast micro-hydro experience to people interested in schemes. Also sited in Tourist Information was the documentary-style video featuring the construction workers building the Blaen Dyar site. Along with the still photos that formed part of the 're:Source' exhibition, this video will be a lasting legacy of the project, able to be shown by LGV at future events.

We've had a long relationship with LGV and we'd like to finish by saying how productive we feel it's been and to give a final thanks to everyone we've met and worked with. We couldn't have undertaken this project without all the help and support given by far too many people to list individually here and we've appreciated your enthusiasm and skills so many times over the last year. It's been a pleasure to help celebrate LGV's 10th anniversary – all the best for the next 10 years!

[Leona Jones](#) and [Penny Hallas](#)



Supported by the [Sustainable Development Fund – Brecon Beacons National Park Authority](#).



LGV and the artists have received an investment from [A&B Cymru's CultureStep](#) to strengthen and develop their creative partnership.



SNOW IN SPRING

By Jackie Charlton



March was the month of snow, April brought sunshine eventually. LCW rarely has to cancel the weekly volunteer day but we found ourselves doing just that in March – tree felling is more difficult in cold, snowy conditions, proving challenging for volunteers. This is important to us as we rely on managing our woodlands effectively in the winter to provide wood for sale during the summer. We cannot fell beyond March as birds are nesting and it is a time for re-growth and wildlife activity.

Processing is now under way, getting all those trees cut and split, ready for sending out soon. This year we repeated the plan to have all wood fuel orders in by the end of April to get deliveries completed in the 'quieter' summer months! That leaves us time to start doing the

fun stuff such as getting plant labels made, cutting ends of wood into small wooden flowers and burning for charcoal; nothing gets wasted from the trees we fell.

ALDER CARR LOTTERY - We have a winner!!

Llangattock Community Woodlands has been running a small lottery for the last 12 months. The aim was to raise about £1000 but this was being rather ambitious. We did manage nearly £300, though, and are looking to raise more this year. There were 3 winners: the first prize of £50 went to Andrew Fryer and there were 2 second prizes won by Helen Burns and Rob Dunning. Although not a huge amount of money was raised, this will go towards buying native Welsh apple trees for the Alder Carr. Our aim is to start building a community orchard and continue the annual Apple Day in October.

Thank you to all those who have contributed to the Alder Carr Lottery and we will be looking for more people to join during this year. Please do consider helping us out with a small contribution and the all important element of becoming a WINNER!

For more information please contact jackiecharltonlgv@gmail.com or andrewgpeach@gmail.com.

The **Alder Carr Lottery** is registered under the Gambling Act 2005 and has a Small Society Lotteries Registration Certificate. Registration No: LN/201600367

EVENTS AT ALDER CARR 2018

LCW has a short programme of events over the summer and into the autumn. This year we are hosting a Summer Solstice event, hoping to have a pitch at LACAS again and Apple Day in the Alder Carr and will be at the Crickhowell Christmas Fayre again.



Bob's Bee notes WARMING AND SWARMING



Bee Bob is on a pilgrimage to a Spanish retreat so this month's article will not be up to the usual high 'BEE' standards but a flavour of what will be happening in our woodland hives.

April is the time to start swarm preparations, both for the bees and beekeeper. Last year, Bee Bob explained how and why bees swarm: "the original queen bee follows the worker bees out of the hive to establish a new home that "scout bees" have selected as being suitable."

Last year, one of our hives swarmed and the swarm moved into a tree; we tried to encourage the bees back into the hive but sadly they went off, never to return. Losing a swarm is hard for the bee keeper as a lot of emotional time and energy is invested into the bees. It's our job to make sure we help maintain the hive, to encourage the bees to stay.

During April and May our bee group regularly inspects the bees, trying not to disturb them too much. Because of the long winter, feeding is still important and it has been so cold this year that the bees became dormant when they would normally be flying at the end of March. They weren't taking much of the sugar fondant placed on the hives as they were conserving energy by holding together lower down in the hive for warmth. However, with the recent warmer, sunny weather the bees are flying and starting the annual process of rebuilding the

colony, the Queen laying and the workers bringing in the pollen. It is even more important now to give them some extra strength by continuing to add sugar fondant to the hive.

When Bee Bob returns, we will undertake more extensive support of the hives, making sure we keep our bees and develop strong colonies for the rest of the summer. Our aim this year is to produce enough honey and bees wax to replenish our budget and keep the bees in the style they are accustomed to. The Bee Palace has now been completely fitted out, ready to extract the honey in September and produce wax for many of the products we hope to make this year.

Good Beekeeping!

Bee Bob



LCW Trustees are justly proud of the commitment and enthusiasm of all our volunteers. We meet regularly every Tuesday and you can find information on where and when we meet on our website www.lcwg.btck.co.uk. If you are interested in environmental management, green wood crafts or bee keeping then do get in touch. Please email Eric Gower eric.gower@gmail.com for a membership form.

LACAS - More than just a Lunch

By Sue Cartlidge

In about a month's time, millions of people across the UK will be sitting down together for a fabulous feast with their communities as part of the Big Lunch on Sunday 3rd June.

To be a part of the LACAS Big Lunch, all you need to do is bring yourself, your family, kids, dog (on a lead though!) plus a dish of something delicious to share. A BBQ will be available if you want to bring something to incinerate! You also need to bring your own plates and cutlery – and if you really must, that bottle of rhubarb wine. All are welcome – the Big Lunch is not just for allotmenters.



Image: Orchard work party

The community orchard is coming along well this year, following its fairly strong pruning last year. A work party recently spent an afternoon spreading mulch around the bases of the trees and also cleared some ground for planting of wild flower seeds. These were obtained from

Grow Wild, the national outreach initiative of the Royal Botanic Gardens at Kew. Watch this space!

For any LACAS queries, do contact Phil Gibson on 01873-811537 or gibsons@uwclub.net

LLANGATTOCK LITTER PICKERS

By Michael Butterfield



Please follow the links below for our most recent news: March Newsletter

May Litter Picks: We are out litter picking as usual on the **first Saturday (5th May)** of the month, meeting at **9.15am**. We are also out litter picking on the following weekdays during May, meeting at **9.15am**: **Thursday 3rd, Friday 11th, Wednesday 16th, Monday 21st & Wednesday 30th**.



LGV VOLUNTEERS NEEDED PLEASE! CAN YOU HELP?

We are looking for a number of people who would like to get involved at Director and non-Director level. Please get in touch with Andrew Fryer if you would like to explore the ways in which you can help: andrewfryer70@gmail.com. You can meet our Board of Directors [here](#).

Now that we have 5 hydro schemes up and running, we'd like to get a few more volunteers involved in monitoring the schemes and taking readings. This would only take around an hour or so once every 6-9 weeks. If you are interested in helping, please contact Simon Walter admin@llangatockgreenvalleys.org.

PLEASE ASK US!

If anybody would like to look at LGV's finances or discuss our schemes and projects, please contact us and we will be happy to help. We are proud to be operating a transparent and successful Community Interest Company. You may also find useful answers to our [frequently asked questions](#) on the LGV website.

To find out more about us or to become a member, please visit:

www.llangattockgreenvalleys.org

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