Working with a Community Energy Company in Wales, UK

Abergwyngregyn
Background and description of the good practice

Ynni Anafon (http://www.anafonhydro.co.uk/) an “Industrial and Provident Society” has already installed a 240kW hydro system on the Afon (River) Anafon, in 2015. This has been a tremendous success but it is unable to facilitate one of the highest wishes of the village (Abergwyngregyn) residents – cheaper electricity. As the hydro generator exports at high voltage, it is not suitable to use as part of the “Energy Local” model. The generating source needs to be on the low voltage system.

Ynni Anafon itself is a ‘spin off’ of the Abergwyngregyn Regeneration Company, which is a well-established organisation and both have an outstanding local reputation. This provides confidence that any new scheme would be well-researched, implemented and managed.

Ynni Anafon is also one of 5 similar community-owned companies that have formed the new Cyd Ynni consortium. Each of the 5 members are located in the post-industrial slate towns and villages in northern Gwynedd, on the edge of the Snowdonia National Park. This consortium approach allows the group to employ staff and also share experience and knowledge, and combine resources. They are also looking at area-wide projects such as heat networks and electric vehicle charging points.

Ynni Anafon sought advice from local experts on renewable energy and it was suggested that they look at a combination of two or more technologies to provide the necessary generation for their proposed low voltage scheme to supply the village. One relatively easy technology to install and finance would be photovoltaic (PV). This would however, provide little generation during the winter and none during the hours of darkness. There needs to another means of generation that could supplement this intermittent generation. One of the possible technologies was AD, a potentially good fit with PV, and the community company was advised to contact SWEA (Biogas Action).

Aims and Objectives of this Action

The objective is to fit a second technology (possibly alongside a battery storage system) that would be reasonably cost effective in providing a balance to the intermittent supply of electricity from a fairly large PV array – that would probably be sited on the roofs of cattle buildings on a farm on the edge of the village.

The question for Biogas Action was whether AD could be that technology – and if so what form it would take.
Technical and Financial Implementation

The initial site visit to Abergwyngregyn was based upon the potential feedstock from a relatively new whiskey distillery that had been established in a redundant building close to the village. The company concerned had indicated that the “waste” products from processes could possibly be made available to the community energy company. Once the practicalities of utilising these products (spent lees, pot ale, wash water and draff) were investigated and the availability land on which to site a plant determined, there was a clear recommendation from SWEA that, on their own at least, these materials were insufficient to justify the construction of an AD plant. SWEA did, however, note that the farm at which it was proposed to site the PV array, had a large slurry tank and suggested that one of the lower cost solutions might be to investigate the capturing of biogas generated in this store.

To be continued

Results and Impacts

The Partners and Stakeholders

- Ynni Anafon
- Cyd Ynni
- National Trust
- Clearfleau Ltd
- Methanogen Ltd
- Daf’s lot!

How this Action could be Replicated

Lessons Learnt

Find out more about this and other BiogasAction topics at:
http://biogasaction.eu/

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