

Barningham Energy Project Zoom Meeting Feasibility Study Outcomes for Renewable Electricity and Sustainable Heating – *Presentation and Question Session*

Wednesday 12th May, 7:30-8:30pm

Joining link will be available at www.barninghamnetzero/ News and
Barningham Net Zero CIC Facebook page.

Follow up event at Barningham Village Hall soon – Watch this Space!

ENERGY FACTSHEET SERIES COMPLETE

The final group of eleven energy factsheets have been issued. Numbered **14 to 24**, the topics they cover are:

- 14) Energy efficient lighting
- 15) Dealing with condensation
- 16) Buying a dehumidifier
- 17) External maintenance for energy efficiency
- 18-24) Draught-proofing and insulation including general advice, lofts, roofs, recessed lighting, solid walls, floors and double glazing in old buildings



The index for the full series, along with Numbers **14, 15 and 17** are delivered with this newsletter as they are thought to have relevance to virtually every household; the remaining factsheets can be viewed on our website and hardcopies of all sheets in the series are available from the village bus shelter.

Barningham Net Zero Community Interest Company

Meeting the Climate Change Emergency in Barningham

www.barninghamnetzero.com

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IT COULD BE 'YES' TO LOCAL ELECTRICITY GENERATION... ...BUT NOT YET

Regular readers of **Barningham Net Zero News** will be aware that we have been working on a feasibility study for a community-owned renewable electricity generation scheme and sustainable home heating solutions, with support from Teesdale Environmental Consulting. The project, which investigated ways in which we can counter the approaching menace of climate change by locally reducing our carbon emissions to net zero, is now concluded.

The study started with a household energy survey which calculated the total local output of carbon emissions (703 tonnes per year) and identified the use of heating oil as the greatest contributor (68%). Having established a baseline for local electricity demand, the feasibility of a scheme consisting of wind turbines and solar photovoltaic (PV) was examined. This involved:

- Assessment of the suitability of local sites for electricity generation
- Consultation with land owners, the community, Northern Powergrid, Durham County Council and equipment vendors
- Evaluation of the financial viability.

For a local community electricity generation scheme to be viable it would need to be acceptable to all parties involved, as well as capable of generating surplus income for the community.

Instead of paying out to publicly floated company shareholders, the profits from such a scheme could potentially subsidise the costs of implementing more sustainable heating solutions, many of which are likely to involve increased use of electricity.



Technically, both wind and solar developments were found to be suitable at sites in the Barningham area, however wind turbines were finally discounted for a number of reasons, including that of public acceptability.

Detailed evaluation was therefore undertaken of the installation of ground mounted solar PV panels at the Bull Acre and a field by the Saw Mill. This included consultations with the community and local planning authority.

OUTCOMES OF THE FINANCIAL ANALYSIS

The financial analysis of the scheme considered the capacity and generation efficiency of the identified sites, the capital and operating costs, potential return through different supply and export options, and various funding models.

Neither the Bull Acre or the Saw Mill site scheme is financially viable at present. The main factors are:

- The current projected capital costs.
- The low rate at which electricity is purchased via the national grid – about 4.7p/kWh at present.
- Under the “Smart Export Guarantee” there is actually no guarantee of purchase price and suppliers can offer as little as 0.01p if they so choose.
- The high cost to connect to the grid network and making the necessary upgrades to the village electricity supply, such upgrades being vital for cost-effective use of the generated electricity.
- The regulatory system which makes it disproportionately expensive for small-scale generators to supply electricity directly to end users. This issue could be addressed by the Local Electricity Bill which is now being put through Parliament with the support of both main political parties (although our local MP has been unable to lend support despite lobbying by Barningham Net Zero and other groups).

There will need to be major energy market reform to change the pricing structure of community owned projects, which the government predicted could contribute 3GW of energy by 2020. The current contribution is only 265MW, which reflects the financial difficulties identified for the Barningham project.

In summary, the cost of the grid connection is disproportionate and the returns, particularly from the low export price, are insufficient to ensure repayment of the capital outlay. Critically, the project costs are fixed and the potential revenue is both variable and volatile. Nevertheless, a significant benefit of the feasibility study is that potential changes, which could make the project viable, are now understood and the situation can be monitored going forward using the bespoke financial model already developed for the project.

WHAT NEXT?

Further details of the study findings will be presented at a village zoom meeting (see back page), coinciding with publication of our summary report on the Barningham Net Zero website.

The establishment of renewable electricity generating capacity locally remains a firm aim of Barningham Net Zero as the potential long-term benefits to the community, both in financial and climate terms, are so great. The report’s recommendations and outcome can be banked until circumstances, government policies and prejudices change. The report provides a template from which viability of a future project can be assessed occasionally by the team in the light of political and technological developments.

Furthermore, there are many ways by which we will continue to work on our goal of reducing our net carbon emissions to zero:

- Encourage (and, if necessary, aid) householders to switch to renewable energy suppliers.
- Continue investigating and promoting other heating sources, e.g. ground source heat pumps and switching from kerosene fuel oil to alternative liquid fuels for firing heating systems.
- Promote energy efficiency, reduce energy waste and adoption of more advanced technology, such as more efficient boilers, lighting and better insulation.
- Promote clean burning wood fuelled fires and stoves.
- Barningham Net Zero trial of dynamic tariff contracts for electricity.
- Tree and hedge planting.
- Lobby in support of the Local Electricity Bill and necessary regulatory change.

Once these plans are more developed we will engage with the community for your views and, hopefully, your support.

