BIOLECTRIC MICRO AD PLANNING DOCUMENT

For New Buildings Farm – 09/05/16

DairyEnergy



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Planning application Support Document

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Biolectric Micro AD Systems

Dairy Energy are representatives in the UK for this award winning Belgian micro AD system. This system is designed to run off the farms own slurry and does not require any other feedstocks. For further information and images please visit ***www.dairyenergy.co.uk***

Biolectric Micro Scale AD Plants - How does it work

- The Biolectric biogas installation daily pumps a fixed quantity of slurry from the reactor to the digestate storage and replaces the discharged volume with fresh manure from the manure pit. This process is fully automated.
- Biogas is formed in the reactor through anaerobic fermentation. The gas is then purified and in the combustion engine it converts to green energy. This energy can be used in the form of electricity and heat on the farm.
- Biolectric systems are classed as micro AD because of the size of energy output i.e. 11-44kw and the benefit of installing these smaller micro sizes is that we can match the power usage of the farm to gain maximum efficiency and therefore greater benefit. Larger AD plants export a great percentage of their electricity which is only worth around 50% value and cannot use all the available heat. Matching the size of plant to the farms usage is not only the most efficient but is the most environmentally conscious option.

The digestate that has been used in the process becomes more of a liquid slurry which enable easier spreading and the ability to be absorbed deeper into the land to increase fertility. The nitrate uptake values can also be increased adding additional benefits. It has been noted that there can be less associated slurry smell when spreading after digestion.



Example Biolectric Installation

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OVERVIEW

Dairy Energy is pleased to submit this planning proposal for New Buildings Farm

Planning Background

The local planning authority that is competent in determining planning applications is Staffordshire Moorlands Council. The Authority has a local plan which forms the principal material consideration against which planning permission applications are assessed.

Context- Policy on Renewable Energy Development

The proposal to construct an AD plant for the purposes of combined heat and power would meet the definition of renewable energy set out in the National Planning Policy Framework (NPPF) and the National Planning Practice Guidance (NPPG).

At an overarching level the NPPF on which local policy is based has a presumption in favour of sustainable development. The NPPF states that there are three dimensions to this, economic, social and environmental, each arising relates to the planning system having to perform a number of roles. The environmental theme includes objectives to:

- Protect and enhance our natural, built and historic environment;
- Use natural resources prudently;
- Minimise waste and pollution; and,
- Mitigate and adapt to climate change including moving to a low carbon economy.

Support for renewable generation that will contribute towards these targets is reflected in national land use policy. Planning Policy Statement 7: Sustainable Development within Rural Communities states that local planning policies

should support development proposals that will enable farming and farmers to become more competitive, sustainable and environmentally friendly, adapt to new and changing markets and diversify into new agricultural opportunities such as renewable energy generation.

Planning Policy Statement 1: Delivering Sustainable Development also lends support to the development of renewable energy installations stating that the planning system:

Should provide a framework that promotes and encourages renewable and low carbon energy generation. Policies should be designed to promote and not restrict renewable and low-carbon energy and supporting infrastructure; and,

Should not require applicants for energy development to demonstrate the overall need for renewable energy and its distribution, nor question the energy justification for whey a proposal for such development must be sited in a particular location.

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Further to national planning policy, the Climate Change Act 2008 requires an 80% reduction in greenhouse gas emissions by 2050 (upon 1990 levels)

Planning Policy Statement 22: Renewable Energy and Planning Policy, states that a planning application for an anaerobic digestion plant could usefully include the following:

1. Site plan and elevation drawings to help determine visual impact;
    a. *Site plans and elevations have been supplied to support this application*
2. Photomontage of digester, plant building(s) and chimney stack with clear indication of Building material;
    a. Please see appendix A
3. Information on grid connection works, including transformer and transmission lines;
    a. The local DNO has been approached and we are awaiting their reply
4. Details of emissions to air and an assessment of their impact;
    a. The development does not reside within an AQMA and therefore in regards to the release of NOx are likely to be unfounded.
5. Details of vehicular access and vehicular movement;
    a. The system will be fitted before the slurry tank and the digestate will be automatically pumped into the lagoon after energy has been released. The only vehicular access will be for maintenance once a quarter for one small van.
6. Landscaping provisions;
    a. The site is next to an existing slurry lagoon
7. Site management measures during the construction phase;
    a. The AD plant can be constructed within 2 weeks and all H/S measures will be documented

The site does not reside within an AQMA.

Furthermore, a review of local planning suggests that small scale AD plant would be supported by local planning policies,

Anaerobic digestion facilities fall under the scope of the Environmental Permitting (England and Wales) Regulations 2010 which requires facilities to hold either a Standard Rules or bespoke permit unless they fall under a specified exemption.

Exemption Small scale on-farm biogas installations can potentially use a T24 exemption which permits anaerobic digestion at premises used for agriculture and the burning of resulting biogas. Essentially, this exemption allows farmers to anaerobically digest manure, slurry and vegetation on farms to produce biogas and digestate that can be used as a fertiliser or soil conditioner.

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Design & Access statements

Process & Use

The farm is choosing a micro scale Biolectric AD plant because it can utilize the waste slurry and convert it to energy efficiently. There are no other financially viable slurry only AD systems on the market

Amount

The size is appropriate to the amount of waste slurry available to maximize uptake and benefit.

Layout

The area was chosen as it is directly located next to the existing slurry lagoon and therefore reduce the amount of ground works , trenching ,pipework and pumps.

Scale

As previously mentioned the scale was determined by the available slurry

Landscaping & Appearance

The AD plant will be located next to existing farm buildings

Access

The system is remotely operated and automatic so there is no need for additional vehicle access although emergency vehicles can use existing farm tracks

The systems are manufactured by Biolectric based in Belgium and they have experience of building over 150 plants

www.biolectric.be

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Apendix A





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Proposed location



New Buildings Farm
Sawdon Road
Hilderstone
Staffs
ST15 8SL