



WHERE THERE'S MUCK THERE COULD BE AD BRASS

Anaerobic digestion (or "AD") is increasingly being promoted as its potential for contributing to the Government's climate change and sustainability targets becomes more evident.

What is it?

AD is the breaking down of organic matter by bacteria in an oxygen free environment. The process produces biogas (a mixture of carbon dioxide and methane), which can be burnt to produce electricity and heat, and a nutrient rich digestate which has a value as a fertilizer and soil conditioner.

"A commitment to reduce the amount of carbon dioxide emitted by 26% by 2020.

What can be subjected to AD?

Any organic matter, except woody wastes, although the speed of conversion and yield of biogas may be different depending on the feedstock. Amongst the principle feedstocks are food waste, animal slurries, farmyard wastes, sewage and grasses.

What are the Government targets and how can AD help?

The Government has committed to:

- reducing the amount of biodegradable municipal waste ("BMW") that is sent to landfill to 35% of the 1995 level by 2020. Various measures are in place to incentive this, including the landfill tax and the landfill allowances trading scheme. Much BMW is food waste and this is easily treated by AD
- increasing the amount of renewable energy in the overall energy mix to 15% by 2020. The biogas produced from the AD process, when used to produce electricity, benefits from double ROCs under the Renewables Obligation. In addition, subject to compliance with

quality standards, the biogas could be injected into the natural gas transmission system and used to produce heat. The proposed Renewable Heat Incentive and Feed-In Tariff are likely to give an additional boost to AD

- reducing the amount of carbon dioxide emitted by 26% by 2020 and all greenhouse gas emissions by 80% by 2050 (against a 1990 or 1995 baseline depending on the gas). Landfill gas and farmyard wastes contribute considerable amounts of methane, a potent greenhouse gas, and AD is an effective means of harnessing the power of the methane to produce energy



- III ensuring that 10% of fuels in transport are from renewable sources by 2020. The biomethane produced from AD can be used as a transport fuel
- III introducing the Carbon Reduction Commitment which will be a “cap and trade” scheme aimed at non-energy intensive users and which will encourage them to cut carbon emissions. Onsite generation by AD could contribute to this requirement.

Whilst the Government is setting the regulatory framework for the move to a low carbon economy, industry participants are working together to set their own targets. For example, the water industry is aiming for 20% of all energy used by the UK water industry to come from renewable sources by 2020 and AD, already used in the water industry, will make a large contribution to this.

What support is available?

The Renewables Obligation is the current principal support mechanism. For each MWh of electricity generated using AD produced biogas, the generator will receive 2 ROCs from April 2009

(an increase from the current 1 ROC/MWh).

Grants are available, notably from DEFRA under the the Rural Development Programme for England 2007-2013, the Bio-energy Capital Grants Scheme (applications close on 30 April 2009) and WRAP (the recent bidding round closed in December 2008).

A draft Quality Protocol for anaerobic digestate has been developed by the Waste Protocols Project (a joint Environment Agency and WRAP initiative) in respect of the criteria for the production and use of

quality outputs from anaerobic digestion. The protocol is one of a series providing guidance on when specific waste types are fully recovered and no longer subject to regulatory controls.

What next?

On 17 February 2009, DEFRA published the 7 page “Anaerobic Digestion - Shared Goals” and announced the formation of a Task Force to deliver the goals. These goals include increasing deployment of AD and assisting in the development of a market for the digestate. The goals are supported by organisations ranging from retail outlets, AD developers, consultants and industry associations.

The changes to the Renewables Obligation (doubling the support for electricity generated using AD) are due to come into effect in April 2009.

In the Energy Act 2008, the Government took powers to introduce a Renewable Heat Incentive and a Feed-in Tariff for microgeneration. This month’s Heat and Energy Saving Strategy Consultation is seeking views as to how these mechanisms should be developed.

How can Martineau help?

We can help you become involved in any part of the AD supply chain, including:

- III advising on all stages of the development of a project, from the initial consideration of the project that is right for you, through to the negotiation of the funding and commercial contracts
- III introduce you to other advisers and potential funders and assist you in raising appropriate finance

- III advise you on the support mechanisms, such as the Renewables Obligation and, when the proposals are made, the new Renewable Heat Incentive and Feed-in Tariff for microgeneration
- III guide and assist you through the planning and regulatory processes
- III guide and assist you in grant applications
- III advise on tax efficient structures.

This bulletin summarises complicated issues and should not be relied upon in relation to specific matters. You are advised to take legal advice on particular problems and we will be happy to assist.

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