



Anaerobic digestion

Energy business group

A 25%
internal rate
of return.

Background

Anaerobic Digestion (AD) is the process of converting organic waste into electricity and various other products such as heat. Despite being relatively new to the UK, these plants have proved to be popular and efficient elsewhere in Europe, particularly in Belgium and Germany.

These plants have the advantage of generating electricity from a renewable source but of also disposing of organic waste, such as foodstuffs and converting into a usable fertiliser etc.

With the UK looking to generate more electricity from renewable sources, whilst reducing our waste, it seems inevitable that more and more anaerobic digestion plants will be developed in the future.

Feasibility

We can carry out an initial due diligence appraisal of the proposed project. This can include carrying out high level forecasts to give indications of IRR returns, expected profit levels etc. We can also make introductions to various specialist consultants such as anaerobic digestion operators and scheme designers etc. At this stage UHY Hacker Young can comment and advise on the most appropriate structure and corporate vehicle to run and operate a scheme as well as advise on available tax reliefs.

Planning and Construction

UHY Hacker Young can assist in the planning process of an anaerobic digestion scheme. This can include introductions to anaerobic digestion manufacturers, negotiations with agricultural bodies who could supply feedstocks etc.

Funding

UHY Hacker Young can assist in the fundraising for the project. We have good relationships with banks, private and institutional investors who are all currently looking to invest in renewable projects. Our work would include the completion of a robust business plan and projections and the project management of the transaction including liaising with solicitors etc, until funds are received.

Operations

UHY Hacker Young can assist in the day to day financial running of a scheme once it is operational. Our services can include not only preparing accounts and completing tax returns but also operating and communicating with electricity suppliers regarding electricity sales and dealing with Renewable Obligation Certificates (ROCs) or Feed In Tariffs (FITs) as appropriate.

Projections

In connection with suppliers and management companies of AD plants, we have prepared high level projections to be used for illustrative purposes and give an indication of the income and returns that could possibly be made from the development of such an AD plant.



Providing a value for money service to assist energy companies.



The development of AD plants has only recently become more cost effective for smaller plants typically under 5 mW with the Government's introduction of the FITs to incentivise small scale electricity generation by communities and businesses. Effectively the electricity generator will now be paid for every kilowatt hour (kWh) of electricity generated whether the electricity is used onsite or exported to the local electricity network.

For larger scale projects, typically over 5 mW, the ROC scheme still exists, and is paid in the same way as a FIT.

The FIT scheme started on 1 April 2010 and the Government confirmed that tariffs for AD plants will be paid for 20 years.

It is worth noting that FIT payments are indexed by RPI, to ensure that target rates of return are maintained in real terms for the lifetime of the scheme.

Results

For a 500 kW plant the high level projected profit & loss account can be provided.

The key figures are as follows:

Turnover per annum	£597,000
Profit before interest & tax	£234,000
Payback period	5 Years
Internal rate of return over 20 years	25%

Assumptions

The projections have been prepared on the following bases and assumptions:

- The capital cost of a 500 kW AD plant will amount to circa £1.55 million, excluding VAT.
- The scheme will be utilised on an annualised basis of 8,200 hours. This is equivalent to the plant being 94% efficient.
- The scheme will be entitled to a "feed-in tariff" rate of 11.5p per kW of generation.
- The scheme would earn 3p for each kW of electricity exported. (Sold to the grid and not consumed by the generator).
- It is currently assumed all electricity would be exported.
- The capital equipment is depreciated over 20 years.
- The forecast does not take interest or tax into account. This has been omitted as we have no knowledge of funding structure or vehicle structure being proposed. (Banks are typically lending at circa 5.5% to 6% at present. Corporation Tax for small companies is currently 21%, reducing to 20% in 2012. Profits generated from commercial AD plants are subject to UK Income and Corporation Taxes).

For further information or advice please contact your usual partner, or visit our website at www.uhy-uk.com.



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