

28 May 2010

Anaerobic Digestion Call for Evidence
Energy Division
DETI
Netherleigh
Massey Avenue
Belfast
BT4 2JP

Dear Sirs,

UFU SUBMISSION FOR ANAEROBIC DIGESTION CALL FOR EVIDENCE

1. Background

The UFU responded to the Proposed Changes to the Northern Ireland Renewables Obligation consultation on 11 December 2009.

DETI have stated that in the consultation responses there was insufficient evidence provided by the consultees to enable DETI to consider scope for change. The UFU welcomes the opportunity to provide evidence as to why Anaerobic Digestion (AD) should receive enhanced support. However, in turn, the Consultation response made no mention of the role that Agriculture will play in AD and this in itself is a reason why enhanced support is considered as a pre-requisite for the success of AD in Northern Ireland.

In our response on 11 December, we highlighted the fact that Anaerobic Digestion (AD) is ideally suited to NI farming, as it can provide renewable energy, electricity and heat. But it also has a number of other benefits which it is difficult to attach a value to. This is set out below as a reminder;

Due to the split nature of the AD products, farmers have the potential to be the provider and utilise of the renewable products created; Biogas and Digestate.

Our farming industry faces legislation which impacts upon our day-to-day operations;

- Nitrates Directive
- Water Framework Directive
- Climate Change
- Low Carbon obligations

AD allows farmers to manage manure and the potential risks associated with it. Not only does the digestion process capture the methane but also it mitigates against CO₂ production. The AD process treats manure which means that when it's spread on the land, it has enhanced qualities; more effectively at eradicating weeds, decreasing the need for pesticides and also it is largely odour free. This allows farmers to grow grass to a better quality and this grass has the potential

to be an energy source. The process creates an energy which can be stored. And possibly most importantly, it is a dispatchable source of energy, it can be turned on (or off) on demand.

The potential of AD has not been realised here in NI, especially if you look at how it has taken off in GB. In Kent for example, where AD is used in food production in conjunction with poly tunnels.

AD has much to offer the NI economy but its biggest drawback is its cost and in particular the level of upfront capital commitment needed for it to go ahead. Two ROCs will not be enough to stimulate the technology as much as is required. There is still a very limited uptake here in Northern Ireland. The announcement of 4 ROC's for small-scale wind in Northern Ireland has already seen a rush of interest, the same definitely cannot be said for AD under 2 ROC's, despite the merits mentioned above.

On the back of this, there is a ground swell of opinion that the financial institutions are not interested in funding renewable projects in Northern Ireland. The main reason for this is the difference between the two sectors here in NI and across the water in GB. In GB, the banks see the renewable projects as being more certain in terms of future financial returns. This is mainly due to more advanced and established technologies, which have come about due to positive market mechanisms.

UFU Consultation Policy – We stated that Anaerobic Digestion (up to 500 kw) and Biomass should receive at least equal support in NI to that in GB. Already in NI we are lagging behind our competitors in GB. Should Biomass and in particular AD be a more favorable option in GB compared to here, we stressed that there was a real possibility that investment will be re-directed across to the mainland.

2. UFU Renewables Policy

It should be pointed out that the Ulster Farmers' Union policy on renewables does not favour any one individual technology, rather our policy is that there needs to be a better mix of technologies across the board.

3. Overview of costs

After speaking to members involved in AD, we have been advised that a useful rule of thumb is that an Anaerobic Digestion plant will cost £5,000/kw (for electricity) and £1,000/kw to fuel to run and maintain. This is as accurate as a rule of thumb can be. Costs are broken down in the following case studies.

On 1st April of this year, DETI introduced a new system of financial incentives for renewables. Under this second-hand hand wind turbines will cost £1,000-£1,200/kw to install and receive four ROCs. Meanwhile, AD which costs 5 times this (£5,000/Kw as opposed to £1,000 - £1,200) and has much higher running costs only got 2 ROCs. The result of this has been the stalling of existing AD projects and a rapid switch over to wind, which some say is has the potential to be oversubscribed and that the current Grid Infrastructure will not be capable of handling this capacity, thereby creating greater inefficiencies. The UFU are concerned that the

current time lag means there is a danger that much of the available grid space will have been taken up by second-hand wind turbines.

It should be pointed out that the UFU are not criticising wind turbines but as stated earlier there needs to be a better mix of technologies.

AD should have at least the same financial incentives as wind power. In many ways it can justify more (the potential for the capture of methane, environmental benefits, all of which we mentioned earlier).

Existing projects should not be disadvantaged if additional financial incentives for AD are realised. Project developers need to know that if a new ROC band or Feed-In Tariff is introduced, then they will automatically move into this. Had it not been for these innovators, the technology would not have been in place to educate and encourage new AD facilitators.

4. AD in Northern Ireland

In March 2010, NNFCC gave a presentation entitled “Anaerobic Digestion and the Role of UK Agriculture”. In this report, the NNFCC provided an update on the number of operational AD plants, aside from AFBI at Hillsborough, there would appear to be none in Northern Ireland.

A map of operational plants...



Source - NNFCC

✓ 35 plants now

✓ c.60 further plants planned or in construction

Therefore despite the advantages of AD for NI, it is still a fledging industry, how far Northern Ireland is lagging behind is highlighted by the numbers of AD plants both in GB and the Republic of Ireland, compared to the ZERO here.

Several reasons for the lack of uptake have been quoted in recent years, but the single most given reason has been the substantial upfront capital costs and lack of financial incentives despite the underlying benefits to the environment and Northern Ireland farming.

5. Summary of UFU Position

As far as the UFU policy is concerned, we cannot identify and promote individual technologies within the renewables, however, Anaerobic Digestion is lagging behind despite having massive potentials for Northern Ireland Agriculture as well as the Environment.

The UFU therefore urges DETI to consider matching AD should have at least the same financial incentives as wind power, **at least FOUR NIROCs**. In many ways it can justify more (the potential for the capture of methane, environmental benefits, all of which we mentioned earlier).

Existing projects should not be disadvantaged if additional financial incentives for AD are realised. Project developers need to know that if a new ROC band or Feed-In Tariff is introduced, then they will automatically move into this. Had it not been for these innovators, the technology would not have been in place to educate and encourage new AD facilitators.

We will now outline seven different types of AD projects, and in the context of each answer each of the questions posed in the call for evidence. The varied projects take into account the differing costs associated with differing KWh and various feedstocks.