Renewable Heat Incentive consultation
Department of Communications, Climate Action and Environment
29-31 Adelaide Road,
Dublin 2,
D02 X285

(e-mailed to: rhi@dccae.gov.ie)

3rd March 2017

Re: Public Consultation on the Design and Implementation of a Renewable Heat Incentive in Ireland

Dear Sir/Madam,

With reference to the above consultation processes, the ***Irish Waste Management Association (IWMA)*** welcomes this opportunity to contribute to the discussion.

IWMA Background

The IWMA is made up of 40 waste management companies. Further details of our association, including a list of our members is available at www.iwma.ie.

The waste sector must achieve various binding EU and national waste management targets under the regulatory control of the Department of Communications, Climate Action and Environment. Energy generating technologies such as Anaerobic Digestion and waste to energy are critical to meeting these legislative obligations. Failure to achieve these targets will result in Ireland incurring significant financial penalties. IWMA considers it vital that the future support schemes offer adequate incentives to ensure the ongoing viability of these technologies to serve the waste sector. A well-functioning integrated waste management system comprising these types of strategic waste treatment infrastructure is essential to underpin Ireland's economic growth.

Anaerobic Digestion

Anaerobic Digestion (AD) is a proven and efficient technology that delivers multiple energy, climate, environmental, societal and economic benefits. It can help Ireland meet a number of important energy and non-energy EU and national policy commitments and it has wide ranging cross-sectoral benefits.

Biogas is a valuable product of AD which will play an important role in helping to achieve our EU Renewable Energy Targets for 2020. Biogas can be converted to energy via an on-site Combined Heat & Power Plant (CHP) and electricity generated from the CHP process can be used in neighbouring industrial or commercial enterprises or can be fed into the national

grid. The surplus heat generated can be used in industrial processes or for district heating systems. Alternatively the biogas can be upgraded on-site for use as a natural gas substitute to help achieve our renewable heat and transport targets. The upgraded renewable gas can be injected directly into the gas network to maximise efficiency in distribution and usage.

AD provides a constant supply of electricity, gas and/or heat. It therefore can be used to provide a stable base-load of renewable energy to the grid. It has the potential to supply enough electricity to power 20% of Irish homes, or to replace 7.5% of the fossil-based natural gas used via the national gas grid with renewable 'green' gas, saving Ireland €200 million in imported fuel.

As well as producing heat and power that can be fed into our communities, AD has an important role to play in the fight against climate change as it can reduce Greenhouse Gas Emissions (GHG) which Ireland has international commitments to decrease. Landfilling and landspreading of organic wastes generates uncontrolled emissions of methane to the atmosphere as the waste degrades. By diverting these wastes to AD, the organic materials are processed in a totally enclosed system which prevents the uncontrolled release of methane. Replacing fossil fuels with renewable energy generated in this manner also reduces GHG emissions. The challenge facing the agriculture sector to moderate its GHG emissions (32% of Ireland's total) and convert to a low carbon sector in the context of major growth to achieve the Food Harvest targets, could be addressed by AD.

AD not only recovers the energy from organic waste, but it also produces a nutrient rich digestate that can be suitable for use as an organic soil conditioner or biofertiliser for agricultural and horticultural purposes thus reducing reliance on artificial fertilisers that are becoming increasingly expensive to manufacture. The nutrients contained in digestate are more amenable to plant uptake than other organic fertilisers and thus its use has water quality, environmental and health benefits as it decreases organic pollution potential as well as reducing risk of spreading microbial contamination.

AD has the added benefit of significant job creation potential. Employment would also be created in support industries such as engineering and manufacturing and other local professional services. There would be new business opportunities for sectors that can provide services to the AD industry and the development of the AD sector would also promote more balanced regional economic development as revenue from the plants is likely to be spent locally. As well as boosting jobs in the rural economy, AD could also provide another farm income stream and better control of energy costs for farmers.

Waste to Energy

Complimentary to Anaerobic Digestion is energy recovery from residual municipal waste (which remains after the source separation of organic waste) in Waste to Energy (WtE) facilities. Over 400 WtE plants are currently operating within the EU. These facilities receive about 78 million tonnes of waste per year, representing a calorific heat value of between 470 and 1,240 PJ – enough to heat London for 5 years. WtE can produce both heat and electricity from the energy produced from waste, meaning they can contribute to both renewable heat and electricity targets.

The primary purpose of waste-to-energy facilities is to safely treat the residual waste that cannot be recycled in a sustainable way while producing energy from it. WtE also helps to divert waste from landfills, thus reducing impacts on land, air and groundwater quality. Valuable ferrous and non-ferrous metals and where possible, a range of aggregates, are also recovered for recycling from the residual bottom ash.

This aligns with the basic objectives of EU waste policy to minimize the negative effects of the generation and management of waste on human health and the environment. This includes turning waste into a resource based on strict application of the waste hierarchy, limiting energy recovery to non-recyclable materials and phasing out landfilling of recyclable or recoverable waste.

National waste policy and waste plans also closely reflect these goals. In order to fulfil European and National policy objectives, Ireland's Regional Waste Plans identify the need for 300,000 tonnes thermal treatment (e.g. WtE) capacity for non-hazardous waste in addition to that already developed in Meath and Dublin.

The development of this additional capacity will help to reduce Ireland's reliance on the export of residual municipal waste. Over 500,000 tonnes of residual municipal waste was exported in 2015, which equates to approximately 33% of the available residual waste market in Ireland. This represents a loss to the economy of approximately €50 million in terms of energy resource and gate fees. It also poses a risk to Ireland's ambition to become self-sufficient in waste treatment and leaves Ireland vulnerable to market shocks, price increases and regulatory controls.

In addition to fulfilling waste management goals, WtE represents a secure, cost effective and sustainable energy source. About 50% of the energy produced by WtE plants comes from carbon-neutral biomass. Unlike other renewables their capacity is reliable, controllable and predictable. A WtE facility can also provide system services, making it unique in that it can both generate renewable electricity and support the integration of renewables onto the system.

The deployment of WtE facilities will not be viable without the help of renewable heat tariffs. The Greater Dublin Area has attracted large scale investments in WtE and Cork has attracted interest in that area at planning stage. In tandem with these developments, the country needs a number of regional WtE facilities at a smaller scale to avoid waste being transported across the country and exported to other parts of Europe. RHI can assist Ireland's self-sufficiency in waste management by supporting the development of WtE facilities that would not be viable without such supports.

Responses to Specific Questions

1. What are the respondent's views on the inclusion or exclusion of the ETS sector?

We prefer that the ETS sector is excluded from the scheme.

2. Do respondents agree that energy efficiency standards should be included as part of the RHI?

We agree that minimum energy efficiency levels should be specified. A repeat of the Northern Ireland situation needs to be avoided. The RHI in the UK was deemed to be successful, however, Northern Ireland did not follow the same RHI design scheme by not setting limits, leading to its abuse. Users could make a profit from the production of heat in empty buildings. We believe that the focus of the DCCAE should be on tariff setting and the introduction of tariff guarantees. If set correctly it will make it cost effective to choose renewable heat over fossil fuels. With a well-designed tariff, payments will be less than the cost of production and the end user will still have to pay for heat, so it will be in their interests to become energy efficient so that energy usage is reduced.

3. Do respondents agree with the requirement to ensure minimum technology standards for each technology should form part of the RHI?

We agree that minimum technology standards should form part of the RHI.

4. It is proposed that the RHI beneficiaries in Ireland will be required to show that heat is supplied to meet an economically justifiable heating requirement that would otherwise be met by an alternative form of heating such as a gas boiler. In addition, heat load should be an existing or new heating requirement, and not created artificially purely to claim the RHI?

Heat used in the AD process should be deemed eligible for the RHI. Under REFIT 3 it was determined that heat used in the anaerobic digestion process is deemed useful heat. This includes the heating of the digesters, the pasteurisation of feedstock and the drying of digestate. Should that determination not have been made plant operators would not have met the 75% HECHP efficiency requirement.

Also, if that determination was not made, for plants to meet 75% efficiency standard the parasitic demand of the plant would be met by installing a fossil fuel boiler. This situation is one that is undesirable and counter-productive with regard to meeting our renewable targets and should be avoided.

The consultation document states that "*anaerobic digestion plants, the pasteurisation of feedstock before they enter the digester, and the digestate is regarded as eligible processes*".

Please note that in Ireland some anaerobic digestion plant pasteurise at the end of the process after the digester step.

5. The preferred option of DCCAE is that the WFQA is a mandatory requirement for participation in the RHI scheme for the purpose of fuel quality assurance. What are the views of respondents to this proposal?

We have no comment on this issue.

6. The DCCAE is minded to adopt minimum standards for PM and NOx emissions in line with the U.K., which is implemented through an Emissions Certificate and on-site emission testing where necessary for biomass appliances. What are the views of respondents to this proposal?

Any requirements to monitor emissions and meet emission limit targets set for waste management facilities should be consistent with the Waste Treatment BREF requirements to avoid unnecessary burdens. The new Waste Treatment BREF should be finalised by the EU Commission in 2017, replacing the 2006 BREF that currently applies.

7. Should the same criteria apply for domestic and imported biomass?

No, imported biomass will have higher transport emissions than domestic biomass and should not have the same criteria. The RHI is an opportunity to support the growth of a domestic industry.

The Biofuel Obligation Scheme did not differentiate between domestic and imported fuels and was a missed opportunity to grow the domestic sector. It would be worth investigating if a modification to the Wood Fuel Quality Assurance scheme (WFQA) could be implemented to capture imported wood biomass. We should not be importing waste biomass.

8. Should the same standards apply to both forestry and energy crop based biomass?

Standards may be different depending on the needs of the technology concerned. For example, combustion of biomass may require different standards to anaerobic digestion of biomass.

9. The preferred position of the DCCAE is to ensure a robust set of environmental sustainability standards for imported biomass. Should the E.U., U.K. or other sustainability criteria apply?

What type of supply chain for GHG certification is appropriate (U.K. or other)?

The DCCAE could include a maximum biomass lifecycle emissions eligibility criterion as part of the sustainability criteria for the RHI. What are respondents' views on this?

What is the most appropriate method for demonstrating compliance with the environmental sustainability criteria?

Should the certification of GHG and wider sustainability issues be mandatory?

Should the RHI scheme differentiate tariffs by CO2 intensity of the biomass? If not, why not?

What is the most appropriate method for demonstrating minimum GHG reductions are being achieved in specific supply chains??

We have no comments on these issues.

10. The preferred option of the DCCAE is to introduce an RHI scheme with tariff differentiation by renewable technology. What are the views of respondents on the question of tariff differentiation by technology type?

We agree with the tariff differentiation by technology type in order to allow for a diverse mix of technologies.

11. The preferred option of the DCCAE is to introduce a tiering approach based on metered heat output (c/kWh). What are the views of respondents on this proposal?

The IWMA agrees with a tiering approach but suggests that the tiers are individually set within different technology categories as in the UK system. With this approach plants can find their own scale and not be restricted by banding.

12. Age of Existing Fossil Fuel Heating technologies being targeted for replacement. What are the views of respondents on this matter?

The IWMA believes that it is essential that new facilities and new technologies are included in the scheme to encourage innovation for the good of future energy supply. We therefore agree that RHI should not be limited to end-of-life replacement of the incumbent system.

13. The preferred option is that the RHI will be paid for a 15 year period. What are the views of respondents on a shorter or longer tariff payment period?

We agree and recommend that the 15 year support duration remain in place as it is in line with most of Ireland's financial institution senior debt requirements.

14. The preferred option is that the RHI will comprise of ongoing payments over a period of years with no front loading. On balance, this decision would minimise the impact on the Exchequer while ensuring the RHI remains attractive for investment. What are the views of respondents on this approach?

We agree, provided that there are RHI guarantees for the 15 year period and that payments are index linked.

15. Payment based on Metered Heat or Deemed Heat Use. What are views of respondents on the proposals for metering and deemed heat use as outlined?

We agree with the preferred approach that the metered option is allowed for all installations, but that the deemed option is allowed as an alternative for small installations. However, when a secondary heating source or backup heat supply is required, payment will be made based on metered readings only.

16. The DCCAE preferred option is to index the RHI tariff to the Consumer Price Index. This is the case in the existing Renewable Energy Feed-in Tariff and has worked well. What are the views of respondents on this proposal?

We agree with indexing the RHI to the CPI.

17. The preferred approach of the DCCAE is to introduce a tariff degression and budget cap mechanism along the lines of the U.K. scheme. What are the views of respondents on this proposal?

The preferred approach only mentions degression but what if the tariff is set to low, will there be a review system to make adjustments and increase a tariff?

To date, the only incentive that has been in place for AD has been REFIT 3. The incentive is for electricity export from AD CHP and offers a higher incentive for demonstrated use of usable heat. REFIT 3 was amended in August 2014 reducing the cap for Anaerobic Digestion projects to 50MW.

In July 2005 a further reduction to the AD cap was made, the reason offered for the reduction from 50MW to the proposed 15MW is that "*Demand for the biomass CHP category has exceeded the original allocation and for the other two categories [AD and biomass combustion] is significantly below the original allocations*". In reality, the biomass CHP tariff was sufficient to support its growth whereas the AD incentive was too low and as a result its capacity was cut. A 1MW biomass CHP plant had a higher tariff than a 1MW AD CHP.

IWMA suggests a threshold of 30MW of biogas is specified for AD that when reached triggers a degression to the tariff level. If this threshold is not reached within a defined timeframe, for example 12 months, then a review to increase the tariff should be commenced to ensure that there is adequate incentivisation to stimulate the industry.

18. What are the views of respondents on the question of pre-accreditation for larger more complex installations?

Pre-accreditation will be required for large scale plants to receive funding. However, to avoid hoarding of capacity planning permission should be a requirement of applying for pre-accreditation.

Additional Comments

Scheme Dates – Backstop/Application Period

The ability to join any future RHI scheme retrospectively is of huge importance to existing plants,. Should an RHI be introduced and should pre-existing plants be excluded from availing of RHI, due the conditions of RHI, they may be placed at a serious disadvantage that may have serious consequences for their survival.

Newly constructed plants will potentially be in a position to draw down RHI in addition to any RESS. Should the combined incentive be greater than REFIT 3 competitor biogas plants will be able to offer lower gate fees and will be in a position to out price existing plants in the market place. For the plants that helped pave the way for biogas in Ireland and assisted in its development, to be priced out of the market would be grossly unfair. New plants should not have a competitive advantage over existing plants due to the economic incentive offered.

Eligibility

Grass is an excellent energy crop due to long persistence of high yields accompanied by low energy inputs. Approximately 91% of Irish agricultural land is under grass. Cross compliance does not encourage the conversion of permanent pastureland to arable land; thus we have and will continue to have increased quantities of excess grassland. Therefore, grass must be considered a significant source of biomass for biogas plants as well as all agricultural manures.

CHP on bio methane to grid (BtG) plants

One point which appears to be missed in the RHI Consultation Document and which needs to be captured in any submission is future support for the CHP on bio methane to grid (BtG) plants.

Generally, BtG plants have an onsite CHP sized between 500kW and 1MW to provide power and heat to the plant. In the UK these plants are eligible for and supported through FITs. Because REFIT III has now expired the CHP installed on new biogas units will no longer be eligible for support. However, any existing biogas plants that seek to expand to incorporate bio methane to the grid will be at a commercial advantage because their process power and heat will be supported. In addition to the RHI support this CHP FIT is a critical source of revenue on BtG plants.

We trust that you will consider these points carefully in the preparation of the new RHI schemes. The ***IWMA*** is available at your convenience for further engagement in relation to any of the issues raised in this correspondence.

I would be grateful if you could please acknowledge receipt of this submission.

Yours Sincerely,

Conor Walsh
IWMA Secretary

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