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(e-mailed to: rhi@dcenr.gov.ie and ress@dcenr.gov.ie)

18th September 2015

**Re: Technology Review Consultations on Renewable Electricity Support
and Renewable Heat Incentive Schemes**

Dear Sir/Madam,

With reference to the above consultation processes, the ***Irish Waste Management Association (IWMA)*** welcomes this opportunity to contribute to the discussion on Ireland's energy future. We do not intend to address the questions included in the consultation documents individually, but rather we wish to make the following general points for your consideration in the consultation process.

IWMA Background

The IWMA is made up of 35 waste management companies that operate 53 waste management facilities that are licensed by the EPA and 21 waste management facilities that are permitted by the local authorities. 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 the Environment, Community and Local Government. 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 recovery.

Anaerobic Digestion

Anaerobic Digestion 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 EU and national policy commitments, including waste management obligations. Rather than continuing to discard organic waste to landfill, Anaerobic Digestion technology can be deployed as part of an integrated waste management network to produce renewable energy from this waste, reduce reliance on imported fossil fuels, and to generate a fertiliser product that can be recycled to land as a soil conditioner and natural fertiliser when derived from source separated waste. The energy produced can be converted into renewable heat and electricity for homes and businesses or it can be upgraded and injected directly into the gas network to maximise efficiency in distribution and usage.

Feedstock's for biogas production include domestic and commercial organic waste (MSW), industrial organic waste from the food and beverage processing industry and sewage sludge from wastewater treatment plants, and organic wastes from the agricultural sector. Anaerobic Digestion can therefore make a significant contribution to the management of organic materials in Ireland.

Policy Drivers for Anaerobic Digestion Development

The benefits of anaerobic digestion are recognised and promoted in EU and national waste management legislation and policy. EU Directives, which set the context for the management of waste in Ireland, encourage the use of Anaerobic Digestion to process non-hazardous organic material which is currently discarded. In accordance with the Landfill Directive (1999/31/EC), biodegradable municipal waste must be diverted from landfill to alternative more sustainable waste management methods and anaerobic digestion can make a valuable contribution to achieving this objective.

The Waste Framework Directive (2008/98/EC) defines a waste hierarchy which aims to move waste away from landfill and towards a variety of recovery and recycling treatment options, all of which are better for the environment than disposal. The Directive encourages the separate collection of biowaste with a view to its biological treatment in a way that fulfils a high level of environmental protection and allows the use of environmentally safe materials produced from the biowaste.

There has been a significant shift in National Waste Management Policy from an initial focus on the development of modern, engineered landfill capacity and the promotion of recycling, to fiscal measures to influence environmental performance as well as policies promoting the development of anaerobic digestion facilities. *A Resource Opportunity* is the current waste policy in force in Ireland and it supports the development of biological treatment infrastructure and the roll-out of the brown bin to divert organic waste from landfill towards more productive uses.

New Commercial and Household Food Waste Regulations now in force are designed to promote the segregation and recovery of food waste. These instruments impose obligations on waste collectors to provide separate food waste collection services, and also on householders and commercial premises to segregate food waste at source.

The Household Food Waste Regulations require that by the 1st July 2016 all houses in agglomerations sized >500 people must have a brown bin. In addition, a recently introduced new legislative framework has set a mandatory requirement for waste collectors and facilities accepting household waste to charge on a pay by weight basis from the 1st July 2016. Under this new charging structure, householders will be incentivised to use the brown bin for disposal of food waste and consequently it is expected to lead to increased tonnages of source separated food waste presented for collection.

The introduction of the Commercial and Household Food Waste Regulations and the mandatory pay by weight charging structure, along with economic instruments such as the landfill levy, will significantly increase the volume of source separated organic waste that will require treatment in a sustainable manner. Thus there is an increasing demand for anaerobic digestion treatment infrastructure in order to facilitate the successful implementation of the Food Waste Regulations and the required diversion of organic waste away from landfill. It is essential that Anaerobic Digestion infrastructure is adequately incentivised in the future energy generation support schemes to ensure that it will be deployed to serve the urgent and growing policy driven demands of the waste sector. This would also help the waste industry contribute toward Ireland's renewable energy and climate change targets.

Northern Ireland

In Northern Ireland the total price paid for electricity from an Anaerobic Digestion plant generating more than 500kw is approximately £180/MWh (€245/MWh) (inclusive of the ROC price and the price paid for electricity), which is almost 90% higher than that received for generation from a similar scale facility in the Republic of Ireland.

As a result of this Irish waste companies may divert organic waste for processing in Northern Ireland, and developers and financiers of Anaerobic Digestion facilities may also focus their investment in Northern Ireland where the returns available are much higher.

To combat this, the IWMA urges the government to introduce improved and appropriate tariffs for Anaerobic Digestion in the future support schemes to ensure that proposed projects are incentivised to operate in the most efficient manner in Ireland.

The improved electricity tariffs in Northern Ireland have resulted in a significant growth in Anaerobic Digestion development in the jurisdiction over the last few years with over 130 planning applications submitted. This demonstrates the immediate impact that can occur if an adequate support price is introduced.

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 300,000 tonnes of residual municipal waste were exported in 2013, which equates to approximately 20% of the available residual waste market in Ireland. This represents a loss to the economy of approximately €30 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, waste represents a secure, cost effective and sustainable energy source. About 50% of the energy produced by WtE plants comes from carbon-neutral biomass. As noted above, 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.

WtE is currently eligible for support under REFIT 1 and REFIT 3 under the "Other Biomass" combustion category. As a renewable support scheme provides a secure, long term price guarantee on at least half of the electrical / heat output it helps to balance out the merchant nature of waste treatment in Ireland. Obtaining support for renewable electricity output or heat output (directly or indirectly) is therefore crucial to the development of new WtE projects.

We trust that you will consider these points carefully in the preparation of the new energy generation support 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,

A handwritten signature in cursive script that reads "Conor Walsh".

Conor Walsh
IWMA Secretary

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