



Bioeconomy Consultation,
Department of the Taoiseach,
Government Buildings,
Upper Merrion Street,
Dublin 2,
D02 R583

15th September 2017

(sent by email only)

Re: Discussion Document for the Preparation of a National Policy Statement on the Bioeconomy

Dear Sir/Madam,

In response to the above-referenced consultation, the Irish Waste Management Association (IWMA) offers the following submission. Rather than answering the individual questions posed in the consultation, we provide an outline of issues below that we believe should be considered as part of the bioeconomy. Given our broad interests in this area, we wish to be recognised as a stakeholder and included in all further consultations and stakeholder engagement going forward.

IWMA Background

The IWMA is made up of c.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 as are our recycling efforts. Failure to achieve these targets will result in Ireland incurring significant financial penalties. IWMA considers it vital that any initiatives relating to the bioeconomy supports the ongoing viability of these technologies. 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.

A good renewable heat incentive is critical to supporting AD in Ireland. Northern Ireland has provided good financial supports for AD and that country has seen wide-scale development of AD facility including those that are managing difficult and potentially polluting wastes such as chicken and poultry litter. Similar supports in the Republic of Ireland would be very beneficial for the bioeconomy.

Composting

Our members are also heavily involved in the aerobic treatment of organic wastes in composting plants. Whilst this process does not produce biogas or energy, it produces a soil improver from waste materials that replaces peat and recycles nitrogen, carbon, phosphorous and potassium. In order to support composting, the market for the finished product needs to be encouraged and supported. Green procurement by state agencies and local authorities would greatly assist the compost market.

Waste to Energy

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 additional 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.

Solid Recovered Fuel

The use of Solid Recovered Fuel, which is derived from residual waste, is a very good environmental measure that IWMA members have developed over the last decade in partnership with the cement industry. SRF replaces fossil fuels such as coal and pet-coke, that are often transported from South America and farther afield. This should be encouraged going forward as part of the bioeconomy.

Recycling

The IWMA members have developed a comprehensive collection and treatment system for recycling in Ireland, with support from packaging producers via Repak. This system is working very effectively but it needs to expand to meet future EU recycling targets. In recent times, difficulties with outlets for some of the recycled materials such as post-consumer paper and plastics is a real threat to the IWMA efforts to achieve EU targets, so this area needs particular attention currently. Development of a paper pulping facility in Ireland would be particularly helpful in this regard as it would open much more secure markets for paper recycling from Ireland.

Development of indigenous plastics recycling facilities or even small scale start-ups would also be hugely beneficial to Irelands recycling efforts going forward.

Yours Sincerely,

A handwritten signature in black ink that reads "Conor Walsh". The signature is written in a cursive, flowing style.

Conor Walsh
IWMA Secretary

cwalsh@slrconsulting.com

c/o SLR Consulting, 7 Dundrum Business Park, Windy Arbour, Dublin 14.