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15<sup>th</sup> September 2017

## **Indaver Ireland response to the Public Consultation on the drafting of a National Policy Statement on the bioeconomy**

Indaver Ireland welcomes the opportunity to contribute to this consultation on the development of a National Policy Statement on the bioeconomy in Ireland.

Indaver owns and operates a small centrally dispatched hybrid renewable generator in Duleek, Co. Meath and is planning to develop a similar generator in Cork over the next number of years. Indaver is currently assessing the potential development of infrastructure in Ireland for the treatment of biosolids generated from wastewater<sup>1</sup>.

Indaver takes the view that whilst waste reduction and elimination should be prioritized as laid out in the Waste Hierarchy, unavoidable wastes (including residues remaining after treatment) that cannot be recycled in a sustainable manner, can be safely and effectively treated by the WtE process. This form of sustainable waste technology has the added benefit of producing electricity and heat whilst ensuring that such unavoidable wastes are transformed into useful and valuable resources which can thereafter contribute to a circular bio-economy.

In addition, EfW has a pivotal role to play in the reduction of carbon emissions and in the meeting of mandated EU targets and to the reduction on external energy dependency. In Ireland and throughout the EU this technology has greatly assisted in the diversion of waste from landfill, and has contributed towards greenhouse gas emission reduction targets.

Indaver has recently provided detailed responses to the 'Regional Biosolids Storage Facility for Greater Dublin' Stage 1 Report issued by Irish Water in February 2017, the Nitrates Action Programme run jointly by the Department of Housing, Planning, Community and Local Government (DHPCLG) and the Department of Agriculture, Food and the Marine (DAFM) in April 2017 and the River Basin Management Plan for Ireland 2018-2021 also run by the Department of Housing, Planning, Community and Local Government in August 2017.

These submissions comprehensively detail the need to develop alternative biosolid treatment facilities as a matter of urgency, and highlight that the current practice of spreading biosolids on agricultural land as the primary means of municipal sludge management in Ireland and is prohibited in many European countries due to environmental and health concerns.

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<sup>1</sup> Treated sewage sludge, commonly referred to as 'biosolids', is the organic by-product of urban wastewater treatment



The development of a National Policy Statement on the bioeconomy provides an ideal opportunity to assess the value that may be extracted from wastes which may be regarded as carbon containing and unavoidable in nature such as sewage sludge. The bioeconomy addresses the production of renewable biological resources and includes such resources as municipal solid waste and wastewater (including the waste stream comprising of biosolids generated from wastewater).

Whilst the bioeconomy may for the most part be primarily associated with other waste streams, such as food waste, in order to ensure that other unavoidable waste streams including biosolids are handled in a sustainable and environmentally sound manner, clear identification of new solutions and treatment methods for such waste streams must be set out in any such strategy if a true and circular bio economy is to be achieved.

It is also worth noting that even in Member State regions such as the Flemish region of Flanders which has been at the forefront of recycling and where 70% of its municipal solid waste (MSW) is recycled each year, there still remains circa 50% biodegradable municipal waste (BWM) and up to a 30% fraction still requiring treatment thereafter.

Currently in Ireland, recycling to agricultural land is considered the most economical and beneficial way for municipal sewage sludge management with approximately 80% of sludge<sup>2</sup> produced in Irish wastewater treatment plants applied each year as fertiliser to agricultural land. This practice is not permitted in many other European countries due to stringent regulations on quality and heavy metal content<sup>3</sup>. In light of such serious concerns, this practice is being phased out and limited and is increasingly being dealt with by means of more environmentally safe means including incineration.

The Environmental Protection Agency (EPA) has in a Research Report entitled 'Health and Water Quality Impacts Arising from Land Spreading of Biosolids'<sup>4</sup> found that there are many risks associated with the spreading of biosolids on agricultural land including the presence of emerging contaminants and metals in sewage sludge and the potential for surface runoff of harmful contaminants into receiving waters. Furthermore, An Bord Bia quality assurance programmes also prohibit the use of raw or treated sewage/biosolids on Bord Bia certified farms.

The foregoing has serious implications for the future development of the agri-food sector in Ireland and for the protection of human health and well-being. It is therefore of vital importance that alternatives to the landspreading of biosolids are now given due and proper consideration. Furthermore, it is expected that Biosolid volumes will increase as a direct result of the improvement of Waste Water Treatment Plant services as directed by the Water

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<sup>2</sup> EPA Destination routes for the national load of sewage sludge in 2015 (EPA, 2016), <http://www.engineersjournal.ie/2017/04/13/wastewater-treatment-biosolids-sludge-damage-land/>

<sup>3</sup> Eurostat, Eurostat, 2014. Sewage Sludge Production and Disposal: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=env\\_ww\\_spd&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=env_ww_spd&lang=en) - For example, in the Netherlands, 92.6% of sewage sludge produced from urban waste water in 2012 was incinerated with none disposed of by agricultural use. In Germany in 2013, approximately 57% was incinerated and 27% used in agriculture

<sup>4</sup> EPA Research Report, 2012, prepared for the EPA by the National University of Galway: <http://www.epa.ie/pubs/reports/research/land/research200.html>



Framework Directive 2000/60/EC, with the quantity of wastewater sludge expected to increase significantly by 2040.<sup>5</sup>

Irish Water's National Wastewater Sludge Management Plan outlines the strategy for managing wastewater sludge over the next 25 years, and includes proposals for the investment in future treatment, transport, storage and reuse (or disposal) of the sludge. One of the objectives includes extracting energy and other resources where economically feasible.

As biosolids represent an unavoidable but biological resource, it is feasible to suggest that a constituent element on any National Policy Statement on the bioeconomy should necessarily include an identified mechanism that is designed to adequately and sustainably deal with this voluminous waste stream which can add value through energy recovery if treated by means of new and environmentally viable treatment facilities. Given the correct policy framework, Indaver would invest in longer term dedicated recovery capacity for sludge in Duleek and in the planned waste to energy facility in Cork.

In conclusion and in light of the foregoing, Indaver submits that consideration must now be given to the need to develop alternative biosolid treatment facilities in order to ensure that this waste can be treated in a more sustainable and environmentally sound manner. The proposed National Policy Statement on the bioeconomy provides an ideal and timely opportunity to do just this whilst being broadly reflective of circular economy principles which require all waste streams to be dealt with in the most environmentally advantageous manner.

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<sup>5</sup> National Wastewater Sludge Management Plan, Irish Water, October 2016.