EUROPEAN SUPPLIERS OF WASTE TO ENERGY TECHNOLOGY

ESWET Answers to the Consultative Communication on the Sustainable Use of Phosphorus

27.11.2013

ESWET – the European Suppliers of Waste to Energy Technology – represents companies that have built and supplied over 95% of the Waste-to-Energy plants in operation in Europe. It seeks to promote the technology which, within the frame of the Waste Hierarchy, recovers energy from waste that would otherwise end up in landfills.

We welcome the opportunity to answer the consultative communication.

Q8: How could the European Innovation Partnership on "agricultural productivity and sustainability" help to take forward the sustainable use of phosphorus?

The first step forward is to reduce and/or improve phosphorus usage in agriculture, as this represents the largest consumption and loss of phosphorus.

The next priority should be researching ways to reduce food waste, both during the stages of production and consumption of food and feed. This will be in line with the first of Europe 2020's three mutually reinforcing priorities - smart growth - developing an economy based on knowledge and innovation.

The sustainable use of phosphorus also depends on its post-consumer recovery, mostly through compost from bio-waste and mono-incineration of sewage sludge, for which acceptance in agriculture needs to be assured.

Q10: What could be done to improve the recovery of phosphorus from food waste and other biodegradable waste?

First and foremost the waste hierarchy should be applied and the prevention of waste should be prioritised. This, however, is not going to be sufficient and the following steps of the hierarchy – preparation for re-use and recycling – should be correctly implemented, ideally through source separation of bio-waste from green and kitchen waste, which becomes digestate and/or compost that can be used as fertiliser.

It is important to note that despite the strategic importance of increasing phosphorus recovery, not all bio-waste is suitable for application to agricultural soil, especially if it contains high levels of pollutants such as heavy metals. In this case, safety of the food chain (e.g. avoiding mercury in food) should have priority over phosphorus recovery and bio-waste which is not suitable for recycling should be thermally recovered in a Waste-to-Energy plant to avoid its landfilling.

Allowing waste products of meat, bone meal and processed animal protein to be labelled as "other biodegradable waste" thus allowing the ashes to be used as fertiliser could also increase the amount of phosphorus that can be recovered, as long as this fulfils applicable safety and hygiene requirements.

Strengthening the Landfill Directive targets will also increase the recovered amount of phosphorus, as less of this valuable resource is thus lost in landfills and available for recovery. This is why ESWET believes that the current momentum towards landfill minimisation, for which we signed a joint letter to Commission President Barroso calling for a ban on the landfilling of combustible material[1], will have the positive side-effect of incentivising bio-waste treatment, hence supporting phosphorus recovery by pushing clean bio-waste back to agricultural fields and sewage sludge away from landfills and onto fields after mono-incineration[2].

Q11: Should some form of recovery of phosphorus from waste water treatment be mandatory or encouraged? What could be done to make sewage sludge and biodegradable waste more available and acceptable to arable farming?

1. Should some form of recovery of phosphorus from waste water treatment be mandatory or encouraged?

To limit Europe's resources dependency and to help contribute to a green and resource efficient economy the recovery of phosphorus from waste water treatment should be encouraged within Europe as soon as possible. With an eye on the rising population and associated rise in food demand, made even larger by changing lifestyle that can be expected in many developing countries, it is in the EU Member States' best interest to reduce phosphorus import dependency while improving resource-efficiency at home.

Besides, developing European technologies to efficiently recover phosphorus contributes to the competitiveness of key EU export sectors such as water & waste management. This can be done by supporting research into technologies to maximise phosphorus recovery from both waste water treatment sludge and bio-waste.

2. What could be done to make sewage sludge and biodegradable waste more available and acceptable to arable farming?

To make bio-waste-based compost more acceptable for farming, source-separation generally yields the best prospects for phosphorus recovery while minimising cross-contamination (which often is an issue when bio-waste is extracted from mixed waste). If the end product fulfils the End-of-Waste criteria, it could more easily gain acceptance in farming. For bio-waste that cannot be recycled in agriculture, thermal treatment is preferable to landfilling.

Regarding sewage sludge, mono-incineration is the best option because it concentrates phosphorus into usable ashes that fulfil the same purpose as sludge while being lighter to transport than liquid sewage sludge. Mono-incineration also hygienises the end-product and avoids spreading contaminants inevitably present in sludge over arable land. Since sewage sludge cannot be mixed with other waste during or after the incineration process, dedicated installations are needed and many already exist.

ESWET – European Suppliers of Waste to Energy Technology
Transparency Register #56047551356-84
Avenue Adolphe Lacomblé 59, B-1030 Brussels
info@eswet.eu / www.eswet.eu

[1] See www.eswet.eu

[2] Like Waste Incineration plants, these facilities combust the material, treat the flue gases to ensure very low emissions and recover energy from waste. The difference is that combusting sewage sludge alone means high concentrations of phosphorus in the bottom ash enabling its recovery.