

New York looks to the future of waste (10 March 2006)

New York City has been investigating ways to manage its waste more sustainably in years to come.



The city that never sleeps also never stops producing waste

Speaking at the Enviro Business conference at the Irish Recycling & Waste Management/Irish Water, Waste & Environment exhibitions in Ireland, Venetia Lannon, vice president of New York City's Economic Development Corporation outlined the city's investigation of new and emerging waste management technologies.

Ms Lannon described how New York's current waste management strategy was unsustainable and uneconomic.

As might be expected in such a vast city, the primary problem is the sheer scale of waste produced and the lack of sites within the urban area itself which can process it. The city produces 46,000 tons of waste every day.

Of this, 30,000 is commercial waste and the responsibility of those who produce it but city authorities have to dispose of the remaining 16,000 tons.

The last of the city-owned incinerators and landfill sites closed in 2001 and since then New York has been exporting its waste to neighbouring states for disposal.

This leads to huge expense, not just in terms of disposal charges but also state taxes and transport costs.

To avoid the costs spiralling out of control as fuel prices and environmental taxes steadily rise, the city has decided to look at cutting-edge ways to manage its own waste.

"The New York City Department of Sanitation (DSNY) attempted to build a series of waste-to-energy facilities in the 1980s but was stopped by local community groups incited by environmental activists who claimed the emission levels of dioxins, furans and mercury from such facilities to be unacceptable," said Ms Lannon.

"Their victory was so complete that when Mayor Bloomberg tried to reintroduce the possibility of newer and cleaner waste-to-energy facilities in New York City four years

ago, the proposal was met with such a resounding no that even Bloomberg, not normally noted for shying away from controversy, demurred."

With traditional incinerators struck off its list of options, NYC embarked on a far-reaching research project inviting proponents of new and emerging waste management systems to put forward alternative proposals.

In an exhaustive process, 43 separate technologies were evaluated.

Among them were thermal plants, both aerobic and anaerobic digestion, hydrolysis, chemical processing and mechanical processing for fibre recovery.

These were then evaluated against their readiness for deployment, scale they could operate on, reliability, performance against environmental criteria, beneficial use of waste such as conversion to energy or other marketable products, and the levels of residue left after the process.

After this evaluation 14 technologies remained, and these were whittled down to just nine which fell into the categories of advanced thermal processes such as gasification and anaerobic digestion.

"Technical findings show that anaerobic digestion and thermal processing technologies could be successfully applied in New York City," said Ms Lannon.

"While environmental findings show that in general these technologies offer better environmental performance than waste-to-energy facilities, including lower air emissions, the potential for increased beneficial use of waste and reduce landfilling.

"Economic findings also indicate that these processing technologies on a commercial scale are less costly than or comparable to costs of current waste export practices in New York City."

But while the technical argument seems to be settled, the authorities still have to win the hearts and minds of a sceptical public.

"There are two things we have to consider there," Ms Lannon told *edie*.

"One is that any time you go into the public arena it's something of a gamble as to how things are going to be perceived.

"If you look purely at emissions they are significantly reduced, there are far less dioxin emissions with gasification than from a combustion plant.

"The technology is different - with waste to energy you are effectively burning garbage but with gasification you are putting the waste into a sealed chamber and subjecting it to intense heat that converts it into gas, which is much cleaner.

"But when you get into a room full of community representatives all that can be lost and their gut reaction may be that this is incineration by another name."

She said several environmental groups had already come out against gasification and the New York authorities had an uphill battle ahead of them to get the public on side.

"All you can really do is get the data out there and try to have an informed public dialogue.

"Also the fact that we have an alternative, anaerobic digestion, that doesn't have the same perceived issues gives us hope that we will be able to get something for the city."

By Sam Bond