



by Paul van der Werf

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Le Bon Plan

Quebec's organic waste diversion plan

The Province of Quebec has been staking out its environmental vision as it relates to waste management for a number of years. The Quebec Residual Materials Management Policy, 1998-2008 envisioned what they call a 4 R-D (reduce, re-use, recycle, recover and dispose) hierarchy. For organic waste a 60 per cent recovery rate was set. The government has recently taken a number of steps to help achieve this diversion level for organic wastes.

Currently, an estimated 40 facilities in Quebec compost organic wastes (not including on-farm sites managing manure). This is being updated and a revised number will be released later this year. The cur-

rent processing capacity is unclear although StatsCan reported that in 2008 about 384,000 tonnes of organic waste was diverted.

This has likely decreased since that time. Described by one Quebec industry observer as an "odour tornado", a number of larger composting facilities have closed in the last five years due to operational issues. This appears to have largely been a function of some larger Quebec firms accepting more organic wastes (including considerable amounts from Ontario) than their facilities could handle appropriately. Today, most facilities are open windrow although some tunnel composting facilities manage manures.



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The 60 per cent organic waste recovery rate has not been met and there have been challenges.

Sophie Taillefer is an Industrial Development Agent, with Recyc-Québec, and has considerable ongoing involvement with the organics processing in the province.

When asked about the key lessons for organic waste processing learned in the last five years she states, “It’s important not to underestimate the effort and energy that needs to be invested for social acceptability. This requires a good communication plan before implementation and follow-up during the process.”

The amount of processing capacity is set to increase considerably and likely in the direction of anaerobic digestion. Local industry players have debated the most appropriate technology: composting or anaerobic digestion. Anaerobic digestion has apparently developed some momentum.

In the last few years the Province has released some new documents that govern and/or inform the management of organic and other wastes in Québec.

The Quebec Residual Materials Management Policy re-released in 2011 updates the previous version and envisions the future of waste management in general. There are clear thrusts to reduce the amount of waste

sent to landfill, achieve climate change goals and implement extended producer responsibility (EPR). For instance by 2015 the province wants to reduce the amount of waste sent for disposal from the current 810 kg/capita to 700 kg/capita, in part from processing 60 per cent of organic wastes.

Currently about 12 per cent of municipal food and leaf-and-yard waste is diverted with the remainder mostly landfilled. About 31 per cent of municipal biosolids and 26 per cent of paper mill biosolids are currently landfilled.

What is most interesting is where they want to take this. The post-2015 plans include banning organic waste from landfill, especially to reduce GHG impacts from waste. This would start with cardboard, paper and wood for which diversion programs are well established, then be expanded to food waste, leaf-and-yard wastes and biosolids by 2020.

Two documents guide the processing of more organic waste.

The current 2008 composting guidelines (Lignes Directrices Pour L’Encadrement Des Activités De Compostage) are under review and will include new information on water treatment and small (<50m³) in-vessel composting facilities.

The stage has clearly been set for more development of anaerobic digestion facilities. In 2011 the government released new anaerobic



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digestion guidelines (Lignes Directrices Pour L'Encadrement Des Activities des Biomethanisation). These are very similar to the composting guidelines in terms of requirements for setback distances, noise and odour generation. The guideline includes separate sections in terms of dealing with digestate and biogas.

The province has set up a funding program to (in their words) "... foster the recycling of putrescible organic materials."

The Financial Program for Biomethanization (anaerobic digestion) and Composting of organics (Programme de Traitement de Matières Organiques par Biométhanisation et Compostage (2008-2012) is a \$250 million provincial government funding program to stimulate the processing of organic wastes. The program is open to both public and private facilities, although it favours public facilities. For public facilities the program will fund up to two-thirds of the cost of AD facilities and fifty per cent of composting facilities. For private sector facilities the program will fund 25 per cent of AD facilities and 20 per cent of composting facilities. Given the funding disparity between public and private sectors, it's clear the province hopes to stimulate public-private partnerships (PPP) and indeed this is what's happening. The funding

supplied by the province will also be in some instances be leveraged with federal money.

"We should see many new municipally owned AD facilities being implemented in Quebec over the next few years," Taillefer points out, "since the amount allocated for AD technology is greater than for composting. The percentage is higher for AD than composting because it offers a greater potential for GHG reduction related to fossil fuel substitution which is mandatory in the program."

It has taken time to get the program off the ground; Applications have been received and there have been announcements but no formal funding yet. (For instance, in the Montreal region there have been four announcements concerning five to six new facilities.)

"Ultimately a key driver for all of these initiatives is promoting the achievement of the goals of the Climate Change Action Plan and of the Quebec Energy Strategy," says Taillefer.

This is a bold and ambitious move. Funding is something that the organics industry has sought, since organics comprise 40 per cent of the waste stream. Diverting them is essential to achieving high waste diversion numbers and reducing greenhouse gas impacts.



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