
Urban Food Waste:

***A Source of Urban
Sustainable Energy***

Increase in Organic Waste

- Metrovancouver ban on organic waste in landfills: 2015
- How does it affect my business?
 - Further source separation;
 - Need to have multiple bins and bin designs;
 - Need to choose hauler and/or destination for your organic waste.

What does the ban do for our communities?

- Reduce reliance on landfills;
 - Organics in landfills seep methane for decades;
- Promote generation of renewable energy in urban centers;
- Reduce consumption of fossil fuels and GHG emissions;
 - Every gigajoule of renewable energy used creates consumption of one less gigajoule of fossil fuels;
 - Transportation to Cache Creek landfill currently requires a 700 km round trip;

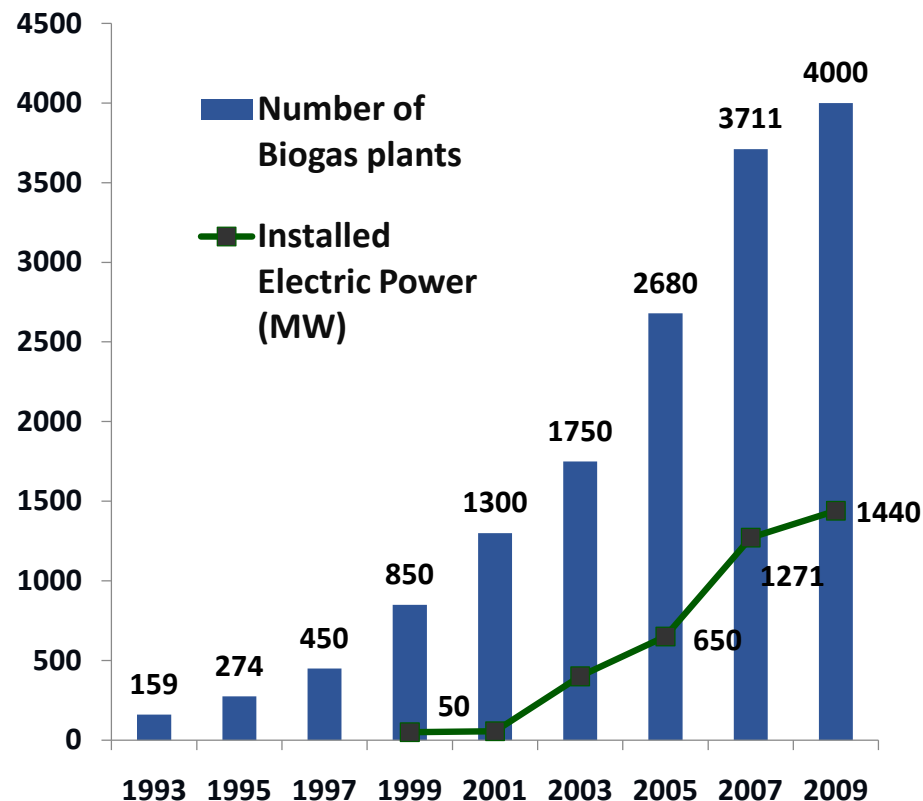
Alternative Methods for Processing Food Waste

Composting	<ul style="list-style-type: none">▪ Works great if food waste is blended with for yard waste;▪ Contaminants lower the quality of compost (farmers won't use);▪ Recycles fertilizer value in food back to agriculture;▪ No energy recovery; heat is dissipated to atmosphere.
Animal Feed	<ul style="list-style-type: none">▪ Oldest form is direct feed of pre-consumer waste to animals;▪ Newer innovative solutions coming to market;▪ Excellent potential solutions to long term global food shortages;▪ Limitations on acceptable feed stocks (primarily pre-consumer).
Anaerobic Digestion (biogas)	<ul style="list-style-type: none">▪ Can handle all types of food waste;▪ Metal/plastic contaminants in organics easily separated;▪ Energy recovery via renewable natural gas generation;▪ Recycles fertilizer value in food back to agriculture.

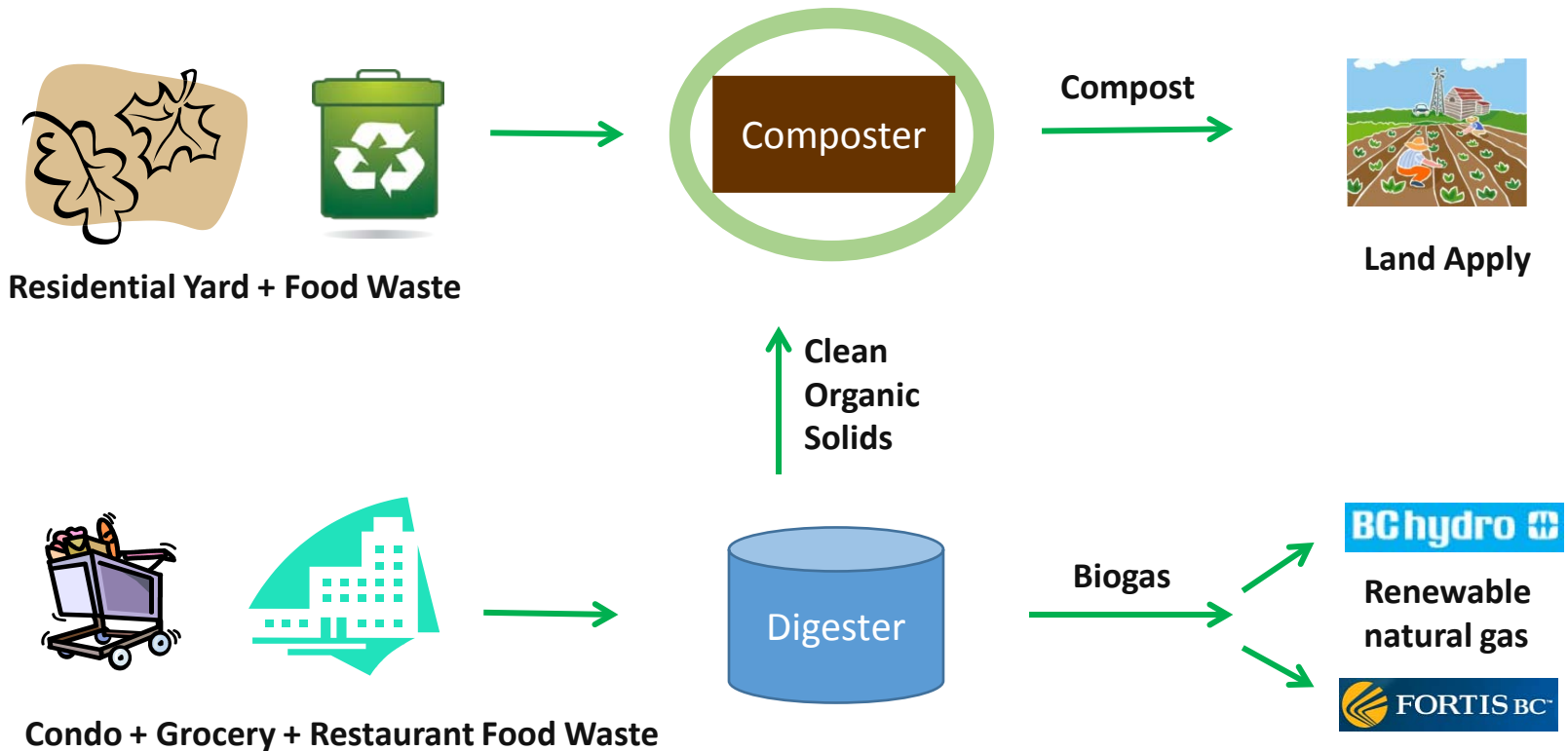
Already Successful European Market

Germany's biogas success:

- Leader in European build out of biogas plants;
- Over 6,000 biogas facilities as of 2013;
- Germany expects biogas derived electricity to rise from 4% in 2010 to 17% in 2020



Integrating Anaerobic Digestion with Current Organics Management



Contaminants in Organic Waste

- **Residential SSO's**
 - Up to 50% Contaminants
- **Grocery Store**
 - Up to 35% Contaminants
- **Restaurant/Cafeteria**
 - Up to 15% Contaminants



Plant Location



1010 Derwent Way, Annacis Island, Delta, B.C.



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