ORGANICS MANAGEMENT IN QUÉBEC: FROM SCRATCH TO BANNING!

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Presentation outline

• Organics generation and recovery per sector in Québec
• Waste management: from scratch to banning
• Waste Policy and regulation – recovery goals and bans
• Implementation measures
• Future treatment facilities coming to town
• Facing challenges
RECYC-QUÉBEC Québec
mandate
promote, develop and foster the reduction, reuse, recovery, recycling, and reclamation of containers, packaging, materials, and products with a view to conserving resources
vision
mobilize Quebecers to promote innovative, sustainable management of residual materials
Québec

- 1,667,441 km² (643,802 mi²)
- 17 Administrative regions
  - 104 Municipal regions and territories
  - 1,287 Municipalities
- 8 M population (2011)
  - 10 cities > 100 k
    - Montreal metropolitan community: 3.8 M
    - Québec metropolitan community: 750 k
### Organic waste generation per sector

**(metric wet ton/yr)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Tonnage (M t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential food and yard waste</td>
<td>1.3</td>
</tr>
<tr>
<td>Municipal biosolids</td>
<td>0.7</td>
</tr>
<tr>
<td>Paper mills sludge</td>
<td>1.2</td>
</tr>
<tr>
<td>Other industrial, commercial and institutional (IC&amp;I) waste</td>
<td>1.2</td>
</tr>
<tr>
<td>Food-processing waste</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>TOTAL ORGANIC WASTE</strong></td>
<td><strong>5.4</strong></td>
</tr>
</tbody>
</table>
Recycling and Elimination of Organic Waste per Sector (2010)

- Residential: 12%
- Municipal biosolids: 97%
- Paper mills sludge: 97%
- Other IC&I: 97%
- Food-processing: 97%
- Total: 37%

Wet metric tons

Thousands
Processing facilities

- Composting
  - 41 facilities processing approximately 400 k tons (2012) – 10 facilities > 80% of tonnage

- Anaerobic digestion (AD)
  - 7 AD facilities for municipal biosolids treatment
  - Some on site small AD facilities for food-processing establishments (ex. cheese factories) and a few on farm
Québec’s Waste Management Policy 1998-2008
(60% organics recovery goal for 2008)

- Mandatory municipal waste management plans
  (Environmental Quality Act)

1998

2003

First Action Plan on Climate Change
2006-2012

- Waste disposal levy
- Regulation on landfill disposal and incineration of waste

2006

2008

Parliament commission on residual materials (report)

2008

2010

Temporary waste disposal levy

2010

2011

Québec’s Residual Materials Management Policy
2011-2015

- Grant Program for Anaerobic digestion and Composting Facilities

2009

- Environmental quality act modified to include waste hierarchy

2009

From scratch…

2001

Grant program for organics recovery

2001

2003

2006

2008

2009

2010

2011
2013
Ban of paper and cardboard
Québec’s Adaptation Strategy on Climate change and Action Plan 2013-2020
Revision of municipal waste management plans

2014
Strategy for the 2020 organic’s ban
Ban of wood
Home composting grant program

2015
60% recovery of organics

2016
Gradual implementation of organics’ ban

2020
...to banning!
Québec’s Residual Material Management Policy

Key elements:

• Ending resource waste
• Promoting the achievement of the Climate Change Action Plan and the Québec Energy Strategy goals
• Making all stakeholders responsible for residual materials management

The Waste Policy Intervention Strategies

• Maintain the 3R’s hierarchy with waste to energy and disposal as last options
• Prevent and reduce the production of residual materials
• Discourage and monitor disposal
• Ban the disposal of organic material
• Make producers more responsible
• Support regional planning and performance
• Encourage the performance of the IC&I and CR&D sectors
• Increase knowledge, inform, raise awareness, and educate
• Report results
Québec’s waste policy and action plan 2011-2015

• 60 % recovery goal for organics with biological treatment (landspread, AD and composting) for 2015

• Gradual elimination ban (landfill and incineration) of organic matter for the year 2020:
  ▪ Fibers (paper and cardboard) : 2013
  ▪ Wood : 2014
  ▪ Organics : 2020

• A strategic plan for the implementation of the organics ban is under preparation
Québec’s vision of waste management in a climate change perspective

In 2020, and more, the amount of waste generated per person is less. The collection of food scraps is in place along with the curbside recycling programs and is now part of the norm. The GHG emissions coming from landfill are declining due to their capture and landfilling of organics has cessed.

Québec’s Climate Change Strategy (2013)
Considerations in the banning strategy

- Priority to food waste reduction
- Focus on the most important sector in terms of tonnage and easier to recycle (improving knowledge on organic waste generators)
- The necessary collection services and treatment facilities must be available
- Presence of markets for recovered and recycled products
- Social acceptability of recycling management measures
- Regulation and control measures

Moving forward towards the 2020 ban

Support measures

- **Disposal levy**: $11.52 + $9.78 (temporary 2013-2023) = $21.30 / ton of waste eliminated
  - Redistribution to municipalities according to performance
  - Financing of AD and composting treatment facility program
- Financial program for biomethanization (AD) and composting of organics (2008-2017) – 650 M$ (Federal, provincial and municipal/private)
- Table for organics recycling and Action plan 2013-2015 – 4 M$
- Domestic and community size composting grant program (2014-2017) – 2 M$
Table on organics recycling and 2013-2015 action plan

4 orientations:

1. Favor recycling of easily accessible organics materials
2. Facilitate decision making for recovery, recycling installations and production of quality products
3. Market development for biosolids, composts and digestates
4. Promotion and information to different publics

Financial program for biomethanization (AD) and composting facilities (MDDEFP / 2008-2017)

- Financial support for the implementation of anaerobic digestion and composting facilities
- Total investment from federal and provincial government and municipal/private stakeholders: 650 M$ (CAD)

<table>
<thead>
<tr>
<th>Anaerobic digestion * municipal</th>
<th>Anaerobic digestion or integrated * private</th>
<th>Composting municipal</th>
<th>Composting private</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 66% of admissible costs</td>
<td>• 25% of admissible costs</td>
<td>• 50% of admissible costs</td>
<td>• 20% of admissible costs</td>
</tr>
</tbody>
</table>

* With or without integrated composting facility for digestate

http://www.mddep.gouv.qc.ca/programmes/biomethanisation/
Future projects coming to town

Number of projects granted or publicly announced (January 2014)

- 13 AD projects (most projects integrate composting facility for digestate and leaves) – residential and commercial food waste (SSO), biosolids and food processing waste
- 11 composting projects – residential and commercial yard and food waste (SSO)
- 2 MBT projects
The planned projects are indicated for information purposes only. The financing of some of these projects has not yet been announced. The data is based on public information and is therefore subject to change. For more information on existing composting facilities:
Résidus verts
Résidus verts et alimentaires et/ou digestats
Autres résidus

Compostage
Résidus alimentaires
Biosolides municipaux

Biométhanisation
Sites existant
Sites planifié

Québec
AD (85 000 t/yr)

Québec
Composting
Anaerobic digestion
Existing site
Future site

EXISTING AD AND COMPOSTING FACILITIES AND FUTURE PROJECTS FOR SSO AND BIOSOLIDS – JANUARY 2014
Existing AD and composting facilities and future projects for SSO and biosolids – January 2014

**SÉMECS**
AD/Composting (40 000 t)

**RIVMO**
AD/Composting (30 000 t)

**RAEVR**
AD – biosolids only (26 000 t) – 11,9 M$  

**Longueuil**
AD/Composting (70 000 t)

**St-Hyacinthe**
AD/Composting (215 200 t) – 47,3 M$

**RAEBL**
AD – biosolids only (110 500 t) – 15 M$

EXISTING AD AND COMPOSTING FACILITIES AND FUTURE PROJECTS FOR SSO AND BIOSOLIDS – JANUARY 2014

Anaerobic digestion
- Existing site
- Future site

Coquillette
- Existing site
- Future site

Montérégie
- Existing site
- Future site

RECYC-QUÉBEC

Quebec
Résidus verts et/ou digestats

Autres résidus

Compostage

Résidus alimentaires

Biosolides municipaux

Biométhanisation

Sites existants

Sites planifiés

Consulter le site WEB

Montréal – West
Composting (50 000 t)

Montréal – North
Composting (location under revision) (29 000 t)

Montréal – South
AD (60 000 t)

Montréal – Est
AD (60 000 t)
Résidus verts et/ou digestats

Autres résidus

Compostage

Résidus alimentaires

Biosolides municipaux

Biométhanisation

Sites existant

Sites planifié

Consulter le site WEB
Facing limits and challenges

• Competition between recycling processes
• Cheap landfill tipping fees even with disposal levy
• Economic viability of AD projects
• Municipal management and owned project – conciliation with private sector
• Applying the bans and control
• Assuring coherence between regulation, policy, programs and waste plans
Tools and information

• Factsheet on organics management

• RECYC-QUÉBEC’s website dedicated to organics: http://organique.recyc-quebec.gouv.qc.ca

• Waste management scenarios
• Case studies
• Information factsheets
• Press release and articles
• Québec map of existing AD and composting facilities and future projects
Merci de votre attention!
QUESTIONS?

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