BRIEFING TO THE ENVIRONMENT AND NATURAL RESOURCES COMMITTEE; MAINE LEGISLATURE

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AGENDA

• About RRS
• Challenges in the recycling marketplace
• Role of EPR in addressing the challenges
ABOUT RRS

SINCE 1986 serving industry/governments/non-profits

- Plan and implement materials management and zero waste solutions
- Facilitate recovery value chain collaboration to increase commodity recovery for industry and municipalities
- Analyze packaging recyclability and compostability
- Business case and net system cost analysis
- End market and recovery systems development for circular economies
- Adapt MRF systems & composting facilities with new technologies to process today’s recyclables
- Develop and implement multi-stakeholder communications and outreach

RRS recycle.com
WHO WE ARE

30 years in recycling and managing resources

40 employees in 3 countries

660 years combined field experience

1,000 projects across 9 markets

OUR SKILLS

- Recycling/Solid Waste Planning
- Organics/Compost
- Communication/Education
- Engineering
- Policy/Legislation
- Hazardous Materials Safety & Compliance
- Project Finance/Economics
- MRF Operations & Material Flow Studies
- Data Analytics & Design
- Corporate Sustainability
- Collaboration Facilitation
- Administrative
CHALLENGES IN THE RECYCLING MARKETPLACE
COMMON COMMUNITY CHALLENGES:

• Volatile recycling markets
• Pressure from MRFs to drop materials
• Paying for recycling (processing fees), instead of being paid (rebates)
• Questions from administrators / elected officials on program costs
• Public expectation of access to recycling
ECONOMIC CHALLENGE: DRAMATIC DROP IN RECYCLING REVENUE

2-YEAR COMPARISON

• Mixed Paper has decreased by 98%
• SRPN has decreased by 68%
• NHDPE has increased by 97%
• PET has decreased by 24%
• Aluminum has decreased by 24%
• Metals and Plastic currently make up 9% of the stream volume, and 88% of the value
THE EVOLVING TON: CHALLENGES THE INDUSTRY

Source: RRS From packaging generation by weight US EPA Advancing Sustainable Materials Management 2015
ECONOMIC CHALLENGE: MRF COSTS CONTINUE TO RISE

COST INCREASES DUE TO:

• Need to slow the line to meet new quality specs
• Increased transportation costs
• Prevalence of lighter material means more items need to run to reach tonnage target
• Increasing contamination
• Aging MRFs coping with new mix of materials

<table>
<thead>
<tr>
<th>U.S. MATERIAL RECOVERY FACILITY Inbound Processing $/Ton</th>
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<tbody>
<tr>
<td>Cost Category</td>
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<td>-----------------</td>
</tr>
<tr>
<td>Fixed</td>
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<td>Residue</td>
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<td><strong>TOTAL</strong></td>
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AT THE SAME TIME... CORPORATIONS NEED RECYCLED CONTENT TO MEET GOALS
SUPPLY DEMAND IMBALANCES

Domestic demand for some materials outstrips supply

PET Bottles | HDPE | PP

Domestic demand is weak for others

Demand | Supply

Paper | Cardboard | Other plastics
MIXED PLASTICS MARKETS ARE NOT DEAD!
NEW RECYCLED PAPER MILL CAPACITY IS BEING ADDED
US RECYCLING FACES CHALLENGING TIMES

• Asian import restrictions are not the cause of the challenges; but have exposed weaknesses in the recycling system:
  • Consumer confusion about what is recyclable / contamination
  • Outdated processing infrastructure
  • Need for domestic market development for some materials, more supply for others
  • Fragmented system
• Communities and states have multiple options to address current market dynamics, for example:
  • New funding sources for recycling (e.g., tip fee surcharges, advanced disposal fees, generator fees, etc.)
  • Requirements for recycling education, access, etc.
  • Minimum recycled content standards for products / packaging
  • Investment in infrastructure & market development

• EPR for packaging and printed paper offers some distinct advantages
ROLE OF EPR IN ADDRESSING THE CHALLENGES
INTEGRATION AND COORDINATION

- EPR fosters system integration
- Producers apply supply-chain thinking to recycling system
- Shifts commodity risk / cost burden from municipalities onto producers
- Stronger data collection, reporting and accountability
ADDRESSING CONTAMINATION

• Producer responsibility organization (PRO) education resources can be applied to implement best practices to combat contamination
• PRO’s focus infrastructure investments on key needs, i.e., MRF / sortation upgrades. Examples include:
  • Ontario: Continuous Improvement Fund
  • EEQ: Glass processing investment
  • Canadian Stewardship Services Alliance (CSSA): Step 4 of the 4 Step Fee Methodology (governs ON, MB, SK, BC)
• EPR programs typically increase recycling rates, to create additional supply of valuable recyclables and feed domestic recycling-based manufacturing
  • Recovery rates for packaging materials in Germany range from 75 to 99%
  • On average, recycling rates in Canadian EPR programs increased by 17% after 2 to 4 years
• Recycled content incentives will help to create additional demand and spur additional investments in recycling-based manufacturing
RECYCLE RATES FOLLOWING EPR IMPLEMENTATION

Residential Recycle Rate in Canadian Provinces*

Average increase Immediately following EPR Implementation 8%
Average increase after 2-4 years of EPR 17%
Average increase after 8-10 years of EPR** 29%

Source: Statistics Canada
*Recycle Rate calculated by dividing amount recovered by amount generated looking only at the residential sector.
**Only Quebec and Ontario have been implemented that long