

MicroGreen Plant Visit - Agenda



10.30 am Meet and greet – Krishna & Alan

10.45 - 12pm Meeting session:

- PAC NEXT update – Alan
- Packaging: Problems & Possibilities for Recycling - Dick Lily
- MicroGreen update - Krishna

12 - 12:30 p.m.: Lunch

12:30 - 1:30 pm.: Plant tour

- Overview of MicroGreen facility and technology

1:30 - 1:45: Wrap-up and farewell



Industry taking the lead the  way

Alan Blake

PACNEXT Executive Director

MicroGreen Visit

October 15th 2013 Arlington, WA



Vision

A World Without Packaging Waste

Purpose

To facilitate the convergence of ideas and identify sustainable solutions that lead to zero packaging waste

Goal

To minimize recovery system cost while maximizing recycling rates and the value of recovered materials



Canadian Waste

- MSW facts & figures 2010
 - 729 kg / capita
 - 25MM tonnes
 - 17MM tonnes to landfill & incineration
 - 8MM tonnes diverted for recycling & composting





USA Waste

- EPA MSW facts & figures 2011
 - 728kg / capita
 - 114MM tonnes
 - 74MM tonnes to landfill & incineration
 - 39MM tonnes 34.7% diverted for recycling & composting





A \$2bn to \$20bn opportunity?



Curbside collection & recovery costs ca. \$1billion / yr






Value of pkg materials that go to landfill > \$1.1 billion / yr



Comparison of Canadian Programs

Country	Ontario	Quebec	Manitoba	British Columbia
Broad Program Scope*	SO Residential	EEQ Residential	MMSM Residential	MMBC Residential
Producer Funding	50% Fees	100% Fees	80% Fees	100% Fees
Funding per capita	\$6.90	\$13.93	\$9.87	n.a.
High Convenience	✓	✓	✓	✓
Source separation	Single + multi stream	Single stream	Single + multi stream	Single stream
Recycling rates	68%	65%	52%	Target 75%
Bottle deposit scheme	✓ All alcoholic beverages	✓ Beverages	✓ Beer only	✓ Beverages

Stewardship PPP Collection Infrastructure

Province	Ontario	Quebec	Manitoba
% access to curbside	95%	99%	93%
Blue Box Wheeled carts Blue bags			
Multi stream	✓	x	✓
Single stream	✓	✓	✓
Depots	✓	x	✓
Public Space	x	✓	✓
Bottle deposit scheme (separate from Blue Box)	✓ All alcoholic beverages	✓ Soft drink + beer	✓ Beer only

Key Industry challenges / opportunities

- **Optimize & harmonize EPR programs**
 - One program to fit the nation (best practices)
 - Create scale to manage costs
- **Fair and level playing field for all materials**
 - Economical recovery of all materials (viable end markets)
- **Consumer engagement**
 - Consistent & standard communication for systemic behaviour change
- **Sustainable Packaging Design Guides**
 - Design packaging for end-of-lifezero waste
 - Communicate the value of packaging



Feedback to Ontario WDA

PACNEXT encourages WDA to consider the following opportunities that are core to our vision of **A World without Packaging Waste**:

- National Harmonization of Printed Paper Packaging EPR Policy to create scale, cost efficiencies (reflecting actual costs), standard reporting & broad consumer engagement.
- Collection & recovery systems optimization through municipality & industry collaboration to drive higher recovery of more pkg materials that create value
- Standard communication with consumers supported by ONE list of materials that can be recycled in ALL municipalities to drive systemic behaviour change
- Influencing packaging Design by encouraging more informed decision making:
 - Highlighting product and package design success stories that help reduce, reuse and recycle
 - Supporting material choices & material combinations that increase recovery
 - Supporting Design Guides that lead to end of life solutions other than landfill
- To take an integrated approach to waste management whereby energy from waste as well as emerging trends are seen as viable means to increase diversion from landfill.

National Zero Waste Council

A National Council to advance a waste prevention & reduction agenda

– to encourage BEHAVIOUR CHANGE



– and to influence PRODUCT DESIGN



PAC NEXT launches 2.0

- Refresh growing organization – 129 members
 - Focus on SPEED, ACTION, RESULTS, CONTENT
- 3 project based committees (vs 6)
 - Funding to support access to external resources
- Sponsor webinar series
 - Food Waste, Marine Debris, EPR Canada vs USA, PAYT
 - Packaging Optimization (M&S), Biopolymers, W2W
- More dynamic communication
 - Revamped monthly letter, Monday newsflash, website
- Center of Knowledge
 - Interactive tool to access relevant data, know-how
- Wrap-up PAC NEXT 1.0
 - Publish reports

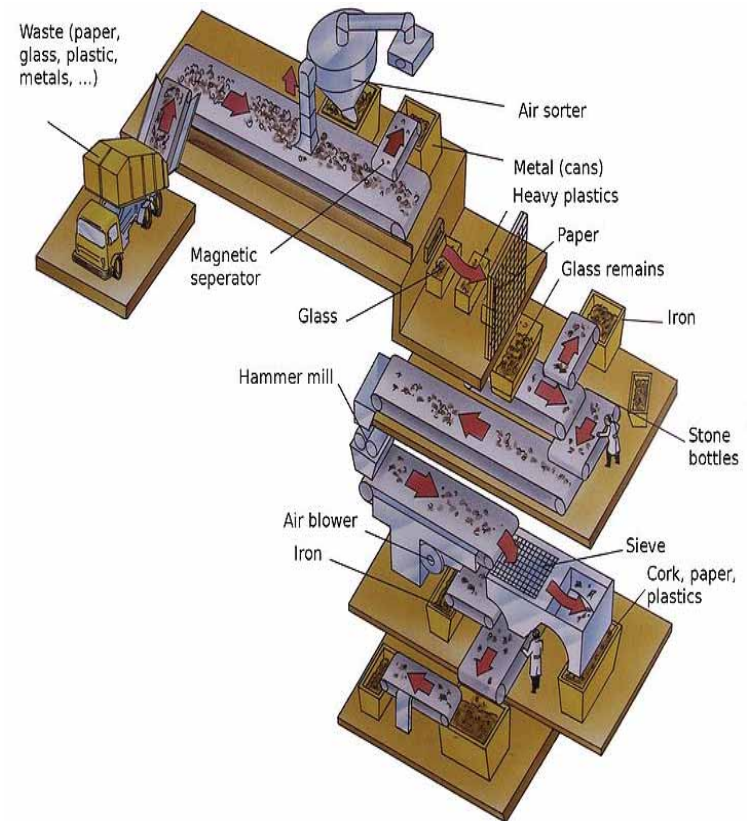
1. EPR Policy “Best Practices”



- High access to convenient curbside collection
- Inclusive – residential and IC&I
- Mandatory recycling - Pay-As-You-Throw (PAYT) programs
- Material source separation:
 - paper & board bundles, PMD (packaging / metals / drinks cartons) collected curbside
 - glass collected and color separated at bring to centers (“igloos”)
- Landfill bans for recyclable materials
- Container deposit programs (separate from EPR programs)

2. System Optimization

- Published a Packaging Materials Recovery Systems Map and list of 120 material types collected in Blue Box in Ontario.
- Maps flow of materials thru collection systems & impact on overall recycling and recovery rates.



3. Material Optimization

- Media release supporting APR guidelines for PET recycling :
 - Protocol for Evaluating PET Thermoform Labels and Adhesives for Compatibility with PET Recycling.
 - Guidelines for PET bottles and PET non-bottle rigid thermoformed plastic containers
- Supporting Canadian Plastics Industry Association (CPIA), Stewardship Ontario and CIF to study and assess cost effective, best practices related to recovery of flexible & plastic films – **LOOKING FOR PILOT PROGRAM OPPORTUNITIES.**



4. Consumer Engagement

- Attitude vs Actions
 - Consumers want sustainable packaging but with NO trade-offs on product performance and value
 - Consumers need motivation, ability and opportunity to change their behaviours
 - PAYT works when legislated
- Importance of Recycling
 - Recycling represents consumers primary environmental effort but it must be easy and convenient
 - Consumers want to be confident that they are doing the right thing
- Communication Best Practices
 - Visual, simple, credible – call to action, rewards and measurement



5. Sustainable Innovation

Designing for Recovery – portfolio of case studies



- (1) Reduce material used
- (2) Fully recyclable and easy to dis-assemble
- (3) Re-usable and/or refillable,
- (5) Increase cube and /or transport efficiency
- (6) Product & Package synergies e.g. product concentration
- (7) Reduce food waste & product loss, extend shelf life
- (8) Close the loop at end-of-life e.g. cup to trays
- (9) Compostable / bio-degradable



6. Sustainable Packaging Design Guide

- Requested by Canadian Council of Ministers for the Environment (CCME), presented as a priority for the National Zero Waste Council (NZWC)
- Interactive web based tool developed and launched May 2013
 - Based upon SPC Design for Recovery, EEQ Design Code and the Global Protocol for Packaging Sustainability (GPPS 2.0)
 - <http://sustainablepackdesign.com/about/>



Industry taking the lead the way

- Policy harmonization to create scale
- Economical recovery of more materials
- Better material choices that increase recovery
- Standard communication, material lists for systemic behavior change
- Share success stories for more informed package & product design decisions
- Deploy Design Guides that support integrated end-of-life solutions other than landfill



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