

The background of the slide features a light green outline map of British Columbia on the left side. Overlaid on the right side is a large, semi-transparent recycling symbol (a Mobius loop) in a darker shade of green. The text is centered over these elements.

Packaging and Printed Paper Stewardship Program Design Options

Multi-Material
British Columbia

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Packaging and Printed Paper Program Design Options

Executive Summary

Multi-Material British Columbia¹ (MMBC) is a not-for-profit agency established under the British Columbia Society Act formed in anticipation of the requirement for a stewardship plan for packaging and printed paper (PPP). MMBC's intention is to assume the role of a stewardship agency in order to discharge the obligations of PPP producers (brand owners and first sellers) under Schedule 5 of BC's Recycling Regulation.

MMBC is currently developing a comprehensive PPP stewardship plan through a three-phased approach with Phase 1 focused on a current state analysis and program design options development.

A program design option is a description of a set of actions that MMBC could take to deliver the recovery performance objective on behalf of producers that choose to participate in MMBC. Actions include defining the packaging and printed paper system requirements and establishing financial transactions which form the basis for commercial arrangements with service providers.

Program design options can have significantly different economic and environmental outcomes and in a number of cases involve trade-offs. Accordingly, an objective framework to evaluate the strengths and weaknesses of various options was developed to assist MMBC in identifying the option that will best deliver long-term diversion outcomes at least cost to PPP producers and their consumers.

As guiding principles, a packaging and printed paper program for British Columbia will:

- 1) Deliver pollution prevention performance to achieve regulatory compliance
- 2) Drive economic efficiency – which encompasses the concepts of:
 - a. Initial cost effectiveness and the opportunity to reduce costs to producers and their consumers over time
 - b. Continuous improvement - the ability for the program to evolve, adapt and innovate thereby increasing diversion while continuously driving down system cost
 - c. A reliance on competitive markets as a mechanism of continuous improvement
- 3) Be transparent and accountable
 - a. To producers in terms of what they get for what they pay
 - b. To regulators on pollution prevention results
 - c. To the public in terms of environmental performance²
 - d. To commercial actors, local governments and other parties with whom MMBC's program may interact

¹ MMBC is governed by a board comprised of a representative from each of the Retail Council of Canada (RCC), Food and Consumer Products of Canada (FCPC), Canadian Federation of Independent Grocers (CFIG), Canadian Restaurant and Food Services Association (CRFA) and the Canadian Newspaper Association (CNA).

² Environmental performance encompasses both the 75% recovery rate and the method of management in terms of the pollution prevention hierarchy.

Packaging and Printed Paper Program Design Options

For each of the three guiding principles, evaluation criteria were developed to support assessment of the program design options³.

Program design options have been developed working from:

- Examples of program design options for stewardship programs operating in other jurisdictions⁴;
- The manner in which PPP services are delivered, typically organized as:
 - Collection;
 - Transportation;
 - Processing;
 - Material marketing; and
- The manner in which the commercial marketplace is arranged including:
 - Purchase of required services using a contract between the party that requires the service and a party able to deliver the service;
 - Stimulating the marketplace by offering financial incentives under conditions designed to motivate parties to deliver the service required by the party providing the incentive; and
 - Delivery of the service directly by the party requiring the service.

Five options based on contracting for PPP services were identified.

Options Based on Contracting for PPP Services		
Option #	Option Title	Key Design Elements
Option 1A	Contract with Collector for All Services	<ul style="list-style-type: none"> • MMBC establishes a series of contracts with collectors throughout the province to ensure appropriate collection service levels for each community • Collectors implement collection services (single family and/or multi-family, curbside and/or depot and/or streetscape as specified in the contract terms) and make their own arrangements with transporters (if required) to transport collected materials to processors and with processors to process and market collected materials
Option 1B	Contract with Processor for All Services	<ul style="list-style-type: none"> • MMBC establishes a series of contracts with processors to process PPP delivered by collectors • Processors make their own arrangements with collectors (and/or transporters) to secure PPP feedstock, process materials to meet market specifications and market materials

³ See Section 2.2 for the evaluation criteria.

⁴ See Section 4.3 for examples of program design options in other jurisdictions.

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Options Based on Contracting for PPP Services		
Option #	Option Title	Key Design Elements
Option 1C	Contract with Markets for All Services	<ul style="list-style-type: none"> • MMBC establishes a series of contracts with markets to purchase PPP collected from residential sources and streetscapes in BC, following processing to meet market specifications • Markets make their own arrangements with processors to secure PPP feedstock, and processors make their own arrangements with collectors to secure PPP feedstock
Option 1D	Contracts with Collectors and Processors	<ul style="list-style-type: none"> • MMBC establishes a series of contracts with collectors throughout the province to ensure appropriate collection service levels for each community • MMBC establishes a series of contracts with processors to process PPP delivered by collectors
Option 1E	Contracts with Collectors, Transporters and Processors	<ul style="list-style-type: none"> • MMBC establishes a series of contracts with collectors throughout the province to ensure appropriate collection service levels for each community • Where collectors cannot deliver directly to processing facilities, MMBC establishes a series of contracts with transporters to transport PPP from collectors to processors as directed by MMBC • MMBC establishes a series of contracts with processors to process PPP delivered by collectors and transporters

Five options based on stimulating marketplace activity through the use of financial incentives for PPP services were identified.

Options Based on Use of Financial Incentives for PPP Services		
Option #	Option Title	Key Design Elements
Option 2A	Incentive for Collectors for All Services	<ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to collectors for each tonne of residential PPP delivered to an MMBC approved⁵ processor • The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and

⁵ Refer to Section 3.1.3 Achieving Performance.

Packaging and Printed Paper Program Design Options

Options Based on Use of Financial Incentives for PPP Services		
Option #	Option Title	Key Design Elements
		<ul style="list-style-type: none"> ○ Source within the geographic area (e.g, single family, multi-family, streetscape) ● Collectors make their own arrangements with processors to receive, process and market PPP
Option 2B	Incentive for Processors for All Services	<ul style="list-style-type: none"> ● MMBC establishes a financial incentive payable to processors for each tonne of residential PPP processed to a recycling effectiveness rate (RER)⁶ and marketed to a user for specified recycling uses ● The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and ○ Source within the geographic area (e.g, single family, multi-family, streetscape) ● Processors make their own arrangements with collectors to access PPP
Option 2C	Incentive for Markets for All Services	<ul style="list-style-type: none"> ● MMBC establishes a financial incentive payable to markets for each tonne of PPP received from MMBC approved⁷ processors ● The incentive can be tiered by <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and ○ Source within the geographic area (e.g, single family, multi-family, streetscape) ● Markets make their own arrangements with processors to access PPP
Option 2D	Incentives for Collectors and Processors	<ul style="list-style-type: none"> ● MMBC establishes a financial incentive payable to collectors for each tonne of PPP delivered to an approved⁸ processor. The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was collected by the collector (e.g. by municipality), and ○ Source within the geographic area

⁶ Recycling Efficiency Rate means a percentage with the numerator representing the quantity of materials recycled (output from recycling facilities) and the denominator representing the quantity of materials received (input to recycling facilities).

⁷ Refer to Section 3.1.3 Achieving Performance.

⁸ Refer to Section 3.1.3 Achieving Performance.

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Options Based on Use of Financial Incentives for PPP Services		
Option #	Option Title	Key Design Elements
		<p>(e.g, single family, multi-family, streetscape)</p> <ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to processors for each tonne of residential PPP processed to a recycling effectiveness rate and marketed to a user for specified recycling uses
Option 2E	Incentives for Collectors, Transporters and Processors	<ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to collectors for each tonne of PPP delivered to an approved⁹ processor tiered by source (e.g, single family, multi-family, streetscape) • MMBC establishes a transportation incentive payable to transporters (where collectors cannot deliver PPP directly to a processor) to transport collected PPP to processors tiered by geographic area • MMBC establishes a financial incentive payable to processors for each tonne of residential PPP processed to a recycling effectiveness rate and marketed to a user for specified recycling uses

Three options based on delivering PPP services directly were identified.

Options Based on Delivering PPP Services Directly		
Option #	Option Title	Key Design Elements
Option 3A	Direct Delivery of Collection Services	<ul style="list-style-type: none"> • MMBC creates an operating business to collect PPP¹⁰ from single family and multi-family households and streetscapes • MMBC would be responsible for costs incurred by its collection operating business • MMBC's business delivers collected PPP to processors
Option 3B	Direct Delivery of Processing Services	<ul style="list-style-type: none"> • MMBC creates an operating business to process PPP collected from single family and multi-family households and streetscapes, sell the processed PPP to recycling markets and retains material revenues

⁹ Refer to Section 3.1.3 Achieving Performance.

¹⁰ While this option is based on collecting PPP from the entire province, MMBC's operating business could collect PPP from a specific geographic area. See Option 4B and 4C.

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Options Based on Delivering PPP Services Directly		
Option #	Option Title	Key Design Elements
		<ul style="list-style-type: none"> • MMBC establishes commercial arrangements with collectors to access feedstock including payment for PPP delivered
Option 3C	Direct Delivery of Marketing Services	<ul style="list-style-type: none"> • MMBC creates an operating business to purchase PPP from processors that are able to prove that the PPP was collected from single family and multi-family households and streetscapes • MMBC's business sells the processed PPP to recycling markets with whom MMBC establishes commercial relationships and retains revenues from the sale of materials

The PPP program could be designed to contract for some services and offer incentives for other services. Similarly, the PPP program could be designed to contract for or offer incentives for services with MMBC providing some of the services directly. While there are numerous variations possible, the following three examples of combined program option elements are provided for illustration.

Options Based on Combining Contracts, Incentives and Direct Delivery of PPP Services		
Option #	Option Title	Key Design Elements
Option 4A	Contracts for Processors and Incentives for Collectors	<ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to collectors for each tonne of PPP delivered to an approved¹¹ processor. The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and ○ Source within the geographic area (e.g. single family, multi-family, streetscape) • MMBC establishes a series of contracts with processors to process PPP delivered by collectors
Option 4B	Contract for Processing and Direct Delivery of Partial Processing Services	<ul style="list-style-type: none"> • MMBC creates an operating business to process a portion of residential PPP and makes arrangements with collectors (and/or transporters) to secure PPP feedstock, processes materials to meet

¹¹ Refer to Section 3.1.3 Achieving Performance.

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Options Based on Combining Contracts, Incentives and Direct Delivery of PPP Services		
Option #	Option Title	Key Design Elements
		<p>market specifications and markets materials</p> <ul style="list-style-type: none"> • MMBC establishes a series of contracts with processors to process the remaining PPP delivered by collectors • Processors make their own arrangements with collectors (and/or transporters) to secure PPP feedstock, process materials to meet market specifications and market materials
Option 4C	Contracts for Collection and Processing and Direct Delivery of Partial Collection, Processing and Marketing Services	<ul style="list-style-type: none"> • MMBC establishes an operating business to collect residential PPP in a specific geographic area, process collected materials and market processed PPP to recycling markets • MMBC negotiates contracts with collectors in collection zones not serviced by MMBC to provide the required collection services • MMBC negotiates contracts with processors to provide processing and marketing services for MMBC's contracted collectors

Descriptions of each option together with pros, cons, opportunities and risks as well as the outcome of the evaluation of each option are provided in Appendices A through P.

Packaging and Printed Paper Program Design Options

1.0 Background

1.1 Regulatory Context

British Columbia (BC), like many other jurisdictions, has been taking steps to transition responsibility for managing end-of-life products from government, and its taxpayers, to industry, and its consumers. Under this approach, producers assume responsibility for the collection and diversion of their products and packaging at end of life.

In July 2004, BC enacted the Environmental Management Act and then, in October 2004, the Recycling Regulation. The Recycling Regulation was amended in May 2011 to include Schedule 5 which defines the packaging¹² and printed paper¹³ product (PPP) category. With this inclusion, the producers of PPP became obligated to submit a stewardship program plan for approval by the director under Part 2. Should a producer fail to comply with these requirements, the producer may no longer sell, offer for sale, distribute or use the product in a commercial enterprise in British Columbia.

The stewardship program plan is due to the Ministry of Environment by November 19, 2012 with implementation of the approved program by May 19, 2014. The stewardship program must address PPP from residential premises¹⁴ and municipal property that is not industrial, commercial and institutional (IC&I) property¹⁵.

1.2 Multi-Material British Columbia

Multi-Material British Columbia¹⁶ (MMBC) is a not-for-profit agency established under the British Columbia Society Act formed in anticipation of the requirement for a stewardship plan for packaging and printed paper.

MMBC's intention is to assume the role of a stewardship agency in order to discharge the obligations of PPP producers (brand owners and first sellers) under Schedule 5 of the Recycling Regulation.

¹² "Packaging" is defined in the Environmental Management Act as "a material, substance or object that is used to protect, contain or transport a commodity or product, or attached to a commodity or product or its container for the purpose of marketing or communicating information about the commodity or product". Beverage containers, with the exception of milk containers, are managed under a provincial deposit return program.

¹³ "Printed Paper" is defined in Schedule 5 of the Recycling Regulation as "paper that is not packaging, but is printed with text or graphics as a medium for communicating information, and includes telephone directories, but does not include other types of bound reference books, bound literary books, or bound text books".

¹⁴ Excerpt from BC Recycling Regulation: "residential premises" includes houses, apartments, condominiums, town homes and other premises in which persons reside but does not include institutional accommodations or visitor accommodations.

¹⁵ PPP from the ICI sector is not included in the program plan to be developed by MMBC at this time.

¹⁶ MMBC is governed by a board comprised of a representative from each of the Retail Council of Canada (RCC), Food and Consumer Products of Canada (FCPC), Canadian Federation of Independent Grocers (CFIG), Canadian Restaurant and Food Services Association (CRFA) and the Canadian Newspaper Association (CNA).

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1.3 Phased Approach to Producer Responsibility Program for Packaging and Printed Paper

MMBC is currently developing a comprehensive PPP stewardship plan through a three-phased approach:

- Phase 1: Current state analysis and program design options development;
- Phase 2: Program plan development, using the findings of Phase 1; and
- Following approval of the stewardship program plan by the director, MMBC will proceed to a third phase to prepare for implementation of the program.

2.0 Program Design Options for Producer Responsibility Program

2.1 What is a Program Design Option?

A program design option is a description of a set of actions that MMBC could take to deliver the recovery performance objective on behalf of producers that choose to participate in MMBC.

Actions can range from MMBC taking direct control of the collection and processing of PPP in BC to various types of commercial transactions designed to increase PPP recycling activity from the level of service being provided in BC today.

Actions include defining the packaging and printed paper system requirements, including types of collection services, access to collection services and types of packaging and printed paper accepted in the collection system when MMBC's program starts in May 2014 and over time.

Actions also include financial transactions which form the basis for commercial arrangements with service providers, including the scope of services to be provided, the form and level of payment and reporting and monitoring to confirm service delivery.

2.2 Program Design Option Evaluation Process

Program design options can have significantly different economic and environmental outcomes and in a number of cases involve trade-offs. Accordingly, an objective framework to evaluate the strengths and weaknesses of various options was developed to assist MMBC in identifying the option that will best deliver long-term diversion outcomes at least cost to PPP producers and their consumers.

As guiding principles, a packaging and printed paper program for British Columbia will:

- 1) Deliver pollution prevention performance to achieve regulatory compliance
- 2) Drive economic efficiency – which encompasses the concepts of:
 - e. Initial cost effectiveness and the opportunity to reduce costs to producers and their consumers over time

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- f. Continuous improvement - the ability for the program to evolve, adapt and innovate thereby increasing diversion while continuously driving down system cost
 - g. A reliance on competitive markets as a mechanism of continuous improvement
- 3) Be transparent and accountable
- h. To producers in terms of what they get for what they pay
 - i. To regulators on pollution prevention results
 - j. To the public in terms of environmental performance¹⁷
 - k. To commercial actors, local governments and other parties with whom MMBC's program may interact

For each of the three guiding principles, evaluation criteria were developed to support assessment of the program design options. The following table sets out the evaluation criteria for each of the three guiding principles.

Guiding Principles	Evaluation Criteria
1. Deliver pollution prevention performance to achieve regulatory compliance	<ul style="list-style-type: none"> • Meeting the 75% recovery rate target¹⁸ and managing recovered materials in accordance with the pollution prevention hierarchy¹⁹ for materials that MMBC producers supply into the BC market • Providing reasonable and free consumer access to collection facilities²⁰ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property²¹ • Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient
2. Drive economic efficiency – which encompasses the concepts of: <ul style="list-style-type: none"> a. Initial cost effectiveness and the opportunity to reduce costs to producers and their consumers over time b. Continuous improvement - the ability for the program to evolve, adapt and innovate thereby increasing diversion while continuously driving down system cost c. A reliance on competitive markets as a 	<ul style="list-style-type: none"> • Ability to deliver the recovery target at least cost to producers • Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results • Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time • Harnesses competitive end-of-life services and markets <ul style="list-style-type: none"> ○ Does the program design option

¹⁷ Environmental performance encompasses both the 75% recovery rate and the method of management in terms of the pollution prevention hierarchy.

¹⁸ BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹⁹ BC Recycling Regulation Section 5(3).

²⁰ BC Recycling Regulation Section 5(1)(c).

²¹ BC Recycling Regulation Section 5(1)(d).

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Guiding Principles	Evaluation Criteria
<p>mechanism of continuous improvement</p>	<p>(PDO) limit the number or range of suppliers?</p> <ul style="list-style-type: none"> ○ Does the PDO limit the ability of service suppliers to compete? ○ Does the PDO reduce the incentive of service suppliers to compete vigorously?²² <ul style="list-style-type: none"> ● Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> ○ Minimizes bureaucracy and institutional complexity ○ Sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer
<p>3. Be transparent and accountable</p> <ul style="list-style-type: none"> a. To producers in terms of what they get for what they pay b. To regulators on pollution prevention results c. To the public in terms of environmental performance²³ d. To commercial actors, local governments and other parties with whom MMBC's program may interact 	<ul style="list-style-type: none"> ● Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program ● Provides financial data that allows costs to be allocated to producers without cross-subsidization ● Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public ● Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information ● Ensures MMBC is perceived as treating the market fairly without causing undue market impacts ● Addresses local government concerns whether arising from their role as service providers, or, on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC

²² OECD 2010. The Competition Assessment Toolkit

http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

²³ Environmental performance encompasses both the 75% recovery rate and the method of management in terms of the pollution prevention hierarchy.

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3.0 Key Considerations for Packaging and Printed Paper

3.1 Packaging and Printed Paper Category

3.1.1 *Managing Products as Materials*

Packaging and printed paper are products when sold or supplied to consumers.

However, when packaging and printed paper are collected for recycling, all packaging and most printed papers are identified by their material composition rather than by their product design. This occurs for a number of reasons:

- Products are commingled during collection;
- Some products remain commingled during processing and when delivered to recycling markets;
- Packaging takes common forms, such as cartons, bottles and cans, which are then further distinguished by the materials from which they are manufactured, e.g. aseptic or coated paper cartons, glass or plastic bottles, steel or aluminum cans;
- Some sorting technologies are designed to sort by recognizing the material from which the packaging is manufactured e.g. steel, aluminum, various plastic resins; and
- Markets set feedstock specifications by material type (e.g. paper fibres, steel, aluminum, glass), by characteristics (e.g. coated) and by colour (e.g. clear, coloured).

While managing packaging and printed paper as materials, rather than products, is practical for purposes of sorting, processing and marketing, it also presents some challenges.

For example, in order to manage its commercial relationships with producers, MMBC may need to undertake composition audits to identify the relative proportion of different products manufactured of the same material type captured in the collection system. Even though manufactured of the same material, these packages may be of substantially different design which can affect the relative proportion of system costs attributed to each producer.

Access by MMBC to collected and processed materials for purposes of composition audits is a consideration in evaluating program design options.

3.1.2 *Collecting at Curbside*

Where garbage is collected at curbside, packaging and printed paper are often also collected at curbside to provide an equal level of convenience for householders.

Unlike collection at drop-off depots, curbside collection requires that materials are moved from the private property of the householder to a public area adjacent to the street. From the time the collection container is placed at the curb until the collection vehicle arrives to empty the container, unauthorized individuals or companies can access the contents to selectively remove, or scavenge, materials of value. The types of materials removed and the degree to which scavenging occurs is directly related to the economic value of the material. The

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economic value can relate to the commodity value of the material or to a value placed on the item as a result of policy instruments such as deposit systems or EPR programs.

Scavenging of materials from PPP set at curbside includes removal of beverage containers to reclaim deposits and, in times of high market prices, aluminum, steel and corrugated cardboard if easy to access.

The degree to which program design could increase the economic value of PPP set at curbside and the level of scavenging activity is a consideration in evaluating program design options.

3.1.3 *Number of Streams*

Packaging and printed paper collected at depots can be collected in segregated streams or can be accepted as commingled materials from residents.

Packaging and printed paper are typically commingled for curbside single family and for multi-family collection as:

- All packaging in one stream and all printed paper in a second stream; or
- All packaging and printed paper commingled into a single stream.

Where packaging and printed paper are separated into two streams for collection, the streams can be collected on the same collection day in a vehicle divided into two compartments or on alternating weeks in a vehicle with a single compartment. When two-stream materials are delivered to a processing facility, the printed paper stream is checked to remove contaminants for quality control and may be further sorted to yield higher value commodities. The packaging stream is sorted mechanically using equipment that differentiates based on size and/or shape characteristics and using magnetic, eddy current and optical sorting equipment. Quality control of the various commodity streams is typically done by manual removal of contaminants.

Where packaging and printed paper are commingled in one stream for collection, materials can be collected in a vehicle with a single compartment or in one section of a multi-compartment vehicle with the other section used for either garbage or organic waste. When single-stream material is delivered to a processing facility, printed papers are sorted from packaging and then each stream is further processed and sorted as described above. Due to the commingling of packaging and printed paper in the collection system, additional quality control is required on both streams to minimize cross-contamination in the marketed commodities.

The shift to single stream collection has been driven, in part, by a desire to reduce the number of vehicle compartments dedicated to packaging and printed paper in order to accommodate co-collection with other materials on the same vehicle. Municipalities with single stream collection systems can:

- Collect PPP and organic waste on the same vehicle, thereby increasing diversion services to residents;
- Collect PPP and garbage on the same vehicle, thereby servicing a residence with a single vehicle; or

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- Collect only PPP, thereby increasing collection vehicle capacity utilization.

Decreasing the number of vehicles required to collect PPP, garbage and/or organic waste was expected to reduce overall municipal collection costs and allow municipalities to cost-effectively increase diversion services.

Commingling of packaging and printed paper during collection requires more sorting staff and equipment than packaging and printed paper collected in separate streams. The additional sorting staff and equipment add costs to the PPP system.

End markets report that commodities produced from commingled packaging and printed paper contain more contamination than commodities produced from packaging and printed paper collected in separate streams. As the higher contamination rates cost end-markets in terms of residue management and equipment maintenance, end-markets may discount prices paid for single-stream packaging and printed paper.

While municipalities may benefit from increased diversion and reduced overall collection costs from commingled packaging and printed paper, it is unclear whether these cost savings are equal to the increased processing costs plus potential loss of commodity revenue and whether the cost savings benefit the PPP system.

3.1.4 Marketplace Trends

There are two sets of marketplace trends that can be expected to have an impact on packaging and printed paper recycling in BC over the next several years:

- Changes in the materials that are consumed and available from BC householders for recycling; and
- Changes in the markets for packaging and printed paper that are managed in recycling programs across the province.

Changes in PPP Materials Available from BC Households

Packaging and printed paper has changed dramatically during the evolution of residential recycling programs over the past 30 years due to influences such as changing household characteristics and changing lifestyles. BC today has:

- Smaller households with fewer children;
- More one person households;
- More people living in urban centres; and
- More people living in multi-family buildings.

Our society also undergoes lifestyle changes that affect the amount and type of packaging and printed paper that come into our homes:

- We read less newspapers, relying increasingly on electronic media for news, events and advertising;

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- We buy more through the internet, which increases corrugated and other paper packaging in our homes;
- More people work out of their homes with a resulting increase in printer and office papers coming out of households; and
- We expect a high degree of convenience in foods we eat, such as ready-to-eat meals, resulting in more plastic and multi-layer packaging.

A recent Canadian study projected that the net results of these household and lifestyle changes likely means that, over the next ten years:

- There will be a 15% to 20% reduction in the total weight of packaging and printed paper available from households for recycling;
- There will be an estimated 18% less paper, but 17% more plastics; and
- The recyclables stream will become lighter, with more units per tonne to collect, sort and recycle into new products or packaging.

Changes in Markets for PPP

Curbside and depot collection is well established in most parts of British Columbia, with the first curbside program starting in North Vancouver in the early 1980s. Originally markets for residentially collected (non-deposit) materials were export markets, as Canadian and US end users required time to adjust to incorporating residential recyclables into their industrial processes. By the mid 1990s, more Canadian and US markets were established and growing to consume the supply of materials created by expanding recycling programs across North America.

A new – and generally positive trend – has emerged regarding current and future markets for PPP materials collected and processed in BC (see Section 3.4). Many recycled materials are now truly international commodities – especially recovered papers and plastics. For the first time since the creation of our paper making industry, Canada exported more paper collected from residential and industrial, commercial and institutional (ICI) sources to foreign mills that we imported for domestic consumption. Waste plastics exports from North America to global markets have increased 10 fold over the past 10 years.

Local and domestic markets are still important, especially for heavier materials, like glass and old corrugated cardboard, where shipping costs are expensive. But today's successful recycling program operators are commonly international commodity traders and these international markets are critical to the future success of PPP recycling.

3.2 Material Markets

Markets utilize processed packaging and printed paper to manufacture new products.

New products can be produced through recycling and composting processed packaging and printed papers.

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3.2.1 Recycling

3.2.1.1 Papers

Recycled paper has long been the backbone of both residential and ICI recycling programs, both in terms of tonnes diverted and revenues generated. As a result of industry consolidation in North America and massive investment in new technology in paper mills in many parts of Asia, shipments of newspaper (ONP), corrugated packaging (OCC) and mixed paper (boxboard, office paper, etc.) make their way every day from BC processors to mills in the Pacific northwest (primarily Washington and Oregon) and Asia (China, Korea and Vietnam).

Processors determine virtually on a daily basis how much ONP or OCC to separate from their mixed paper stream to secure the most advantageous prices.

Prices for recycled paper grades vary widely and have softened with the global recession of the past two years. Paper prices vary from \$80 to \$150 per tonne depending on the grade and the global economy and demand.

3.2.1.2 Glass

Recycled glass has many end uses. The choice of end uses may depend on the quality of the glass, with glass collected through depots commonly being cleaner than glass collected through curbside collection programs.

Recycled glass can be used to make new containers, fibreglass, sand blast medium and an aggregate substitute.

BC glass is shipped to a fiberglass manufacturing plant just outside Calgary, Alberta and to a firm in Abbotsford that creates sand blast medium and is used as an alternative to aggregate.

As noted earlier, glass is a material for which local market applications are especially important as the cost and environmental burdens of shipping recycled glass long distances for reprocessing are prohibitive. As a rule, the cost to collect, sort and ship glass to markets is not offset by the revenue received from markets.

3.2.1.3 Plastics

Much of the growth in consumer packaging is expected to be in plastics, both in rigid and film formats. Some will be single resin packages that can be readily sorted, either manually or with newly-developed optical sorting technologies, with reasonable commodity prices. But some of the plastic packaging (and increasingly paper packaging) will be multi-layered which is typically more difficult or impossible to recycle.

The plastics reprocessing industry has established a presence in the lower mainland with operating businesses that reprocess mixed plastics, residentially collected film plastics and foam polystyrene packaging.

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Clean, post-consumer reprocessed plastic pellets commonly fetch prices of several hundred dollars per tonne. However, the cost to collect and process light-weight resins, such as film and foam polystyrene packaging, is generally significantly higher than the revenue received from markets.

3.2.1.4 Metals

Most of the aluminum cans generated in BC come back through the deposit system and are reprocessing into can sheet in the US. Good markets also exist for recovered aluminum foil and rigid aluminum (non-beverage) packaging.

Steel cans enjoy a recycling rate across North America of over 60%, the highest recycling rate of any packaging material collected through curbside and (non-deposit) depot collection systems. The price of steel containers has been in the range of \$130 to \$200 per tonne for some time, largely as a result of Asian market demand. Steel mills in Washington State and California process materials shipped from BC recyclers and scrap dealers.

3.2.2 Composting

Soiled paper packaging degrades²⁴ under similar composting conditions and generally at similar rates of conversion as vegetative wastes. Compost made from feedstock including soiled paper packaging can be used as a soil amendment and as an ingredient in blended soil products.

As the types of biodegradable plastic packaging and their processes for degradation vary, standards for biodegradability have been developed for the composting industry. ASTM D6400-04 and EN 13432 Standards set out requirements for the performance of biodegradable plastics in a commercially managed compost environment including the following criteria:

- Disintegration - the ability to fragment into non-distinguishable pieces after screening and safely support bio-assimilation and microbial growth;
- Inherent biodegradation - conversion of carbon to carbon dioxide to the level of 60% and 90% over a period of 180 days for ASTM D6400-04 and EN 13432 respectively;
- Safety - there is no evidence of any eco-toxicity in finished compost and soil blends containing compost can support plant growth; and
- Toxicity - heavy metal concentrations are less than 50% regulated values in soil amendments

3.2.3 Recovery

Markets for engineered fuel^{25,26} to replace conventional sources of energy in industrial processes include cement plants and paper mills.

²⁴ While Schedule 12 Organic Matter Suitable for Composting of BC's *Organic Matter Recycling Regulation* does not list soiled paper as an acceptable feedstock for the production of Class A or Class B compost, the MOE has signaled in *Organic Matter Recycling Regulation* Update and Policy Intentions Paper that they intend to amend Schedule 12 to include paper and cardboard that cannot be reasonably recycled into a paper product and is not contaminated with any substance harmful to humans, animals, plants or the environment.

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Industrial processes require fuel sources, whether conventional or alternate, to meet defined performance standards. Requirements established by the industrial users of alternate fuels include:

- Maximum particle size²⁷;
- Acceptable material content²⁸;
- Maximum levels of chemicals that are contaminants in the industrial process²⁹;
- Maximum levels of contaminants in the industrial process³⁰;
- Maximum moisture content³¹; and
- Minimum energy value³².

4.0 Program Design Options

4.1 Categories of Program Design Options

Program design options have been developed working from:

- Examples of program design options for stewardship programs operating in other jurisdictions³³;
- The manner in which PPP services are delivered, typically organized as:
 - Collection;
 - Transportation;
 - Processing;
 - Material marketing; and
- The manner in which the commercial marketplace is arranged including:
 - Purchase of required services using a contract between the party that requires the service and a party able to deliver the service;
 - Stimulating the marketplace by offering financial incentives under conditions designed to motivate parties to deliver the service required by the party providing the incentive; and
 - Delivery of the service directly by the party requiring the service.

4.2 Examples of Program Designs in Other Jurisdictions

As set out in Section 2.1, program design includes system requirements and the form of financial transactions that are intended to deliver the system requirements. Examples of system

²⁵ Residues from primary or downstream processors comprised of packaging and printed paper for which there are no recycling markets or that cannot meet recycling end-market specifications further processed to meet end-market specifications for fuel.

²⁶ Packaging and printed paper for which there are no recycling markets or that cannot meet recycling end-market specifications processed to meet end-market specifications for fuel.

²⁷ Typical size specifications are 40 mm to 50 mm.

²⁸ Typically includes types of PPP such as plastic packaging, coated and uncoated paper.

²⁹ Examples: 1.5% by weight of sulfur and 0.01% of chlorine.

³⁰ Typically no contaminants such as rocks, dirt, metals, other non-combustible materials allowed.

³¹ Typically as low as possible with maximum levels of 5% moisture by weight.

³² Typically no less than 2,500 Btu per lb with preferred heat values in the range of 7,000 to 14,000 Btu per lb.

³³ See Section 4.3 for examples of program design options in other jurisdictions.

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requirements for programs managing packaging in other jurisdictions are provided in Section 4.2.1. Examples of financial transactions for programs managing various materials in other jurisdictions are provided in Section 4.2.2.

4.2.1 Examples of System Requirements

Examples of system requirements have focused on programs that manage packaging and/or printed paper considering four types of system requirements: targets, performance, sources, access to collection services and types of materials accepted.

Jurisdiction	Target and Performance	Sources	Access to Collection Services	Materials Accepted
Manitoba	<p><i>Target:</i> 75% for beverage containers; 50% reduction of plastic bags by 2015</p> <p><i>Performance:</i> program started in 2010; performance data not available</p>	Residential	Municipal curbside and depot with private collection where municipalities do not participate; streetscape collection (2,500 bins deployed)	Printed paper and packaging comprised of glass, metal, paper, plastic
Ontario	<p><i>Target:</i> 60% as single program target</p> <p><i>Performance:</i> 65% recycled</p>	Residential	Municipal services in communities with at least 5,000 inhabitants	Printed paper and packaging comprised of glass, metal, paper, plastic
Quebec	<p><i>Target:</i> 70% of paper, cardboard, plastic, glass, metal</p> <p><i>Performance:</i> 56% collected</p>	Residential and ICI where municipalities service	Municipal curbside and depot	Packaging, printed materials, written media
Belgium	<p><i>Target:</i> Residential: 80% recycling and 90% recovery IC&I: 75% recycling and 80% recovery in 2009; 80% recycling and 85% recovery from 2010 Material specific: 60% glass³⁴ 60% paper 50% tinfoil 50% aluminum 22.5% plastics</p> <p><i>Performance:</i> Residential: 93% recycling, 95.6% recovery Material specific: 100% glass</p>	Residential	Municipal curbside and depots ³⁵ to agreed standard	Packaging with plastics limited to bottles and flasks

³⁴ Belgium has adopted the targets set in the European Union Packaging Directive.

³⁵ Glass through bottle banks; other materials curbside

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Jurisdiction	Target and Performance	Sources	Access to Collection Services	Materials Accepted
	89% paper 94% metals 39% plastics			
France	<p><i>Target:</i> 60% glass³⁶ 60% paper 50% tinplate 50% aluminum 22.5% plastics 55% overall</p> <p><i>Performance:</i> Residential: 63% recycling Material specific: 79% glass 54% paper 110% steel 31% aluminum 21% plastics</p>	Residential	Municipal curbside and depots	Packaging
Germany	<p><i>Target:</i> 55% overall recycling 65% overall recovery Material specific: 75% glass³⁷ 70% paper 70% tinplate 60% aluminum 60% composites 60% plastics</p> <p><i>Performance:</i> 71% recycling 95% recovery Material specific: 82% glass 88% paper 92% metals 47% plastics</p>	Residential	Contracts for residential collection services through tender process	Paper, packaging of paper, board, plastics, metals, glass ³⁸
United Kingdom	<p><i>Target:</i> 60% glass³⁹ 60% paper 50% tinplate 50% aluminum 22.5% plastics</p>	Residential and ICI	Residential by municipal curbside and depot ⁴⁰ ICI by private sector	Paper, cardboard, glass, aluminum, steel, plastic, wood ⁴¹ , other ⁴²

³⁶ France has adopted the targets set in the European Union Packaging Directive.

³⁷ The German Packaging Ordinance prescribes higher targets than the European Union Packaging Directive.

³⁸ Germany has a deposit system for beverage containers.

³⁹ The United Kingdom has adopted the targets set in the European Union Packaging Directive.

⁴⁰ Service access, materials collected and service levels are not consistent across UK local authorities.

⁴¹ Pallets, fibreboard

⁴² Ceramics, cork, jute, rubber, hessian

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Jurisdiction	Target and Performance	Sources	Access to Collection Services	Materials Accepted
	<i>Performance:</i> 62% recycling 66% recovery <i>Material specific:</i> 61% glass 80% paper 57% metals 2.4% plastics			

4.2.2 Examples of Financial Transactions

Examples of financial transactions in operating programs have been organized in the following categories:

- Purchase of required services using a contract between the party that requires the service and a party able to deliver the service;
- Stimulating the marketplace by offering financial incentives under conditions designed to motivate parties to deliver the service required by the party providing the incentive;
- Delivery of the service directly by the party requiring the service; and
- Some combination of contracting, incentives and/or direct service delivery.

Examples of programs that purchase services using contracts with service providers include:

- Paint programs in four provinces⁴³ contract for collection, transportation and processing;
- The paint program in Ontario contracts with municipalities to provide collection, with transporters to pick up paint from retailers that act as collection sites and with processors for processing of the paint transported from retailers;
- Waste Electrical and Electronic Equipment (WEEE) programs in six provinces contract for transportation, consolidation and processing;
- The BC fluorescents program contracts with collectors to accept fluorescent bulbs and tubes from householders and contracts with processors to process collected materials;
- Battery programs operated by Call2Recycle in 4 provinces contract for transportation and processing;
- In Germany, packaging is collected from residential and ICI generators by companies contracted by a clearing house organization established co-operatively by 9 producer organizations; and
- In Belgium, a producer organization contracts with municipalities to collect packaging from residences while some of these municipalities sub-contract with private companies to deliver the specified collection service.

Examples of programs that stimulate marketplace activities by offering financial incentives include:

⁴³ British Columbia, Nova Scotia, Saskatchewan, New Brunswick

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- Used Oil Material Programs in five provinces⁴⁴ offer Return Incentives to collectors and processors of used oil, oil filters and oil bottles;
- The BC Tires Stewardship Program offers incentives to transporters and processors;
- The Alberta used tires program offers incentives to transporters, processors (of shred and crumb), manufacturers (of fabricated and manufactured products) and end-users;
- The Ontario Used Tires Program offers incentives to collectors, transporters, processors and manufacturers;
- The Ontario battery program offers incentives to transporters and processors;
- The WEEE program in Ontario offers incentives to collectors to accept WEEE from householders and to processors to process and market WEEE they collect from both residential and ICI generators;
- The Alberta WEEE program offers incentives to processors to accept WEEE from collectors, process and market the material; and
- In France, Eco-Emballages compensates municipalities for collection and sorting of packaging using an incentive payment per tonne.

Examples of programs that deliver services directly include:

- Valpak, one of approximately 40 agencies operating in Britain to purchase Packaging Recovery Notes on behalf of producers, operates a processing facility for packaging;
- A number of other agencies⁴⁵ operating in Britain to purchase Packaging Recovery Notes on behalf of producers provide collection services;
- Six⁴⁶ of nine agencies operating in Germany to manage packaging from residential generators own and operate material processing facilities; and
- DSD, one of nine agencies operating in Germany to manage packaging from residential generators, operates a material brokering system.

Examples of programs that use a number of approaches to commercial transactions:

- In addition to operating a processing facility, Valpak also purchases Packaging Recovery Notes⁴⁷ from recyclers and exporters, with the purchase price acting as a financial incentive to recycle the packaging;
- In addition to offering incentives to processors, the Ontario WEEE program contracts with transporters, consolidators and processors to manage WEEE from collectors receiving a collection incentive; and
- In addition to contracting with municipalities for collection, the Ontario paint program offers incentives to transporters to pick up paint from municipalities and incentives to processors to process the paint.

⁴⁴ British Columbia Used Oil Management Association (BCUOMA), Alberta Used Oil Management Association (AUOMA), Saskatchewan Association for Resource Recovery Corp. (SARRC), Manitoba Association for Resource Recovery Corp. (MARRC), Société de gestion des huiles usagées (SOGHU)

⁴⁵ Examples include Veolia, Wastepak and Bifpack.

⁴⁶ The six companies are waste management firms: Landbell, Belland Dual, Eko-Punkt (Remondis), Vfw, Zentek and Veolia Dual.

⁴⁷ Packaging Recovery Notes act as proof that packaging supplied by Valpak's members has been recycled and the producers have met their statutory obligation.

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4.3 System Requirements

4.3.1 Performance Obligation

Under Section 5 (1) of the Recycling Regulation, the product stewardship plan for PPP may be approved if the director is satisfied that the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director and if the plan adequately provides for the management of the product in adherence to the order of preference in the pollution prevention hierarchy.

Section 5(3) sets out the pollution prevention hierarchy in descending order of preference, such that pollution prevention is not undertaken at one level unless or until all feasible opportunities for pollution prevention at a higher level have been taken:

- (a) reduce the environmental impact of producing the product by eliminating toxic components and increasing energy and resource efficiency;
- (b) redesign the product to improve reusability or recyclability;
- (c) eliminate or reduce the generation of unused portions of a product that is consumable;
- (d) reuse the product;
- (e) recycle the product;
- (f) recover material or energy from the product;
- (g) otherwise dispose of the waste from the product in compliance with the Act.

4.3.1.1 Recycling

The Recycling Regulation Guide defines recycling as a series of activities by which products are collected, sorted, processed and converted into raw materials and used in the production of new products.

For purposes of program design option development and assessment, it is assumed that recycling includes:

- Use of packaging or printed paper, when sorted and processed to meet end-market specifications, as raw materials in an activity that produces a new product; and
- Use of packaging or printed paper for which there are no recycling markets, when sorted and processed to meet end-market specifications, as raw materials in an activity that produces compost or soil amendment.

4.3.1.2 Recovery

Recovery is the use of products that are collected, sorted, processed and converted into a fuel substitute or for energy production.

For purposes of program design option development and assessment, it is assumed that recovery includes:

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- Processing residues from primary⁴⁸ or downstream processors⁴⁹, comprised of packaging and printed paper for which there are no recycling markets or that cannot meet recycling end-market specifications, which are further processed to meet specifications as an engineered fuel to replace conventional sources of energy in industrial processes; and
- Packaging and printed paper for which there are no recycling markets or that cannot meet recycling end-market specifications processed to meet specifications as an engineered fuel to replace conventional sources of energy in industrial processes.

4.3.1.3 Achieving Performance

The packaging and printed paper program is obligated to achieve a 75% recovery rate (or another recovery rate established by the director) over time. In order to meet this obligation, program services must be delivered in ways that complement and support the objective. Approaches to ensure that program services support the performance objective include:

- Defining the services to be provided through vendor standards; and/or
- Defining the services to be provided in contract terms.

For collectors of packaging and printed paper, vendor standards or contract terms would typically include:

- Legal, health and safety and environmental requirements;
- Administrative and reporting requirements; and
- Performance requirements including
 - The packaging and printed paper to be accepted in the collection system;
 - The residential sources of packaging and printed paper to receive service;
 - The level of access to collection services to be provided;
 - The maximum amount of contamination⁵⁰ allowed in the collected materials.

For processors of packaging and printed paper, vendor standards or contract terms would typically include:

- Legal, health and safety and environmental requirements;
- Administrative and reporting requirements; and
- Performance requirements including
 - The minimum amount of a collected material that must be utilized by recycling markets rather than recovered or disposed, referred to as a recycling efficiency rate (RER)⁵¹;

⁴⁸ Processor (also referred to as primary processor) means a receiver of PPP responsible for providing custody assurance, processing, handling, transfer or transport services while preparing the PPP for use in saleable products and safely disposing of any residual.

⁴⁹ Downstream processor means an entity engaged by a processor to receive PPP from the processor and to provide custody assurance, processing, handling, transfer or transport services to the processor.

⁵⁰ Contamination would include materials other than the targeted packaging and printed paper accepted in the collection system.

⁵¹ Recycling Efficiency Rate means a percentage with the numerator representing the quantity of materials recycled (output from recycling facilities) and the denominator representing the quantity of materials received (input to recycling facilities).

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- The maximum amount of a collected material that can be directed to recovery markets;
- The maximum amount of a collected material that can be directed to disposal.

4.3.2 Sources of Packaging and Printed Paper

Under Schedule 5 of the Recycling Regulation, the packaging and printed paper program is to address residential premises and municipal property that is not industrial, commercial or institutional property.

The program does not include packaging and printed paper from industrial, commercial or institutional sources.

4.3.2.1 Residential Premises

Residential premises are comprised of:

- Single family dwellings inhabited year round or seasonally⁵²; and
- Multi-family dwellings including rental, co-operative, fractional ownership, time-share, condominium and seniors residences⁵³.

Packaging and printed paper when generated as waste at residential premises can be:

- Transferred by the resident to an area outside of their private property, for example a rear lane or edge of a public street; or
- Stored on the residential premises, for example in a storage area at a multi-family building, with the collector being authorized to access the private property to pick up the material.

4.3.2.2 Municipal Property that is not Industrial, Commercial or Institutional

Municipal property that is not industrial, commercial or institutional property is comprised of:

- Sidewalks which are municipal property, which adjoin buildings in an urban commercial area and which are used for pedestrian traffic;
- Plazas or town squares which are municipal property and which are available to the public; and
- Parks which are municipal property.

For purposes of program design option development and assessment, these types of municipal properties are referred to as streetscape.

$$\text{Recycling Efficiency Rate \%} = \frac{\text{Recycled (material recycling)}}{\text{Input to Recycling}} \times 100$$

⁵² Vacation facilities, such as hotels, motels, cottages and cabins, are considered commercial businesses.

⁵³ Residences at which medical care is provided, such as nursing homes, long-term care facilities and hospices, are considered institutions.

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4.3.3 Collection System

4.3.3.1 Access to Collection Services

Section 5(1)(c) of the Recycling Regulation requires that a stewardship plan provide reasonable and free⁵⁴ consumer access to collection facilities.

The sources of packaging and printed paper, as set out in Section 3.2, are residential premises, including single family and multi-family dwellings, and municipal properties that are streetscapes.

Access by householders to various types of services differs across BC communities, reflecting population density and other factors.

For purposes of program design option development and assessment, it is assumed that reasonable access to collection facilities for packaging and printed paper will be provided:

- For single family households through
 - Curbside collection for packaging and printed paper in areas receiving curbside collection of garbage⁵⁵;
 - Depot collection for packaging and printed paper in other areas;
- For multi-family households through
 - Curbside collection for packaging and printed paper where the PPP is placed in public easements for collection on regular curbside routes;
 - Collection services where the municipality⁵⁶ has a population of 15,000⁵⁷ or more and the number of multi-family households represents 15% or more of total households in a municipality⁵⁸; and
- For streetscapes, subject to proof of concept through testing effective delivery of streetscape collection systems, through collection where the municipality⁵⁹ has
 - An existing litter collection system;
 - A population of 20,000 or more; and
 - A population density of 200 or more people per square kilometre⁶⁰.

⁵⁴ To ensure free access by residents, MMBC can stipulate that service providers not charge residents for the service as a term of a contract or as a condition of eligibility for an incentive.

⁵⁵ Stakeholders reported that households not receiving curbside collection of garbage by local governments are receiving curbside collection of PPP by local governments. To include these households in the MMBC program, this bullet could be modified to "Curbside collection for packaging and printed paper in areas receiving curbside collection of recycling and/or garbage".

⁵⁶ Stakeholders noted that using a municipality as the basis for this calculation does not take into account service areas and would exclude households in electoral areas adjacent to, and possibly serviced by, a municipality.

⁵⁷ Stakeholders reported that multi-family households in municipalities with populations lower than 15,000 are currently receiving collection services provided by or supported by local governments.

⁵⁸ Of the 40 BC municipalities with a population of 15,000 or more, 35 contain multi-family households representing 15% or more of total households.

⁵⁹ Stakeholders suggested that public events be captured in streetscape collection services and that reasonable access to streetscape collection be based on the presence of business activities that generate large amounts of PPP litter, such as quick serve restaurants, convenience stores and newspaper kiosks.

⁶⁰ Twenty-eight municipalities have a population of 20,000 or more and a population density of 200 or more people per square kilometer.

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4.3.3.2 Packaging and Printed Paper Accepted

The following table sets out the packaging and printed paper that could be accepted in the recycling collection system, as well the circumstances under which paper packaging would be accepted in food waste collection programs and directed to composting. These materials are compatible with current processing infrastructure and end-markets are available.

Material Type	Could be Accepted in PPP Recycling Collection System	Could be Accepted in Food Waste Collection System
Printed Papers		
Newspapers and Inserts	√	
Magazines/Catalogues	√	
Telephone Directories	√	
Other Printed Paper	√	
Paper Packaging		
Corrugated Cardboard	√	When contaminated with food
Boxboard	√	When contaminated with food
Kraft Paper Bags	√	When contaminated with food
Molded Pulp Containers	√	When contaminated with food
Polycoated Cartons	√	When contaminated with food
Polycoated Cups	√	When contaminated with food
Other Coated Paper Containers	√	When contaminated with food
Plastic Packaging		
PET Bottles (# 1)	√	
PET Thermoform (# 1)	√	
HDPE Containers (# 2)	√	
Tubs and Lids (# 2, 4, 5)	√	
Polystyrene Crystal	√	
PP Containers	√	
Other Rigid Plastics (# 4, 5, 7 or unmarked)	√	
Biodegradable plastic packaging	61	√ ⁶²

⁶¹ Biodegradable plastic packaging is a contaminant in the recycling stream.

⁶² Where biodegradable plastic packaging meets the ASTM D6400-04 and EN 13432 Standards which set out requirements for the performance of biodegradable plastics in a commercially managed compost environment including the following criteria:

- Disintegration - the ability to fragment into non-distinguishable pieces after screening and safely support bio-assimilation and microbial growth;
- Inherent biodegradation - conversion of carbon to carbon dioxide to the level of 60% and 90% over a period of 180 days for ASTM D6400-04 and EN 13432 respectively;
- Safety - there is no evidence of any eco-toxicity in finished compost and soil blends containing compost can support plant growth; and
- Toxicity - heavy metal concentrations are less than 50% regulated values in soil amendments.

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Material Type	Could be Accepted in PPP Recycling Collection System	Could be Accepted in Food Waste Collection System
Composite Packaging⁶³		
Aseptic Containers	√	
Spiral Wound Cans	√	
Bimetal Containers	√	
Other Packaging		
Aluminum Cans ⁶⁴	√	
Aluminum Foil	√	
Steel Cans ⁶⁵	√	
Glass Bottles & Jars	√	

Certain types of packaging present particular challenges in either collection or processing systems, even though the materials are technically recyclable and end-market demand exists.

For example, handling of plastic film in a sorting facility is difficult as small pieces will float in an air current while larger pieces or a carrier bag filled with film will not respond in the same manner. For these reasons, mechanical sorting systems do not effectively separate plastic film, requiring manual sorting both to create a separate stream for marketing and to ensure adequate separation from other materials for quality control.

Polystyrene foam presents collection challenges due to its large volume to weight ratio. It also presents sorting challenges due to the variation in size (from small packing ‘peanuts’ to larger molded pieces used for protective packaging) and because pieces develop an electric charge and adhere to other materials, creating contamination in other streams.

Polyvinyl chloride (PVC) bottles and containers, while recyclable when effectively separated, are a prohibitive in other streams. If PVC materials are commingled for curbside collection, effective sorting and quality control systems are required.

Collection of plastic film, polystyrene foam and PVC bottles and containers at drop-off depots would allow effective separation, avoiding sorting challenges at processing facilities. These materials could be included in curbside collection systems if the related technical issues are resolved.

⁶³ Other forms of composting packaging, such as multiple plastic resin laminate packaging and paper/plastic laminate packaging, could be included in collection systems if markets are developed.

⁶⁴ Including empty aerosol containers.

⁶⁵ Including empty aerosol containers and empty paint cans

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Material Type	Technical Resolution Required to be Included in PPP Curbside Recycling Collection System
LDPE/HDPE Film ⁶⁶	Requires method of handling in collection system to facilitate effective sorting at processing facilities
Polystyrene Foam	
Polyvinyl Chloride (PVC) Bottles and Other Containers (# 3)	Requires effective method of separation as PVC is prohibited in all other streams

End-uses for flexible packaging manufactured from a combination of materials are not currently available. Examples of multi-layer packaging include:

- Paper laminated with plastic;
- Two or more types of plastic laminated; and
- Packages which include features, such as spouts or closures, made from materials that are different from the primary package.

While not recyclable, these packages could be processed to meet end-user specifications as an alternate fuel. The following packaging could be added to the curbside collection system when the related technical issues are resolved:

Material Type	Technical Resolution Required to be Included in PPP Recycling Collection System
Other Films ⁶⁷	Requires processing capability to produce engineered fuel to meet end-user specifications and demand
Paper/Plastic Laminates ⁶⁸	
Multiple Resin Laminates ⁶⁹	

4.4 Financial Transactions

4.4.1 Implications of Contracting or Incentives

Contracting for services and offering incentives to stimulate the marketplace to deliver services engage service providers in fundamentally different ways.

Contracting for services involves selecting some service providers from the group of possible service providers based on their ability to deliver specified services at least cost. This has the

⁶⁶ Includes plastic grocery bags, plastic retail carry out bags (except bags with metal grommets, rope drawstrings and other non-plastic items), newspaper / flyer bags, dry cleaning bags, overwrap used for bottled water cases, pop cases, toilet tissue, paper towels, diapers etc., overwrap around durable products and marked #2 or #4 (such as around mattresses, furniture or electronic equipment), plastic water softener/salt bags, garden product bags (e.g., soil, mulch, etc. provided residues are removed), bread bags (transparent), produce and bulk food bags for dry fruits and fresh vegetables, cereal box liners

⁶⁷ Includes cellophane overwrap (clear crinkly/non-stretch plastic), supermarket fresh meat wrap (food residues are health risk to collectors and processors), pasta bags, prewashed salad mix bags

⁶⁸ Includes cookie bags

⁶⁹ Includes cheese, poultry and meat overwrap, plastic bubble wrap, stand up pouches

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effect of limiting the number of companies delivering the services and working to achieve MMBC's recovery objective.

Where service providers are contracted, they become, in perception and in effect, agents and their ability to act as arms length intermediaries is reduced.

Where the market is characterized by numerous players and dynamic competition, contracting for services may yield the lowest price for the specified service. However, service providers may have limited ability or motivation to implement innovations that can improve the system during the contract term.

Where the market is characterized by few players and limited competition, contracting for services may not yield the lowest price that could be achieved in a dynamic, competitive market.

Given MMBC's role as the sole (or primary) buyer (i.e. a monopsony) of residential PPP services in British Columbia, contracting for recycling services may have the effect of depressing service provider prices. Over the longer term, depressed prices may force some service providers out of business leaving a more concentrated, less competitive market.

Under an incentive system, service providers that meet MMBC's technical requirements can deliver the service in exchange for the incentive available from MMBC. Incentives are typically set to reflect the price of existing market transactions and are then adjusted over time to reflect system performance and activities.

Service providers accessing incentives have no right of exclusivity and approved service providers are able to compete with one another to maximize profit by managing the most PPP at the least cost possible, driving PPP activity, efficiency and innovation.

Under an incentive system, the service provider establishes commercial relationships with others and becomes an arms-length intermediary to achieve the desired outcome. For example, an incentive available to processors will induce processors to engage collectors to collect PPP and collectors will, in turn, engage householders.

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4.4.2 Financial Transaction Options Based on Contracting for Services

Five financial transaction options based on contracting for PPP services were identified. These options are:

Financial Transaction Options Based on Contracting for PPP Services			
Option #	Option Title	Key Design Elements	Description, Pros, Cons, Opportunities, Risks, Evaluation Found in
Option 1A	Contract with Collector for All Services	<ul style="list-style-type: none"> • MMBC establishes a series of contracts with collectors throughout the province to ensure appropriate collection service levels for each community • Collectors implement collection services (single family and/or multi-family, curbside and/or depot and/or streetscape as specified in the contract terms) and make their own arrangements with transporters (if required) to transport collected materials to processors and with processors to process and market collected materials 	Appendix A - page 38
Option 1B	Contract with Processor for All Services	<ul style="list-style-type: none"> • MMBC establishes a series of contracts with processors to process PPP delivered by collectors • Processors make their own arrangements with collectors (and/or transporters) to secure PPP feedstock, process materials to meet market specifications and market materials 	Appendix B - page 45
Option 1C	Contract with Markets ⁷⁰ for All Services	<ul style="list-style-type: none"> • MMBC establishes a series of contracts with markets to purchase PPP collected from residential sources and streetscapes in BC, following processing to meet market specifications • Markets make their own arrangements with processors to secure PPP feedstock, and processors make their own arrangements with collectors to secure PPP feedstock 	Appendix C - page 52
Option 1D	Contracts with Collectors and Processors	<ul style="list-style-type: none"> • MMBC establishes a series of contracts with collectors throughout the province to ensure appropriate collection 	Appendix D - page 60

⁷⁰ Those utilizing secondary resources in new products.

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Financial Transaction Options Based on Contracting for PPP Services			
Option #	Option Title	Key Design Elements	Description, Pros, Cons, Opportunities, Risks, Evaluation Found in
		service levels for each community • MMBC establishes a series of contracts with processors to process PPP delivered by collectors	
Option 1E	Contracts with Collectors, Transporters and Processors	• MMBC establishes a series of contracts with collectors throughout the province to ensure appropriate collection service levels for each community • Where collectors cannot deliver directly to processing facilities, MMBC establishes a series of contracts with transporters to transport PPP from collectors to processors as directed by MMBC • MMBC establishes a series of contracts with processors to process PPP delivered by collectors and transporters	Appendix E - page 67

4.4.3 Financial Transaction Options Based on Stimulating Marketplace Activity Through Incentives

Five financial transaction options based on stimulating marketplace activity through the use of financial incentives for PPP services were identified. These options are:

Financial Transaction Options Based on Use of Financial Incentives for PPP Services			
Option #	Option Title	Key Design Elements	Description, Pros, Cons, Opportunities, Risks, Evaluation Found in
Option 2A	Incentive for Collectors for All Services	• MMBC establishes a financial incentive payable to collectors for each tonne of residential PPP delivered to an MMBC approved ⁷¹ processor	Appendix F - page 75

⁷¹ Refer to Section 3.1.3 Achieving Performance.

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Financial Transaction Options Based on Use of Financial Incentives for PPP Services			
Option #	Option Title	Key Design Elements	Description, Pros, Cons, Opportunities, Risks, Evaluation Found in
		<ul style="list-style-type: none"> • The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and ○ Source within the geographic area (e.g, single family, multi-family, streetscape) • Collectors make their own arrangements with processors to receive, process and market PPP 	
Option 2B	Incentive for Processors for All Services	<ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to processors for each tonne of residential PPP processed to a recycling effectiveness rate (RER) and marketed to a user for specified recycling uses • The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and ○ Source within the geographic area (e.g, single family, multi-family, streetscape) • Processors make their own arrangements with collectors to access PPP 	Appendix G - page 82
Option 2C	Incentive for Markets ⁷² for All Services	<ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to markets for each tonne of PPP received from MMBC approved⁷³ processors • The incentive can be tiered by <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and ○ Source within the geographic area (e.g, single family, multi-family, streetscape) • Markets make their own arrangements with processors to 	Appendix H - page 89

⁷² Those utilizing secondary resources in new products.

⁷³ Refer to Section 3.1.3 Achieving Performance.

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Financial Transaction Options Based on Use of Financial Incentives for PPP Services			
Option #	Option Title	Key Design Elements	Description, Pros, Cons, Opportunities, Risks, Evaluation Found in
		access PPP	
Option 2D	Incentives for Collectors and Processors	<ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to collectors for each tonne of PPP delivered to an approved⁷⁴ processor. The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was collected by the collector (e.g. by municipality), and ○ Source within the geographic area (e.g, single family, multi-family, streetscape) • MMBC establishes a financial incentive payable to processors for each tonne of residential PPP processed to a recycling effectiveness rate and marketed to a user for specified recycling uses 	Appendix I - page 96
Option 2E	Incentives for Collectors, Transporters and Processors	<ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to collectors for each tonne of PPP delivered to an approved⁷⁵ processor tiered by source (e.g, single family, multi-family, streetscape) • MMBC establishes a transportation incentive payable to transporters (where collectors cannot deliver PPP directly to a processor) to transport collected PPP to processors tiered by geographic area • MMBC establishes a financial incentive payable to processors for each tonne of residential PPP processed to a recycling effectiveness rate and marketed to a user for specified recycling uses 	Appendix J - page 103

⁷⁴ Refer to Section 3.1.3 Achieving Performance.

⁷⁵ Refer to Section 3.1.3 Achieving Performance.

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4.4.4 Financial Transaction Options Based on Delivering Services Directly

Three financial transaction options based on delivering PPP services directly were identified. These options are:

Financial Transaction Options Based on Delivering PPP Services Directly			
Option #	Option Title	Key Design Elements	Description, Pros, Cons, Opportunities, Risks, Evaluation Found in
Option 3A	Direct Delivery of Collection Services	<ul style="list-style-type: none"> • MMBC creates an operating business to collect PPP⁷⁶ from single family and multi-family households and streetscapes • MMBC would be responsible for costs incurred by its collection operating business • MMBC's business delivers collected PPP to processors 	Appendix K - page 111
Option 3B	Direct Delivery of Processing Services	<ul style="list-style-type: none"> • MMBC creates an operating business to process PPP collected from single family and multi-family households and streetscapes, sell the processed PPP to recycling markets and retains material revenues • MMBC establishes commercial arrangements with collectors to access feedstock including payment for PPP delivered 	Appendix L - page 118
Option 3C	Direct Delivery of Marketing ⁷⁷ Services	<ul style="list-style-type: none"> • MMBC creates an operating business to purchase PPP from processors that are able to prove that the PPP was collected from single family and multi-family households and streetscapes • MMBC's business sells the processed PPP to recycling markets with whom MMBC establishes commercial relationships and retains revenues from the sale of materials 	Appendix M - page 125

⁷⁶ While this option is based on collecting PPP from the entire province, MMBC's operating business could collect PPP from a specific geographic area. See Option 4B and 4C.

⁷⁷ Purchasing processed PPP from processors and selling to those consuming secondary resources in new products.

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4.4.5 Combining Financial Transaction Option Elements

The PPP program could be designed to contract for some services and offer incentives for other services. Similarly, the PPP program could be designed to contract for or offer incentives for services with MMBC providing some of the services directly. While there are numerous variations possible, the following three examples of combined program option elements are provided for illustration:

Financial Transaction Options Based on Combining Contracts, Incentives and Direct Delivery of PPP Services			
Option #	Option Title	Key Design Elements	Description, Pros, Cons, Opportunities, Risks, Evaluation Found in
Option 4A	Contract with Processor and Incentives for Collectors	<ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to collectors for each tonne of PPP delivered to an approved⁷⁸ processor. The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and ○ Source within the geographic area (e.g, single family, multi-family, streetscape) • MMBC establishes a series of contracts with processors to process PPP delivered by collectors 	Appendix N - page 132
Option 4B	Contract with Processor and Direct Delivery of Partial Processing Services	<ul style="list-style-type: none"> • MMBC creates an operating business to process a portion of residential PPP and makes arrangements with collectors (and/or transporters) to secure PPP feedstock, processes materials to meet market specifications and markets materials • MMBC establishes a series of contracts with processors to process the remaining PPP delivered by collectors • Processors make their own arrangements with collectors (and/or transporters) to secure PPP feedstock, process materials to meet market specifications and market materials 	Appendix O - page 140

⁷⁸ Refer to Section 3.1.3 Achieving Performance.

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Financial Transaction Options Based on Combining Contracts, Incentives and Direct Delivery of PPP Services			
Option #	Option Title	Key Design Elements	Description, Pros, Cons, Opportunities, Risks, Evaluation Found in
Option 4C	Contracts for Collection and Processing and Direct Delivery of Partial Collection, Processing and Marketing Services	<ul style="list-style-type: none"> • MMBC establishes an operating business to collect residential PPP in a specific geographic area, process collected materials and market processed PPP to recycling markets • MMBC negotiates contracts with collectors in collection zones not serviced by MMBC to provide the required collection services • MMBC negotiates contracts with processors to provide processing and marketing services for MMBC's contracted collectors 	Appendix P – page 149

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5.0 Evaluation of Financial Transaction Options

5.1 Application of Evaluation Criteria

The evaluation criteria set out in Section 2.2 were applied using a methodology based on the following approach:

- Where the question posed by the criteria can be answered by ‘yes’ or ‘no’; and
- Where the question posed by the criteria requires a response that is relative on a continuum which has been defined as:
 - High (H) meaning ‘highly likely’;
 - Medium/high (MH) meaning ‘potential with minimal effort’;
 - Medium (M) meaning ‘potential with effort’;
 - Medium/low (ML) meaning ‘unlikely but great effort can mitigate’; and
 - Low (L) meaning ‘highly unlikely’.

This methodology is set out in the following table.

Principle	#	Evaluation Criteria	Evaluation Methodology
Program Performance	1	Meeting the 75% recovery rate target ⁷⁹ and managing recovered materials in accordance with the pollution prevention hierarchy ⁸⁰ for materials that MMBC producers supply into the BC market <ul style="list-style-type: none"> - collected from single family households - collected by multi-family households - collected by streetscapes 	high to low
			high to low
			high to low
	2	Providing reasonable and free consumer access to collection facilities ⁸¹ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ⁸²	high to low
	3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	high to low
			high to low
Economic Efficiency	4	Ability to deliver the recovery target at least cost to producers <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	high to low
			high to low
			high to low
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	high to low
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	high to low

⁷⁹ BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

⁸⁰ BC Recycling Regulation Section 5(3).

⁸¹ BC Recycling Regulation Section 5(1)(c).

⁸² BC Recycling Regulation Section 5(1)(d).

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Principle	#	Evaluation Criteria	Evaluation Methodology
	7	Harnesses competitive end-of-life services and markets: Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously? ⁸³	yes or no
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC' to administer	yes or no
			yes or no
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	high to low
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	high to low
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	high to low
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes or no
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	high to low
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	yes or no

5.2 Summary Matrix

The following table sets out the application of the criteria using the evaluation methodology described in Section 5.1 to the options described in Section 4.0. Explanations for the rankings assigned to each option for the criteria are provided in Appendices A through P.

MMBC can engage collectors, processors or recycling markets through conditional financial incentives or on a contractual basis. It can also directly deliver services itself. The decision to use intermediaries and how best to engage them involves trade-offs. In general:

- MMBC has more ability to ensure collection service levels are delivered if it has commercial relationships with collectors through contracts or incentives or if MMBC delivers collection services directly.

⁸³ OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

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- MMBC is more likely to achieve the recovery target at the lowest cost if collectors and processors are able to compete with one another and if MMBC is able to design contracts and financial payments to service providers to drive system innovation, economies of scale and other improvements.
- MMBC has more ability to track collection program performance if it has commercial relationships with collectors through contracts or incentives or if MMBC delivers collection services directly.
- MMBC has more ability to track recycling program performance if it has commercial relationships with processors and/or markets through contracts or incentives or if MMBC delivers processing services directly.
- Contracting for collection and processing services will likely limit the number of service providers as some existing collectors and processors may not be selected by MMBC.
- Use of incentives would allow existing single family, multi-family and depot collectors (both local government and private) that can comply with MMBC's vendor standards to deliver the services for which incentives are provided.
- Use of contracts would allow MMBC to negotiate with municipalities providing collection services using public sector staff to pay the average cost determined through the contract procurement process.
- MMBC's administration is more complex if it establishes commercial relationships with collectors rather than (or in addition to) processors or markets as the number of collectors is likely greater than processors and markets combined.
- MMBC may be better positioned to establish reasonable arrangements with service providers if it has direct operating experience and cost data (by providing services directly in a portion of the province).

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Program Performance	#	Evaluation Criteria	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E	3A	3B	3C	4A	4B	4C									
	1	Meeting the 75% recovery rate target ⁸⁴ and managing recovered materials in accordance with the pollution prevention hierarchy ⁸⁵ for materials that MMBC stewards supply into the BC market - collected from single family households - collected by multi-family households - collected by streetscapes	MH	H	H	MH	MH	M	H	H	H	H	H	MH	H	H	H	H	H	MH							
			M	MH	MH	M	M														M	MH	MH	MH	MH	MH	M
			ML	ML	ML	ML	ML														ML	ML	M	M	ML	ML	ML
2	Providing reasonable and free consumer access to collection facilities ⁸⁶ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ⁸⁷	H	ML	ML	H	H	H	H	ML	H	H	H	H	H	ML	H	ML	H	ML	H							
3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient - by single family households - by multi-family households - by streetscapes	H	ML	ML	H	H	M	ML	ML	M	M	H	MH	ML	ML	M	ML	H									
							M	ML	ML	M	M					M											
							L	L	L	L	L					L											

⁸⁴ BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

⁸⁵ BC Recycling Regulation Section 5(3).

⁸⁶ BC Recycling Regulation Section 5(1)(c).

⁸⁷ BC Recycling Regulation Section 5(1)(d).

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Economic Efficiency	#	Evaluation Criteria	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E	3A	3B	3C	4A	4B	4C		
	4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	M	M	M	M	M	H	H	H	H	H	H	M	MH	M	MH	M	M	
			ML	ML	ML	ML	ML											ML		ML
			ML	ML	ML	ML	ML											ML		ML
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	M	MH	H	M	M	H	H	H	H	H	H	L	M	H	MH	MH	M	
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	ML	M	M	ML	ML	H	H	H	H	H	H	M	M	H	MH	MH	M	
	7	Harnesses competitive end-of-life services and markets: Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously? ⁸⁸	yes	yes	no	yes	yes	no	no	no	no	no	no	yes	yes	no	yes	yes	yes	
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer 	no	yes	yes	no	no	no	yes	yes	no	no	no	no	no	no	no	yes	no	
			yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

⁸⁸ OECD 2010. The Competition Assessment Toolkit. http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

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Transparency and Accountability	#	Evaluation Criteria	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E	3A	3B	3C	4A	4B	4C	
	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	M	M	ML	MH	MH	ML	ML	ML	MH	MH	M	H	ML	MH	M	MH	
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	M	M	ML	MH	H	ML	ML	L	MH	H	MH	MH	ML	H	MH	H	
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	M	MH	M	MH	MH	M	MH	M	MH	MH	M	H	MH	MH	MH	MH	
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	yes
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	M	M	MH	M	M	MH	MH	MH	MH	MH	MH	L	L	L	M	M	M
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	yes	no	no	yes	yes	no	no	no	no	no	no	no	yes	no	no	no	no

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5.3 Considerations when Selecting Preferred Program Design Option

MMBC may wish to consider the following points when selecting its preferred program design option on which Phase 2 will be based:

- Existing collection and processing systems for residential PPP in BC have achieved an estimated recycling rate in the range of 50% to 57% based on pre-existing commercial arrangements and decisions taken by local governments, not-for-profit organizations and private collectors without intervention from producers.
- Local governments play a significant role in the management of PPP through contracted collection, processing and marketing services, often purchased under a single blended cost.
- Local governments have a special interest in management of residential packaging and printed paper because:
 - PPP collection services involve use of land adjacent to streets and lanes for set out by households;
 - PPP may be co-collected with organic waste and/or garbage which are services that will continue to be delivered by local governments;
 - Many residents view PPP services as a local government service;
 - Relationships between elected councillors and their residential constituents may be based, in part, on delivery of recycling services;
 - PPP represents a significant portion of residential waste; and
 - PPP remaining in the waste stream may be managed by the local government.
- Private companies are offering PPP collection services in some areas and in some circumstances (e.g. multi-family buildings) that do not receive local government service.
- Depots operated by local governments, not-for-profit organizations and private companies are operating in many areas of BC, including off-shore islands and other remote areas. Even where curbside collection service is available, depots are common, including those operated by private companies that charge visitors to drop off PPP.
- Residential PPP is being processed by fifteen private companies, three local governments and ten not-for-profit organizations. Approximately 60% of residential PPP is processed by four companies.
- With the exception of glass used locally as aggregate and some plastics (primarily expanded polystyrene) which are utilized by BC manufacturers, PPP is exported to markets located outside of BC.

Appendix A

Option 1A: Contract with Collector for All Services

Appendix A – Option 1A: Contract with Collector for All Services

Option 1A: Contract with Collector for All Services
Description
<ul style="list-style-type: none"> • MMBC establishes a series of contracts with collectors throughout the province to ensure appropriate collection service levels for each community • Collectors implement collection services (single family and/or multi-family, curbside and/or depot and/or streetscape as specified in the contract terms) and make their own arrangements with transporters (if required) to transport collected materials to processors and with processors to process and market collected materials • Collectors establish a system to track tonnages collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC • MMBC pays collectors who pay transporters and processors as required⁸⁹
Operating Example of Program Design Option
<ul style="list-style-type: none"> • Fostplus for PPP in Belgium
Flow of PPP From Households To Recycling Markets
<ul style="list-style-type: none"> • Householders have access to single family curbside, multi-family and/or depot collection as defined by the contract terms between collectors and MMBC • Residents have access to streetscape collection as defined by the contract terms between collectors and MMBC • Materials will be collected by local governments or companies that have been successful in establishing contracts with MMBC • Materials will be delivered by collectors to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
MMBC's Role and Responsibilities
<ul style="list-style-type: none"> • MMBC determines collection service levels for single family and multi-family households and collection from streetscapes • MMBC determines the types of PPP accepted in the collection system • MMBC determines zones for purposes of procuring collection services⁹⁰ • MMBC negotiates⁹¹ one or more contracts with collectors in each collection zone to provide the required collection, processing and marketing services • MMBC establishes tracking, reporting, verification and auditing procedures to ensure data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs • MMBC pays collectors based on submission of verified data confirming processing and marketing of PPP sourced from single family and multi-family households and from streetscapes

⁸⁹ Collectors may be paid by processors for some materials when material revenues are high or may pay processors to receive materials when material revenues are low and/or where processing costs are higher than commodity revenues.

⁹⁰ Operating examples of collection zones include BC Used Oil Material Program for incentive system and BC Hydro for fridge retirement collection contracts.

⁹¹ MMBC could select collectors through negotiation, tenders or request for proposals.

Appendix A – Option 1A: Contract with Collector for All Services

- MMBC delivers communications to residents about collection services and/or requires contracted collectors to deliver communications to residents
- MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment

Changes in Role of Householders

- Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although the collector may be different
- Participation requirements may change if new collectors provide service and if PPP accepted in MMBC's program differs from current system
- In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection

Changes in Role of Local Governments

- Local governments that wish to provide collection services, and arrange for processing and marketing services, can respond to MMBC's process to procure collection services
- Local governments that negotiate contracts with MMBC will establish arrangements with processors (and transporters if required) to secure processing and marketing services to satisfy their contractual obligations to MMBC
- Local governments that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the collection and recycling system
- Local governments that currently contract for PPP collection services will no longer contract for these services
- Local governments that currently collect PPP with union staff may or may not be successful in negotiating a contract with MMBC to provide collection services
- Collector selected by MMBC for a collection zone may be different from collector currently providing service under contract to local government, requiring transition co-ordination

Changes for Private Sector PPP Collectors

- Private collectors that wish to provide collection services, and arrange for processing and marketing services, can respond to MMBC's process to procure services
- Private collectors that negotiate contracts with MMBC will establish arrangements with processors (and transporters if required) to secure processing and marketing services to satisfy their contractual obligations to MMBC
- Private collectors that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the collection and recycling system
- Private collectors that currently provide PPP collection services may or may not be successful in negotiating a contract with MMBC to provide collection services
- Private collectors can choose to respond to MMBC's process to procure collection services for one or more collection zones
- When residential and ICI generators are serviced on the same routes, collectors will need to identify the residential portion for reporting to MMBC

Changes for Private Sector PPP Processors

- Processors will provide services to collectors that negotiate collection contracts with MMBC

Appendix A – Option 1A: Contract with Collector for All Services

<ul style="list-style-type: none"> • Processors that also provide collection services can respond to MMBC’s process to procure collection services based on their vertically integrated businesses
<p>Changes for Private Sector PPP Marketing Companies</p>
<ul style="list-style-type: none"> • Material marketing companies continue to deal with processors
<p>Infrastructure Gaps</p>
<ul style="list-style-type: none"> • Gaps in collection infrastructure will be addressed by collectors that negotiate contracts with MMBC • Gaps in processing infrastructure will be addressed by processors wishing to secure feedstock from collectors that negotiate contracts with MMBC
<p>Transitioning From Current System to Contract with Collector For All Services</p>
<ul style="list-style-type: none"> • Where existing local government collection contracts expire in May 2014, MMBC can negotiate collection contracts to begin at the launch of the MMBC program • Where existing local government collection contracts expire after May 2014, MMBC can <ul style="list-style-type: none"> ○ pay for collection services to the contract expiry date based on MMBC’s average contracted collection cost in similar jurisdictions ○ negotiate collection services to be implemented as of the expiry date • Where private companies are paid by single-family households and multi-family buildings for collection services, these arrangements are likely to be abandoned in favour of services provided by contractors paid by MMBC
<p>Stakeholder Implications</p>
<ul style="list-style-type: none"> • Local governments may be concerned that service will be reduced when service levels are determined by MMBC • Smaller collectors or collectors that are not aligned with processors may be less able to compete to provide package of services that includes collection, processing and marketing • Smaller processors may be disadvantaged by lack of economies of scale but may have advantage of proximity to collection routes • If successful collectors are vertically integrated and if smaller MRFs cannot offer cost-effective service in comparison to transfer and processing at larger MRFs, materials may flow to a smaller number of processors increasing quantities marketed by each reducing the need for brokers’ services
<p>Pros</p>
<ul style="list-style-type: none"> • Transactions with collectors cover collection, processing and marketing services • Local governments and small and large private companies can respond to MMBC’s process to procure collection services • Will yield good data on materials collected as collectors are MMBC’s point of contact • Likely to be numerous interested collectors due to lower capital investment to establish PPP collection business • Contracts with collectors will not contribute to increased scavenging • Collectors deal with processors and processors deal with markets • Able to deliver consistent communication message to residents as MMBC defines collection service levels

Appendix A – Option 1A: Contract with Collector for All Services

Cons
<ul style="list-style-type: none"> • Less reliable data on materials recycled or recovered as data must flow from markets to processor to collector to MMBC • As collectors determine commercial arrangements with processors, may not lead to investment in processing infrastructure which could contribute over time to system efficiency • May encourage vertical integration reducing number of service providers and marketplace competition • Payment to collectors based on quantity recycled will require more extensive tracking and monitoring system • MMBC may not be able to access processors or markets to compile data needed for cost allocation through material composition audits and time/motion studies
Opportunities
<ul style="list-style-type: none"> • MMBC can define collection services to ensure appropriate service levels • MMBC can define collection zones to improve collection system efficiencies • Length and terms of contracts between MMBC and collectors determine how payments can be adjusted to reflect changing system costs and revenues • MMBC can set contract term and define contract conditions to facilitate system design adjustments (e.g. adding new materials to collection system), to renew bid prices as system efficiencies are achieved • MMBC access to collectors for audit purposes can be secured via contract terms
Risks
<ul style="list-style-type: none"> • If payment were to be based on quantity collected, may contribute to inflated reporting • Collectors depend on processors who in turn depend on markets to track recycling efficiency rates which may lead to erroneous data • Collectors are MMBC's single source of data without system cross-checks • MMBC access to processors and markets for audit purposes must be secured via contracts with collectors • Where residential and ICI generators are serviced on the same routes, agreement between MMBC and collectors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required • Multi-family building owners/managers may not co-operate with collectors contracted by MMBC

Program Performance	#	Evaluation Criteria	Contract with Collector	Key Rationale
Program Performance	1	Meeting the 75% recovery rate target ⁹² and managing recovered materials in accordance with the pollution prevention hierarchy ⁹³ for materials that MMBC stewards supply into the BC market	MH	Contract can specify service, collectors selected through procurement process, collectors able to service with existing
		- collected from single family households		

⁹² BC Recycling Regulation Section 5(1)(a): "the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director".

⁹³ BC Recycling Regulation Section 5(3).

Appendix A – Option 1A: Contract with Collector for All Services

#	Evaluation Criteria	Contract with Collector	Key Rationale	
			technologies	
	-	collected by multi-family households	M	Contract can specify service, collectors selected through procurement process, systems required to effectively service high-rise multi-family
	-	collected by streetscapes	ML	Contract can specify service, collectors selected through procurement process, new systems required to effectively service
2	Providing reasonable and free consumer access to collection facilities ⁹⁴ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ⁹⁵	H	Contract can specify collection service levels	
3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	H	Able to deliver communications message as collection service levels defined in contract	
Economic Efficiency	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	M	Price fixed by contract term may not represent least cost	
		ML	Price fixed by contract term may not represent least cost and may not reflect innovation to effectively service	
		ML		
5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	M	Limited by process to procure services and by length of contract term	
6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	ML	Limited by process to procure services and by length of contract term	
7	Harnesses competitive end-of-life services and markets: <ul style="list-style-type: none"> Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously?⁹⁶ 	yes	Limited by process to procure services	
8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer		Collectors likely to be most numerous of total service providers engaged in delivering	

⁹⁴ BC Recycling Regulation Section 5(1)(c).

⁹⁵ BC Recycling Regulation Section 5(1)(d).

⁹⁶ OECD 2010. The Competition Assessment Toolkit.

http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix A – Option 1A: Contract with Collector for All Services

P	er	#	Evaluation Criteria	Contract with Collector	Key Rationale
			each interaction		PPP services
			- minimizes MMBC bureaucracy and institutional complexity	no	
			- sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer	yes	Defined in procurement process and contract terms
Transparency and Accountability		9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	M	Access to collectors can be defined in contract terms but no access to processors
		10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	M	Access to collectors for collection cost allocation data but no access to processors for processing cost allocation data
		11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	M	Access to collectors for quantities collected but no access to processors for quantities shipped
		12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined in procurement process and contract terms
		13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	M	MMBC would select preferred collectors through procurement process; those not selected may perceive process as unfair
		14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	yes	Procurement process can specify collection service levels and role for local government

Appendix B

Option 1B: Contract with Processor for All Services

Appendix B – Option 1B: Contract with Processor for All Services

Option 1B: Contract with Processor for All Services
Description
<ul style="list-style-type: none"> • MMBC establishes a series of contracts with processors to process PPP delivered by collectors • Processors make their own arrangements with collectors (and/or transporters) to secure PPP feedstock, process materials to meet market specifications and market materials • Processors establish a system to track tonnages collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC • MMBC pays processors and processors pay transporters and collectors as required
Operating Example of Program Design Option
<ul style="list-style-type: none"> • No operating example identified
Flow of PPP From Households To Recycling Markets
<ul style="list-style-type: none"> • Householder and streetscape services will be determined by collectors which may be influenced by their arrangements with processors which may, in turn, be influenced by their negotiation with MMBC • Materials will be collected by local governments or companies that have established a relationship with a processor that has negotiated a contract with MMBC • Materials will be delivered by collectors to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
MMBC's Role and Responsibilities
<ul style="list-style-type: none"> • MMBC negotiates⁹⁷ contracts with processors to provide the required collection, processing and marketing services • MMBC can deliver collection service level requirements (for single family and multi-family households and collection from streetscapes by geography, types of PPP accepted in the collection system) by incorporating requirements in contracts with processors or by paying processors, in part, by the source of feedstock on the expectation that processors will secure feedstock from collectors providing the specified services • MMBC establishes tracking, reporting, verification and auditing procedures to ensure data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs • MMBC pays processors based on submission of verified data confirming processing and marketing of PPP sourced from single family and multi-family households and from streetscapes • MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment
Changes in Role of Householders
<ul style="list-style-type: none"> • Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although the collector may be different

⁹⁷ MMBC could select processors through negotiation, tenders or request for proposals.

Appendix B – Option 1B: Contract with Processor for All Services

- Participation requirements may change if new collectors provide service and if PPP accepted in MMBC’s program differs from current system
- In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection

Changes in Role of Local Governments

- Local governments that wish to provide collection services can arrange to deliver PPP to, and receive payment from, processors that negotiate contracts with MMBC
- Local governments that currently have contracts with collectors can continue these arrangements subject to arranging to deliver PPP to, and receive payment from, processors that negotiate contracts with MMBC
- Local governments that currently provide collection services with union staff can continue to do so subject to arranging to deliver PPP to, and receive payment from, processors that negotiate contracts with MMBC

Changes for Private Sector PPP Collectors

- Private collection contractors may contract with local governments to provide collection services for single family and multi-family households and/or streetscapes, subject to either the contractor or the local government arranging to deliver PPP to, and receive payment from, processors that negotiate contracts with MMBC
- Private collection contractors may make their own arrangements with single family and multi-family households to provide collection services, subject to arranging to deliver PPP to, and receive payment from, processors that negotiate contracts with MMBC
- Collectors identify the geographic location and source of each load of PPP when delivered to a processor to prove the reported material came from residential sources
- When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors

Changes for Private Sector PPP Processors

- Processors that wish to provide processing and marketing services, and arrange for collection services, can respond to MMBC’s process to procure services
- Processors establish arrangements with collectors (and transporters if required) to secure feedstock to satisfy their contractual obligations to MMBC
- Processors that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the collection and recycling system
- Processors will contract with and receive payment from MMBC for processing and marketing services (rather than local governments or companies)

Changes for Private Sector PPP Marketing Companies

- Material marketing companies continue to deal with processors

Infrastructure Gaps

- Gaps in collection infrastructure will be addressed by collectors wishing to deliver feedstock to processors that negotiate contracts with MMBC
- Gaps in processing infrastructure will be addressed by processors that negotiate contracts with MMBC

Appendix B – Option 1B: Contract with Processor for All Services

Transitioning From Current System to Contract with Processor For All Services
<ul style="list-style-type: none">• Where existing local government collection contracts expire in May 2014, local governments can enter into new contracts subject to either the contractor or the local government arranging to deliver PPP to, and receive payment from, processors that negotiate contracts with MMBC• Where existing local government collection contracts expire after May 2014, the local government or its contractor can arrange to deliver PPP to, and receive payment from, processors that negotiate contracts with MMBC• Where private companies are paid by single-family households and multi-family buildings for collection services, collectors can arrange to deliver PPP to, and receive payment from, processors that negotiate contracts with MMBC and can then eliminate or reduce the charge to single-family households and multi-family buildings
Stakeholder Implications
<ul style="list-style-type: none">• Collectors must arrange to deliver PPP to processors that negotiate contracts with MMBC and payment from these processors may or may not be sufficient to cover collectors' costs• Local governments may be concerned that collection service will be reduced when service is delivered by collectors through arrangements with processors• As processors will be accountable to MMBC for delivery of collection services, processors may be more likely to vertically integrate services to directly provide collection service• Smaller processors or processors that are not aligned with collectors may be less able to compete to provide package of services that includes collection, processing and marketing• Delivery of collection services in all geographic areas and all sources of PPP may depend on whether MMBC's payment to processors is variable by factors such as geographic location and source (single family, multi-family, streetscape)• Materials may flow to a smaller number of processors increasing quantities marketed by each reducing the need for brokers' services
Pros
<ul style="list-style-type: none">• Transactions with processors cover collection, processing and marketing services• Private and local government collectors providing curbside, depot, multi-family building and streetscape collection services can arrange to deliver PPP to, and receive payment from, processors that negotiate contracts with MMBC• Will yield good data on materials marketed as processors are MMBC's point of contact• Does not replace existing commercial relationships between collectors and processors (but will affect terms)• Does not replace existing commercial relationships between processors and markets• Processors deal with both collectors and markets
Cons
<ul style="list-style-type: none">• As processors determine commercial arrangements with collectors<ul style="list-style-type: none">○ may not deliver collection service levels required○ may not lead to investment in collection infrastructure which could contribute over time to system efficiency○ processors may purchase PPP from scavengers• May encourage vertical integration reducing number of service providers and

Appendix B – Option 1B: Contract with Processor for All Services

<p>marketplace competition</p> <ul style="list-style-type: none"> • May be few interested processors due to high capital investment to establish PPP processing business • Less reliable data on materials collected by geographic location and source as data must flow from collectors to processor to MMBC • Payment to processors based (in part) on collection service levels will require more extensive tracking system • MMBC may not be able to access collectors to compile data needed for cost allocation through material composition audits and time/motion studies • Difficult to deliver consistent communication message to residents when collection services are determined by collectors
Opportunities
<ul style="list-style-type: none"> • Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if payments from MMBC to processors are structured appropriately • MMBC can structure payments to processors to provide premium for PPP for which markets provide no or limited revenue • MMBC can contract with multiple processors to protect against processor failure • MMBC can set contract term and define contract conditions to facilitate system design adjustments (e.g. adding new materials to collection system), to renew bid prices as system efficiencies are achieved • MMBC access to processors for audit purposes can be secured via contract terms
Risks
<ul style="list-style-type: none"> • MMBC’s ability to ensure that collection services meet MMBC’s requirements is limited to holding processors accountable through contractual terms • Processors are MMBC’s single source of data without system cross-checks • MMBC access to collectors for audit purposes must be secured via contracts with processors • Where residential and ICI generators are serviced on the same routes, agreement between MMBC and processors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required and processors must implement methodology

Program Performance	#	Evaluation Criteria	Contract with Processor	Key Rationale
Program Performance	1	Meeting the 75% recovery rate target ⁹⁸ and managing recovered materials in accordance with the pollution prevention hierarchy ⁹⁹ for materials that MMBC stewards supply into the BC market	H	Contract can specify service, processors able to secure PPP from range of collectors, collectors able to service with existing technologies
		- collected from single family households		

⁹⁸ BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

⁹⁹ BC Recycling Regulation Section 5(3).

Appendix B – Option 1B: Contract with Processor for All Services

#	Evaluation Criteria	Contract with Processor	Key Rationale
	- collected by multi-family households	MH	Contract can specify service, processors able to secure PPP from range of collectors, systems required to effectively service high-rise multi-family
	- collected by streetscapes	ML	Contract can specify service, processors able to secure PPP from range of collectors, new systems required to effectively service
2	Providing reasonable and free consumer access to collection facilities ¹⁰⁰ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹⁰¹	ML	MMBC not able to specify collection service level directly through arrangements with collectors
3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	ML	Not able to deliver communications message as MMBC not able to specify collection service levels
Economic Efficiency	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	M	Price fixed by contract term may not represent least cost
		ML	Price fixed by contract term may not represent least cost and may not reflect innovation to effectively service
		ML	
5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	MH	Processors limited by process to procure services and by length of contract term but processors able to secure PPP from range of collectors
6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	M	Processors limited by process to procure services and by length of contract term but processors able to secure PPP from most innovative collectors
7	Harnesses competitive end-of-life services and markets: Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete?	yes	Limited by process to procure services
	Does the PDO reduce the incentive of service suppliers to compete vigorously? ¹⁰²		

¹⁰⁰ BC Recycling Regulation Section 5(1)(c).

¹⁰¹ BC Recycling Regulation Section 5(1)(d).

¹⁰² OECD 2010. The Competition Assessment Toolkit.

http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix B – Option 1B: Contract with Processor for All Services

P er c	#	Evaluation Criteria	Contract with Processor	Key Rationale
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer 	yes	Relatively small number of processors
			yes	Defined in procurement process and contract terms
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	M	Access to processors can be defined in contract terms but no access to collectors
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	M	Access to processors for processing cost allocation but no access to collectors for collection cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	MH	Access to processors for quantities delivered and quantities shipped
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined in procurement process and contract terms
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	M	MMBC would select preferred processors through procurement process; those not selected may perceive process as unfair
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	No	MMBC not able to specify collection service levels and role for local government

Appendix C

Option 1C: Contract with Market for All Services

Appendix C – Option 1C: Contract with Market for All Services

Option 1C: Contract with Market for All Services
Description
<ul style="list-style-type: none"> • MMBC establishes a series of contracts with markets to purchase PPP collected from residential sources and streetscapes in BC, following processing to meet market specifications • Markets make their own arrangements with processors to secure PPP feedstock, and processors make their own arrangements with collectors to secure PPP feedstock • Markets establish a system to track tonnages collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC • MMBC pays markets for materials marketed and markets use this additional source of income to adjust prices for material purchased from processors so that processors are able to pay collectors as required
Operating Example of Program Design Option
<ul style="list-style-type: none"> • No operating example identified
Flow of PPP From Households To Recycling Markets
<ul style="list-style-type: none"> • Householder and streetscape services will be determined by collectors which may be influenced by their arrangements with processors which may, in turn, be influenced by their arrangements with markets which may, in turn, be influenced by their negotiation with MMBC • Materials will be collected by local governments or companies that have established a relationship with processors that have relationships with markets that have negotiate contracts with MMBC • Materials will be delivered by collectors to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials to markets that have negotiate contracts with MMBC
MMBC's Role and Responsibilities
<ul style="list-style-type: none"> • MMBC negotiates¹⁰³ contracts with markets to provide the required collection, processing and recycling services • MMBC can deliver collection service level requirements (for single family and multi-family households and collection from streetscapes by geography, types of PPP accepted in the collection system) by incorporating requirements in contracts with markets or by paying markets, in part, by the source of feedstock on the expectation that markets will secure feedstock from processors and processors will secure feedstock from collectors providing the specified services • MMBC establishes tracking, reporting, verification and auditing procedures to ensure data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs • MMBC pays markets based on submission of verified data confirming processing and recycling of PPP sourced from single family and multi-family households and from

¹⁰³ MMBC could select processors through negotiation, tenders or request for proposals.

Appendix C – Option 1C: Contract with Market for All Services

<p>streetscapes</p> <ul style="list-style-type: none">• MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment
Changes in Role of Householders
<ul style="list-style-type: none">• Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although the collector may be different• Participation requirements may change if new collectors provide service and if PPP accepted in MMBC's program differs from current system• In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection
Changes in Role of Local Governments
<ul style="list-style-type: none">• Local governments that wish to provide collection services can arrange to deliver PPP to, and receive payment from, processors that have arrangements with markets that negotiate contracts with MMBC• Local governments that currently have contracts with collectors can continue these arrangements subject to arranging to deliver PPP to, and receive payment from, processors that have arrangements with markets that negotiate contracts with MMBC• Local governments that currently provide collection services with union staff can continue to do so subject to arranging to deliver PPP to, and receive payment from, processors that have arrangements with markets that negotiate contracts with MMBC
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none">• Private collection contractors may contract with local governments to provide collection services for single family and multi-family households and/or streetscapes, subject to either the contractor or the local government arranging to deliver PPP to, and receive payment from, processors that have arrangements with markets that negotiate contracts with MMBC• Private collection contractors may make their own arrangements with single family and multi-family households to provide collection services, subject to arranging to deliver PPP to, and receive payment from, processors that have arrangements with markets that negotiate contracts with MMBC• Collectors identify the geographic location and source of each load of PPP when delivered to a processor to prove the reported material came from residential sources• When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors
Changes for Private Sector PPP Processors
<ul style="list-style-type: none">• Processors sell processed materials to markets, with payments intended to be sufficient for processing services as well as for purchasing feedstock from collectors• Processors establish arrangements with collectors (and transporters if required) to secure feedstock from specified geographic locations and sources
Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none">• Markets require information on PPP collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC• Brokers providing services to markets would need to establish systems to track sources

Appendix C – Option 1C: Contract with Market for All Services

of PPP in order to satisfy markets' requirements for reporting to MMBC
Infrastructure Gaps
<ul style="list-style-type: none"> • Gaps in collection infrastructure will be addressed by collectors wishing to deliver feedstock to processors that have arrangements with markets that negotiate contracts with MMBC • Gaps in processing infrastructure will be addressed by processors that negotiate contracts with markets that negotiate contracts with MMBC
Transitioning From Current System to Contract with Markets For All Services
<ul style="list-style-type: none"> • Markets would have MMBC's payment to increase purchase prices paid to processors for materials meeting market specifications and MMBC's contractual requirements • Systems to track sources of PPP from collectors through processors to markets would be required • Where existing local government collection contracts expire in May 2014, local governments can enter into new contracts subject to either the contractor or the local government arranging to deliver PPP to, and receive payment from, processors that have arrangements with markets that negotiate contracts with MMBC • Where existing local government collection contracts expire after May 2014, the local government or its contractor can arrange to deliver PPP to, and receive payment from, processors that have arrangements with markets that negotiate contracts with MMBC • Where private companies are paid by single-family households and multi-family buildings for collection services, collectors can arrange to deliver PPP to, and receive payment from, processors that have arrangements with markets that negotiate contracts with MMBC and can then eliminate or reduce the charge to single-family households and multi-family buildings
Stakeholder Implications
<ul style="list-style-type: none"> • Collectors must arrange to deliver PPP to processors that have arrangements with markets that negotiate contracts with MMBC and payment from these processors may or may not be sufficient to cover collectors' costs • Processors must arrange to ship PPP to markets that negotiate contracts with MMBC and payment from these markets may or may not be sufficient to cover processors' costs, including the cost of purchasing PPP from collectors • Local governments may be concerned that collection service will be reduced when service is delivered by collectors through arrangements with processors • As markets will be accountable to MMBC for delivery of collection services, markets may be more likely to vertically integrate services to directly provide collection and processing services • Smaller markets or markets that are not aligned with processors and collectors may be less able to compete to provide package of services that includes collection, processing and recycling • Delivery of collection services in all geographic areas and all sources of PPP may depend on whether MMBC's payment to markets is variable by factors such as geographic location and source (single family, multi-family, streetscape)

Appendix C – Option 1C: Contract with Market for All Services

<p>Pros</p> <ul style="list-style-type: none"> • Transactions with markets cover collection, processing and marketing services • Private and local government collectors providing curbside, depot, multi-family building and streetscape collection services can arrange to deliver PPP to, and receive payment from, processors that have arrangements with markets that negotiate contracts with MMBC • Will yield good data on materials recycled as markets are MMBC’s point of contact • Does not replace existing commercial relationships between collectors and processors (but will affect terms) • Does not replace existing commercial relationships between processors and markets (but will affect terms) • Markets deal with processors and processors deal with collectors
<p>Cons</p> <ul style="list-style-type: none"> • As markets determine commercial arrangements with processors and processors determine arrangements with collectors <ul style="list-style-type: none"> ○ may not deliver collection service levels required ○ may not lead to investment in processing and collection infrastructure which could contribute over time to system efficiency ○ processors may purchase PPP from scavengers • May encourage vertical integration reducing number of service providers and marketplace competition • Most PPP markets are located outside of BC • Less reliable data on materials collected by geographic location and source as data must flow from collectors to processors to markets to MMBC • Payment to markets based (in part) on collection service levels will require more extensive tracking system • MMBC may not be able to access collectors or processors to compile data needed for cost allocation through material composition audits and time/motion studies • Difficult to deliver consistent communication message to residents when collection services are determined by collectors
<p>Opportunities</p> <ul style="list-style-type: none"> • Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if payments from MMBC to markets are structured appropriately • MMBC can structure payments to markets to provide premium for PPP for which markets provide no or limited revenue or for which market demand does not exist • MMBC can contract with multiple markets to protect against market failure • Length and terms of contracts between MMBC and markets determine how payments can be adjusted to reflect changing system costs and market revenue • MMBC can set contract term and define contract conditions to facilitate system design adjustments (e.g. adding new materials to collection system), to renew bid prices as system efficiencies are achieved • MMBC access to markets for audit purposes can be secured via contract terms
<p>Risks</p> <ul style="list-style-type: none"> • MMBC’s ability to ensure that collection services meet MMBC’s requirements is limited to holding markets accountable through contractual terms

Appendix C – Option 1C: Contract with Market for All Services

- PPP from BC residential sources likely represents small portion of feedstock for many markets and may not be considered priority
- Markets depend on processors who in turn depend on collectors to track source and quantity of PPP collected which may lead to erroneous data
- Markets are MMBC's single source of data without system cross-checks
- Where residential and ICI generators are serviced on the same routes, agreement between MMBC and markets on an acceptable allocation methodology to identify the residential portion of mixed loads will be required and markets and processors must implement methodology

#	Evaluation Criteria	Contract with Market	Key Rationale
Program Performance	Meeting the 75% recovery rate target ¹⁰⁴ and managing recovered materials in accordance with the pollution prevention hierarchy ¹⁰⁵ for materials that MMBC stewards supply into the BC market	H	Contract can specify service, markets able to secure PPP from range of processors who, in turn, can secure PPP from range of collectors, collectors able to service with existing technologies
	- collected from single family households		
	1	- collected by multi-family households	MH
	- collected by streetscapes	M	Contract can specify service, , markets able to secure PPP from range of processors who, in turn, can secure PPP from range of collectors, new systems required to effectively service
2	Providing reasonable and free consumer access to collection facilities ¹⁰⁶ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹⁰⁷	ML	MMBC not able to specify collection service level directly through arrangements with collectors
3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient	ML	Not able to deliver communications message as MMBC not able to specify collection service levels
	- by single family households - by multi-family households		

¹⁰⁴ BC Recycling Regulation Section 5(1)(a):“the plan will achieve, or is capable of achieving, within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹⁰⁵ BC Recycling Regulation Section 5(3).

¹⁰⁶ BC Recycling Regulation Section 5(1)(c).

¹⁰⁷ BC Recycling Regulation Section 5(1)(d).

Appendix C – Option 1C: Contract with Market for All Services

#	Evaluation Criteria	Contract with Market	Key Rationale
	- by streetscapes		
Economic Efficiency	4 Ability to deliver the recovery target at least cost to stewards - from single family households - from multi-family households - from streetscapes	M	Price fixed by contract term may not represent least cost
		ML	Price fixed by contract term may not represent least cost and may not reflect innovation to effectively service
		ML	
	5 Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	H	Markets limited by process to procure services and by length of contract term markets able to secure PPP from range of processors who, in turn, can secure PPP from range of collectors
	6 Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	M	Markets limited by process to procure services and by length of contract term but markets able to secure PPP from most innovative processors who are able to secure PPP from most innovative collectors
	7 Harnesses competitive end-of-life services and markets: Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously? ¹⁰⁸	No	Markets able to secure PPP from range of processors who, in turn, can secure PPP from range of collectors
8 Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer	yes	Relatively small number of markets	
	No	Relationship with markets defined in procurement process and contract terms but relationships among markets, processors and collectors may be unclear	

¹⁰⁸ OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix C – Option 1C: Contract with Market for All Services

	#	Evaluation Criteria	Contract with Market	Key Rationale
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	ML	Access to markets can be defined in contract terms but no access to collectors or processors
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	ML	No access to processors for processing cost allocation data and no access to collectors for collection cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	M	Access to markets for quantities received and utilized but no access to collectors for quantities collected
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined in procurement process and contract terms
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	MH	MMBC would select preferred markets through procurement process; markets able to secure PPP from range of processors who, in turn, can secure PPP from range of collectors
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	no	MMBC not able to specify collection service levels and role for local government

Appendix D

Option 1D: Contracts with Collectors and Processors

Appendix D – Option 1D: Contracts with Collectors and Processors

Option 1D: Contracts with Collectors and Processors
<p>Description</p> <ul style="list-style-type: none"> • MMBC establishes a series of contracts with collectors throughout the province to ensure appropriate collection service levels for each community • Collectors implement collection services (single family and/or multi-family, curbside and/or depot and/or streetscape as specified in the contract terms) and make their own arrangements with transporters (if required) to transport collected materials to processors • Collectors establish a system to track tonnages collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC • MMBC establishes a series of contracts with processors to process and market PPP delivered by collectors • Processors process materials to meet market specifications and market materials • Processors establish a system to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC • MMBC pays collectors and processors (and either collectors or processors pay transporters if required)
<p>Operating Example of Program Design Option</p> <ul style="list-style-type: none"> • BC fluorescents program, German PPP program, Belgium PPP program
<p>Flow of PPP From Households To Recycling Markets</p> <ul style="list-style-type: none"> • Householders have access to single family curbside, multi-family and/or depot collection as defined by the contract terms between collectors and MMBC • Residents have access to streetscape collection as defined by the contract terms between collectors and MMBC • Materials will be collected by local governments or companies that have been successful in establishing contracts with MMBC • Materials will be delivered by collectors to processors that have been successful in establishing contracts with MMBC either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
<p>MMBC's Role and Responsibilities</p> <ul style="list-style-type: none"> • MMBC determines collection service levels for single family and multi-family households and collection from streetscapes • MMBC determines the types of PPP accepted in the collection system • MMBC determines zones for purposes of procuring collection services¹⁰⁹ • MMBC negotiates¹¹⁰ one or more contracts with collectors in each collection zone to provide the required collection services • MMBC pays collectors based on submission of verified data confirming PPP collected from single family and multi-family households and from streetscapes delivered to

¹⁰⁹ Operating examples of collection zones include BC Used Oil Material Program for incentive system and BC Hydro for fridge retirement collection contracts.

¹¹⁰ MMBC could select collectors through negotiation, tenders or request for proposals.

Appendix D – Option 1D: Contracts with Collectors and Processors

<p>processors that negotiate contracts with MMBC</p> <ul style="list-style-type: none">• MMBC delivers communications to residents about collection services and/or requires contracted collectors to deliver communications to residents• MMBC negotiates¹¹¹ contracts with processors to provide the required processing and marketing services• MMBC pays processors based on submission of verified data confirming processing and marketing of PPP delivered by collectors that negotiate contracts with MMBC• MMBC establishes tracking, reporting, verification and auditing procedures to ensure data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs• MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment
Changes in Role of Householders
<ul style="list-style-type: none">• Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although the collector may be different• Participation requirements may change if new collectors provide service and if PPP accepted in MMBC's program differs from current system• In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection
Changes in Role of Local Governments
<ul style="list-style-type: none">• Local governments that wish to provide collection services can respond to MMBC's process to procure collection services• Local governments that negotiate contracts with MMBC will deliver PPP to processors that negotiate contracts with MMBC• Local governments that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the collection system• Local governments that currently contract for PPP collection services will no longer contract for these services• Local governments that currently collect PPP with union staff may or may not be successful in negotiating a contract with MMBC to provide collection services• Collector selected by MMBC for a collection zone may be different from collector currently providing service under contract to local government, requiring transition co-ordination
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none">• Private collectors that wish to provide collection services can respond to MMBC's process to procure services• Private collectors that negotiate contracts with MMBC will deliver PPP to processors that negotiate contracts with MMBC• Private collectors that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the collection system• Private collectors that currently provide PPP collection services may or may not be successful in negotiating a contract with MMBC to provide collection services

¹¹¹ MMBC could select processors through negotiation, tenders or request for proposals.

Appendix D – Option 1D: Contracts with Collectors and Processors

<ul style="list-style-type: none">• Private collectors can choose to respond to MMBC’s process to procure collection services for one or more collection zones• When residential and ICI generators are serviced on the same routes, collectors will need to identify the residential portion for reporting to MMBC
Changes for Private Sector PPP Processors
<ul style="list-style-type: none">• Processors that wish to provide processing and marketing services can respond to MMBC’s process to procure services• Processors that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the processing and recycling system• Processors will contract with and receive payment from MMBC for processing and marketing services (rather than local governments or companies)
Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none">• Material marketing companies continue to deal with processors
Infrastructure Gaps
<ul style="list-style-type: none">• Gaps in collection infrastructure will be addressed by collectors that negotiate contracts with MMBC• Gaps in processing infrastructure will be addressed by processors that negotiate contracts with MMBC
Transitioning From Current System to Contracts with Collectors and Processors
<ul style="list-style-type: none">• Where existing local government collection contracts expire in May 2014, MMBC can negotiate collection contracts to begin at the launch of the MMBC program• Where existing local government collection contracts expire after May 2014, MMBC can<ul style="list-style-type: none">○ pay for collection services to the contract expiry date based on MMBC’s average contracted collection cost in similar jurisdictions○ negotiate collection services to be implemented as of the expiry date• Where private companies are paid by single-family households and multi-family buildings for collection services, these arrangements are likely to be abandoned in favour of services provided by contractors paid by MMBC
Stakeholder Implications
<ul style="list-style-type: none">• Local governments may be concerned that service will be reduced when service levels are determined by MMBC• Materials may flow to a smaller number of processors increasing quantities marketed by each reducing the need for brokers’ services• Relationships between collectors and processors may change to accommodate MMBC’s selected contractors
Pros
<ul style="list-style-type: none">• Collection service levels are more likely to be delivered as MMBC can specify service standards in contracts with collectors Local governments and small and large private companies can respond to MMBC’s process to procure collection services• Will yield good data on materials collected as collectors are MMBC’s point of contact as well as good data on materials as processors are also MMBC’s point of contact• MMBC can cross-check and reconcile data from collectors and processors

Appendix D – Option 1D: Contracts with Collectors and Processors

<ul style="list-style-type: none"> • MMBC access to collectors and processors for audit purposes can be secured via contract terms • MMBC can establish and enforce performance standards for collection and processing through commercial arrangements with each party • Contracts with collectors will not contribute to increased scavenging • Does not replace existing commercial relationships between processors and markets Likely to be numerous interested collectors due to lower capital investment to establish PPP collection business • Able to deliver consistent communication message to residents as MMBC defines collection service levels
<p>Cons</p> <ul style="list-style-type: none"> • Higher administrative burden on MMBC to manage collection and processing contracts and two sources of data • May encourage vertical integration reducing number of service providers and marketplace competition • May be few interested processors due to high capital investment to establish PPP processing business • May lead to fewer number of larger collectors and/or processors which can concentrate system capacity reducing marketplace competition over time
<p>Opportunities</p> <ul style="list-style-type: none"> • MMBC can define collection services to ensure appropriate service levels • MMBC can define collection zones to improve collection system efficiencies • MMBC can structure payments to processors to provide premium for PPP for which markets provide no or limited revenue • MMBC can contract with multiple processors to protect against processor failure • Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if payments from MMBC to collectors and processors are structured appropriately • MMBC can set contract term and define contract conditions to facilitate system design adjustments (e.g. adding new materials to collection system), to renew bid prices as system efficiencies are achieved
<p>Risks</p> <ul style="list-style-type: none"> • If payment were to be based on quantity collected, may contribute to inflated reporting • Where residential and ICI generators are serviced on the same routes, agreement between MMBC and collectors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required • Multi-family building owners/managers may not co-operate with collectors contracted by MMBC

Appendix D – Option 1D: Contracts with Collectors and Processors

	#	Evaluation Criteria	Contracts with Collectors and Processors	Key Rationale		
Program Performance	1	Meeting the 75% recovery rate target ¹¹² and managing recovered materials in accordance with the pollution prevention hierarchy ¹¹³ for materials that MMBC stewards supply into the BC market	MH	Contract can specify service, collectors selected through procurement process, collectors able to service with existing technologies		
		- collected from single family households				
		- collected by multi-family households			M	Contract can specify service, collectors selected through procurement process, systems required to effectively service high-rise multi-family
		- collected by streetscapes			ML	Contract can specify service, collectors selected through procurement process, new systems required to effectively service
	2	Providing reasonable and free consumer access to collection facilities ¹¹⁴ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹¹⁵	H	Contract can specify collection service levels		
3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	H	Able to deliver communications message as collection service levels defined in contract			
Economic Efficiency	4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	M	Price fixed by contract term may not represent least cost		
			ML	Price fixed by contract term may not represent least cost and may not reflect innovation to effectively service		
			ML			
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	M	Limited by process to procure services and by length of contract term		

¹¹² BC Recycling Regulation Section 5(1)(a):“the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹¹³ BC Recycling Regulation Section 5(3).

¹¹⁴ BC Recycling Regulation Section 5(1)(c).

¹¹⁵ BC Recycling Regulation Section 5(1)(d).

Appendix D – Option 1D: Contracts with Collectors and Processors

	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	ML	Limited by process to procure services and by length of contract term
	7	Harnesses competitive end-of-life services and markets: Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously? ¹¹⁶	yes	Limited by process to procure services
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer 	No	Contracts with collectors and processors
			Yes	Defined in procurement process and contract terms
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	MH	Access to collectors and processors can be defined in contract terms but no access to markets
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	MH	Access to collectors for collection cost allocation data and access to processors for processing cost allocation
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	MH	Access to collectors for quantities collected and to processors for quantities shipped but no access to markets for quantities utilized
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined in procurement process and contract terms
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	M	MMBC would select preferred processors through procurement process; those not selected may perceive process as unfair
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	yes	Procurement process can specify collection service levels and role for local government

¹¹⁶ OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix E

Option 1E: Contracts with Collectors, Transporters and Processors

Appendix E – Option 1E: Contracts with Collectors, Transporters and Processors

Option 1E: Contracts with Collectors, Transporters and Processors
Description
<ul style="list-style-type: none"> • MMBC establishes a series of contracts with collectors throughout the province to ensure appropriate collection service levels for each community • Collectors implement collection services (single family and/or multi-family, curbside and/or depot and/or streetscape as specified in the contract terms) and make their own arrangements with transporters (if required) to transport collected materials to processors • Collectors establish a system to track tonnages collected by geography, to prove the reported material came from residential sources to satisfy requirements of contracts with MMBC • Where collectors cannot deliver directly to processing facilities, MMBC establishes a series of contracts with transporters to transport PPP from collectors to processors as directed by MMBC • Transporters establish a system to track tonnages transported from collector sites to processors to satisfy requirements of contracts with MMBC • MMBC establishes a series of contracts with processors to process and market PPP delivered by collectors • Processors process materials to meet market specifications and market materials • Processors establish a system to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC • MMBC pays collectors, transporters and processors
Operating Example of Program Design Option
<ul style="list-style-type: none"> • Paint programs in British Columbia, Nova Scotia, Saskatchewan, Ontario, New Brunswick
Flow of PPP From Households To Recycling Markets
<ul style="list-style-type: none"> • Householders have access to single family curbside, multi-family and/or depot collection as defined by the contract terms between collectors and MMBC • Residents have access to streetscape collection as defined by the contract terms between collectors and MMBC • Materials will be collected by local governments or companies that have been successful in establishing contracts with MMBC • Materials will be delivered by collectors to processors that have been successful in establishing contracts with MMBC either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
MMBC's Role and Responsibilities
<ul style="list-style-type: none"> • MMBC determines collection service levels for single family and multi-family households and collection from streetscapes • MMBC determines the types of PPP accepted in the collection system • MMBC determines zones for purposes of procuring collection services¹¹⁷ • MMBC negotiates¹¹⁸ one or more contracts with collectors in each collection zone to provide the required collection services

¹¹⁷ Operating examples of collection zones include BC Used Oil Material Program for incentive system and BC Hydro for fridge retirement collection contracts.

Appendix E – Option 1E: Contracts with Collectors, Transporters and Processors

- MMBC pays collectors based on submission of verified data confirming PPP collected from single family and multi-family households and from streetscapes delivered to processors that negotiate contracts with MMBC
- MMBC delivers communications to residents about collection services and/or requires contracted collectors to deliver communications to residents
- MMBC negotiates¹¹⁹ contracts with transporters to provide required transportation service
- MMBC establishes commercial arrangements with transporters based on payments for transport of PPP from collectors at a distance from processing facilities
- MMBC negotiates¹²⁰ contracts with processors to provide the required processing and marketing services
- MMBC pays processors based on submission of verified data confirming processing and marketing of PPP delivered by collectors that negotiate contracts with MMBC
- MMBC establishes tracking, reporting, verification and auditing procedures to ensure data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs
- MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment

Changes in Role of Householders

- Local governments that wish to provide collection services can respond to MMBC's process to procure collection services
- Local governments that negotiate contracts with MMBC will deliver PPP to processors that negotiate contracts with MMBC where materials are delivered by collection vehicles
- Local governments that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the collection system
- Local governments that currently contract for PPP collection or transportation services will no longer contract for these services
- Local governments that currently collect PPP with union staff may or may not be successful in negotiating a contract with MMBC to provide collection services
- Collector selected by MMBC for a collection zone may be different from collector currently providing service under contract to local government, requiring transition co-ordination

Changes in Role of Local Governments

- Regional districts or local governments that currently have contracts with collectors and transporters will no longer contract for these services
- Regional districts or local governments that wish to provide collection services will be expected to comply with MMBC's performance specifications
- Regional districts or local governments that wish to provide collection services can respond to MMBC's request for qualifications or tenders
- Regional districts or local governments that currently provide collection services with union staff may not be selected as the preferred collector for the collection zone

¹¹⁸ MMBC could select collectors through negotiation, tenders or request for proposals.

¹¹⁹ MMBC could select transporters through negotiation, tenders or request for proposals.

¹²⁰ MMBC could select processors through negotiation, tenders or request for proposals.

Appendix E – Option 1E: Contracts with Collectors, Transporters and Processors

<ul style="list-style-type: none">Collector selected by MMBC for a collection zone may be different from collector currently providing service under contract to local government, requiring transition co-ordination
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none">Private collectors that wish to provide collection services can respond to MMBC's process to procure servicesPrivate collectors that negotiate contracts with MMBC will deliver PPP to processors that negotiate contracts with MMBCPrivate collectors that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the collection systemPrivate collectors that currently provide PPP collection services may or may not be successful in negotiating a contract with MMBC to provide collection servicesPrivate collectors can choose to respond to MMBC's process to procure collection services for one or more collection zonesWhen residential and ICI generators are serviced on the same routes, collectors will need to identify the residential portion for reporting to MMBCWhere collectors currently use transporters, transporters may change depending on which transporters are selected by MMBC to provide transport services
Changes for Private Sector PPP Processors
<ul style="list-style-type: none">Processors that wish to provide processing and marketing services can respond to MMBC's process to procure servicesProcessors that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the processing and recycling systemProcessors will contract with and receive payment from MMBC for processing and marketing services (rather than local governments or companies)
Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none">Material marketing companies continue to deal with processors
Infrastructure Gaps
<ul style="list-style-type: none">Gaps in collection infrastructure will be addressed by collectors that negotiate contracts with MMBCGaps in transportation infrastructure will be addressed by transporters that negotiate contracts with MMBCGaps in processing infrastructure will be addressed by processors that negotiate contracts with MMBC
Transitioning From Current System to Contracts with Collectors, Transporters and Processors
<ul style="list-style-type: none">Where existing local government collection contracts expire in May 2014, MMBC can negotiate collection contracts to begin at the launch of the MMBC programWhere existing local government collection contracts expire after May 2014, MMBC can<ul style="list-style-type: none">pay for collection services to the contract expiry date based on MMBC's average contracted collection cost in similar jurisdictionsnegotiate collection services to be implemented as of the expiry dateWhere private companies are paid by single-family households and multi-family buildings

Appendix E – Option 1E: Contracts with Collectors, Transporters and Processors

<p>for collection services, these arrangements are likely to be abandoned in favour of services provided by contractors paid by MMBC</p> <ul style="list-style-type: none"> • Materials that were previously delivered directly to a local processing facility may be transported by an MMBC transporter to a more distant MRF • Processing facility locations serving geographic areas may change depending on which processing company is selected by MMBC to provide processing services
<p>Stakeholder Implications</p> <ul style="list-style-type: none"> • Local governments may be concerned that service will be reduced when service levels are determined by MMBC • Materials may flow to a smaller number of processors increasing quantities marketed by each reducing the need for brokers' services • Relationships between collectors, transporters and processors may change to accommodate MMBC's selected contractors
<p>Pros</p> <ul style="list-style-type: none"> • Collection service levels are more likely to be delivered as MMBC can specify service standards in contracts with collectors • Local governments and small and large private companies can respond to MMBC's process to procure collection services • Will yield good data on materials collected as collectors are MMBC's point of contact as well as good data on materials as processors are also MMBC's point of contact • MMBC can cross-check and reconcile data from collectors, transporters and processors • MMBC access to collectors and processors for audit purposes can be secured via contract terms • MMBC can establish and enforce performance standards for collection, transportation and processing through commercial arrangements with each party • Contracts with collectors will not contribute to increased scavenging • Does not replace existing commercial relationships between processors and markets Likely to be numerous interested collectors due to lower capital investment to establish PPP collection business • Able to deliver consistent communication message to residents as MMBC defines collection service levels
<p>Cons</p> <ul style="list-style-type: none"> • Higher administrative burden on MMBC to manage collection, transportation and processing contracts and multiple sources of data • May encourage vertical integration reducing number of service providers and marketplace competition • May be few interested processors due to high capital investment to establish PPP processing business • May lead to fewer number of larger collectors and/or processors which can concentrate system capacity reducing marketplace competition over time
<p>Opportunities</p> <ul style="list-style-type: none"> • MMBC can define collection services to ensure appropriate service levels • MMBC can define collection zones to improve collection system efficiencies • MMBC can structure payments to processors to provide premium for PPP for which markets provide no or limited revenue

Appendix E – Option 1E: Contracts with Collectors, Transporters and Processors

<ul style="list-style-type: none"> • MMBC can contract with multiple processors to protect against processor failure • Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if payments from MMBC to collectors and processors are structured appropriately • MMBC can set contract term and define contract conditions to facilitate system design adjustments (e.g. adding new materials to collection system), to renew bid prices as system efficiencies are achieved
Risks
<ul style="list-style-type: none"> • If payment were to be based on quantity collected, may contribute to inflated reporting • Where residential and ICI generators are serviced on the same routes, agreement between MMBC and collectors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required • Multi-family building owners/managers may not co-operate with collectors contracted by MMBC

	#	Evaluation Criteria	Contracts with Collectors, Transporters and Processors	Key Rationale
Program Performance	1	Meeting the 75% recovery rate target ¹²¹ and managing recovered materials in accordance with the pollution prevention hierarchy ¹²² for materials that MMBC stewards supply into the BC market	MH	Contract can specify service, collectors selected through procurement process, collectors able to service with existing technologies
		- collected from single family households		
		- collected by multi-family households	M	
	- collected by streetscapes	ML	Contract can specify service, collectors selected through procurement process, new systems required to effectively service	
	2	Providing reasonable and free consumer access to collection facilities ¹²³ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹²⁴	H	Contract can specify collection service levels

¹²¹ BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹²² BC Recycling Regulation Section 5(3).

¹²³ BC Recycling Regulation Section 5(1)(c).

¹²⁴ BC Recycling Regulation Section 5(1)(d).

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Program Performance	#	Evaluation Criteria	Contracts with Collectors, Transporters and Processors	Key Rationale
	3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	H	Able to deliver communications message as collection service levels defined in contract
Economic Efficiency	4	Ability to deliver the recovery target at least cost to stewards	M	Price fixed by contract term may not represent least cost
		- from single family households	ML	Price fixed by contract term may not represent least cost and may not reflect innovation to effectively service
		- from multi-family households	ML	
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	M	Limited by process to procure services and by length of contract term
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	ML	Limited by process to procure services and by length of contract term
	7	Harnesses competitive end-of-life services and markets: <ul style="list-style-type: none"> Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously?¹²⁵ 	yes	Limited by process to procure services
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer 	no	Contracts with collectors, transporters and processors
yes			Defined in procurement process and contract terms	

¹²⁵ OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix E – Option 1E: Contracts with Collectors, Transporters and Processors

	#	Evaluation Criteria	Contracts with Collectors, Transporters and Processors	Key Rationale
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	MH	Access to collectors, transporters and processors can be defined in contract terms but no access to markets
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	H	Access to collectors for collection cost allocation data, access to transporters for transport cost allocation data and access to processors for processing cost allocation
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	MH	Access to collectors for quantities collected and to processors for quantities shipped but no access to markets for quantities recycled
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	Yes	Defined in procurement process and contract terms
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	M	MMBC would select preferred service providers through procurement process; those not selected may perceive process as unfair
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	yes	Procurement process can specify collection service levels and role for local government

Appendix F

Option 2A: Incentive for Collectors for All Services

Appendix F – Option 2A: Incentive for Collectors for All Services

<p>Option 2A: Incentive for Collectors for All Services</p>
<p>Description:</p> <ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to collectors for each tonne of residential PPP delivered to an MMBC approved¹²⁶ processor • The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and ○ Source within the geographic area (e.g. single family, multi-family, streetscape) • Collectors implement collection services for which incentives are available and make their own arrangements with transporters (if required) to transport collected materials to processors and with processors to process and market collected materials • Collectors establish a system to track tonnages collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to be eligible for incentives from MMBC • MMBC pays incentives to collectors who pay transporters and processors as required
<p>Operating Example of Program Design Option</p> <ul style="list-style-type: none"> • Eco-Emballages for PPP in France
<p>Flow of PPP From Households To Recycling Markets</p> <ul style="list-style-type: none"> • Householder and streetscape services will be determined by collectors which may be influenced by the incentive available from MMBC • Approved¹²⁷ collectors transport collected materials to approved processors • Materials will be collected by local governments or companies that are approved to receive the incentive available from MMBC and that have established arrangements with processors that are approved by MMBC to receive the material • Processors access PPP by establishing arrangements with collectors providing single family curbside, multi-family, depot and/or streetscape collection service or by providing these collection services directly • Materials will be delivered by collectors to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
<p>MMBC's Role and Responsibilities</p> <ul style="list-style-type: none"> • MMBC establishes incentives tiered by the geographic area in which PPP is collected and the source of PPP • MMBC establishes a processor standard by which processors are approved to be eligible to receive collected PPP; processor standard includes a recycling effectiveness threshold (RET) – e.g. a specified percentage of a material marketed by weight for every tonne of the material received by the processor • MMBC verifies geographic area and sources of PPP by requiring collectors to report locations and source of materials and by confirming these data through audits • MMBC verifies processor outputs to material recycling markets through audits • MMBC verifies processor ongoing adherence to the RET through audits

¹²⁶ Refer to Section 3.1.3 Achieving Performance.

¹²⁷ Refer to Section 3.1.3 Achieving Performance.

Appendix F – Option 2A: Incentive for Collectors for All Services

Changes in Role of Householders
<ul style="list-style-type: none">• Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although the collector may be different• Participation requirements may change if new collectors provide service and if PPP accepted in MMBC’s program differs from current system• In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection
Changes in Role of Local Governments
<ul style="list-style-type: none">• Local governments wishing to provide collection services will be approved against the MMBC collector standard to be eligible for the collection incentive and must negotiate delivery of materials to approved processors• Local governments that currently provide collection services with union staff may continue to do so but must be eligible for the MMBC collection incentive and must negotiate delivery of materials to approved processors• Local governments must comply with MMBC reporting and audit requirements to remain approved
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none">• Private collectors wishing to provide collection services will be approved against the MMBC collector standard to be eligible for the collection incentive• Private collectors must comply with MMBC reporting and audit requirements to remain approved• Private collectors can negotiate with local governments to provide collection services with either the private collector or the local government being eligible for the MMBC collection incentive and negotiating delivery of materials to approved processors• Collectors that wish to provide collection services must make arrangements with local governments to access public easements to provide single family, multi-family dwellings and streetscape collection, make arrangements with multi-family property management companies for collection services and negotiate delivery of materials to approved processors• Negotiations between incumbent collectors and local governments remain at the discretion of those parties• Collectors will identify geographic areas and sources of PPP to MMBC to be eligible for zone and source specific incentives• When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors to MMBC
Changes for Private Sector PPP Processors
<ul style="list-style-type: none">• Processors that wish to provide processing and marketing services can apply to be approved against the MMBC processor standard including the recycling efficiency rate to receive PPP from collectors eligible for the collection incentive• Processors establish arrangements with collectors (and transporters if required) to secure feedstock• Processors must comply with MMBC reporting and audit requirements to remain approved• Processors will compete for PPP by negotiating with collectors and/or directly (where vertically integrated) with local governments and multi-family building property managers to access PPP feedstock

Appendix F – Option 2A: Incentive for Collectors for All Services

Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none"> • Material marketing companies continue to deal with processors
Infrastructure Gaps
<ul style="list-style-type: none"> • Collection infrastructure gaps will be filled by collectors where incentive levels and volume of PPP are sufficient to drive a reasonable return on investment in infrastructure <ul style="list-style-type: none"> ○ Example: collectors may capitalize multi-family building collection infrastructure where the building enters into a long-term agreement with the collector • Processing infrastructure gaps will be filled where processors negotiated payment from collectors, commodity values and volume of PPP are sufficient to drive a reasonable return on investment in infrastructure; <ul style="list-style-type: none"> ○ Example: processor may capitalize processing facility expansion or additional sorting equipment based on secured feedstock from collectors and anticipation of future income from payments by collectors
Transitioning From Current System to Single Incentive Available to Collectors
<ul style="list-style-type: none"> • Negotiations between processors, collectors and local governments likely to begin when MMBC unveils tiered collection incentives • Current arrangements between processors, collectors and local governments can be renegotiated to take into account the MMBC collection incentive system at their discretion • Where private companies are paid by single-family households and multi-family buildings for collection services, collectors can adjust arrangements to take into account the MMBC collection incentive system at their discretion • MMBC's ability to track PPP system performance depends on collectors being approved and establishing necessary arrangements with approved processors
Stakeholder Implications
<ul style="list-style-type: none"> • Processors may be more likely to vertically integrate services to directly provide collection service • Processors may prefer dealing with fewer number of collectors to access feedstock leading to consolidation of collectors • Smaller processors may be advantageously positioned to service adjacent geographic areas but may be disadvantaged by lack of economies of scale
Pros
<ul style="list-style-type: none"> • MMBC's focus is on collectors – the most costly aspect of delivering a PPP program • Payment is based on collection and delivery to processors that are able to deliver recycling outcomes • MMBC is not involved in any market transactions required to pull materials to processors • Arrangements between local governments, collectors and processors are determined among themselves without MMBC intervention or dispute mediation • Collectors and processors can “self-organize” to delivery MMBC's performance objective • Competitive collection markets more likely to deliver long-term efficiency • Processors ensure quality of materials received by rejecting substandard materials that cannot be processed to the recycling efficiency rate with the effect that the collector is not eligible for the collection incentive for rejected materials • MMBC is a price-setter not a price taker with less financial risk as incentives can be

Appendix F – Option 2A: Incentive for Collectors for All Services

<p>ratcheted up incrementally to drive performance if required and ratcheted down over time as capital investments mature</p> <ul style="list-style-type: none"> • Requirements for collectors to verify geographic zone and residential sources of PPP may be used as a control on ICI materials and scavenging
Cons
<ul style="list-style-type: none"> • Significant MMBC investment in audit and oversight activities to verify sources of PPP received by collectors and recycling outcomes • May encourage vertical integration reducing number of service providers and marketplace competition • Difficult to deliver consistent communication message to residents when collection services are determined by collectors
Opportunities
<ul style="list-style-type: none"> • Larger collectors may have an incentive to invest in processing capacity • Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if incentives from MMBC to collectors are structured appropriately • MMBC can structure incentives to collectors to provide premium for PPP for which markets provide no or limited revenue
Risks
<ul style="list-style-type: none"> • Novel approach for PPP that will require intensive education and initial support for stakeholder adjustment • Absence of prescriptive commercial arrangements may translate to uncertainty among stakeholders • Delivery of collection service levels dependent on effectiveness of variable incentives • Collection incentives may contribute to inflated reporting (leakage from ICI) • Where residential and ICI generators are serviced on the same routes, agreement among MMBC, collectors and processors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required • Incentive levels might be set below costs so that processors and collectors are not attracted to provide services, delaying achievement of targets • Incentives must be set to drive desired market activity (investment in infrastructure gaps, collection etc.) in the absence of perfect market information

Program Performance	#	Evaluation Criteria	Incentive for Collectors	Key Rationale
Program Performance	1	<p>Meeting the 75% recovery rate target¹²⁸ and managing recovered materials in accordance with the pollution prevention hierarchy¹²⁹ for materials that MMBC stewards supply into the BC market</p> <ul style="list-style-type: none"> - collected from single family households - collected by multi-family households - collected by streetscapes 	M	<p>Collectors will collect PPP to be eligible for incentive but uncertain effect on processing and recycling</p>

¹²⁸ BC Recycling Regulation Section 5(1)(a): "the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director".

¹²⁹ BC Recycling Regulation Section 5(3).

Appendix F – Option 2A: Incentive for Collectors for All Services

P er c	#	Evaluation Criteria	Incentive for Collectors	Key Rationale
Economic Efficiency	2	Providing reasonable and free consumer access to collection facilities ¹³⁰ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹³¹	H	Incentive can be tiered by source to deliver desired service levels
	3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	M	Service for which incentive is provided can be communicated
			M	Service for which incentive is provided can be communicated
			L	Uncertain effect on streetscape collection services
	4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	H	Incentive can be adjusted to reflect system changes
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	H	Incentive likely to engage interested collectors, and through collectors, processors
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	H	Collectors and processors will innovate to increase revenue and profit; processors limited by process to procure services and by length of contract term but processors able to secure PPP from most innovative collectors
	7	Harnesses competitive end-of-life services and markets: <ul style="list-style-type: none"> Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously?¹³² 	no	Collectors able to deliver required service can access incentive and processors can negotiate with collectors
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for 	no	Collectors likely to be most numerous of total service providers engaged in delivering PPP services
			yes	Defined requirements to be eligible for incentive

¹³⁰ BC Recycling Regulation Section 5(1)(c).

¹³¹ BC Recycling Regulation Section 5(1)(d).

¹³² OECD 2010. The Competition Assessment Toolkit.

http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix F – Option 2A: Incentive for Collectors for All Services

P er s	#	Evaluation Criteria	Incentive for Collectors	Key Rationale
		program services that are clear and reasonable for service providers and simple for MMBC to administer		
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	ML	Access to collectors can be defined in eligibility requirements but no access to processors or markets
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	ML	Access to collectors for collection cost allocation data but no access to processors for processing cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	M	Access to collectors for quantities collected but no access to processors for quantities shipped or to markets for quantities recycled
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined requirements to be eligible for incentive
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	MH	Collectors able to deliver required service can access incentive and processors can negotiate with collectors
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	no	No mechanism to address concerns

Appendix G

Option 2B: Incentive for Processors for All Services

Appendix G – Option 2B: Incentive for Processors for All Services

<p>Option 2B: Incentive for Processors for All Services</p>
<p>Description:</p> <ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to processors for each tonne of residential PPP processed to a recycling effectiveness rate (RER) and marketed to a user for specified recycling uses • The incentive can be tiered by <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and ○ Source within the geographic area (e.g. single family, multi-family, streetscape) • Processors make their own arrangements with collectors (and/or transporters) to secure PPP feedstock, process materials to meet market specifications and market materials • Processors establish a system to track tonnages collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to be eligible for incentives from MMBC • MMBC pays incentives to processors and processors pay transporters and collectors as required
<p>Operating Example of Program Design Option</p> <ul style="list-style-type: none"> • No operating example identified
<p>Flow of PPP From Households To Recycling Markets</p> <ul style="list-style-type: none"> • Processors access PPP by establishing arrangements with collectors providing single family curbside, multi-family, depot and/or streetscape collection service or by providing these collection services directly • Householder and streetscape services will be determined by collectors which may be influenced by their arrangements with processors which may, in turn, be influenced by the incentive available from MMBC • Materials will be collected by local governments or companies that have established a relationship with a processor that is approved¹³³ to receive the incentive available from MMBC • Materials will be delivered by collectors to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
<p>MMBC's Role and Responsibilities</p> <ul style="list-style-type: none"> • MMBC establishes processor incentives tiered by the geographic area in which PPP is collected and the source of PPP • MMBC establishes a processor standard by which processors are approved to be eligible to receive the incentive including a recycling effectiveness rate (RER) – e.g. a specified percentage of a material marketed by weight for every tonne of the material received by the processor • MMBC verifies reported locations, sources and quantities through audits • MMBC verifies processor outputs to material recycling markets through audits • MMBC verifies processor ongoing adherence to the RER through audits

¹³³ Refer to Section 3.1.3 Achieving Performance

Appendix G – Option 2B: Incentive for Processors for All Services

Changes in Role of Householders
<ul style="list-style-type: none">• Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although the collector may be different• Participation requirements may change if new collectors provide service and if PPP accepted in MMBC’s program differs from current system• In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection
Changes in Role of Local Governments
<ul style="list-style-type: none">• Local governments that wish to provide collection services can do so but must negotiate sale of materials to approved processors• Local governments that currently have contracts with collectors may continue to contract for these services but either the local government or collector must negotiate sale of materials to approved processors• Local governments that currently provide collection services with union staff may continue to do so but must negotiate sale of materials to approved processors
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none">• Private collectors that wish to provide collection services make arrangements with local governments for access to public easements where required to provide collection to single family and multi-family dwellings and to provide streetscape collection, make arrangements with multi-family property management companies for collection services and negotiate sale of materials to approved processors• Negotiations between incumbent collectors and local governments remain at the discretion of those parties• Collectors identify geographic areas and sources of PPP to processors so that processors have the information necessary to be eligible for zone and source specific processor incentives• When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors to allow processors to meet their reporting obligation to MMBC
Changes for Private Sector PPP Processors
<ul style="list-style-type: none">• Processors that wish to provide processing and marketing services, and arrange for collection services, can apply to be approved against the MMBC processor standard including the recycling efficiency rate to be eligible for the processor incentive• Processors establish arrangements with collectors (and transporters if required) to secure feedstock• Processors must comply with MMBC reporting and audit requirements to remain approved
Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none">• Material marketing companies continue to deal with processors
Infrastructure Gaps
<ul style="list-style-type: none">• Collection infrastructure gaps will be filled where collectors negotiated payment from processors and volume of PPP are sufficient to drive a reasonable return on investment in infrastructure<ul style="list-style-type: none">○ Example: collectors may capitalize multi-family building collection infrastructure

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<p>where the building enters into a long-term agreement with the collector</p> <ul style="list-style-type: none"> Processing infrastructure gaps will be filled by processors where incentive levels, commodity values and volume of PPP are sufficient to drive a reasonable return on investment in infrastructure; <ul style="list-style-type: none"> Example: processor may capitalize processing facility expansion or additional sorting equipment based on secured feedstock from collectors and anticipation of future income from processing incentives
<p>Transitioning From Current System to Incentive Available to Processor</p> <ul style="list-style-type: none"> Negotiations between processors, collectors and local governments likely to begin when MMBC unveils tiered processing incentives Current arrangements between processors, collectors and local governments can be renegotiated to take into account the MMBC processing incentive system at their discretion Where private companies are paid by single-family households and multi-family buildings for collection services, collectors can adjust arrangements to take into account their negotiated payment from processors at their discretion MMBC's ability to track PPP system performance depends on processors being approved and establishing necessary arrangements with collectors to access PPP
<p>Stakeholder Implications</p> <ul style="list-style-type: none"> Processors may be more likely to vertically integrate services to directly provide collection service Processors may prefer dealing with fewer number of collectors to access feedstock leading to consolidation of collectors Smaller processors may be advantageously positioned to service adjacent geographic areas but may be disadvantaged by lack of economies of scale
<p>Pros</p> <ul style="list-style-type: none"> Payment is based on collection and recycling outcomes Arrangements between local governments, collectors and processors are determined among themselves without MMBC intervention Collectors and processors can “self-organize” to deliver MMBC's performance objective Competitive collection and processing markets are more likely to deliver long-term efficiency Processors ensure quality of materials received by rejecting substandard materials that cannot be processed to the recycling efficiency rate MMBC is a price-setter not a price taker with less financial risk as incentives can be ratcheted up incrementally to drive performance if required and ratcheted down over time as capital investments mature Requirements for processors to verify geographic location and residential sources of PPP may be used as a control on ICI materials and scavenging Will yield good data on materials collected if incentive is structured by geographic location and source and good data on material marketed as processors are MMBC's point of contact
<p>Cons</p> <ul style="list-style-type: none"> Significant MMBC investment in audit and oversight activities to verify sources of PPP received by processors and recycling outcomes

Appendix G – Option 2B: Incentive for Processors for All Services

<ul style="list-style-type: none"> • May encourage vertical integration reducing number of service providers and marketplace competition • May be few interested processors due to high capital investment to establish PPP processing business • Less reliable data on materials collected by geographic location and source as data must flow from collectors to processor to MMBC • MMBC may not be able to access collectors to compile data needed for cost allocation through material composition audits and time/motion studies • Difficult to deliver consistent communication message to residents when collection services are determined by collectors
<p>Opportunities</p> <ul style="list-style-type: none"> • Larger collectors may have an incentive to invest in processing capacity • Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if incentives from MMBC to processors are structured appropriately • MMBC can structure incentives to processors to provide premium for PPP for which markets provide no or limited revenue
<p>Risks</p> <ul style="list-style-type: none"> • Novel approach for PPP that will require intensive education and initial support for stakeholder adjustment • Absence of prescriptive commercial arrangements may translate to uncertainty among stakeholders • Delivery of collection service levels dependent on effectiveness of variable incentives • Processor incentives may contribute to inflated reporting (leakage from ICI) • Where residential and ICI generators are serviced on the same routes, agreement between MMBC and processors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required • Incentive levels might be set below costs so that processors and collectors are not attracted to provide services, delaying achievement of targets • Incentives must be set to drive desired market activity (investment in infrastructure gaps, collection etc.) in the absence of perfect market information

Program Performance	#	Evaluation Criteria	Incentive for Processors	Key Rationale
	1	Meeting the 75% recovery rate target ¹³⁴ and managing recovered materials in accordance with the pollution prevention hierarchy ¹³⁵ for materials that MMBC stewards supply into the BC market <ul style="list-style-type: none"> - collected from single family households - collected by multi-family households - collected by streetscapes 	H	Processors will secure PPP feedstock, process and ship for recycling to be eligible for incentive

¹³⁴ BC Recycling Regulation Section 5(1)(a):“the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹³⁵ BC Recycling Regulation Section 5(3).

Appendix G – Option 2B: Incentive for Processors for All Services

Processor	#	Evaluation Criteria	Incentive for Processors	Key Rationale
	2	Providing reasonable and free consumer access to collection facilities ¹³⁶ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹³⁷	H	Incentive can be tiered by source to deliver desired service levels
	3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	ML	As processors make arrangements with collectors, service level is unknown
			ML	As processors make arrangements with collectors, service level is unknown
L			As processors make arrangements with collectors. service level is unknown and uncertain effect on streetscape collection services	
Economic Efficiency	4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	H	Incentive can be adjusted to reflect system changes
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	H	Incentive likely to engage interested processors, and through processors, collectors
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	H	Collectors and processors will innovate to increase revenue and profit
	7	Harnesses competitive end-of-life services and markets: <ul style="list-style-type: none"> Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously?¹³⁸ 	no	Processors able to deliver required service can access incentive and collectors can negotiate with processors
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for 	yes	Relatively small number of processors
yes			Defined requirements to be eligible for incentive	

¹³⁶ BC Recycling Regulation Section 5(1)(c).

¹³⁷ BC Recycling Regulation Section 5(1)(d).

¹³⁸ OECD 2010. The Competition Assessment Toolkit.

http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix G – Option 2B: Incentive for Processors for All Services

P er s	#	Evaluation Criteria	Incentive for Processors	Key Rationale
		program services that are clear and reasonable for service providers and simple for MMBC to administer		
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	ML	Access to processors can be defined in eligibility requirements but no access to collectors or markets
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	ML	Access to processors for processing cost allocation data but no access to collectors for collection cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	MH	Access to processors for quantities received and shipped but no access to markets for quantities recycled
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined requirements to be eligible for incentive
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	MH	Processors able to deliver required service can access incentive and collectors can negotiate with processors
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	no	No mechanism to address concerns

Appendix H

Option 2C: Incentive for Markets for All Services

Appendix H – Option 2C: Incentive for Markets for All Services

Option 2C: Incentive for Markets for All Services
Description:
<ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to markets for each tonne of PPP received from MMBC approved¹³⁹ processors • The incentive can be tiered by <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was supplied to the processor (e.g. by municipality), and ○ Source within the geographic area (e.g. single family, multi-family, streetscape) • Markets make their own arrangements with processors to secure PPP feedstock, and processors make their own arrangements with collectors to secure PPP feedstock • Markets establish a system to track tonnages collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to be eligible for incentives from MMBC • MMBC pays incentives to markets for materials marketed and markets use this additional source of income to adjust prices for material purchased from processors so that processors are able to pay collectors as required
Operating Example of Program Design Option
<ul style="list-style-type: none"> • Packaging Recovery Notes in the United Kingdom
Flow of PPP From Households To Recycling Markets
<ul style="list-style-type: none"> • Markets purchase materials from processors • Processors access PPP by establishing arrangements with collectors providing single family curbside, multi-family, depot and/or streetscape collection service or by providing these collection services directly • Householder and streetscape services will be determined by collectors which may be influenced by their arrangements with processors which may, in turn, be influenced by their arrangements with markets that are eligible for the incentive available from MMBC • Materials will be collected by local governments or companies that have established a relationship with a processor that is approved by MMBC as a source of PPP for which markets are eligible for incentives available from MMBC • Materials will be delivered by collectors to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
MMBC's Role and Responsibilities
<ul style="list-style-type: none"> • MMBC establishes market incentives tiered by the geographic area in which PPP is collected and the source of PPP • MMBC establishes a processor standard by which processors are approved by MMBC as a source of PPP for which markets are eligible for incentives available from MMBC • MMBC verifies reported locations, sources and quantities through audits • MMBC verifies processor outputs to material recycling markets through audits • MMBC verifies processor ongoing adherence to the RER through audits
Changes in Role of Householders
<ul style="list-style-type: none"> • Householders receiving municipal PPP collection services are expected to continue to

¹³⁹ Refer to Section 3.1.3 Achieving Performance.

Appendix H – Option 2C: Incentive for Markets for All Services

<p>receive the same level of service, although the collector may be different</p> <ul style="list-style-type: none">• Participation requirements may change if new collectors provide service and if PPP accepted in MMBC’s program differs from current system• In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection
Changes in Role of Local Governments
<ul style="list-style-type: none">• Local governments that wish to provide collection services can do so but must negotiate sale of materials to approved processors• Local governments that currently have contracts with collectors may continue to contract for these services but either the local government or collector must negotiate sale of materials to approved processors• Local governments that currently provide collection services with union staff may continue to do so but must negotiate sale of materials to approved processors
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none">• Private collectors that wish to provide collection services make arrangements with local governments for access to public easements where required to provide collection to single family and multi-family dwellings and to provide streetscape collection, make arrangements with multi-family property management companies for collection services and negotiate sale of materials to approved processors• Negotiations between incumbent collectors and local governments remain at the discretion of those parties• Collectors identify geographic areas and sources of PPP to processors so that processors have the information necessary to deliver materials to markets• When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors so that processors have the information necessary to deliver materials to markets
Changes for Private Sector PPP Processors
<ul style="list-style-type: none">• Processors will be approved by MMBC• Processors must comply with MMBC requirements to remain approved• Processors establish arrangements with collectors (and transporters if required) to secure feedstock• Processors establish arrangements with markets eligible for incentive available from MMBC, including payment from markets for the shipped PPP (commodity values may be augmented by the incentive paid to the markets by MMBC)
Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none">• Approved processors will deliver material to markets eligible for incentive available from MMBC• Material marketing companies may continue to deal with approved processors but must deliver material to approved markets
Infrastructure Gaps
<ul style="list-style-type: none">• Collection infrastructure gaps will be filled by collectors payments from processors and volume of PPP are sufficient to drive a reasonable return on investment in infrastructure;<ul style="list-style-type: none">○ Example: collectors may capitalize multi-family building collection infrastructure where the building enters into a long-term agreement with the collector

Appendix H – Option 2C: Incentive for Markets for All Services

<ul style="list-style-type: none"> • Processing infrastructure gaps will be filled by processors where payments from markets and volume of PPP are sufficient to drive a reasonable return on investment in infrastructure; <ul style="list-style-type: none"> ○ Example: processor may capitalize processing facility expansion or additional sorting equipment based on secured feedstock from collectors and anticipation of future income from markets
<p>Transitioning From Current System to Incentive for Markets for All Services</p>
<ul style="list-style-type: none"> • Negotiations between markets, processors, collectors and local governments likely to begin when MMBC unveils incentive available to markets • Current arrangements between markets, processors, collectors and local governments are renegotiated to take into account the MMBC market incentives at their discretion • MMBC’s ability to track PPP system performance depends on markets being approved and establishing necessary arrangements with approved processors
<p>Stakeholder Implications</p>
<ul style="list-style-type: none"> • Processors may be more likely to vertically integrate services to directly provide collection service • Processors may prefer dealing with fewer number of collectors to access feedstock leading to consolidation of collectors that remain independent • Smaller processors may be advantageously positioned to service adjacent geographic areas but may be disadvantaged by lack of economies of scale
<p>Pros</p>
<ul style="list-style-type: none"> • Payment is based on material usage for recycling • Arrangements between local governments, collectors and processors are determined among themselves (without MMBC intervention) • Collectors and processors can “self-organize” to deliver MMBC’s performance objective • Competitive collection and processing markets are more likely to deliver long-term efficiency • Markets ensure quality of materials received by rejecting substandard materials • MMBC is a price-setter not a price taker with less financial risk as incentives can be ratcheted up incrementally to drive performance if required and ratcheted down over time as capital investments mature • Requirements for processors to report geographic location and residential sources of PPP may be used as a control on ICI materials and scavenging
<p>Cons</p>
<ul style="list-style-type: none"> • Little ability to influence geographic coverage • Significant MMBC investment in audit and oversight activities to verify sources of PPP received by markets and recycling outcomes • May encourage vertical integration reducing number of service providers and marketplace competition • Less reliable data on materials collected by geographic location and source as data must flow from collectors to processor to markets to MMBC • MMBC may not be able to access collectors and processors to compile data needed for cost allocation through material composition audits and time/motion studies • Difficult to deliver consistent communication message to residents when collection services are determined by collectors

Appendix H – Option 2C: Incentive for Markets for All Services

Opportunities
<ul style="list-style-type: none"> • Larger collectors may have an incentive to invest in processing capacity • Could lead to investment in MRF sorting capability and collection of additional materials if incentives from MMBC to markets are structured appropriately • MMBC can structure incentives to markets to provide premium for PPP for which markets provide no or limited revenue
Risks
<ul style="list-style-type: none"> • Novel approach for PPP that will require intensive education and initial support for stakeholder adjustment • Absence of prescriptive commercial arrangements may translate to uncertainty among stakeholders • Most markets are located outside of BC resulting in incentives flowing out of BC and, in some cases, out of Canada and North America • Markets incentives may contribute to inflated reporting (leakage from ICI) • Where residential and ICI generators are serviced on the same routes, agreement between MMBC and processors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required • Payments from markets to processors and from processors to collectors are insufficient to drive collection and processing activities • Incentives must be set to drive desired market activity (investment in infrastructure gaps, collection etc.) in the absence of perfect market information

	#	Evaluation Criteria	Incentive for Markets	Key Rationale
Program Performance	1	Meeting the 75% recovery rate target ¹⁴⁰ and managing recovered materials in accordance with the pollution prevention hierarchy ¹⁴¹ for materials that MMBC stewards supply into the BC market <ul style="list-style-type: none"> - collected from single family households - collected by multi-family households - collected by streetscapes 	H	Markets will secure PPP feedstock and recycle to be eligible for incentive
	2	Providing reasonable and free consumer access to collection facilities ¹⁴² and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹⁴³	ML	Incentive can be tiered by source to deliver desired service levels but markets must create similar tiered incentive for processors and processors must create tiered incentive for collectors
	3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient		As markets make arrangements with processors who make arrangements with collectors,

¹⁴⁰ BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹⁴¹ BC Recycling Regulation Section 5(3).

¹⁴² BC Recycling Regulation Section 5(1)(c).

¹⁴³ BC Recycling Regulation Section 5(1)(d).

Appendix H – Option 2C: Incentive for Markets for All Services

P	er	#	Evaluation Criteria	Incentive for Markets	Key Rationale
			- by single family households	ML	service level is unknown
			- by multi-family households	ML	As markets make arrangements with processors who make arrangements with collectors, service level is unknown
			- by streetscapes	L	As markets make arrangements with processors who make arrangements with collectors, service level is unknown and uncertain effect on streetscape collection services
Economic Efficiency		4	Ability to deliver the recovery target at least cost to stewards - from single family households - from multi-family households - from streetscapes	H	Incentive can be adjusted to reflect system changes
		5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	H	Incentive likely to engage interested markets and, through markets, processors, and through processors, collectors
		6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	H	Collectors, processors and markets will innovate to increase revenue and profit
		7	Harnesses competitive end-of-life services and markets: Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously? ¹⁴⁴	no	Markets able to deliver required service can access incentive, processors can negotiate with markets and collectors can negotiate with processors
		8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer	yes	Relatively small number of markets
				yes	Defined requirements to be eligible for incentive

¹⁴⁴ OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix H – Option 2C: Incentive for Markets for All Services

P er s	#	Evaluation Criteria	Incentive for Markets	Key Rationale
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	ML	Access to markets can be defined in eligibility requirements but no access to processors or collectors
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	L	No access to processors for processing cost allocation data or access to collectors for collection cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	M	Access to markets for quantities received and recycled but no access to collectors for quantities collected or processors for quantities received
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined requirements to be eligible for incentive
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	MH	Markets able to deliver required service can access incentive, processors can negotiate with markets and collectors can negotiate with processors
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	no	No mechanism to address concerns

Appendix I

Option 2D: Incentives for Collectors and Processors

Appendix I – Option 2D: Incentives for Collectors and Processors

<p>Option 2D: Incentives for Collectors and Processors</p>
<p>Description:</p> <ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to collectors for each tonne of PPP delivered to an approved¹⁴⁵ processor. The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was collected by the collector (e.g. by municipality), and ○ Source within the geographic area (e.g. single family, multi-family, streetscape) • MMBC establishes a financial incentive payable to processors for each tonne of residential PPP processed to a recycling effectiveness rate and marketed to a user for specified recycling uses
<p>Operating Example of Program Design Option</p> <ul style="list-style-type: none"> • Used Oil Material Programs in BC, Alberta, Saskatchewan, Manitoba, Quebec
<p>Flow of PPP From Households To Recycling Markets</p> <ul style="list-style-type: none"> • Householder and streetscape services will be determined by collectors which may be influenced by the incentive available from MMBC • Materials will be collected by local governments or companies that are approved¹⁴⁶ to receive the incentive available from MMBC and that have established arrangements with processors • Processors access PPP by establishing arrangements with collectors providing single family curbside, multi-family, depot and/or streetscape collection service or by collecting materials directly • Materials will be delivered by collectors to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
<p>MMBC's Role and Responsibilities</p> <ul style="list-style-type: none"> • MMBC establishes collection incentives tiered by the geographic area in which PPP is collected and the source of PPP • MMBC establishes PPP processing incentives conditional on processor meeting a processor standard which includes a recycling effectiveness rate (RER) – e.g. a specified percentage of a material marketed by weight for every tonne of the material received by the processor • MMBC verifies geographic area and sources of PPP by requiring collectors to report locations and source of materials and by confirming these data through audits • MMBC verifies processor outputs to material recycling markets through audits • MMBC verifies processor ongoing adherence to the RER through audits
<p>Changes in Role of Householders</p> <ul style="list-style-type: none"> • Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although the collector may be different • Participation requirements may change if new collectors provide service and if PPP accepted in MMBC's program differs from current system • In dense retail traffic areas in larger urban environments, residents will have access to

¹⁴⁵ Refer to Section 3.1.3 Achieving Performance.

¹⁴⁶ Refer to Section 3.1.3 Achieving Performance.

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streetscape collection
Changes in Role of Local Governments
<ul style="list-style-type: none"> • Local governments wishing to provide collection services will be approved against the MMBC collector standard to be eligible for the collection incentive and must negotiate delivery of materials to approved processors • Local governments that currently provide collection services with union staff may continue to do so but must be eligible for the MMBC collection incentive and must negotiate delivery of materials to approved processors • Local governments must comply with MMBC reporting and audit requirements to remain approved
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none"> • Private collectors wishing to provide collection services will be approved against the MMBC collector standard to be eligible for the collection incentive • Private collectors must comply with MMBC reporting and audit requirements to remain approved • Private collectors can negotiate with local governments to provide collection services with either the private collector or the local government being eligible for the MMBC collection incentive and negotiating delivery of materials to approved processors • Collectors that wish to provide collection services must make arrangements with local governments to access public easements to provide single family, multi-family dwellings and streetscape collection, make arrangements with multi-family property management companies for collection services and negotiate delivery of materials to approved processors • Negotiations between incumbent collectors and local governments remain at the discretion of those parties • Collectors will identify geographic areas and sources of PPP to MMBC to be eligible for zone and source specific incentives • When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors to MMBC
Changes for Private Sector PPP Processors
<ul style="list-style-type: none"> • Processors that wish to provide processing and marketing services can apply to be approved against the MMBC processor standard including the recycling efficiency rate to be eligible for the processor incentive • Processors establish arrangements with collectors (and transporters if required) to secure feedstock • Processors must comply with MMBC reporting and audit requirements to remain approved • Processors will compete for PPP by negotiating with collectors and/or directly (where vertically integrated) with local governments and multi-family building property managers to access PPP feedstock
Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none"> • Material marketing companies continue to deal with processors
Infrastructure Gaps
<ul style="list-style-type: none"> • Collection infrastructure gaps will be filled by collectors where incentive levels and

Appendix I – Option 2D: Incentives for Collectors and Processors

<p>volume of PPP are sufficient to drive a reasonable return on investment in infrastructure;</p> <ul style="list-style-type: none">○ Example: collectors may capitalize multi-family building collection infrastructure where the building enters into a long-term agreement with the collector● Processing infrastructure gaps will be filled by processors where incentive levels, commodity values and volume of PPP are sufficient to drive a reasonable return on investment in infrastructure;<ul style="list-style-type: none">○ Example: processor may capitalize processing facility expansion or additional sorting equipment based on secured feedstock from collectors and anticipation of future income from processing incentives
Transitioning From Current System to Incentives for Collectors and Processors
<ul style="list-style-type: none">● Negotiations between processors, collectors and local governments likely to begin when MMBC unveils collection and processing incentives● Current arrangements between processors, collectors and local governments can be renegotiated to take into account the MMBC collection and processing incentives at their discretion● Where private companies are paid by single-family households and multi-family buildings for collection services, collectors can adjust arrangements to take into account the MMBC processing incentive system at their discretion● MMBC's ability to track PPP system performance depends on collectors and processors being approved and establishing necessary arrangements
Stakeholder Implications
<ul style="list-style-type: none">● Processors may be more likely to vertically integrate services to directly provide collection service● Processors may prefer dealing with fewer number of collectors to access feedstock leading to consolidation of collectors● Smaller processors may be advantageously positioned to service adjacent geographic areas but may be disadvantaged by lack of economies of scale
Pros
<ul style="list-style-type: none">● Payment is based on collection and recycling outcomes● Incentives for both collection and processing provide MMBC with more adjustable price mechanisms to achieve program goals at lowest cost● Arrangements between local governments, collectors and processors are determined among themselves without MMBC intervention● Collectors and processors can “self-organize” to deliver MMBC's performance objective● Competitive collection and processing marketplaces are more likely to deliver long-term efficiency● Processors ensure quality of materials received by rejecting substandard materials that cannot be processed to the recycling efficiency rate with the effect that the collector is not eligible for the collection incentive for rejected materials● MMBC is a price-setter not a price taker with less financial risk as incentives can be ratcheted up incrementally to drive performance if required and ratcheted down over time as capital investments mature● Requirements for collectors to verify geographic zone and residential sources of PPP may be used as a control on ICI materials and scavenging

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Cons
<ul style="list-style-type: none"> • Significant MMBC investment in audit and oversight activities to verify sources of PPP received by processors and recycling outcomes • May encourage vertical integration reducing number of service providers and marketplace competition • May be few interested processors due to high capital investment to establish PPP processing business • Difficult to deliver consistent communication message to residents when collection services are determined by collectors
Opportunities
<ul style="list-style-type: none"> • Larger collectors may have an incentive to invest in processing capacity • Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if incentives from MMBC to processors are structured appropriately • MMBC can structure incentives to processors to provide premium for PPP for which markets provide no or limited revenue
Risks
<ul style="list-style-type: none"> • Novel approach for PPP that will require intensive education and initial support for stakeholder adjustment • Absence of prescriptive commercial arrangements may translate to uncertainty among stakeholders • Delivery of collection service levels dependent on effectiveness of variable incentives • Collection incentives may contribute to inflated reporting (leakage from ICI) • Where residential and ICI generators are serviced on the same routes, agreement among MMBC, collectors and processors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required • Incentive levels might be set below costs so that processors and collectors are not attracted to provide services, delaying achievement of targets • Incentives must be set to drive desired market activity (investment in infrastructure gaps, collection etc.) in the absence of perfect market information

Program Performance	#	Evaluation Criteria	Incentives for Collectors and Processors	Key Rationale
1	1	Meeting the 75% recovery rate target ¹⁴⁷ and managing recovered materials in accordance with the pollution prevention hierarchy ¹⁴⁸ for materials that MMBC stewards supply into the BC market <ul style="list-style-type: none"> - collected from single family households - collected by multi-family households - collected by streetscapes 	H	Collectors will collect PPP to be eligible for incentive and processors will secure PPP feedstock, process and ship for recycling to be eligible for

¹⁴⁷ BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹⁴⁸ BC Recycling Regulation Section 5(3).

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Program	Incentive	Perfor	#	Evaluation Criteria	Incentives for Collectors and Processors	Key Rationale
						incentive
			2	Providing reasonable and free consumer access to collection facilities ¹⁴⁹ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹⁵⁰	H	Incentive can be tiered by source to deliver desired service levels
			3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	M	Service for which incentive is provided can be communicated
					M	Service for which incentive is provided can be communicated
					L	Uncertain effect on streetscape collection services
			4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	H	Incentives can be adjusted to reflect system changes
			5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	H	Collection incentive likely to engage interested collectors and processing incentive likely to engage interested processors
			6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	H	Collectors and processors will innovate to increase revenue and profit
			7	Harnesses competitive end-of-life services and markets: <ul style="list-style-type: none"> Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously?¹⁵¹ 	no	Collectors and processors able to deliver required service can access incentive
			8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and 	no	Requires interaction with collectors and processors
					yes	Defined requirements to be eligible for incentive

¹⁴⁹ BC Recycling Regulation Section 5(1)(c).

¹⁵⁰ BC Recycling Regulation Section 5(1)(d).

¹⁵¹ OECD 2010. The Competition Assessment Toolkit.

http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

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Program Performance	#	Evaluation Criteria	Incentives for Collectors and Processors	Key Rationale
		reasonable for service providers and simple for MMBC to administer		
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	MH	Access to collectors and processors can be defined in eligibility requirements but no access to markets
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	MH	Access to collectors for collection cost allocation data and processors for processing cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	MH	Access to collectors for quantities collected and access to processors for quantities received and shipped but no access to markets for quantities recycled
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined requirements to be eligible for incentive
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	MH	Collectors and processors able to deliver required service can access incentive
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	no	No mechanism to address concerns

Appendix J

Option 2E: Incentives for Collectors, Transporters and Processors

Appendix J – Option 2E: Incentives for Collectors, Transporters and Processors

<p>Option 2E: Incentives for Collectors, Transporters and Processors</p>
<p>Description:</p> <ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to collectors for each tonne of PPP delivered to an approved¹⁵² processor tiered by source (e.g, single family, multi-family, streetscape) • MMBC establishes transportation incentive payable to transporters (where collectors cannot deliver PPP directly to a processor) to transport collected PPP to processors tiered by geographic area • MMBC establishes a financial incentive payable to processors for each tonne of residential PPP processed to a recycling effectiveness rate and marketed to a user for specified recycling uses
<p>Operating Example of Program Design Option</p> <ul style="list-style-type: none"> • Ontario Used Tires Program
<p>Flow of PPP From Households To Recycling Markets</p> <ul style="list-style-type: none"> • Householder and streetscape services will be determined by collectors which may be influenced by the incentive available from MMBC • Materials will be collected by local governments or companies that are approved¹⁵³ to receive the incentive available from MMBC and that have established arrangements with approved processors • Processors access PPP by establishing arrangements with collectors providing single family curbside, multi-family, depot and/or streetscape collection service or by collecting materials directly • Materials will be delivered by collectors to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
<p>MMBC's Role and Responsibilities</p> <ul style="list-style-type: none"> • MMBC establishes collection incentives tiered by the source of PPP • MMBC establishes transportation incentives tiered by the geographic area in which PPP is collected • MMBC establishes processing incentives conditional on processor meeting a processor standard which includes a recycling effectiveness rate (RER) – e.g. a specified percentage of a material marketed by weight for every tonne of the material received by the processor • MMBC verifies sources of PPP by requiring collectors to report source of materials and by confirming these data through audits • MMBC verifies processor outputs to material recycling markets through audits • MMBC verifies processor ongoing adherence to the RER through audits
<p>Changes in Role of Householders</p> <ul style="list-style-type: none"> • Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although the collector may be different • Participation requirements may change if new collectors provide service and if PPP

¹⁵² Refer to Section 3.1.3 Achieving Performance.

¹⁵³ Refer to Section 3.1.3 Achieving Performance.

Appendix J – Option 2E: Incentives for Collectors, Transporters and Processors

<p>accepted in MMBC’s program differs from current system</p> <ul style="list-style-type: none">• In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection
Changes in Role of Local Governments
<ul style="list-style-type: none">• Local governments wishing to provide collection services will be approved against the MMBC collector standard to be eligible for the collection incentive and must negotiate delivery of materials to approved processors• Local governments that currently provide collection services with union staff may continue to do so but must be eligible for the MMBC collection incentive and must negotiate delivery of materials to approved processors• Local governments must comply with MMBC reporting and audit requirements to remain approved
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none">• Private collectors wishing to provide collection services will be approved against the MMBC collector standard to be eligible for the collection incentive• Private collectors must comply with MMBC reporting and audit requirements to remain approved• Private collectors can negotiate with local governments to provide collection services with either the private collector or the local government being eligible for the MMBC collection incentive and negotiating delivery of materials to approved processors• Collectors that wish to provide collection services must make arrangements with local governments to access public easements to provide single family, multi-family dwellings and streetscape collection, make arrangements with multi-family property management companies for collection services and negotiate delivery of materials to approved processors directly or through approved transporters• Negotiations between incumbent collectors and local governments remain at the discretion of those parties• Collectors will identify sources of PPP to MMBC to be eligible for incentives• When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors to MMBC• Transporters will identify geographic areas to MMBC to be eligible for incentives
Changes for Private Sector PPP Processors
<ul style="list-style-type: none">• Processors that wish to provide processing and marketing services can apply to be approved against the MMBC processor standard including the recycling efficiency rate to be eligible for the processor incentive• Processors establish arrangements with collectors (and transporters if required) to secure feedstock• Processors must comply with MMBC reporting and audit requirements to remain approved• Processors will compete for PPP by negotiating with collectors and/or directly (where vertically integrated) with local governments and multi-family building property managers to access PPP feedstock

Appendix J – Option 2E: Incentives for Collectors, Transporters and Processors

<p>Changes for Private Sector PPP Marketing Companies</p> <ul style="list-style-type: none"> • Material marketing companies continue to deal with processors
<p>Infrastructure Gaps</p> <ul style="list-style-type: none"> • Collection infrastructure gaps will be filled by collectors where incentive levels and volume of PPP are sufficient to drive a reasonable return on investment in infrastructure; <ul style="list-style-type: none"> ○ Example: collectors may capitalize multi-family building collection infrastructure where the building enters into a long-term agreement with the collector • Processing infrastructure gaps will be filled by processors where incentive levels, commodity values and volume of PPP are sufficient to drive a reasonable return on investment in infrastructure; <ul style="list-style-type: none"> ○ Example: processor may capitalize processing facility expansion or additional sorting equipment based on secured feedstock from collectors and anticipation of future income from processing incentives
<p>Transitioning From Current System to Incentives for Collectors, Transporters and Processors</p> <ul style="list-style-type: none"> • Negotiations between processors, transporters, collectors and local governments likely to begin when MMBC unveils collection, transportation and processing incentives • Current arrangements between processors, transporters, collectors and local governments can be renegotiated to take into account the MMBC collection, transportation and processing incentives at their discretion • Where private companies are paid by single-family households and multi-family buildings for collection services, collectors can adjust arrangements to take into account the MMBC collection incentive at their discretion • MMBC's ability to track PPP system performance depends on collectors and processors being approved and establishing necessary arrangements
<p>Stakeholder Implications</p> <ul style="list-style-type: none"> • Processors may be more likely to vertically integrate services to directly provide collection service • Processors may prefer dealing with fewer number of collectors to access feedstock leading to consolidation of collectors • Smaller processors may be advantageously positioned to service adjacent geographic areas but may be disadvantaged by lack of economies of scale
<p>Pros</p> <ul style="list-style-type: none"> • Payment is based on collection, transportation and recycling outcomes • Incentives for collection, transportation and processing provide MMBC with more adjustable price mechanisms to achieve program goals at lowest cost • Arrangements between local governments, collectors, transporters and processors are determined among themselves without MMBC intervention • Collectors, transporters and processors can “self-organize” to deliver MMBC's performance objective • Competitive collection, transportation and processing marketplaces are more likely to deliver long-term efficiency • Processors ensure quality of materials received by rejecting substandard materials that cannot be processed to the recycling efficiency rate with the effect that the collector is not eligible for the collection incentive for rejected materials

Appendix J – Option 2E: Incentives for Collectors, Transporters and Processors

<ul style="list-style-type: none"> • MMBC is a price-setter not a price taker with less financial risk as incentives can be ratcheted up incrementally to drive performance if required and ratcheted down over time as capital investments mature • Requirements for transporters and collectors to verify geographic zone and residential sources of PPP may be used as a control on scavenging
<p>Cons</p> <ul style="list-style-type: none"> • Significant MMBC investment in audit and oversight activities to verify sources of PPP and recycling outcomes • May encourage vertical integration reducing number of service providers and marketplace competition • May be few interested processors due to high capital investment to establish PPP processing business • Difficult to deliver consistent communication message to residents when collection services are determined by collectors
<p>Opportunities</p> <ul style="list-style-type: none"> • Larger collectors may have an incentive to invest in processing capacity • Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if incentives from MMBC to processors are structured appropriately • MMBC can structure incentives to processors to provide premium for PPP for which markets provide no or limited revenue
<p>Risks</p> <ul style="list-style-type: none"> • Novel approach for PPP that will require intensive education and initial support for stakeholder adjustment • Absence of prescriptive commercial arrangements may translate to uncertainty among stakeholders • Delivery of collection service levels dependent on effectiveness of variable incentives • Collection incentives may contribute to inflated reporting (leakage from ICI) • Where residential and ICI generators are serviced on the same routes, agreement among MMBC, collectors and processors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required • Incentive levels might be set below costs so that processors and collectors are not attracted to provide services, delaying achievement of targets • Incentives must be set to drive desired market activity (investment in infrastructure gaps, collection etc.) in the absence of perfect market information

Appendix J – Option 2E: Incentives for Collectors, Transporters and Processors

	#	Evaluation Criteria	Incentives for Collectors, Transporters and Processors	Key Rationale
Program Performance	1	Meeting the 75% recovery rate target ¹⁵⁴ and managing recovered materials in accordance with the pollution prevention hierarchy ¹⁵⁵ for materials that MMBC stewards supply into the BC market <ul style="list-style-type: none"> - collected from single family households - collected by multi-family households 	H	Collectors will collect PPP to be eligible for incentive, transporters will transport PPP to be eligible for incentive and processors will secure PPP feedstock, process and ship for recycling to be eligible for incentive
		<ul style="list-style-type: none"> - collected by streetscapes 		
	2	Providing reasonable and free consumer access to collection facilities ¹⁵⁶ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹⁵⁷	H	Incentive can be tiered by source to deliver desired service levels
	3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	M	Service for which incentive is provided can be communicated
			M	Service for which incentive is provided can be communicated
			L	Uncertain effect on streetscape collection services
Economic Efficiency	4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	H	Incentives can be adjusted to reflect system changes
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	H	Collection incentive likely to engage interested collectors, transportation incentive likely to engage interested transporters and processing incentive likely to engaged interested processors
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	H	Collectors, transporters and processors will innovate to increase revenue and profit
	7	Harnesses competitive end-of-life services and markets:		

¹⁵⁴ BC Recycling Regulation Section 5(1)(a):“the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹⁵⁵ BC Recycling Regulation Section 5(3).

¹⁵⁶ BC Recycling Regulation Section 5(1)(c).

¹⁵⁷ BC Recycling Regulation Section 5(1)(d).

Appendix J – Option 2E: Incentives for Collectors, Transporters and Processors

Program Performance	#	Evaluation Criteria	Incentives for Collectors, Transporters and Processors	Key Rationale
		Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously? ¹⁵⁸	no	Collectors, transporters and processors able to deliver required service can access incentive
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer 	no	Requires interaction with collectors, transporters and processors
			yes	Defined requirements to be eligible for incentive
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	MH	Access to collectors, transporters and processors can be defined in eligibility requirements but no access to markets
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	H	Access to collectors for collection cost allocation data, transporters for transportation cost allocation data and processors for processing cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	MH	Access to collectors for quantities collected and access to processors for quantities received and shipped but no access to markets for quantities recycled
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined requirements to be eligible for incentive
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	MH	Collectors, transporters and processors able to deliver required service can access incentive
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to	no	No mechanism to address concerns

¹⁵⁸ OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix J – Option 2E: Incentives for Collectors, Transporters and Processors

Program Performance	#	Evaluation Criteria	Incentives for Collectors, Transporters and Processors	Key Rationale
		residences on behalf of MMBC		

Appendix K

Option 3A: Delivering Collection Services Directly

Appendix K – Option 3A: Delivering Collection Services Directly

<p>Option 3A: Delivering Collection Services Directly</p>
<p>Description:</p> <ul style="list-style-type: none"> • MMBC creates an operating business to collect PPP¹⁵⁹ from single family and multi-family households and streetscapes • MMBC would be responsible for costs incurred by its collection operating business • MMBC’s business delivers collected PPP to processors¹⁶⁰
<p>Operating Example of Program Design Option</p> <ul style="list-style-type: none"> • Veolia, Wastepak and Bifpack provide collection services for packaging in the United Kingdom
<p>Flow of PPP From Households To Recycling Markets</p> <ul style="list-style-type: none"> • Householders have access to single family curbside, multi-family and/or depot collection as provided by MMBC’s collection business • Residents have access to streetscape collection as provided by MMBC’s collection business • Materials will be delivered by MMBC to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
<p>MMBC’s Role and Responsibilities</p> <ul style="list-style-type: none"> • MMBC determines collection service levels for single family and multi-family households and collection from streetscapes • MMBC determines the types of PPP accepted in the collection system • MMBC establishes an operating business to collect residential PPP • MMBC establishes arrangements with processors to provide processing services for materials collected by MMBC • MMBC establishes tracking, reporting, verification and auditing procedures to ensure data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs • MMBC delivers communications to residents about collection services • MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment
<p>Changes in Role of Householders</p> <ul style="list-style-type: none"> • Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although MMBC will be the collector • Participation requirements may change • In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection

¹⁵⁹ While this option is based on collecting PPP from the entire province, MMBC’s operating business could collect PPP from a specific geographic area. See Option 4B and 4C.

¹⁶⁰ MMBC may be paid by processors for some materials when material revenues are high or may pay processors to receive materials when material revenues are low and/or where processing costs are higher than commodity revenues.

Appendix K – Option 3A: Delivering Collection Services Directly

<p>Changes in Role of Local Governments</p> <ul style="list-style-type: none"> • Local governments that currently contract for PPP collection services will no longer contract for these services • Local governments that currently collect PPP with union staff will no longer deliver these services • MMBC would make arrangements with local governments for access to public easements where required to provide collection to single family and multi-family dwellings and to provide streetscape collection • Co-ordination of transition from existing contracted or local government collector to MMBC collection business would be required
<p>Changes for Private Sector PPP Collectors</p> <ul style="list-style-type: none"> • Private collectors that currently collect residential PPP will no longer deliver these services • Where residential and ICI generators were serviced on the same routes, private collectors will continue to service ICI customers
<p>Changes for Private Sector PPP Processors</p> <ul style="list-style-type: none"> • Processors will receive PPP from MMBC’s collection business • MMBC would establish commercial relationships with processors to receive collected PPP¹⁶¹ • Processors will process and market materials
<p>Changes for Private Sector PPP Marketing Companies</p> <ul style="list-style-type: none"> • Material marketing companies continue to deal with processors
<p>Infrastructure Gaps</p> <ul style="list-style-type: none"> • Gaps in collection infrastructure will be addressed by MMBC’s collection business • Gaps in processing infrastructure will be addressed by processors wishing to receive PPP from MMBC’s collection business
<p>Transitioning From Current System to Delivering Collection Services Directly</p> <ul style="list-style-type: none"> • MMBC would make arrangements with local governments for access to public easements where required to provide collection to single family and multi-family dwellings and to provide streetscape collection • Where existing local government collection contracts expire in May 2014, MMBC’s collection business can provide collection services as of this date • Where existing local government collection contracts expire after May 2014, MMBC can <ul style="list-style-type: none"> ○ pay for collection services to the contract expiry date based on MMBC’s average cost to deliver collection services in similar jurisdictions ○ provide collection services as of the expiry date • Where private companies are paid by single-family households and multi-family buildings for collection services, these arrangements are likely to be abandoned in favour of services provided at no charge by MMBC • MMBC would need to build effective business arrangements as with any other operating business

¹⁶¹ MMBC may be paid by processors for some materials when material revenues are high or may pay processors to receive materials when material revenues are low and/or where processing costs are higher than commodity revenues.

Appendix K – Option 3A: Delivering Collection Services Directly

Stakeholder Implications
<ul style="list-style-type: none"> • Local governments and private collectors would no longer provide collection services • Where private collectors have integrated residential and ICI collection routes, collection routing would be disrupted • Local governments may be concerned that collection service will be reduced when service is provided by MMBC • MMBC would become the only source of residential PPP for processors • Smaller processors may be disadvantaged by lack of economies of scale but may have advantage of proximity to collection routes • Processors would retain their commercial relationships with markets
Pros
<ul style="list-style-type: none"> • MMBC determines residential PPP collection system design • Householders would have a direct relationship with MMBC through the collection system • MMBC has control over collection system costs and performance¹⁶² • MMBC can ensure no ICI PPP is included in MMBC's collection system • MMBC can deal directly with scavengers • Collecting residential PPP provides MMBC with direct collection experience • Will yield direct data on materials collected • Processors retain their link to recycling markets with whom they have established relationships • Able to deliver consistent communication message to residents as MMBC delivers collection services
Cons
<ul style="list-style-type: none"> • Steep learning curve for MMBC to deliver residential PPP collection services • No competition for collecting residential PPP materials • Less reliable data on materials recycled or recovered as data must flow from markets to processor to MMBC • May not lead to investment in processing infrastructure which could contribute over time to system efficiency • MMBC may not be able to access processors or markets to compile data needed for cost allocation through material composition audits and time/motion studies • Existing collectors would need to source ICI PPP to support their businesses
Opportunities
<ul style="list-style-type: none"> • MMBC can define collection services to ensure appropriate service levels • MMBC can design and manage collection system which is typically the highest cost area of the PPP system • MMBC can compile collection data needed for cost allocation through collected material composition audits and collection system time/motion studies • MMBC could establish commercial arrangements with willing processors to develop processing capability for problem/marginal materials

¹⁶² PPP collection typically costs more than PPP processing.

Appendix K – Option 3A: Delivering Collection Services Directly

Risks
<ul style="list-style-type: none"> • Multi-family building owners/managers may not co-operate with MMBC • MMBC must secure access to processors to compile data needed for cost allocation through processed material composition audits and processing system time/motion studies and to markets to compile data on quantity recycled • Approach may be considered overly intrusive

	#	Evaluation Criteria	Direct Delivery of Collection Services	Key Rationale
Program Performance	1	Meeting the 75% recovery rate target ¹⁶³ and managing recovered materials in accordance with the pollution prevention hierarchy ¹⁶⁴ for materials that MMBC stewards supply into the BC market <ul style="list-style-type: none"> - collected from single family households 	MH	MMBC able to deliver desired collection services with existing technologies
		<ul style="list-style-type: none"> - collected by multi-family households 	M	MMBC able to deliver desired collection services but systems required to effectively service high-rise multi-family
		<ul style="list-style-type: none"> - collected by streetscapes 	ML	MMBC able to deliver desired collection services but new systems required to effectively service
	2	Providing reasonable and free consumer access to collection facilities ¹⁶⁵ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹⁶⁶	H	MMBC can deliver desired collection service levels
Economic Efficiency	3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	H	Able to deliver communications message describing MMBC's collection services
	4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	M	MMBC able to control collection system design and delivery but limited influence over processing and markets
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	L	Will engage processors and markets but not collectors which are likely to be most numerous

¹⁶³ BC Recycling Regulation Section 5(1)(a): "the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director".

¹⁶⁴ BC Recycling Regulation Section 5(3).

¹⁶⁵ BC Recycling Regulation Section 5(1)(c).

¹⁶⁶ BC Recycling Regulation Section 5(1)(d).

Appendix K – Option 3A: Delivering Collection Services Directly

Program Performance	#	Evaluation Criteria	Direct Delivery of Collection Services	Key Rationale
				of total service providers engaged in delivering PPP services
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	M	MMBC able to implement collection innovations but lack of competition may slow process
	7	Harnesses competitive end-of-life services and markets: Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously? ¹⁶⁷	yes	MMBC provides all collection services
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction		
		- minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer	no	MMBC must develop collection operating business
			yes	Defined in process to procure processing services
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	M	MMBC oversees collection system and can negotiate access to processors but has no access to markets
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	MH	MMBC has collection cost data and can negotiate access to processors for processing cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	M	MMBC has data on quantities collected and can negotiate access to processors for quantities shipped but has no access to markets for quantities recycled
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	no	MMBC responsible for collection system complaints
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	L	MMBC's collection operating business would displace existing collectors
	14	Addresses local government concerns, whether arising from their role as service	no	MMBC delivers collection services

¹⁶⁷ OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix K – Option 3A: Delivering Collection Services Directly

Program	in Perfor	#	Evaluation Criteria	Direct Delivery of Collection Services	Key Rationale
			providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC		

Appendix L

Option 3B: Delivering Processing Services Directly

Appendix L – Option 3B: Delivering Processing Services Directly

<p>Option 3B: Delivering Processing Services Directly</p>
<p>Description:</p> <ul style="list-style-type: none"> • MMBC creates an operating business to process PPP¹⁶⁸ collected from single family and multi-family households and streetscapes • MMBC establishes commercial arrangements with collectors to access feedstock including payment for PPP delivered • MMBC’s business sells the processed PPP to recycling markets with whom MMBC establishes commercial relationships • MMBC would be responsible for costs incurred by its processing operating business and would retain material revenues
<p>Operating Example of Program Design Option</p> <ul style="list-style-type: none"> • Valpak operates a processing facility for packaging in the United Kingdom and the Japanese Appliance Recycling program operates its own processing facilities
<p>Flow of PPP From Households To Recycling Markets</p> <ul style="list-style-type: none"> • Householders have access to single family curbside, multi-family and/or depot collection as provided by collectors that have established arrangements with MMBC’s processing business • Residents have access to streetscape collection as provided by collectors that have established arrangements with MMBC’s processing business • Materials will be delivered by collectors to processing facilities operated by MMBC • MMBC processes and markets materials
<p>MMBC’s Role and Responsibilities</p> <ul style="list-style-type: none"> • MMBC establishes an operating business to process residential PPP and market processed PPP to recycling markets • MMBC establishes commercial relationships with collectors to access feedstock specifying <ul style="list-style-type: none"> ○ types of PPP accepted for processing and to be included in the collection system ○ collection service levels for single family and multi-family households and collection from streetscapes ○ communications to residents about collection services • MMBC establishes tracking, reporting, verification and auditing procedures to ensure data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs • MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment
<p>Changes in Role of Householders</p> <ul style="list-style-type: none"> • Householders receiving municipal PPP collection services are expected to continue to receive the same level of service • Participation requirements may change • In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection

¹⁶⁸ While this option is based on processing PPP collected from the entire province, MMBC’s operating business could process PPP from a specific geographic area. See Option 4B and 4C.

Appendix L – Option 3B: Delivering Processing Services Directly

Changes in Role of Local Governments
<ul style="list-style-type: none">• Local governments that wish to provide collection services can do so but must negotiate sale of materials to MMBC• Local governments that currently have contracts with collectors may continue to contract for these services but either the local government or collector must negotiate sale of materials to MMBC• Local governments that currently provide collection services with union staff may continue to do so but must negotiate sale of materials to MMBC• MMBC would become the only delivery point for residential PPP collected by local governments
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none">• Private collection contractors may contract with local governments to provide collection services for single family and multi-family households and/or streetscapes, subject to either the contractor or the local government arranging to deliver PPP to, and receive payment from, MMBC• Private collection contractors may make their own arrangements with single family and multi-family households to provide collection services, subject to arranging to deliver PPP to, and receive payment from, MMBC• Collectors identify the geographic location and source of each load of PPP when delivered to MMBC to prove the reported material came from residential sources• When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors• MMBC would become the only delivery point for residential PPP collected by private collectors
Changes for Private Sector PPP Processors
<ul style="list-style-type: none">• Processors currently processing residential PPP will no longer deliver these services
Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none">• MMBC would market residential PPP processed by its processing business• Material marketing companies would deal with MMBC
Infrastructure Gaps
<ul style="list-style-type: none">• Gaps in collection infrastructure will be addressed by collectors wishing to deliver PPP to, and receive payment from, MMBC's processing business• Gaps in processing infrastructure will be addressed by MMBC's processing business
Transitioning From Current System to Delivering Processing Services Directly
<ul style="list-style-type: none">• MMBC would establish its processing facilities• MMBC would establish commercial relationships with collectors to secure feedstock for its processing facilities• MMBC would establish commercial arrangements with recycling and recovery markets• Where existing local government collection contracts expire in May 2014, local governments can enter into new contracts subject to either the contractor or the local government arranging to deliver PPP to, and receive payment from, MMBC• Where existing local government collection contracts expire after May 2014, the local government or its contractor can arrange to deliver PPP to, and receive payment from,

Appendix L – Option 3B: Delivering Processing Services Directly

<p>MMBC</p> <ul style="list-style-type: none"> • Where private companies are paid by single-family households and multi-family buildings for collection services, collectors can arrange to deliver PPP to, and receive payment from, MMBC and can then eliminate or reduce the charge to single-family households and multi-family buildings • MMBC would need to build effective business arrangements as with any other operating business
<p>Stakeholder Implications</p> <ul style="list-style-type: none"> • Local governments and private collectors would arrange to deliver PPP to, and receive payment from, MMBC • Processors would no longer process residential PPP • Material marketing companies would deal with MMBC • MMBC would market processed residential PPP to recycling companies
<p>Pros</p> <ul style="list-style-type: none"> • Processing residential PPP provides MMBC with direct processing experience • Will yield direct data on materials delivered to markets • MMBC’s processing business would command top prices from markets because of the larger quantities being processed and marketed by a single agency • MMBC will benefit from high commodity prices • MMBC can refuse delivery of scavenged PPP
<p>Cons</p> <ul style="list-style-type: none"> • Steep learning curve for MMBC to deliver residential PPP processing services • No competition for processing residential PPP materials • Less reliable data on materials collected as must flow from collectors to MMBC • May not lead to investment in collection infrastructure which could contribute over time to system efficiency • MMBC may not be able to access collectors to compile data needed for cost allocation through material composition audits and time/motion studies • Existing processors would need to source ICI PPP to supply their facilities and maintain their relationships with recycling markets • MMBC assumes the risk of falling commodity prices for the materials it processes although the risk is mediated by BC’s access to export market • May be less market competition among recycling markets if MMBC enters into longer term contracts • Difficult to deliver consistent communication message to residents when collection services are determined by collectors
<p>Opportunities</p> <ul style="list-style-type: none"> • MMBC can establish processing services to manage PPP not currently accepted in collection system • MMBC could establish commercial arrangements with willing markets to develop market capacity and demand for problem/marginal materials • MMBC can compile data needed for cost allocation through collected and processed material composition audits and processing system time/motion studies

Appendix L – Option 3B: Delivering Processing Services Directly

Risks
<ul style="list-style-type: none"> • MMBC must secure access to collectors to compile data needed for cost allocation through collection system time/motion studies and to markets to compile data on quantity recycled • Approach may be considered overly intrusive

#	Evaluation Criteria	Direct Delivery of Processing Services	Key Rationale
Program Performance	Meeting the 75% recovery rate target ¹⁶⁹ and managing recovered materials in accordance with the pollution prevention hierarchy ¹⁷⁰ for materials that MMBC stewards supply into the BC market <ul style="list-style-type: none"> - collected from single family households 	H	MMBC able to deliver desired processing services and negotiate with collectors to deliver desired collection services with existing technologies
	<ul style="list-style-type: none"> - collected by multi-family households 	MH	MMBC able to deliver desired processing services and negotiate with collectors to deliver desired collection services but systems required to effectively service high-rise multi-family
	<ul style="list-style-type: none"> - collected by streetscapes 	M	MMBC able to deliver desired processing services and negotiate with collectors to deliver desired collection services but new systems required to effectively service
2	Providing reasonable and free consumer access to collection facilities ¹⁷¹ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹⁷²	H	MMBC can negotiate with collectors to deliver desired collection services
3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	MH	Able to deliver communications message describing collection services negotiated with collectors

¹⁶⁹ BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹⁷⁰ BC Recycling Regulation Section 5(3).

¹⁷¹ BC Recycling Regulation Section 5(1)(c).

¹⁷² BC Recycling Regulation Section 5(1)(d).

Appendix L – Option 3B: Delivering Processing Services Directly

	#	Evaluation Criteria	Direct Delivery of Processing Services	Key Rationale
Economic Efficiency	4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	MH	MMBC able to control processing system design and delivery and can negotiate with both collectors and markets
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	M	Will engage markets and collectors which are likely to be most numerous of total service providers engaged in delivering PPP services but not processors
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	M	MMBC able to implement processing innovations but lack of competition may slow process
	7	Harnesses competitive end-of-life services and markets: <ul style="list-style-type: none"> Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously?¹⁷³ 	yes	MMBC provides all processing services
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer 	no	MMBC must develop processing operating business
			yes	Defined in process to procure collection services
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	H	MMBC oversees processing system and can negotiate access to collectors and markets
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	MH	MMBC has processing cost data and can negotiate access to collectors for collection cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	H	MMBC has data on quantities received from collectors and shipped to markets and can negotiate access to markets for quantities recycled

¹⁷³ OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix L – Option 3B: Delivering Processing Services Directly

	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined in process to procure collection services
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	L	MMBC's processing operating business would displace existing processors
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	yes	Procurement process can specify collection service levels and role for local government

Appendix M

Option 3C: Delivering Material Marketing Services Directly

Appendix M – Option 3C: Delivering Material Marketing Services Directly

Option 3C: Delivering Material Marketing Services Directly
Description
<ul style="list-style-type: none"> • MMBC creates an operating business to purchase PPP¹⁷⁴ from processors that are able to prove that the PPP was collected from single family and multi-family households and streetscapes • MMBC’s business sells the processed PPP to recycling markets with whom MMBC establishes commercial relationships • MMBC retains revenues from the sale of materials • MMBC purchases processed PPP at prices that allow processors to capitalize and operate the processing system in a manner that meets program requirements and standards and to purchase collected PPP
Operating Example of Program Design Option
<ul style="list-style-type: none"> • DSD operates a material brokering system for PPP in Germany
Flow of PPP From Households To Recycling Markets
<ul style="list-style-type: none"> • Householders have access to single family curbside, multi-family and/or depot collection as provided by collectors that have established arrangements with processors that sell PPP to MMBC marketing business • Residents have access to streetscape collection as provided by collectors that have established arrangements with processors that sell PPP to MMBC marketing business • Materials will be delivered by collectors to processing facilities that sell PPP to MMBC marketing business • MMBC purchases processed materials from processors and markets the materials • Delivery of materials from processing facilities to recycling markets would be co-ordinated by MMBC
MMBC’s Role and Responsibilities
<ul style="list-style-type: none"> • MMBC establishes an operating business to purchase processed residential PPP from processors and market these materials to recycling and recovery markets • MMBC establishes tracking, reporting, verification and auditing procedures to ensure data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs • MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment
Changes in Role of Householders
<ul style="list-style-type: none"> • Householders receiving municipal PPP collection services are expected to continue to receive the same level of service • Participation requirements may change • In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection
Changes in Role of Local Governments
<ul style="list-style-type: none"> • Local governments that wish to provide collection services can do so but must negotiate

¹⁷⁴ While this option is based on purchasing and marketing all processed residential PPP, MMBC’s operating business could purchase and market only certain types of processed residential PPP. See Option 4B and 4C.

Appendix M – Option 3C: Delivering Material Marketing Services Directly

<ul style="list-style-type: none">• sale of materials to processors that sell processed materials to MMBC• Local governments that currently have contracts with collectors may continue to contract for these services but either the local government or collector must negotiate sale of materials to processors that sell processed materials to MMBC• Local governments that currently provide collection services with union staff may continue to do so but must negotiate sale of materials to processors that sell processed materials to MMBC• MMBC would become the only purchaser of processed residential PPP collected by local governments
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none">• Private collection contractors may contract with local governments to provide collection services for single family and multi-family households and/or streetscapes, subject to either the contractor or the local government arranging to deliver PPP to, and receive payment from, processors that sell processed materials to MMBC• Private collection contractors may make their own arrangements with single family and multi-family households to provide collection services, subject to arranging to deliver PPP to, and receive payment from, processors that sell processed materials to MMBC• Collectors identify the geographic location and source of each load of PPP when delivered to processors so that they can prove the reported material came from residential sources when selling processed material to MMBC• When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors
Changes for Private Sector PPP Processors
<ul style="list-style-type: none">• Processors would purchase PPP collected from single family and multi-family households and streetscapes• Processors would process collected residential PPP to meet material specifications set by MMBC (based on requirements of recycling markets selected by MMBC)• MMBC would purchase processed PPP from processors• Processors would no longer market processed residential PPP• Processors would co-operate with MMBC to co-ordinate delivery of materials to recycling markets selected by MMBC
Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none">• MMBC would purchase processed residential PPP and market this material to recycling and recovery markets• Material marketing companies would deal with MMBC
Infrastructure Gaps
<ul style="list-style-type: none">• Gaps in collection infrastructure will be addressed by collectors wishing to deliver PPP to, and receive payment from, processors that sell processed materials to MMBC• Gaps in processing infrastructure will be addressed by processors that sell processed materials to MMBC
Transitioning From Current System to MMBC Providing Material Marketing
<ul style="list-style-type: none">• MMBC would establish commercial arrangements with recycling and recovery markets• MMBC would establish commercial arrangements with processors of residential PPP• Where existing local government collection contracts expire in May 2014, local

Appendix M – Option 3C: Delivering Material Marketing Services Directly

<p>governments can enter into new contracts subject to either the contractor or the local government arranging to deliver PPP to, and receive payment from, processors that sell processed materials to MMBC</p> <ul style="list-style-type: none"> • Where existing local government collection contracts expire after May 2014, the local government or its contractor can arrange to deliver PPP to, and receive payment from, processors that sell processed materials to MMBC • Where private companies are paid by single-family households and multi-family buildings for collection services, collectors can arrange to deliver PPP to, and receive payment from, processors that sell processed materials to MMBC and can then eliminate or reduce the charge to single-family households and multi-family buildings • MMBC would need to build effective business arrangements as with any other operating business
<p>Stakeholder Implications</p> <ul style="list-style-type: none"> • Local governments and private collectors would arrange to deliver PPP to, and receive payment from, processors that sell processed materials to MMBC • Processors would no longer market residential PPP • MMBC would market processed residential PPP to recycling companies • Material marketing companies would deal with MMBC • Recycling markets would deal with MMBC rather than processors
<p>Pros</p> <ul style="list-style-type: none"> • MMBC can direct materials to recycling markets • Marketing residential PPP provides MMBC with direct commodity market experience • Will yield direct data on materials delivered to markets • MMBC's marketing business would command top prices from markets because of the larger quantities being marketed by a single agency • MMBC will benefit from high commodity prices • MMBC would likely be able to establish an effective material marketing business as experienced staff could be sourced from the recycling industry
<p>Cons</p> <ul style="list-style-type: none"> • MMBC must communicate recycling market requirements to processors • Less reliable data on materials collected as must flow from collectors to processors to MMBC • May not lead to investment in collection infrastructure which could contribute over time to system efficiency • MMBC may not be able to access collectors to compile data needed for cost allocation through material composition audits and time/motion studies • Processors may purchase PPP from scavengers • Contracts with collectors will not contribute to increased scavenging • MMBC assumes the risk of falling commodity prices for the materials it processes although the risk is mediated by BC's access to export market • May be less market competition among recycling markets if MMBC enters into longer term contracts • Processors lose their link to recycling markets with whom they have established relationships • Difficult to deliver consistent communication message to residents when collection services are determined by collectors

Appendix M – Option 3C: Delivering Material Marketing Services Directly

Opportunities
<ul style="list-style-type: none"> • MMBC can establish purchase price for PPP not currently accepted in collection system • MMBC could establish commercial arrangements with willing markets to develop market capacity and demand for problem/marginal materials • MMBC can support local markets
Risks
<ul style="list-style-type: none"> • MMBC must secure access to collectors and processors to compile data needed for cost allocation through system time/motion studies and to markets to compile data on quantity recycled • Approach may be considered overly intrusive

	#	Evaluation Criteria	Direct Delivery of Marketing Services	Key Rationale		
Program Performance	1	Meeting the 75% recovery rate target ¹⁷⁵ and managing recovered materials in accordance with the pollution prevention hierarchy ¹⁷⁶ for materials that MMBC stewards supply into the BC market				
		- collected from single family households			H	MMBC able to negotiate with markets and processors to create demand for PPP from collectors to deliver desired collection services with existing technologies
		- collected by multi-family households			MH	MMBC able to negotiate with markets and processors to create demand for PPP from collectors to deliver desired collection services but systems required to effectively service high-rise multi-family
	- collected by streetscapes	M	MMBC able to negotiate with markets and processors to create demand for PPP from services and negotiate with collectors to deliver desired collection services but new systems required to effectively service			
	2	Providing reasonable and free consumer access to collection facilities ¹⁷⁷ and for collection from residential premises, and from	ML	MMBC not able to specify collection service level directly through arrangements with		

¹⁷⁵ BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹⁷⁶ BC Recycling Regulation Section 5(3).

¹⁷⁷ BC Recycling Regulation Section 5(1)(c).

Appendix M – Option 3C: Delivering Material Marketing Services Directly

Program Performance	#	Evaluation Criteria	Direct Delivery of Marketing Services	Key Rationale
		municipal property that is not industrial, commercial or institutional property ¹⁷⁸		collectors
	3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	ML	Not able to deliver communications message as MMBC not able to specify collection service levels
Economic Efficiency	4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	M	MMBC able to negotiate with processors but not with collectors
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	H	Will engage collectors, processors and markets
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	H	Collectors, processors and markets will innovate to increase revenue and profit
	7	Harnesses competitive end-of-life services and markets: <ul style="list-style-type: none"> Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously?¹⁷⁹ 	no	MMBC purchases processed material from processors able to deliver required service, processors can negotiate with collectors
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer 	no	MMBC deals with processors and markets
			yes	Defined in process to procure processed material

¹⁷⁸ BC Recycling Regulation Section 5(1)(d).

¹⁷⁹ OECD 2010. The Competition Assessment Toolkit.

http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix M – Option 3C: Delivering Material Marketing Services Directly

	#	Evaluation Criteria	Direct Delivery of Marketing Services	Key Rationale
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	ML	MMBC can negotiate access to processors and markets but has no access to collectors
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	ML	MMBC can negotiate access to processors for processing cost allocation data but has no access to collection cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	MH	MMBC has data on quantities shipped to markets and can negotiate access to markets for quantities recycled and to processors for quantities received
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined in process to procure processed material
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	L	MMBC's processing operating business would displace existing relationships between processors and markets
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	no	No mechanism to address concerns

Appendix N

Option 4A: Contract with Processor and Incentive for Collectors

Appendix N – Option 4A: Contract with Processor and Incentive for Collectors

Option 4A: Contract with Processor and Incentive for Collectors
Description
<ul style="list-style-type: none"> • MMBC establishes a financial incentive payable to collectors for each tonne of PPP delivered to an approved¹⁸⁰ processor. The incentive can be tiered by: <ul style="list-style-type: none"> ○ Geographic area from which residential PPP was collected by the collector (e.g. by municipality), and ○ Source within the geographic area (e.g, single family, multi-family, streetscape) • Collectors establish a system to track tonnages collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to be eligible for incentives available from MMBC • MMBC establishes a series of contracts with processors to process PPP delivered by collectors • Processors process materials to meet market specifications and market materials • Processors establish a system to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC
Operating Example of Program Design Option
<ul style="list-style-type: none"> • Ontario Waste Electrical and Electronic Equipment Program
Flow of PPP From Households To Recycling Markets
<ul style="list-style-type: none"> • Householder and streetscape services will be determined by collectors which may be influenced by the incentive available from MMBC • Materials will be collected by local governments or companies that are approved to receive the incentive available from MMBC and that have established arrangements with MMBC's contracted processors • Processors access PPP by establishing arrangements with collectors providing single family curbside, multi-family, depot and/or streetscape collection service or by collecting materials directly • Materials will be delivered by collectors to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
MMBC's Role and Responsibilities
<ul style="list-style-type: none"> • MMBC establishes collection incentives tiered by the geographic area in which PPP is collected and the source of PPP • MMBC pays collectors based on submission of verified data confirming PPP collected from single family and multi-family households and from streetscapes delivered to processors that negotiate contracts with MMBC • MMBC negotiates¹⁸¹ contracts with processors to provide the required processing and marketing services • MMBC pays processors based on submission of verified data confirming processing and marketing of PPP delivered by collectors • MMBC establishes tracking, reporting, verification and auditing procedures to ensure

¹⁸⁰ Refer to Section 3.1.3 Achieving Performance.

¹⁸¹ MMBC could select processors through negotiation, tenders or request for proposals.

Appendix N – Option 4A: Contract with Processor and Incentive for Collectors

<p>data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs</p> <ul style="list-style-type: none">• MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment
Changes in Role of Householders
<ul style="list-style-type: none">• Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although the collector may be different• Participation requirements may change if new collectors provide service and if PPP accepted in MMBC's program differs from current system• In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection
Changes in Role of Local Governments
<ul style="list-style-type: none">• Local governments wishing to provide collection services will be approved against the MMBC collector standard to be eligible for the collection incentive and must negotiate delivery of materials to MMBC's contracted processors• Local governments that currently provide collection services with union staff may continue to do so but must be eligible for the MMBC collection incentive and must negotiate delivery of materials to MMBC's contracted processors• Local governments must comply with MMBC reporting and audit requirements to remain approved collectors
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none">• Private collectors wishing to provide collection services will be approved against the MMBC collector standard to be eligible for the collection incentive• Private collectors must comply with MMBC reporting and audit requirements to remain approved• Private collectors can negotiate with local governments to provide collection services with either the private collector or the local government being eligible for the MMBC collection incentive and negotiating delivery of materials to MMBC's contracted processors• Collectors that wish to provide collection services must make arrangements with local governments to access public easements to provide single family, multi-family dwellings and streetscape collection, make arrangements with multi-family property management companies for collection services and negotiate delivery of materials to approved processors• Negotiations between incumbent collectors and local governments remain at the discretion of those parties• Collectors will identify geographic areas and sources of PPP to MMBC to be eligible for zone and source specific incentives• When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors to MMBC
Changes for Private Sector PPP Processors
<ul style="list-style-type: none">• Processors that wish to provide processing and marketing services can respond to MMBC's process to procure services• Processors that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the processing and recycling

Appendix N – Option 4A: Contract with Processor and Incentive for Collectors

<p>system</p> <ul style="list-style-type: none">Processors will contract with and receive payment from MMBC for processing and marketing services (rather than local governments or companies)Processors will compete for PPP by negotiating with collectors and/or directly (where vertically integrated) with local governments and multi-family building property managers to access PPP feedstock
Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none">Material marketing companies continue to deal with processors
Infrastructure Gaps
<ul style="list-style-type: none">Collection infrastructure gaps will be filled by collectors where incentive levels and volume of PPP are sufficient to drive a reasonable return on investment in infrastructure;<ul style="list-style-type: none">Example: collectors may capitalize multi-family building collection infrastructure where the building enters into a long-term agreement with the collectorGaps in processing infrastructure will be addressed by processors that negotiate contracts with MMBC
Transitioning From Current System to Incentives for Collectors and Contracts with Processors
<ul style="list-style-type: none">Negotiations between collectors and local governments likely to begin when MMBC unveils collection incentiveCurrent arrangements between collectors and local governments can be renegotiated to take into account the MMBC collection incentives at their discretionWhere private companies are paid by single-family households and multi-family buildings for collection services, collectors can adjust arrangements to take into account the collection incentive available from MMBC at their discretionMMBC's ability to track PPP system performance depends on collectors being approved and establishing necessary arrangements with contracted processors
Stakeholder Implications
<ul style="list-style-type: none">Processors may be more likely to vertically integrate services to directly provide collection service and access collection incentivesProcessors may prefer dealing with fewer number of collectors to access feedstock leading to consolidation of collectorsSmaller processors may be advantageously positioned to service adjacent geographic areas but may be disadvantaged by lack of economies of scaleRelationships between collectors and processors may change to accommodate MMBC's selected processing contractors
Pros
<ul style="list-style-type: none">Payment is based on collection and recycling outcomesArrangements between local governments and collectors are determined among themselves without MMBC interventionCompetitive collection marketplace is more likely to deliver long-term efficiencyProcessors ensure quality of materials received by rejecting substandard materials that cannot be processed to the recycling efficiency rate with the effect that the collector is not eligible for the collection incentive for rejected materialsMMBC is a price-setter for collection services with less financial risk as incentives can be

Appendix N – Option 4A: Contract with Processor and Incentive for Collectors

<p>ratcheted up incrementally to drive performance if required and ratcheted down over time as capital investments mature</p> <ul style="list-style-type: none">• Requirements for collectors to verify geographic zone and residential sources of PPP may be used as a control on ICI materials and scavenging• Will yield good data on materials collected as collectors are MMBC's point of contact as well as good data on materials as processors are also MMBC's point of contact• MMBC can cross-check and reconcile data from collectors and processors• MMBC access to processors for audit purposes can be secured via contract terms• MMBC can establish and enforce performance standards for processing through commercial arrangements• Does not replace existing commercial relationships between processors and markets• Likely to be numerous interested collectors due to lower capital investment to establish PPP collection business
Cons
<ul style="list-style-type: none">• Significant MMBC investment in audit and oversight activities to verify sources of PPP received by processors and recycling outcomes• Higher administrative burden on MMBC to manage collection incentive payments and processing contracts and two sources of data• May encourage vertical integration reducing number of service providers and marketplace competition• May be few interested processors due to high capital investment to establish PPP processing business• Difficult to deliver consistent communication message to residents when collection services are determined by collectors
Opportunities
<ul style="list-style-type: none">• MMBC can contract with multiple processors to protect against processor failure• Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if payments from MMBC to collectors and processors are structured appropriately• MMBC can structure payments to processors to provide premium for PPP for which markets provide no or limited revenue• MMBC can set contract term and define contract conditions to facilitate system design adjustments (e.g. adding new materials to collection system), to renew bid prices as system efficiencies are achieved
Risks
<ul style="list-style-type: none">• Novel approach for PPP collection that will require intensive education and initial support for stakeholder adjustment• Delivery of collection service levels dependent on effectiveness of variable incentives• Collection incentives may contribute to inflated reporting (leakage from ICI)• Where residential and ICI generators are serviced on the same routes, agreement among MMBC, collectors and processors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required• Incentive levels might be set below costs so that collectors are not attracted to provide services, delaying achievement of targets• Incentives must be set to drive desired market activity (investment in infrastructure gaps, collection etc.) in the absence of perfect market information

Appendix N – Option 4A: Contract with Processor and Incentive for Collectors

	#	Evaluation Criteria	Contracts for Processors and Incentives for Collectors	Key Rationale
Program Performance	1	Meeting the 75% recovery rate target ¹⁸² and managing recovered materials in accordance with the pollution prevention hierarchy ¹⁸³ for materials that MMBC stewards supply into the BC market	H	Collectors will collect PPP to be eligible for incentive; contract with processors can specify service; processors able to secure PPP from range of collectors, collectors able to service with existing technologies
		- collected from single family households		
		- collected by multi-family households		Collectors will collect PPP to be eligible for incentive; contract with processors can specify service; processors able to secure PPP from range of collectors, systems required to effectively service high-rise multi-family
		- collected by streetscapes		Collectors will collect PPP to be eligible for incentive; contract with processors can specify service; processors able to secure PPP from range of collectors, new systems required to effectively service
	2	Providing reasonable and free consumer access to collection facilities ¹⁸⁴ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹⁸⁵	H	Collection incentive can be tiered by source to deliver desired service levels
	3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient	M	Service for which incentive is provided can be communicated
		- by single family households		Service for which incentive is provided can be communicated
		- by multi-family households	L	Uncertain effect on streetscape collection services

¹⁸² BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹⁸³ BC Recycling Regulation Section 5(3).

¹⁸⁴ BC Recycling Regulation Section 5(1)(c).

¹⁸⁵ BC Recycling Regulation Section 5(1)(d).

Appendix N – Option 4A: Contract with Processor and Incentive for Collectors

	#	Evaluation Criteria	Contracts for Processors and Incentives for Collectors	Key Rationale
Economic Efficiency	4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	MH	Collection incentive can be adjusted to reflect system changes; Processing price fixed by contract term may not represent least cost and may not reflect innovation
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	MH	Collection incentive likely to engage interested collectors; processors limited by process to procure services and by length of contract term but processors able to secure PPP from range of collectors
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	MH	Collectors will innovate to increase revenue and profit; processors limited by process to procure services and by length of contract term
	7	Harnesses competitive end-of-life services and markets: <ul style="list-style-type: none"> Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously?¹⁸⁶ 	yes	Collectors able to deliver required service can access incentive; processors limited by process to procure processing services
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction <ul style="list-style-type: none"> - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer 	no	Collectors likely to be most numerous of total service providers engaged in delivering PPP services
			yes	Defined requirements to be eligible for collection incentive and requirements for processing services defined in procurement process and contract terms

¹⁸⁶ OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix N – Option 4A: Contract with Processor and Incentive for Collectors

Transparency and Accountability	#	Evaluation Criteria	Contracts for Processors and Incentives for Collectors	Key Rationale
	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	MH	Access to collectors can be defined in eligibility requirements and access to processors can be defined in contract terms
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	H	Access to collectors for collection cost allocation data and access to processors for processing cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	MH	Access to collectors for quantities collected and access to processors for quantities shipped but no access to markets for quantities recycled
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined requirements to be eligible for collection incentive and requirements for processing services defined in procurement process and contract terms
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	M	Collectors able to deliver required service can access incentive; MMBC would select preferred processors through procurement process and those not selected may perceive process as unfair
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	no	No mechanism to address concerns

Appendix O – Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services

Appendix O

Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services

Appendix O – Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services

Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services
Description
<ul style="list-style-type: none"> • MMBC creates an operating business to process a portion of residential PPP and makes arrangements with collectors (and/or transporters) to secure PPP feedstock, process materials to meet market specifications and market materials • MMBC would be responsible for costs incurred by its processing business and would retain revenues for sale of processed PPP • MMBC establishes a series of contracts with processors to process the remaining PPP delivered by collectors • Processors make their own arrangements with collectors (and/or transporters) to secure PPP feedstock, process materials to meet market specifications and market materials • Processors establish a system to track tonnages collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC • MMBC pays processors and processors pay transporters and collectors as required
Operating Example of Program Design Option
<ul style="list-style-type: none"> • No operating example identified
Flow of PPP From Households To Recycling Markets
<ul style="list-style-type: none"> • Householder and streetscape services will be determined by collectors which may be influenced by their arrangements with processors which may, in turn, be influenced by their negotiation with MMBC • Materials will be collected by local governments or companies that have established a relationship with MMBC’s processing business or with processors that have negotiated contracts with MMBC • Materials will be delivered by collectors to MMBC’s processing business or processors that have negotiated contracts with MMBC either directly from collection vehicles or via transfer facilities and transporters • MMBC’s processing business and MMBC’s contracted processors will process and market materials
MMBC’s Role and Responsibilities
<ul style="list-style-type: none"> • MMBC establishes an operating business to process residential PPP and market processed PPP to recycling markets • MMBC establishes commercial relationships with collectors to access sufficient feedstock for its processing business including specifying <ul style="list-style-type: none"> ○ types of PPP accepted for processing and to be included in the collection system ○ collection service levels for single family and multi-family households and collection from streetscapes ○ communications to residents about collection services • MMBC negotiates¹⁸⁷ contracts with processors to provide the additional collection, processing and marketing services required

¹⁸⁷ MMBC could select processors through negotiation, tenders or request for proposals.

Appendix O – Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services

- MMBC can deliver collection service level requirements (for single family and multi-family households and collection from streetscapes by geography, types of PPP accepted in the collection system) by incorporating requirements in contracts with processors or by paying processors, in part, by the source of feedstock on the expectation that processors will secure feedstock from collectors providing the specified services
- MMBC establishes tracking, reporting, verification and auditing procedures to ensure data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs
- MMBC pays processors based on submission of verified data confirming processing and marketing of PPP sourced from single family and multi-family households and from streetscapes
- MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment

Changes in Role of Householders

- Householders receiving municipal PPP collection services are expected to continue to receive the same level of service, although the collector may be different
- Participation requirements may change if new collectors provide service and if PPP accepted in MMBC's program differs from current system
- In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection

Changes in Role of Local Governments

- Local governments that wish to provide collection services can arrange to deliver PPP to, and receive payment from, MMBC's processing business or processors that negotiate contracts with MMBC
- Local governments that currently have contracts with collectors can continue these arrangements subject to arranging to deliver PPP to, and receive payment from, MMBC's processing business or processors that negotiate contracts with MMBC
- Local governments that currently provide collection services with union staff can continue to do so subject to arranging to deliver PPP to, and receive payment from, MMBC's processing business or processors that negotiate contracts with MMBC

Changes for Private Sector PPP Collectors

- Private collection contractors may contract with local governments to provide collection services for single family and multi-family households and/or streetscapes, subject to either the contractor or the local government arranging to deliver PPP to, and receive payment from, MMBC's processing business or processors that negotiate contracts with MMBC
- Private collection contractors may make their own arrangements with single family and multi-family households to provide collection services, subject to arranging to deliver PPP to, and receive payment from, MMBC's processing business or processors that negotiate contracts with MMBC
- Collectors identify the geographic location and source of each load of PPP when delivered to a processor to prove the reported material came from residential sources
- When residential and ICI generators are serviced on the same routes, collectors will identify the residential portion of PPP delivered to processors

Appendix O – Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services

<p>Changes for Private Sector PPP Processors</p> <ul style="list-style-type: none"> • Processors that wish to provide processing and marketing services, and arrange for collection services, can respond to MMBC’s process to procure services • Processors establish arrangements with collectors (and transporters if required) to secure feedstock to satisfy their contractual obligations to MMBC • Processors that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the collection and recycling system • Processors will contract with and receive payment from MMBC for processing and marketing services (rather than local governments or companies)
<p>Changes for Private Sector PPP Marketing Companies</p> <ul style="list-style-type: none"> • Material marketing companies continue to deal with processors • Material marketing companies may deal with MMBC’s processing business
<p>Infrastructure Gaps</p> <ul style="list-style-type: none"> • Gaps in collection infrastructure will be addressed by collectors wishing to deliver feedstock to MMBC’s processing business or processors that negotiate contracts with MMBC • Gaps in processing infrastructure will be addressed by MMBC’s processing business and processors that negotiate contracts with MMBC
<p>Transitioning From Current System to Contract for Processing and Direct Delivery of Partial Processing Services</p> <ul style="list-style-type: none"> • MMBC would establish its processing facility (or facilities) • MMBC would establish commercial relationships with collectors to secure feedstock for its processing facility (or facilities) • Where existing local government collection contracts expire in May 2014, local governments can enter into new contracts subject to either the contractor or the local government arranging to deliver PPP to, and receive payment from, MMBC’s processing business or processors that negotiate contracts with MMBC • Where existing local government collection contracts expire after May 2014, the local government or its contractor can arrange to deliver PPP to, and receive payment from, MMBC’s processing business or processors that negotiate contracts with MMBC • Where private companies are paid by single-family households and multi-family buildings for collection services, collectors can arrange to deliver PPP to, and receive payment from, MMBC’s processing business or processors that negotiate contracts with MMBC and can then eliminate or reduce the charge to single-family households and multi-family buildings
<p>Stakeholder Implications</p> <ul style="list-style-type: none"> • Collectors must arrange to deliver PPP to MMBC’s processing business or processors that negotiate contracts with MMBC and payment from these processors may or may not be sufficient to cover collectors’ costs • Local governments may be concerned that collection service will be reduced when service is delivered by collectors through arrangements with processors • As processors will be accountable to MMBC for delivery of collection services, processors may be more likely to vertically integrate services to directly provide collection service

Appendix O – Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services

<ul style="list-style-type: none"> • Smaller processors or processors that are not aligned with collectors may be less able to compete to provide package of services that includes collection, processing and marketing • Delivery of collection services in all geographic areas and all sources of PPP may depend on whether MMBC's payment to processors is variable by factors such as geographic location and source (single family, multi-family, streetscape) • Processors may compete with MMBC's processing business for feedstock from collectors • Materials may flow to a smaller number of processors increasing quantities marketed by each reducing the need for brokers' services • MMBC would market residential PPP processed by its processing business to recycling companies
<p>Pros</p> <ul style="list-style-type: none"> • Processing residential PPP provides MMBC with direct processing experience • Will yield direct data on materials MMBC delivers to markets • MMBC will benefit from high commodity prices for materials MMBC delivers to markets • Transactions with processors cover collection, processing and marketing services • Private and local government collectors providing curbside, depot, multi-family building and streetscape collection services can arrange to deliver PPP to, and receive payment from, MMBC's processing business and processors that negotiate contracts with MMBC • Will yield good data on materials marketed as processors are MMBC's point of contact • Does not replace existing commercial relationships where collectors continue to ship to MMBC's contracted processors (but will affect terms) • Does not replace existing commercial relationships between processors and markets • MMBC has direct access to processing data for cost allocation through material composition audits and time/motion studies
<p>Cons</p> <ul style="list-style-type: none"> • Steep learning curve for MMBC to deliver residential PPP processing services • MMBC assumes the risk of falling commodity prices for the materials it delivers to markets although the risk is mediated by BC's access to export market • As processors determine commercial arrangements with collectors <ul style="list-style-type: none"> ○ may not deliver collection service levels required ○ may not lead to investment in collection infrastructure which could contribute over time to system efficiency ○ processors may purchase PPP from scavengers • Less reliable data on materials collected by geographic location and source as data must flow from collectors to processor to MMBC although mitigated by MMBC's direct relationship with some collectors • May encourage vertical integration reducing number of service providers and marketplace competition • Payment to processors based (in part) on collection service levels will require more extensive tracking system • Difficult to deliver consistent communication message to residents when collection services are determined by collectors
<p>Opportunities</p> <ul style="list-style-type: none"> • MMBC can establish processing services to manage PPP not currently accepted in

Appendix O – Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services

- collection system
- MMBC could establish commercial arrangements with willing markets to develop market capacity and demand for problem/marginal materials
 - MMBC can compile data needed for cost allocation through collected and processed material composition audits and processing system time/motion studies
 - Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if payments from MMBC to processors are structured appropriately
 - MMBC can structure payments to processors to provide premium for PPP for which markets provide no or limited revenue
 - MMBC’s processing business provides protection against processor failure
 - MMBC can contract with multiple processors to protect against processor failure
 - MMBC can set contract term and define contract conditions to facilitate system design adjustments (e.g. adding new materials to collection system), to renew bid prices as system efficiencies are achieved
 - MMBC access to processors for audit purposes can be secured via contract terms

Risks

- MMBC must secure access to collectors to compile data needed for cost allocation through collection system time/motion studies and to markets to compile data on quantity recycled
- MMBC’s ability to ensure that collection services meet MMBC’s requirements is limited to holding processors accountable through contractual terms
- Processors are MMBC’s single source of data without system cross-checks although mitigated by MMBC’s direct relationship with some collectors
- MMBC access to collectors for audit purposes could be secured via arrangements with collectors delivering PPP to MMBC’s processing business
- Where residential and ICI generators are serviced on the same routes, agreement between MMBC and processors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required and processors must implement methodology

Program Performance	#	Evaluation Criteria	Contract for Processing and Direct Delivery of Partial Processing Services	Key Rationale
	1	Meeting the 75% recovery rate target ¹⁸⁸ and managing recovered materials in accordance with the pollution prevention hierarchy ¹⁸⁹ for materials that MMBC stewards supply into the BC market	H	Contract can specify service, processors able to secure PPP from range of collectors,
		- collected from single family households		

¹⁸⁸ BC Recycling Regulation Section 5(1)(a): “the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹⁸⁹ BC Recycling Regulation Section 5(3).

Appendix O – Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services

Program Performance	#	Evaluation Criteria	Contract for Processing and Direct Delivery of Partial Processing Services	Key Rationale
				collectors able to service with existing technologies
		- collected by multi-family households	MH	Contract can specify service, processors able to secure PPP from range of collectors, systems required to effectively service high-rise multi-family
		- collected by streetscapes	ML	Contract can specify service, processors able to secure PPP from range of collectors, new systems required to effectively service
	2	Providing reasonable and free consumer access to collection facilities ¹⁹⁰ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹⁹¹	ML	MMBC not able to specify collection service level directly through arrangements with collectors
	3	<p>Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient</p> <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	ML	Not able to deliver communications message as MMBC not able to specify collection service levels
Economic Efficiency	4	Ability to deliver the recovery target at least cost to stewards	M	MMBC processing operations will provide insight into processing costs for purposes of adjusting processing portion of contract prices; portion of price reflecting collection costs fixed by contract term may not represent least cost
		- from single family households		
		- from multi-family households	ML	MMBC processing operations will provide insight into processing costs for purposes of adjusting processing portion of contract price; portion of price reflecting collection costs fixed by contract term may not represent least cost and may not reflect innovation to effectively service
	- from streetscapes	ML		
5	Likelihood to engage entities across BC that	MH	Processors limited by process to	

¹⁹⁰ BC Recycling Regulation Section 5(1)(c).

¹⁹¹ BC Recycling Regulation Section 5(1)(d).

Appendix O – Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services

Program Performance	#	Evaluation Criteria	Contract for Processing and Direct Delivery of Partial Processing Services	Key Rationale
		can most efficiently deliver collection and recovery rate results		procure services and by length of contract term but processors able to secure PPP from range of collectors
	6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	MH	Processors limited by process to procure services and by length of contract term but processors able to secure PPP from most innovative collectors
	7	Harnesses competitive end-of-life services and markets: Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously? ¹⁹²	yes	Limited by process to procure services
	8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction - minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer	yes	Relatively small number of processors
			yes	Defined in procurement process and contract terms
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	M	Access to processors can be defined in contract terms but no access to collectors
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	MH	Access to processors for processing cost allocation but no access to collectors for collection cost allocation data
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated to regulators and the public	MH	Access to processors for quantities delivered and quantities shipped but no access to markets for quantities recycled
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined in procurement process and contract terms

¹⁹² OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix O – Option 4B: Contract with Processor and Direct Delivery of Partial Processing Services

Program Performance	#	Evaluation Criteria	Contract for Processing and Direct Delivery of Partial Processing Services	Key Rationale
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	M	MMBC would select preferred processors through procurement process; those not selected may perceive process as unfair
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	no	MMBC not able to specify collection service levels and role for local government

Appendix P

Option 4C: Contracts with Collectors, Transporters and Processors and Direct Delivery of Partial Collection, Processing and Marketing Services

Appendix P – Option 4C: Contracts with Collectors, Transporters and Processors and Direct Delivery of Partial Collection, Processing and Marketing Services

Option 4C: Contracts with Collectors, Transporters and Processors and Direct Delivery of Partial Collection, Processing and Marketing Services
<p>Description</p> <ul style="list-style-type: none"> • MMBC creates an operating business to collect PPP from single family and multi-family households and streetscapes located in a specific geographic area, process collected materials and market processed PPP to recycling markets • MMBC would be responsible for costs incurred by its operating business and would retain revenues for sale of processed PPP • MMBC also establishes a series of contracts with collectors throughout the province to ensure appropriate collection service levels to other communities • Collectors implement collection services (single family and/or multi-family, curbside and/or depot and/or streetscape as specified in the contract terms) and make their own arrangements with transporters (if required) to transport collected materials to processors and with processors to process and market collected materials • Collectors establish a system to track tonnages collected by geography, to prove the reported material came from residential sources and to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC • MMBC establishes a series of contracts with processors to process PPP delivered by contracted collectors • Processors process materials to meet market specifications and market materials • Processors establish a system to track tonnages recycled and recovered to satisfy requirements of contracts with MMBC • MMBC pays collectors and processors (and either collectors or processors pay transporters if required)
<p>Operating Example of Program Design Option</p> <ul style="list-style-type: none"> • No operating example identified
<p>Flow of PPP From Households To Recycling Markets</p> <ul style="list-style-type: none"> • Household have access to single family curbside, multi-family and/or depot collection provided by MMBC’s collection business or as defined by the contract terms between collectors and MMBC • Residents have access to streetscape collection as provided by MMBC’s collection business or as defined by the contract terms between collectors and MMBC • Participation requirements may change if new collectors provide service and if PPP accepted in MMBC’s program differs from current system • Materials will be delivered by MMBC and its contracted collectors to processors either directly from collection vehicles or via transfer facilities and transporters • Processors will process and market materials
<p>MMBC’s Role and Responsibilities</p> <ul style="list-style-type: none"> • MMBC determines collection service levels for single family and multi-family households and collection from streetscapes from single family and multi-family households • MMBC determines the types of PPP accepted in the collection system • MMBC determines zones for purposes of procuring collection services¹⁹³

¹⁹³ Operating examples of collection zones include BC Used Oil Material Program for incentive system and BC Hydro for fridge retirement collection contracts.

Appendix P – Option 4C: Contracts with Collectors, Transporters and Processors and Direct Delivery of Partial Collection, Processing and Marketing Services

- MMBC establishes an operating business to collect residential PPP in a specific geographic area, process collected materials and market processed PPP to recycling markets
- MMBC negotiates¹⁹⁴ one or more contracts with collectors in collection zones not serviced by MMBC to provide the required collection services
- MMBC pays collectors based on submission of verified data confirming PPP collected from single family and multi-family households and from streetscapes delivered to processors that negotiate contracts with MMBC
- MMBC delivers communications to residents about collection services and/or requires contracted collectors to deliver communications to residents
- MMBC negotiates¹⁹⁵ contracts with processors to provide processing and marketing services for MMBC's contracted collectors
- MMBC pays processors based on submission of verified data confirming processing and marketing of PPP delivered by collectors that negotiate contracts with MMBC
- MMBC establishes tracking, reporting, verification and auditing procedures to ensure data collection and monitoring at a sufficient level of detail to satisfy their performance reporting obligations and business management needs
- MMBC consolidates information and reports tonnages collected by regional district and provincial collection and recycling rates to Ministry of Environment

Changes in Role of Householders

- Householders receiving municipal PPP collection services are expected to continue to receive the same level of service from either MMBC's operating business or from MMBC's contracted collectors
- Participation requirements may change
- In dense retail traffic areas in larger urban environments, residents will have access to streetscape collection

Changes in Role of Local Governments

- MMBC would make arrangements with local governments for access to public easements where required for MMBC's operating business to service single family and multi-family dwellings and streetscape collection
- Co-ordination of transition from existing contracted or local government collector to MMBC's operating business would be required
- Local governments that wish to provide collection services can respond to MMBC's process to procure collection services
- Local governments that negotiate contracts with MMBC will deliver PPP to processors that negotiate contracts with MMBC
- Local governments that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the collection system
- Local governments that currently contract for PPP collection services will no longer contract for these services
- Local governments that currently collect PPP with union staff may or may not be successful in negotiating a contract with MMBC to provide collection services
- Collector selected by MMBC for a collection zone may be different from collector

¹⁹⁴ MMBC could select collectors through negotiation, tenders or request for proposals.

¹⁹⁵ MMBC could select processors through negotiation, tenders or request for proposals.

Appendix P – Option 4C: Contracts with Collectors, Transporters and Processors and Direct Delivery of Partial Collection, Processing and Marketing Services

currently providing service under contract to local government, requiring transition co-ordination
Changes for Private Sector PPP Collectors
<ul style="list-style-type: none"> • Private collectors that wish to provide collection services can respond to MMBC's process to procure services • Private collectors that negotiate contracts with MMBC will deliver PPP to processors that negotiate contracts with MMBC • Private collectors that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the collection system • Private collectors that currently provide PPP collection services may or may not be successful in negotiating a contract with MMBC to provide collection services • Private collectors can choose to respond to MMBC's process to procure collection services for one or more collection zones • When residential and ICI generators are serviced on the same routes, collectors will need to identify the residential portion for reporting to MMBC
Changes for Private Sector PPP Processors
<ul style="list-style-type: none"> • Processors that wish to provide processing and marketing services can respond to MMBC's process to procure services • Processors will receive PPP from MMBC's contracted collectors • Processors that negotiate contracts with MMBC will be expected to comply with the contract terms including performance requirements for the processing and recycling system • Processors will contract with and receive payment from MMBC for processing and marketing services (rather than local governments or companies)
Changes for Private Sector PPP Marketing Companies
<ul style="list-style-type: none"> • Material marketing companies continue to deal with processors
Infrastructure Gaps
<ul style="list-style-type: none"> • Gaps in collection infrastructure will be addressed by MMBC's operating business and by collectors that negotiate contracts with MMBC • Gaps in processing infrastructure will be addressed by MMBC's operating business and processors that negotiate contracts with MMBC
Transitioning From Current System to Contracts for Collection and Processing and Direct Delivery of Partial Collection, Processing and Marketing Services
<ul style="list-style-type: none"> • MMBC would make arrangements with local governments for access to public easements where required for MMBC's operating business to service single family and multi-family dwellings and streetscape collection • MMBC would establish its processing facility (or facilities) and commercial relationships with collectors to secure feedstock for its facility (or facilities) • MMBC would establish commercial arrangements with recycling and recovery markets • Where existing local government collection contracts expire in May 2014, MMBC's operating business can provide collection service or MMBC can negotiate collection contracts to begin at the launch of the MMBC program • Where existing local government collection contracts expire after May 2014, MMBC can <ul style="list-style-type: none"> ○ pay for collection services to the contract expiry date based on MMBC's average

Appendix P – Option 4C: Contracts with Collectors, Transporters and Processors and Direct Delivery of Partial Collection, Processing and Marketing Services

<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ contracted collection cost in similar jurisdictions ○ provide collection service or negotiate collection contracts to begin at the launch of the MMBC program • Where private companies are paid by single-family households and multi-family buildings for collection services, these arrangements are likely to be abandoned in favour of services provided by MMBC's operating business or by contractors paid by MMBC • MMBC would need to build effective business arrangements as with any other operating business
<p>Stakeholder Implications</p> <ul style="list-style-type: none"> • Local governments may be concerned that service will be reduced when service is provided by or levels are determined by MMBC • Collectors and processors providing services for geographic area to be serviced by MMBC's operating business may be replaced by MMBC's service • Where private collectors have integrated residential and ICI collection routes, collection routing would be disrupted • Smaller processors may be disadvantaged by lack of economies of scale but may have advantage of proximity to collection routes • Processors would retain their commercial relationships with markets • Relationships between collectors and processors may change to accommodate MMBC's selected contractors
<p>Pros</p> <ul style="list-style-type: none"> • MMBC determines residential PPP collection system design • Collecting residential PPP in a specific geographic area provides MMBC with data on materials collected, feedstock for MMBC's processing facility, data on materials delivered to markets, data for cost allocation through material composition audits and time/motion studies, direct collection, processing and marketing experience • MMBC will benefit from high commodity prices for materials MMBC delivers to markets • Local governments and small and large collectors and processors can respond to MMBC's process to procure collection services • Will yield good data on materials collected and marketed as both collectors and processors are MMBC's points of contact • Contracts with collectors will not contribute to scavenging • Does not replace existing commercial relationships where collectors continue to ship to MMBC's contracted processors (but will affect terms) • Does not replace existing commercial relationships between processors and markets • Collection service levels are more likely to be delivered as MMBC can specify service standards in contracts with collectors • MMBC can establish and enforce performance standards for collection and processing through commercial arrangements with each party • MMBC can cross-check and reconcile data from collectors and processors • MMBC access to collectors and processors for audit purposes can be secured via contract terms • Able to deliver consistent communication message to residents as MMBC defines collection service levels
<p>Cons</p> <ul style="list-style-type: none"> • Steep learning curve for MMBC to deliver residential PPP collection, processing and

Appendix P – Option 4C: Contracts with Collectors, Transporters and Processors and Direct Delivery of Partial Collection, Processing and Marketing Services

<p>marketing services</p> <ul style="list-style-type: none"> • MMBC assumes the risk of falling commodity prices for the materials it processes although the risk is mediated by BC's access to export market • Higher administrative burden on MMBC to manage collection and processing contracts and two sources of data • May encourage vertical integration reducing number of service providers and marketplace competition • May be few interested processors due to high capital investment to establish PPP processing business • May lead to fewer number of larger collectors and/or processors which can concentrate system capacity reducing marketplace competition over time
<p>Opportunities</p> <ul style="list-style-type: none"> • MMBC can define collection services to ensure appropriate service levels • MMBC can define collection zones to improve collection system efficiencies • MMBC can compile data needed for cost allocation through collected and processed material composition audits and collection and processing system time/motion studies • MMBC can establish processing services to manage PPP not currently accepted in collection system • MMBC can structure payments to processors to provide premium for PPP for which markets provide no or limited revenue • MMBC's processing business provides protection against processor failure • MMBC can contract with multiple processors to protect against processor failure • Could lead to investment in MRF sorting capability and collection of additional materials to supply new processing capacity if payments from MMBC to collectors and processors are structured appropriately • MMBC can set contract term and define contract conditions to facilitate system design adjustments (e.g. adding new materials to collection system), to renew bid prices as system efficiencies are achieved • MMBC can support local markets using PPP it collects, processes and markets
<p>Risks</p> <ul style="list-style-type: none"> • If payment to contracted collectors were to be based on quantity collected, may contribute to inflated reporting • Where residential and ICI generators are serviced on the same routes, agreement between MMBC and collectors on an acceptable allocation methodology to identify the residential portion of mixed loads will be required • Multi-family building owners/managers may not co-operate with MMBC or collectors contracted by MMBC

Appendix P – Option 4C: Contracts with Collectors, Transporters and Processors and Direct Delivery of Partial Collection, Processing and Marketing Services

	#	Evaluation Criteria	Contracts for Collection, Transportation and Processing and Direct Delivery of Partial Collection, Transportation and Processing Services	Key Rationale		
Program Performance	1	Meeting the 75% recovery rate target ¹⁹⁶ and managing recovered materials in accordance with the pollution prevention hierarchy ¹⁹⁷ for materials that MMBC stewards supply into the BC market	MH	Contract can specify service, collectors selected through procurement process, collectors able to service with existing technologies		
		- collected from single family households				
		- collected by multi-family households			M	Contract can specify service, collectors selected through procurement process, systems required to effectively service high-rise multi-family
		- collected by streetscapes			ML	Contract can specify service, collectors selected through procurement process, new systems required to effectively service
	2	Providing reasonable and free consumer access to collection facilities ¹⁹⁸ and for collection from residential premises, and from municipal property that is not industrial, commercial or institutional property ¹⁹⁹	H	Contract can specify collection service levels		
	3	Actions by residents to access the collection facilities that can be easily communicated and that are reasonably convenient <ul style="list-style-type: none"> - by single family households - by multi-family households - by streetscapes 	H	Able to deliver communications message as collection service levels defined in contract		
Economic Efficiency	4	Ability to deliver the recovery target at least cost to stewards <ul style="list-style-type: none"> - from single family households - from multi-family households - from streetscapes 	M	MMBC operations will provide insight into costs for purposes of adjusting contract prices		

¹⁹⁶ BC Recycling Regulation Section 5(1)(a):“the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director”.

¹⁹⁷ BC Recycling Regulation Section 5(3).

¹⁹⁸ BC Recycling Regulation Section 5(1)(c).

¹⁹⁹ BC Recycling Regulation Section 5(1)(d).

Appendix P – Option 4C: Contracts with Collectors, Transporters and Processors and Direct Delivery of Partial Collection, Processing and Marketing Services

Program Performance	#	Evaluation Criteria	Contracts for Collection, Transportation and Processing and Direct Delivery of Partial Collection, Transportation and Processing Services	Key Rationale
	5	Likelihood to engage entities across BC that can most efficiently deliver collection and recovery rate results	M	Limited by process to procure services and by length of contract term
6	Fosters innovation in PPP collection, diversion and recovery that results in greater efficiency over time	M	Limited by process to procure services and by length of contract term but can be mitigated by MMBC's insights into costs for purposes of adjusting contract prices	
7	Harnesses competitive end-of-life services and markets: Does the PDO limit the number or range of suppliers? Does the PDO limit the ability of service suppliers to compete? Does the PDO reduce the incentive of service suppliers to compete vigorously? ²⁰⁰	yes	Limited by process to procure services	
8	Minimizes MMBC transaction costs by driving activities that further MMBC's performance objectives without MMBC having to administer each interaction			
	- minimizes MMBC bureaucracy and institutional complexity - sets a procedural framework and commercial terms and conditions for program services that are clear and reasonable for service providers and simple for MMBC to administer	no	Contracts with collectors, transporters and processors	
		yes	Defined in procurement process and contract terms	
Transparency and Accountability	9	Provides opportunities to efficiently and effectively oversee and audit market transactions to ensure producer value for money and the financial and environmental performance integrity of the program	MH	Access to processors can be defined in contract terms but no access to collectors
	10	Provides financial data that allows costs to be allocated to producers without cross-subsidization	H	Access to collectors, transporters and processors can be defined in contract terms but no access to markets
	11	Ensures that key indicator information on environmental performance (i.e. collection, recycling and recovery by material) can be easily collected, collated and communicated	MH	Access to collectors for quantities collected and to processors for quantities shipped but no access to

²⁰⁰ OECD 2010. The Competition Assessment Toolkit.
http://www.oecd.org/document/48/0,3746,en_2649_37463_42454576_1_1_1_37463,00.html

Appendix P – Option 4C: Contracts with Collectors, Transporters and Processors and Direct Delivery of Partial Collection, Processing and Marketing Services

Program Performance	#	Evaluation Criteria	Contracts for Collection, Transportation and Processing and Direct Delivery of Partial Collection, Transportation and Processing Services	Key Rationale
		to regulators and the public		markets for quantities recycled
	12	Minimizes potential for commercial disputes resulting from lack of communication or poor dissemination of information	yes	Defined in procurement process and contract terms
	13	Ensures MMBC is perceived as treating the market fairly without causing undue market impacts	M	MMBC would select preferred service providers through procurement process; those not selected may perceive process as unfair
	14	Addresses local government concerns, whether arising from their role as service providers or on behalf of their citizens, with regard to recovery services delivered to residences on behalf of MMBC	no	Procurement process can specify collection service levels and role for local government

Appendix Q – Glossary of Terms

Competitive market means a market with multiple buyers and multiple sellers.

Downstream processor means an entity engaged by a processor to receive PPP from the processor and to provide custody assurance, processing, handling, transfer or transport services to the processor.

Monopoly means a market with a single seller and multiple buyers.

Monopsony means a market with multiple sellers and a single buyer.

Processing means custody assurance, handling and processing of MHSW by manual or mechanical means for the purpose of resource recovery.

Processor (also referred to as primary processor) means a receiver of PPP responsible for providing custody assurance, processing, handling, transfer or transport services while preparing the PPP for use in saleable products and safely disposing of any residual.

Recycling Efficiency Rate means a percentage with the numerator representing the quantity of materials recycled (output from recycling facilities) and the denominator representing the quantity of materials received (input to recycling facilities).

$$\text{Recycling Efficiency Rate \%} = \frac{\text{Recycled (material recycling)}}{\text{Input to Recycling}} \times 100$$

Residual means the portion of a product that remains after the primary and all downstream processors have completed their services.