

Questions as of July 13, 2020

#	Question	Answer
1.	As I understand it, the MCI is a factor in fee setting. Going under the assumption that well-established materials with unvarying characteristic/composition will consistently have the same material impacts that were determined in the system, will the MCI then have a constant value? In line with this, should we only expect MCI changes for new materials or materials that require further research and development?	<p>It is generally correct that well-established materials with unvarying characteristics and composition would have a more or less constant relative value within the MCI.</p> <p>However, we know that material characteristics and composition within a material category can vary from year to year. For example, as the form and density of PET thermoform packaging varies, this could impact the resulting MCI measurements for the PET Thermoform category. This variation would be captured in the measurements and resulting inputs to the MCI calculations. In addition, changes to the packaging and printed materials supplied by producers, such as light-weighting or material substitution would also be expected to result in some variation to inputs in the MCI calculations. While the changes are not expected to be dramatic year over year, some minor variation should be expected.</p> <p>It is also important to recall that even when the material's value on the MCI is constant, that does not suggest that the fee rate will be constant year over year. The reason is that the MCI is one variable when calculating the material's relative share of the Gross Cost in Step 1 of the Four-Step Fee Methodology. The other variables include supply quantities, collected/managed quantities, and the program's budget.</p>

Questions as of June 30, 2020

#	Question	Answer
2.	With an aim of lowering their remittances and helping create a more efficient system, how should stewards use the MCI in decision making when it comes to packaging selection, or should they not?	The MCI provides information about the relative cost impacts of materials on the recycling system such as how much does Material A impact costs compared to Material B and at what point in the system does it have those impacts? While this is an important input to the Four-Step Fee Methodology, it pertains only to

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		<p>Step One of the Methodology, i.e., the allocation of gross cost. Therefore, we do not recommend that it be used as the only indicator when making packaging choices because it is only one input to fees. The goal is to provide stewards with information about these cost impacts so that they have confidence in the MCI and therefore confidence in the fees that result.</p>
3.	<p>The pre-read document made reference to design assumptions that all programs are based on cart or commingled" collection. Our municipality (like many others) utilizes a two stream (container/ fibre) system and the existing MRF infrastructure is designed for separate stream processing. Does this imply that all Ontario municipal programs will be transitioning from a blue box(es) system to a single stream cart-based system? If so would all related costs (collection containers, vehicles, MRF infrastructure) be 100% covered by stewards under full EPR program (post 2023)? Do municipalities have any say should they wish not to see carts deployed throughout their community?</p>	<p>The MCD conceptual recycling system includes the complete set of activities and technologies that collectively constitute a comprehensive, fully optimized, fully maintained system, that, operating at its highest level and efficiency, produces output material that is ready to be repurposed. As such, it establishes a common "level-playing field" set of conditions that enable all materials' cost impacts to be consistently measured. Therefore, by nature and design, it does not reflect any particular municipal recycling program. While the conceptual system is rooted in real world recycling technologies and processes it is used only to determine relative cost impacts and has no bearing on particular collection systems, processes or technologies used by individual municipalities. Further, no municipality is expected to adjust their recycling system based on the design of the conceptual system used to determine the MCI.</p>
4.	<p>Collection module assumes single stream. What if collection was fibres and containers rather than commingled?</p>	<p>Please see answer above.</p>
5.	<p>What does the category 'used beverage containers' refer to in the MCI? Does it refer to aluminum beverage containers only?</p>	<p>Used Beverage containers include: aluminum sealed rigid beverage containers used for alcohol and spirits, carbonated beverages, juices, sports drinks, water and energy drinks.</p>
6.	<p>You mentioned that currently, aggregation of fee categories happens before the 4-step methodology is applied. I was under the impression that it was the opposite and each individual material category undergoes the 4-step methodology, which produces its fee. Then certain material category fees are aggregated. Can you clarify?</p>	<p>MCD impact measurement studies were done on a greater number of material categories than the number of material categories on which stewards report and pay fees. This provides an additional level of granularity and detail on how a broad range of material characteristics impact the cost of the system. However, the MCD study categories are mapped to the existing fee setting categories which necessarily includes some aggregation and this is done before input to</p>

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		the fee setting methodology. This aggregation is completed during the calculation of the final MCI used in fee setting.
7.	How flexible is the MCD to new material streams being added as a new material stream would change the overall metrics established by the previous mix of materials	One of the four primary components of the MCD is maintenance procedures that monitor the evolving tonne and evolving recycling processes and technologies and their associated costs. This will ensure that the MCD model can respond over time and stay in step with the marketplace and the evolving tonne and the introduction of new materials and packaging formats. As new materials are introduced, they will be included in measurement studies so that we can gather the necessary metrics that will help inform their value on the Material Cost Index (MCI).
8.	Will any consideration be given adding more material categories? For example, newer plastics not in the exiting HDPE or PET categories.	Please see answer above. The evolving tonne refers to the ever-changing mix of materials in the recycling system as new materials and new formats are introduced into the marketplace. The MCD methodology has been built so that it has the flexibility and nimbleness to reflect these changing conditions.
9.	What happens if the PROs in Ontario do not approve the Four-Step fee methodology?	Stewardship Ontario will determine if it will propose the move to the Four-Step Fee Methodology and the Material Cost Differentiation methodology for use while it remains the designated IFO until wind up is complete. Once the transition is complete and the Ontario PROs assume operational responsibility, we cannot comment on how these organizations will go about setting their prices/fees.
10.	The MCD seems to categorize the recyclability of materials by cost of handling/processing/etc. Is there a similar study or ranking/scoring system that looks at the recyclability of materials regardless of cost? For example, PVC shows a lower cost than some other plastics but many MRF's do not want PVC mixed in their plastic. How will that be addressed?	The MCD Methodology was developed specifically to assess the relative cost impact of materials on the recycling system in order to appropriately allocate gross system costs to all materials in Step One of the Four-Step Fee Methodology. The MCD Methodology was not designed to assess each material's recyclability or end market value. When it comes to materials such as PVC, the MCD methodology is based on the principle that all materials count, all characteristics count and all the activities needed to prepare them to be repurposed are considered. Therefore, since PVC is in the system it must be included in the MCD system and its cost impacts determined based only on its material characteristics not on its recyclability. The MCI is only one input into the Four-Step Fee Methodology. The system costs associated with materials

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		that are not recyclable or might be considered a contaminant are addressed in other aspects of the fee methodology including steps two and four.
11.	What about PVC in the general trends?	If there are innovations in technology that affect the management of PVC or changes to the supply of PVC, these will be considered as they evolve and incorporated into the MCD Methodology accordingly.
12.	How did you distribute the cost of cross contamination, for instance, a can ending up in the ONP and having to be removed at the MRF?	The MCD model, which is comprised of 18 distinct modules, ensures that all cost impacts related to the collection and sorting of each material category are considered. This includes quality control activities such as the impacts of materials that tend to be misdirected at various stages of the sorting process such as lightweight PET bottles that can be misdirected to the mixed paper stream and need to be recovered.
13.	For an excluded material (not collected) does that mean that the calculation for their share of gross cost allocation is based only on the 60% calculated from the contribution of materials into the market - reported by stewards.	That is correct but it also means that this material will not receive any share of the commodity revenue under Step 2 of the Four-Step Fee Methodology. Further, this material may assume expense under Step 4 to fund research and development, end market development or other to improve its performance in the system.
14.	Using your slide 19, if material two is a material that is not collected in a municipal collection program, its relative share would still be 66.7%. Would it be the expectation of a steward that material 2 should be collected in a blue box, otherwise if collected as trash, the taxpayer is paying twice.	In line with principle that all materials count and should contribute to program costs, material two in your example, will receive a 66.7% share of 60% of the cost of the program based on the supplied quantity as reported by stewards. This feature of the Four Step Fee Methodology ensures that all materials are contributing to the system costs whether or not they are collected for recycling. The steward of a material not collected in the recycling stream may also be contributing to the costs associated with improving its recyclability and/or the development recycling end markets under Step 4. Typically, a material is not collected in the recycling system if it cannot currently be recycled or recovered, due to lack of technology and/or lack of end-markets.
15.	With little to no commodity revenue in many categories, doesn't being a material that is not collected benefit you by avoiding the costs associated with collection, thus advantaging less environmentally sound materials?	The first principle of the Four-Step Fee Methodology is that all designated materials must bear a fair share of the costs of the recycling system irrespective of whether they are collected for recycling or waste disposal. This principle ensures that non-recyclables are not inadvertently rewarded through the fee methodology. Since all materials are assuming their relative share of 60% of the

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		<p>gross cost of the system whether or not they are collected, reduces the share of gross costs attributed to those materials that are collected and recycled, nor do uncollected materials earn commodity revenue, which is allocated in Step 2 of the Fee Methodology. In addition, Step 4 of the methodology attributes cost only to those materials that require investment to improve their cost and performance effectiveness in the recycling system or need development of recycling end markets. In these ways the Four-Step Fee Methodology ensures that materials not yet collected for recycling do not avoid their fair share of the system costs.</p>