

CIF Project #761 - County of Peterborough Curbside Collection Cost Analysis

Background

The County of Peterborough (The County), a rural municipality located in east-central Ontario, assisted CIF by providing blue box curbside data to test a newly developed collection cost model. As the majority of municipalities contract blue box collection to service delivery companies, they are price takers, not price makers. The CIF collection cost model was developed to help municipalities understand true collection costs (pre-profit) in order to assist budget development and plan for potential costs associated with shifts in service delivery (materials collection changes or fleet operation alterations).

The County has approximately 54,000 residents distributed over an area of 4,000 square kilometres and is comprised of eight (8) Townships. The County is nearly one and a half hours driving time north-east of Toronto and north-west of Kingston and is bounded by the Counties of Haliburton and Northumberland on the north and south respectively and by the City of Kawartha Lakes on the west and the County of Hastings on the east.

Issues and Challenges Identified

The County currently contracts/outsources recycling collection on a price per tonne basis for three residential sections:

1. curbside blue boxes and carts for campgrounds (two stream);
2. depot materials from 8 yard bins (two stream); and
3. private roads collection.

The contract was awarded in 2010 through an intensive RFP process with a three envelop bidding method. At each level, Bidders had to meet criteria in order for the next envelop to be considered. Bidders had to first provide financial security/bond information, secondly provide a project proposal, and finally provide a pricing proposal. The contract started in 2011 for seven years with two - one year extension options, taking the next RFP drafting to begin in either 2016 or 2017 respectively.

Although the County supervises and assists with day to day operations, the County is one step removed from knowing the exact and direct costs associated with the collection process. Greater understanding and analysis of true costs associated with collection will provide insight into existing and future collection contracts. This is fundamentally important as systems adjust infrastructure, operations, capital, and recycling material streams. Costing

information can also assist and inform political will/decisions regarding the economics associated with changes in service delivery.

With the implementation of Bill 151 - The Waste Free Ontario Act - there is some uncertainty associated with future municipal involvement in blue box collection. Therefore, it was prudent to investigate true financial expenditures in order to be competitive.

Information Utilized

Data was collected and/or estimated focussing specifically on curbside collection in the County. The information utilized to generate costs and future revenue related to the current contracted fleet included:

- capital for vehicles (all makes and models);
- estimated salvage value (after contract term);
- insurance and system ECA;
- fuel consumption;
- drivers/supervisors/staffing; and
- maintenance.

Values were projected for contractor overhead costs including:

- facilities (office space, parking, and maintenance bays); and
- administrative staffing.

For information purposes, municipal costs were added into the worksheet for administration and facilities for a total overall cost perspective. Total estimated time to meet, gather, and synthesize the data was approximately 30 hours. The majority of information was taken directly from outputs associated with the annual municipal datacall.

Utilizing CIF worksheets developed in June 2016 named "Collection Cost Analysis", the County input collection data (fleet, contract infrastructure/staffing, and municipal costs) and generated an estimated collection cost per tonne (cost per household was also generated). Without including any municipal costs, on average, in 2014 the County paid \$303.30 per tonne for collected recycling to its contractor. The estimated collection cost generated from the worksheet was \$300.01 per tonne.

In addition to cost per tonne, the County was interested in projecting a cost per material category associated with the collected blue box materials. Waste audit data from 2012/13 was utilized to propagate a composition of recyclable materials by weight (tonnage) and volume (cubic metres). Volume measurements were based on numbers from the Stewardship Ontario 2016 PIM. Composition percentages by materials were then fed into the cost per tonne calculation to generate a cost per material by weight and by volume. For example, costs associated with the current material streams showed that collecting cost by weight (tonne) of newspaper = \$35.44 and PETE bottles = \$17.56. Costs associated with the current material

streams showed that collection by volume (m³) for newspaper = \$15.63 and PETE bottles = \$43.68. Municipalities should take note of the disparity in pricing by weight versus volume.

Learnings

Although a true cost per tonne was the desired outcome, there is some uncertainty in its validity. The largest concern about the amount estimated was that it only represented a 1% profit for the contractor when compared with the 2014 contract price. However, producing a dollar amount by weight is the first step towards understanding true costs. In the future, it is suggested that municipalities seek additional information in contracts without compromising corporate trade secrets in order to gain better comprehension into the entire financial system associated with recycling collection. That said, it can be assumed that the cost differential included volume discounts on vehicles and the potential for contractors to subsidize municipalities with commercial contracts in the area.

This model was based on the average blue box composition using data collected through waste audits. It should be noted that waste audits are a snapshot of time within a system and true composition changes happen annually, seasonally, and even weekly (depending on weather and/or what's on sale). In the County, with the influx of cottagers, seasonal collection can shift total tonnage by 2%. Post EPR rollout of the blue box program, it is recommended that systems be developed to record the composition of collected materials based on actual marketed values (For example, the way a municipal MRF would report into the datacall) so that end-of-year invoicing is based on actual collected materials not estimates. Further, when cross checking MRF marketed materials there should be consideration of other materials accepted and processed at the MRF. The Peterborough MRF takes in commercial and other municipal programs (Haliburton, City, Hiawatha plus commercial loads) and the materials are not sorted separately.

Generally, the cost per material worksheet was helpful to analyze the effect on costs for collection if blue box composition changes or if multiple contracts are offered for specific materials (for example only plastics, all metals, just newspapers, etc.). The volume estimates provide insight into sizing needs of residential collection units (Blue boxes sizes of 16 gallon or 22 gallon or a cart). The shifts in recycling could include materials removed from collection, multiple contracts for the total "basket of goods", the addition of new materials, or materials changing (for example lightweighting). With these future possibilities, municipalities need to understand the effects on contract costs by material stream in order to negotiate reasonable financial compensation.

In addition to the accepted blue box materials, residents place unapproved materials curbside for collection. In the material cost spreadsheet, it was obvious that the list of audited items includes a mix of “obligated” and “non-obligated” materials. All these items contributed to the total cost per tonne. Municipalities have long accepted that contamination is a part of collecting recyclable materials. In the future, there will need to be enforcement systems in place to watchdog contamination rates with service providers as well as the ability to negotiate reasonable allowable rates with stewards as a "cost of doing business".

The County has identified a desire to pursue further details into the ‘true’ cost of services such as private road recycling, campground recycling program, and depot service in areas with curbside services. Research needs to be done into costs and the financial impact of alternative collection strategies for materials removed from the current system, in particular changing: glass, and/or plastic bags, and/or polystyrene from curbside collection to depot.

The material cost spreadsheet demonstrates that there is a substantial difference in “cost to manage” the same material if negotiated as a per tonne contract versus a per volume contract. It is therefore suggested that all collectors need to pick one way of being paid for their service (by volume or tonne).

The County suggested that the collection cost model may be beneficial when comparing overall regional and/or provincial costs to show market gaps in servicing prices or underserved areas. This will assist municipalities in negotiating total contract cost and potentially improve competition within marketplaces where discrepancies exist.