



Smart collection and incentive pricing for residual and organic matter

Questions and answers

I. THE PROJECT AND ITS OBJECTIVES

1. Why is the City of Vaudreuil-Dorion running the smart collection and incentive tariff project?

In recent years, the City of Vaudreuil-Dorion has worked towards modernizing its way of managing bins and collections to ensure better monitoring and implementing a system to encourage the reduction and sorting of residual materials. With the environment in mind, the City hopes to be seen as a role model across the territory of the *MRC Vaudreuil-Soulanges*, and perhaps even Quebec, on matters related to waste management.

Smart collection and incentive tariffs have been evaluated and considered effective measures for the reduction of waste destined for disposal, both by the C.D. Howe Institute and the environmental public hearings bureau (*BAPE*). Furthermore, these measures have been encouraged by the *Communauté métropolitaine de Montréal (CMM)* and Canada's Ecofiscal Commission.

2. What is smart collection?

Smart collection is an automated waste collection system that can be monitored in real time. Each bin is associated with an address through an RFID transponder (electronic chip). The trucks are equipped with a reading system that identifies the bins being collected, records the information, and transmits the data to the City.

3. What is an incentive tariff?

Smart collection will be able to quantify the use of waste collection services by households and invoice them accordingly, thus encouraging those who do a better job at sorting - which results in less residual matter ending up in landfills. This method of financing the service is called incentive pricing.

Currently, the costs associated with the collection and processing of residual materials are included in the property tax bill. All households are therefore charged the same amount. In 2022, this service represented a cost of \$264 per housing unit. Once the incentive tariff is established, citizens will pay based on their use of the service. Households that make efforts to reduce the quantities of waste needing final disposal will be charged a lesser amount.

II. HOW THE PROJECT WORKS

4. Which bins will be affected by smart collection?

In Vaudreuil-Dorion, smart collection and the incentive tariff will involve the black bins (final waste) and brown bins (organic waste). Incentive pricing for black bins encourages reduction at source as well as better waste sorting practices, which prevents materials that are still recoverable from ending up in landfills. Incentive pricing for organic waste, combined with that for final waste, will help avoid the opposite effect of the one desired, namely placing garbage in the brown bin. Also, incentive pricing for organic waste helps reduce food waste while encouraging grasscycling (leaving grass in place), leaf mulching (crushing leaves on grass) and even home composting for those who are able to.

It is important to note that the pricing for organic matter will be lower than that for final waste (differential pricing) to ensure that what citizens place in the black bins is strictly final waste.

5. What information will be recorded when my bin is emptied?

The collection report will include the identification number of the chip being read, the address associated with the chip, the GPS coordinates for the location where the bin was emptied, the date and time the bin was collected, and the type of bin emptied (final waste or organic matter). No information on the content of residues will be recorded unless the driver of the truck is able to ascertain the presence of non-compliant materials.

6. What criteria will the incentive tariff be based on?

The tariff will be based on how much a household participates in collections, i.e. the number of times a bin has been placed at the curb over a year and lifted by the collection truck. As citizens become better at sorting and reducing their household waste and organic waste, the bins will take longer to fill up and will require less frequent trips to the curb.

Other factors may also be taken into consideration by the City to produce pricing grids that are adapted to different scenarios.

7. How will this tariff be calculated?

More specifically, the incentive tariff will be calculated based on the number of times per year, for each household, a bin containing final waste or organic waste is collected. A fixed portion, distributed equally, will cover the costs associated with a baseline number of collections (for example, 12 collections per year). A variable portion, calculated for each household, will be determined according to the number of additional collections compared to the reference figure. Using this example, if a household participated in 26 collections during the year, the variable portion would be calculated based on the 14 additional collections. Incentive pricing will not take into account the weight of the bins.

Other factors may also be taken into consideration by the City to produce pricing grids that are adapted to different scenarios.

8. How will invoicing be carried out for citizens?

The cost for collection services will be added to the annual property tax bill sent to homeowners. At the end of the year, the number of collections will be calculated for each residence and type of collection. The information will then be sent to the Finance and Treasury Department, who will prepare individual invoices.

9. Why doesn't smart collection and the incentive tariff apply to recycling?

Smart collection could also apply to the blue bin, but selective collection is the responsibility of the *MRC de Vaudreuil-Dorion* and *Éco Entreprise Québec*, the organization representing the companies that market containers, packaging and printed materials. Including selective collection in the project is not planned for the near future.

10. How will the City make sure the process is working properly so that I am only charged for the collections I actually take part in?

The smart collection system will undergo a period of testing and adjusting during 2024 and 2025. During this time, we will be checking to make sure the bins are properly assigned to each address and the data gathering process during collections is working as intended. At the end of 2025, the City will be able to tell each household, using a sample invoice, how much the collection service would have cost them if the incentive tariff had been in force. Incentive pricing will only come into effect in 2026, and the first invoice will be incorporated into the tax bill sent to homeowners in 2027.

III. IMPACTS OF THE PROJECT

11. What are the benefits of smart collection?

Smart collection will allow the City to keep better track of its collections. Bins will be monitored in real time as they are collected, which will allow for more accurate and rapid management of unforeseen events on-the-job and a better quality of service when it comes to problem solving and responding to citizen complaints. Also, since the City will know the precise number of bins collected by the contractor, this will ensure that the contractor responsible for collection is paid for the exact services rendered.

The process will also result in better management of the bins distributed across the territory (working bins, broken bins, bins under repair) and an up-to-date inventory thanks to the daily collection reports.

Smart collection will also allow citizens to benefit from the incentive tariff for residual materials and organic waste.

12. What are the benefits of the incentive tariff?

Incentive pricing is a way to financially reward households who generate less final waste. It encourages waste sorting and reduction. As a result, it diverts recyclable and organic materials away from landfills, thus avoiding the negative environmental impacts linked to their disposal (wasted resources and greenhouse gas emissions from landfilled organic matter). Reduced landfilling also carries economic benefits for the City, since the municipalities who send the least waste to landfills are financially rewarded by the Quebec government.

The incentive tariff also offers a more transparent way of invoicing citizens and the institutional, commercial and industrial sector (ICI) for waste management. The method is based on the "user pays" principle. Instead of charging everyone the same amount without distinction, as is currently the case, invoicing is established according to how much use citizens make of collection services, among other things.

13. What are the advantages of charging based on the frequency of collections rather than their weight?

The incentive tariff is based on the frequency of collections and motivates citizens to reduce the number of times they place their garbage bin and organic waste bin at the curb. This practice allows trucks to reduce their number of stops and accelerations per collection, resulting in less greenhouse gas emissions, as well as reduced landfill emissions.

IV. WHO IS THE PROJECT AIMED AT

14. Who is the incentive pricing program designed for?

As a first step, the program will be aimed at homes and ICI members already served by a municipal rolling bin collection service. In a second phase, incentive pricing will be extended to the institutional, commercial and industrial sectors that use containers, or those who generate large volumes.

15. What happens if I move?

As is currently the case, collection charges will be included in the tax bill sent to the homeowner. If the owner sells his or her home, he or she will be billed only for collections made up to the day of sale. Likewise, the new owner will only be charged for the collections made after the purchase. It's also important to remember that wheeled bins belong to the City and must remain at the home to which they are attached. Whether you rent or own, if you move or sell your home, leave the bins where they are. Make sure you write your address on the bin, and check regularly to make sure it's legible!

16. Who is responsible for paying when it's a rental property?

Costs will be applied to the property tax bill sent to the owners, who are responsible for paying the bill. No changes have been made in this respect. Municipal taxes related to the management of residual materials have always been invoiced to owners through the annual tax bill.

17. How will the pricing work for multi-unit buildings that share bins?

For condominiums that share rolling bins, the tariff will be divided equally among all households, and the owner of each unit will have his share to pay on the annual tax bill. In the event where one person is the owner of housing units that share rolling bins, one single price will be established and integrated into the tax bill sent annually.

18. live in an apartment building and I don't have a bin. How does the incentive tariff affect me?

For residential buildings that use containers, the method will be used to monitor the collections over the year. However, the incentive tariff system will not yet be applied. Hence, there will not be any significant change for you if you live in a multi-unit building with a container. This should not stop you, however, from making efforts to contribute to waste reduction.

V. IMPLICATIONS OF THE PROJECT

19. Is this a new rate?

The residual materials collection service offered by the City is currently financed by the municipal taxes collected annually. This means that citizens already pay to support it: for example, each household paid around \$264 in 2021 for the City to honour its collection contracts.

So it's not a question of creating a new tariff, but rather of changing the way costs are transferred on to the population. Instead of dividing costs equally between all households, it will be possible to bill a household according to its use of the service (just as Hydro-Québec bills homes according to their use of electricity).

Currently, the \$264 paid by each household finances, among other things, 26 garbage collections a year (as garbage trucks pass by every two weeks). However, if a family is out of town for four weeks and misses two collections, they will still be obliged to pay for the 26 collections to which they were entitled. When incentive-based pricing is applied, the family will only be able to pay for the 22 collections it has attended.

20. When should I place my bin at the curb?

You should place your bins at the curb for collection only when necessary, i.e. when they are full, when they are producing strong odours, (during periods of extreme heat for example) or when you expect to be away for several weeks.

21. Does the incentive tariff financially penalize citizens?

No, on the contrary. The population already pays for the municipal costs associated with the management of residual materials, which are included in the annual tax bill. Incentive pricing will reward citizens who are doing the right thing by charging them less. Citizens will also be able to have better control of their municipal taxes and gain a better understanding of how they work.

22. Will my taxes increase?

That is up to you! Currently, all costs for waste management are invoiced to residents via their tax bill, regardless of how much they use the collection service. The new tariff system will include a fixed portion that is lower than the current price as well as a variable portion that will be based on the number of additional times the bins are collected. The fixed portion will be calculated in a way to ensure that users with good waste management practices do not have to pay more than what they currently pay. Since the fixed portion already includes a good number of free collections, additional collections may not even be required, resulting in a decrease in your taxes.

The cost of the fixed portion, the number of collections included, and the cost for each additional collection have not yet been determined. However, as an example, the fixed portion in Beaconsfield is \$210 and includes 12 collections per year. The cost is \$3.00 for one additional collection. Therefore, a household that participates in the 26 annual collections (one collection every two weeks) pays \$252.

23. How will the City support citizens in their efforts to reduce waste?

The City of Vaudreuil-Dorion offers many complementary collections and drop-off centres that allow citizens to dispose of materials that are still recoverable and keep them out of landfills, including collections for recyclable materials, organic materials, green waste and branches, as well as ecocentres. In addition, the City offers various subsidies to citizens who want to further reduce the amount of final waste and organic matter they produce, such as subsidies for the purchase of zero waste products for every day (including reusable menstrual products), washable diapers and home composters. The *MRC de Vaudreuil-Soulanges* has also developed an online search tool called [Tricycle](#) to help citizens sort their materials, and a [chart](#) that indicates the types of materials accepted in each bin.

24. Will there be a change in the frequency of collections offered by the City?

Collection services for final waste will remain every two weeks, and the collection of organic matter will remain weekly from April 15th to November 15th. During the winter, from November 16th to April 14th, the collection will take place every two weeks due to lower citizen participation.

The most important change that comes with the project is the financial reward for citizens who manage to reduce their participation rate in collections, for example, by missing one collection to wait for the next. The collection service offered by the City remains essentially the same and citizens can continue to choose to have their waste picked up at each collection or not.

25. What about green waste collection?

Green waste and autumn leaves can be placed in 240-L brown bins year-round. Green waste and leaf collections will be added in the spring and fall to complete the range of services offered. There will be no limit to the quantity, but residues will have to be placed in bags or open bins, as is currently the case. Exact dates will be marked in the municipal calendar and on the City's website.

26. Will the collection days remain the same?

The days assigned to black and brown bin collection might change, since the City leaves the choice up to the contractor to service the territory over several days, allowing him to optimize his operations and consequently, optimize the costs as well. Communications to this effect will be issued by the City if need be.

27. If I miss one collection to wait for the next, won't my bin produce bad odours?

No organic matter is accepted in the waste bin, which should limit the release of bad odours and thus make it possible to participate less frequently in the collection of final waste without causing any inconvenience. As for the brown bin containing organic matter, adding garden or leaf residues will help control odours, especially from food waste.

It should also be borne in mind that citizens will retain the choice of participating in all the collections offered by the City if they deem it a constraint to keep the bin at home for more than a week. There will be no financial penalty. Certainly, it will be easier to reduce participation in collections during the winter months. This could already bring financial benefits, even if during the warmer months we decide to take our bins out for every collection.

The usual advice already included on the City's website remains the same, i.e. pack food waste in newspaper or paper bags, line the bottom of the bin with newspaper, sprinkle food with baking soda, freeze waste and place it in the bin shortly before collection, place the brown bin in the shade and rinse it occasionally with water, vinegar and baking soda.

28. Doesn't this measure encourage citizens to put their garbage in neighbours' bins?

Smart collection and incentive pricing have already been implemented in Beaconsfield, as well as in Europe, and this problem has not come up. In any case, since the incentive-based pricing system will be based on the number of times a bin is lifted, and not on its weight, materials deposited in a container by other users will not affect the cost of collections for the owner of the bin. The use of containers belonging to other households is however prohibited by municipal by-law No. 1792 respecting the management of residual materials, and failing to comply to it is punishable by fines. Remember to write your address on the bins associated with your household to avoid unintentional mistakes between neighbours!

29. What happens if my garbage bin disappears or is replaced by a neighbor's?

As each bin will be associated with an address and a range of GPS coordinates, bins moved from their usual location can be identified by the City and put back in the right place. However, if you notice a mistake, it's important to contact the City.

30. Will smart collection be more expensive for the City?

No. While it is true that the introduction and use of new technologies constitutes new spending, this new system will make it possible to achieve even greater savings, since the costs for automated collection are much lower than for manual collection. Furthermore, under incentive-based pricing, the City will pay the contractor responsible for collections in part according to the number of bin lifts. The less residents put their bins out on the street, the less it will cost the city. These savings are passed on directly to residents through incentive-based pricing.

Furthermore, while waste reduction helps reduce treatment costs, it also helps increase the amount received each year from the government for the elimination of residual material. This amount is calculated based on how well each municipality manages the amount of waste sent to landfills. For example, in 2022, the City received \$267,995.11 in payment through this program, amounting to \$6.28 per capita. The best performing municipality in the *Montérégie* received the amount of \$16.82 per capita, and the best performing municipality in Quebec was awarded \$18.02 per capita. This means that, if Vaudreuil-Dorion were to become one of the best performing municipalities, the amount received could increase by \$500,000/year.

VI. STAGES OF THE PROJECT

31. When will smart collection and the incentive tariff be implemented?

Smart collection will be implemented on January 1st 2024. This means that the bins will be equipped with chips and assigned to households in 2023, and the collection trucks will be equipped with a chip-reading and record-keeping system.

Even though the information from the collections will begin to be recorded as of January 1st, 2024, the incentive tariff itself will only come into effect two years later, on January 1st, 2026. The two-year test period will give both citizens and the City enough time to adjust. Between January 1st, 2024 and December 31st, 2025, citizens and the ICI sector served will be billed in the same way as they currently are.

32. Will the bins need to be changed?

Yes, the 45-L brown bins (for organic matter) will be replaced by larger bins (240-L) that can be lifted automatically (by the truck's robotic arms). This will give citizens more space in the bin to fill with green waste, which is now included in the collection of organic waste, as well as food residues. This change to the larger size will also help solve some of the problems often reported by citizens with the smaller brown bin, such as the fact that it falls over very easily in the wind or is even taken by raccoons. The brown bins will be replaced in September 2023 only for households that currently use a 45-L brown bin.

Citizens will be able to keep their small brown bins for another use, such as storing pet food, de-icing salt, soil or other gardening tools and materials, or simply as a temporary garbage bin for indoor use that can be emptied into the larger bin for collection at the curb by the City.

It is important to note that once the new brown bins are delivered, only the 240-L brown bins - and not the small 45-L bins - will be picked up by organic waste collection trucks. Citizens who do not wish to keep their small bin can return it to the City for recycling. The collection procedure will be communicated at the appropriate time.

The black bins for household waste will not be replaced, nor will the 240-L brown bins that are already on the territory. These bins will be equipped with chips and assigned to their household address. These actions will be implemented during the summer of 2023.

33. How will the chip installation and bin assignment process be carried out?

From June to August 2023, employees of USD Global will travel through the City's streets to install a chip on each bin, as well as a sticker indicating that the container is ready for smart collection. The team will be working mainly on collection days, when the bins are already out, but also on other days, reserving the right to enter a private alleyway, driveway, or yard to gain access to bins in plain view. Authorized employees will be clearly identified and will have in their possession a letter of authorization from the City.

The assignment will be made for all garbage bins (black) and all 240-L organic waste bins (brown). Before the smart collection process begins, the small brown bins (45-L) will be replaced by 240-L bins already assigned and equipped with chips.