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Testimony on Getting to Zero Waste

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Management*

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Thank you for the opportunity to testify today. My name is Adrian Pietrzak and I am a Research Associate at the Citizens Budget Commission (CBC), a nonpartisan, nonprofit think tank and watchdog devoted to constructive change in the finances and services of New York State and City governments. CBC has conducted research on the City's solid waste management systems since 2013.

The City's goal of achieving zero waste by 2030 is ambitious and laudable. The Mayor's One New York Plan goal is to reduce total refuse waste by 90 percent by 2030 against a baseline 2005 level of 3.6 million tons, but progress has been slow. By fiscal year 2020, total tons of refuse collected by the Department of Sanitation (DSNY) had fallen only 10.7 percent against the 2005 baseline; and refuse produced per New Yorker on average has declined only 3.7 percent over the last decade. To meet the 2030 target, New Yorkers would need to reduce their refuse waste dramatically – by 88 percent over the next nine years.

One of the challenges to reaching this ambitious goal is that residents lack incentives to reduce how much refuse they generate. Right now, New Yorkers do not experience a direct connection between the waste they put at the curb, and the costs associated with its collection and disposal. Based on the experiences in other jurisdictions, [CBC has recommended a volume-based fee](#) to increase service cost visibility and reduce waste generation.

A volume-based fee—for example, charging residents 50 cents per 13-gallon kitchen bag of refuse they put out for collection—provides residents an incentive to produce less waste. It also

can be structured to improve the diversion rate, the percent of waste diverted from landfill, by encouraging recycling and proper sorting of waste by keeping recycling services free. Volume-based fee systems have been used successfully in other dense cities. In 1996 when Seoul, South Korea rolled out its fee system, waste generation immediately declined 11 percent and the fee helped the city achieve a diversion rate of over 60 percent by 2016. Based on outcomes in other municipalities, CBC estimates that a fee of 50 cents per City-approved standard kitchen bag could reduce total refuse generation by around 20 percent and increase the City's diversion rate from 18 percent to over 25 percent, leading to around 600,000 fewer tons of waste landfilled each year.¹ Absent any other DSNY changes, this could save the City over \$110 million annually from lower waste volumes.

In 2015, the City's One New York Plan included a proposal for a volume-based fee, called the save-as-you-throw program. Since then, the Administration has stepped back from its support, and put a 2018 consultant study of the effectiveness and feasibility of the program on hold. The City should restart its effort.

The City also should consider other targeted programs and policy changes to help reduce waste generation. Resident participation in programs, such as organics drop-off or textile collection, can be bolstered through the design of the volume-based fee.

Comprising 34 percent of the waste stream, organics present an opportunity to divert a substantial amount of refuse. However, the curbside collection program, while ambitious, was plagued by low participation and high costs, making its expansion cost prohibitive and leading to its two-year suspension in the current City budget. The City should explore alternatives that can divert organic waste, such as:

- Expanding the use of organics drop-off sites in locations central to communities such as subway stops, which when paired with a volume-based fee, can help increase organics disposal achieve economies of scale;
- Incentivizing, if feasible and cost-effective, on-site anaerobic digesters in large residential buildings; and
- Encouraging the use of in-sink food disposal where feasible for DEP wastewater treatment plants, lessening the need for costly curbside collection. [Prior CBC analysis showed that their expanded use could cost the City \\$41 million a year](#) to cover higher DEP operating costs and the price of purchase and installation of in-sink units. This would reduce the total volume of organics in the refuse stream by 14 percent at a much lower cost than an equivalent reduction would cost using a curbside program.

Comprising 6 percent of the waste stream, textiles represent a sizable portion of divertible waste. The City could build on its textile recycling program, either through expanded drop-off locations or by partnering with private haulers to expand textiles collection programs. Like organics, textiles recycling would greatly benefit from the added diversion incentive provided from a volume-based fee.

In addition, the City should pursue actions that increase the efficiency of sanitation services, which could generate savings that in part could be used to support zero waste efforts. DSNY's productivity, measured as refuse tons collected per truck shift, has steadily declined over the past two decades. Refuse productivity hit an all-time low of 9.3 tons per truck shift in fiscal year 2020, below both the Uniformed Sanitationmen Association's (USA) collectively bargained 10.7 tons per truck shift target and the average truck capacity of 12.5 tons per truck shift. In fact, the Department has not achieved its refuse productivity targets since fiscal year 2005. Recycling collection productivity is even lower than refuse, at 5.8 tons per truck shift in fiscal year 2020. While recycling productivity has improved somewhat over the last decade, in part due to an expansion of the plastics recycling program, it remains far below both the contractual target of 6.2 tons and the average truck capacity of 11.5 tons per truck shift.

Given that a volume-based fee would alter waste generation patterns, implementation should be coupled with effective operational management that optimizes truck routes to achieve currently collectively bargained productivity targets. When coupled with these productivity savings, the fee can save over \$250 million annually before accounting for an estimated \$140 million in bag fee revenues, which could be rebated to help address financial inequities or help cover the costs of running the program.²

Key to achieving these targets is to [shift away from the "one size fits all approach" to residential waste services](#), including actions such as:

- Regularly revising collection routes with the help of GPS technology and routing software to optimize route capacities;
- Changing the number of collection days in districts where appropriate;
- Altering the number hours of a shift or moving some collection into late night or overnight hours;
- Greatly expanding containerization, including centralized drop-off sites for waste on the street in districts as appropriate; and
- Allowing routes to cross district boundaries when beneficial.

Achieving zero waste requires a holistic approach that uses City resources efficiently, incentivizes residents to improve their recycling habits and reduce their refuse generation, and

implements targeted programs and policies to improve diversion of various waste streams. One of the most critical steps the City could take toward zero waste would be implementation of a volume-based fee which would make the cost of a household's waste generation transparent and incentivize recycling. Such a fee also makes other targeted programs such as organics or textiles recycling programs more effective by incorporating financial incentives to encourage their use. Thank you again for the opportunity to testify. CBC staff is happy to discuss the details of any of these recommendations in greater detail.

¹ Savings are calculated based on the volume of curbside refuse and recycling wastes, the average tons per truck shift, and the per ton fully loaded collection and disposal costs for fiscal year 2018. Savings assume disposal costs are held fixed at fiscal year 2018 levels. The volume-based fee system assumes a bagged system where each 13-gallon kitchen bag is charged 50 cents which can hold an average 16.1 pounds based on the United States Environmental Protection Agency's 2016 solid waste conversion guidelines. The cost of recycling remains free. Volume reductions and recycling increases calculated based on results found in a study of over 450 Dutch municipalities before and after volume-based fee implementation. See: Marteen A. Allers and Corine Hoebe, "Effects of Unit-Based Garbage Pricing: A Difference-in-Differences Approach," (September 19, 2009); City of New York, Mayor's Office of Operations, *Mayor's Management Report Fiscal 2019* (September 2019); New York City Department of Sanitation, *Annual Report for DSNY & Non-DSNY Collections, Fiscal Year 2020* (accessed April 1, 2021); and United States Environmental Protection Agency, "Volume-to-Weight Conversion Factors for Solid Waste" (April 2016).

² Productivity savings assume DSNY achieve collectively bargained targets of 10.7 tons per refuse truck shift and 6.2 tons per recycling truck shift.