Curbside Collection Design and Rate Structure Guidelines
[manual, semi-automated and fully automated]

Rate Options

Rate options can be proportional or two-tiered with both bags and containers. In either case, it is recommended to create a rate that is as linear as possible in order to maximize waste reduction.

- *A proportional rate structure* takes all of the costs of the program, both fixed and variable, and builds them into the rate structure. A proportional rate is a good choice in an area of high home ownership. The rate is more risky as waste decreases over time (if your goal is zero waste) as many of the fixed costs remain the same. Therefore, in a proportional rate, the cost will increase as households reduce their waste generation. Rate structure is specifically related to municipal costs, not just tipping cost.
- *A two-tiered rate structure* keeps the fixed costs of the program in the tax base and creates a unit based cost to cover the variable expense (tipping costs) of the program. A two-tiered rate is a good choice in communities with low home ownership rates. The two-tiered rate leaves part of the cost on the homeowner and shifts the portion of the cost directly related to the user onto the home occupant. The two-tiered rate is flexible; the fixed costs of the system remain in the taxes, so that as the resident reduces trash generation, their costs also decrease. Below are sample two-tiered rate options.

Municipalities that offer curbside collection of trash and recycling have three design options

1. **Bags**
   - With bags, residents pay as they go for what they use.
   - Creating a two-tiered rate for each household by charging a bag fee and reducing the tax or fee by the tipping expense (only) would incentivize residents without changing the overall cost of disposal significantly. If residents recycle more and pay as they go for one bag per week, their overall cost would have minimal change. The average household spends approximately $50 in actual tipping expense in New Mexico [this is a rounded average and will vary from landfill to landfill – but it is an easy number to use for demonstration purposes]. For example, if the household tax was reduced by approximately $50 in a two-tiered bag system, the residents would be asked to purchase weekly bags to cover the cost of their actual trash generation.
   - In manual and semi-automated systems, bags are an easy, cost-effective way to get started. There is no need to incur a large expense by investing in new containers.
   - A bag system can be achieved by using a proportional or two-tiered rate structure.
   - The municipality could also set a two-tiered rate without reducing the fee or tax associated with the variable cost of trash. Instead, the municipality could retain the additional revenue to offset any current budget shortfall.

- **Residential Rate Structure – Suggestions for Bags.** The cost of the trash bag should be determined based on the cost of the bag itself plus the cost to dispose of the contents within, based on weight. Based on an average of $40 per ton disposal rate in New Mexico and a 25 cent (bag and distribution) cost, and assuming the average bag weight is 23 lbs (EPA standard), the average cost of the trash bag will be around 71 cents (round up to 75 cents). This would cover the cost of disposal and the cost of the bag. The cost of bags will be higher than a normal store-bought trash bag. The price point should be just high enough to incentivize change.

    - In this example, if the household cost were reduced by $50 and each household used one bag per week for trash and recycled more, the cost to the household would be 75 cents x 52 weeks = $39, a net savings of $11 per household.

    - Sample simplified cost structure:

Average cost per ton disposal	$40.00
Average cost per pound [cost per ton divided by 2000 lbs]	$0.02
Average cost per bag [manufactured and distributed to muni office or direct to retail location]	$0.25
Total suggested bag cost [based on 23 lb weight] 33-gallon bag	$0.71

    - Bags could also be used with fully automated collection using 96-gallon containers. Installing a camera on the truck to monitor bag compliance during pick up is a less expensive option then the expense of new, smaller containers.

2. Containers

- Similar to the two-tiered bag rate structure, a two-tiered container structure could be developed by reducing the tax or fee to the household by the approximate $50 annual tipping expense and leaving the fixed costs covered through taxes. The households would then be required to choose a container size that suits their needs. The container cost should be based on the assumption that all or most homes would choose the smallest container size of 32 gallons. Those choosing this size would have approximately the same annual overall cost as the prior system. However, those that choose a larger container would pay more. Therefore, homes have an incentive to choose a small container and recycle more.
- In semi-automated and fully-automated collection systems, changing container sizes as part of a PAYT program is initially more costly, but over a 10-year period containers are a more cost effective option than the bag approach.

- A container system can be achieved using a proportional or two-tiered rate. The two-tiered rate requires less change and can give residents an incentive to reduce their waste without significantly changing the overall cost of disposal.
- The municipality could also set a two-tiered rate without reducing the feet or tax associated with the variable cost of trash. Instead, the municipality could retain the additional revenue to offset any current budget shortfall.
- In this example, if the household cost is reduced by $50 and each household chose the small container for trash and recycled more, the cost to the household would be approximately the same ($50 rebate from tax or fee in exchange for choosing the $50 annual container option).
- Sample simplified cost structure:

	32-Gallon	64-Gallon	96-Gallon
Container cost amortized over 4 years	10	15	20
Estimated annual cost per container of trash	36.5	73	109.5
Sub total	46.5	88	129.5
Round up to cover replacement or damaged carts, billing, collections and cart inventory	50	100	150

3. Hybrid or Overflow Design Option

- All households receive one 32-gallon trash container for no fee or charge.
- There is no rate structure change. The only change is the reduction in the container size.
- All residents are required to purchase a special color overflow bag for additional trash or the household must request a larger container at a substantial fee. The fee suggestions are similar to those described above.
- All households receive a larger container for recycling. Generally, municipalities will use the old waste receptacles for recycling by simply adding a sticker. This saves money on the purchase of recycling containers. Using a small trash container creates an automatic shift in waste and recycling tonnages.
- Municipalities that are ready to purchase new containers or are switching from duel stream to single stream recycling have an opportunity to use an overflow program. A hybrid overflow system is a great way to make a transition to PAYT without a lot of rate structure changes.
- There is also an added benefit to the municipality, as the hybrid program will decrease waste at a municipal level without decreasing cost to the individual household. Thus, the municipality is able to use the savings within the department for other services such as education.
- The hybrid program can also be used in programs with no curbside recycling.