Variable Rate Pricing: Best Practice to Increase Recycling

Pay-As-You-Throw (PAYT) is a unit-based waste collection fee system that, when implemented using a best practices approach, is the most effective way to give households an opportunity to save money by disposing of less waste and recycling more. Similar to other utilities like electricity and water, households are charged based on the quantity of waste they produce. The more they dispose; the more they pay; and the more they recycle, the less they dispose and the more they save.

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**WHY PAYT?**

- **Cuts waste in half.** PAYT communities, on average, dispose of 49% less waste than communities that include the cost of waste collection in property taxes or charge it as a fixed fee.
- **Dramatically increases recycling.** Research shows that variable rate systems result in a 20-40% increase in recycling tonnage.\(^2\)
- **Fair/equitable.** Households are responsible for their own behavior and can take control of their costs accordingly. A survey of 1,000 PAYT participants found that 68% see the program as fair.\(^2\)
- **Saves money.** The cost of waste disposal has risen 2.4 times faster than inflation over the last 30 years.\(^4\) Often trash fees fall short in covering full costs. PAYT cuts disposal costs dramatically, provides a sustainable revenue stream when rates are designed with care, and defers the cost of future landfill development.
- **Flexible to implement.** PAYT can be designed to meet the needs of any community (e.g., big or small, rural or urban, curbside or drop-off, with automated or manual collection, etc.).

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**PAYT Program Types**

- **Bag**
  - Generators purchase special plastic bags, often designed with a city logo or other distinguishing graphic, through city hall and/or local retailers. The price includes the cost of waste services. Residents can control their costs by choosing to throw less away. Different bag sizes can be used to designate specific volumes of waste.
  - Creates incentive to reduce waste by providing a direct link between waste generating behavior and cost. No billing system to administer, but bags must be made available to residents. Can work with cart- or can-based collection systems. Inexpensive to implement.
  - Can control their costs by choosing to throw less away.

- **Variable Cart**
  - Generators pay a fixed price based on size or number of carts they select for waste service. The larger or greater number of carts used, the more they pay.
  - Entails upfront costs for variable carts provision and delivery as well as ongoing costs for maintenance. Administratively more complex due to billing system requirements. Limited flexibility in switching between can/cart sizes.
  - Cart size decisions and associated costs are linked to estimated waste generating behavior over time as opposed to weekly fluctuations in generation.
  - Can control their costs by choosing to throw less away.

- **Tag or Sticker**
  - Generators purchase special tags or stickers through city hall and/or local retailers. Price includes cost of waste services so the more tags/stickers used, the more they pay. Tags/stickers can designate specific volumes of waste and, unlike bags, can be used for bulky items.
  - Creates incentive to reduce waste by providing a direct link between behavior and cost. Relatively inexpensive to implement. No billing system to administer, but tags/stickers must be made available to residents. Does not work well with automated cart based systems due to difficulty spotting tags/stickers; but can be used as method for charging for overflow waste.
  - Increased potential for fraud as tags/stickers are more susceptible to theft, counterfeiting, and non-compliance.

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**WHAT ACCOUNTS FOR WASTE REDUCTION?**

- **60%** Increase in recycling
- **40%** Source reduction, textiles diversion, reuse and yard waste collection

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**PRICING SYSTEMS**

Pricing systems vary widely between communities but generally fall into three categories:

1. **Fully Variable:** All or most program costs are recovered through the unit fees paid by the generator. To ensure full cost recovery, it is crucial that full program costs are known before setting fees and that future fee adjustments are permitted if needed.

2. **Two-Tiered:** Like an electricity bill, a two-tiered system charges the generator a base fixed fee regardless of use and a variable fee that is based on use.

3. **Hybrid:** Generators pay a fixed amount for a specified maximum volume of waste to be set out per collection period. Waste set out that exceeds this amount accrues an additional charge.
## POTENTIAL CONCERNS

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<tr>
<th>Concern</th>
<th>Possible Resolution</th>
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<tr>
<td><strong>Haulers and Recyclers</strong></td>
<td>• Design the program with hauler input</td>
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<td>• Implement recycling first, then PAYT a year later</td>
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<td>• Provide extensive recycling education and enforcement</td>
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<td><strong>Uncertain and Unpredictable Revenue</strong></td>
<td>• Develop the initial rate structure to reflect realistic future diversion rates and allow for a “true up” over time</td>
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<td><strong>Illegal Dumping</strong></td>
<td>• More perception than reality. Illegal dumping is largely made up of bulky waste and non-residential materials.</td>
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<td>• Preempt illegal dumping through education and promotion</td>
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<td><strong>Politics</strong></td>
<td>• Identify a champion to promote and shepherd PAYT adoption</td>
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<td>• Conduct extensive education and outreach at all stages of program adoption</td>
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<td>• Phase in program to ease transition</td>
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## SUPPORT FOR PAYT*

The following are just some of the organizations recognizing PAYT as a valuable tool for consideration by communities wanting to reduce waste and boost recycling rates:

- **The National League of Cities Sustainable Cities Institute** provides resources to aid cities in developing sustainability programs and achieving sustainability goals. An example is a PAYT Fact Sheet. PAYT is described as a “Next Generation” strategy to help local governments improve on traditional programs.

- **The U.S. EPA** supports PAYT “…because it encompasses three interrelated components that are key to successful community programs: 1) Environmental Stability; 2) Economic Stability; and 3) Equity. Although the U.S. EPA no longer updates the information it has online, it continues to provide information such as resources and case studies.

Regional organizations like the **Northeast Waste Management Officials’ Association** (NEWMOA), and several state agencies, including MA DEP, CT DEEP, CalRecycle, PA DEP, and the Natural Resources Council of Maine, have worked with communities to help implement PAYT programs (sometimes referred to as SMART – Saving Money and Reducing Trash), by sharing tips, case studies, and other resources.

## WANT TO LEARN MORE?

[WWW.PAYASYOUTHROW.ORG](http://WWW.PAYASYOUTHROW.ORG)

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1. Also known as variable rate pricing, trash metering, unit pricing and Save As You Recycle