

# The Feasibility of Pay-As-You-Throw For the Boroughs of Leechburg and Kittanning

Armstrong County



PAYT tags, cans, and bags  
Photo from the PaDEP Recycling  
Homepage

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## **BACKGROUND**

The Pennsylvania Department of Environmental Protection (PaDEP), the Governor's Center for Local Government Services, the Pennsylvania State Association of Township Supervisors (PSATS) and the Solid Waste Association of North America (SWANA) formed a training partnership for Pennsylvania local governments interested in achieving higher recycling rates. Through this partnership, Leechburg and Kittanning Boroughs were awarded \$6,000 in technical assistance services from Gannett Fleming, Inc. to evaluate the feasibility of a Pay-As-You-Throw (PAYT) program.

## **INTRODUCTION**

The Boroughs of Leechburg and Kittanning, which are both located in Armstrong County, requested information on Pay-As-You-Throw (PAYT) programs. PAYT, which also known as variable rate pricing or unit pricing, is a system under which residents pay for municipal solid waste (MSW) services per unit of waste collected rather than a fixed fee. As a result, PAYT encourages waste reduction and subsequently greater recycling rates. Kittanning Borough also wanted to determine if a PAYT program could reduce the amount of bagged refuse that is discarded on Borough streets from citizens of neighboring municipalities.

A PAYT program is ideal for communities with recycling programs because it provides residents with a means of waste reduction. Both Leechburg and Kittanning have curbside recycling services as well as drop-off recycling centers and special collection days for bulky items, such as household appliances and tires. The details of these programs are presented in this report.

This report provides a general overview of PAYT, such as the advantages and disadvantages, methods of implementation, and the various pricing structures. Recommendations regarding PAYT for Kittanning and Leechburg Boroughs are also included. If additional information is desired, the report identifies the resources that are available.

## SCOPE OF SERVICES

Gannett Fleming, Inc. developed the Scope of Services.

**Task 1:** Evaluate the feasibility of PAYT for the two municipalities.

**Task 2:** Discuss the advantages and disadvantages of PAYT as well as the methods of implementation and pricing structures.

## TASK COMPLETION

**Task 1: Evaluate the feasibility of PAYT for the two municipalities.**

PAYT, which is also known as variable rate pricing or unit pricing, is a system under which residents pay for municipal solid waste services per unit of waste collected rather than a fixed fee. Such a program is established through the sale of designated cans, bags, and tags. The cost of the service is incorporated into the purchase price of these items. Municipal residents must use the designated cans, bags and/or tags in order to receive service.

In order for a PAYT program to be feasible, it is important to have recycling services available. Both Leechburg and Kittanning have curbside recycling services as well as drop-off recycling centers and special collection days for bulky items, as detailed in **Table 1**.

**Table 1:** Details of the Leechburg and Kittanning Borough Recycling Programs

<b>Category</b>	<b>Kittanning Borough</b>	<b>Leechburg Borough</b>
Act 101 Recycling Mandate	Yes	No
Curbside Recycling Service Provider	Borough Employees	Borough Employees
MSW Service Provider	Borough Employees	Privately-Owned Hauler
Curbside Recyclables	Aluminum cans Bi-metallic cans Plastic bottles (PET & HDPE) Glass bottles (clear, brown, & green)	Aluminum cans Bi-metallic cans Plastic bottles (PET & HDPE) Glass bottles (clear, brown, & green)
Drop-off Recyclables	Newspaper Office paper Magazines Catalogs Envelopes Cardboard Phone books	Newspaper Office paper Magazines Catalogs Envelopes Cardboard
Bulky Recyclables	Tires Batteries Stoves Refrigerators Freezers Scrap metals Carpet	Tires Batteries Building materials
Leaf Collection	Yes	Yes

**Kittanning Borough**

A PAYT program is feasible for Kittanning Borough at this point in time for the following reasons:

- The Borough provides trash collection services, which is not essential to the implementation of PAYT, but means that changes to the program can be done without waiting for a contract with a private hauler to expire.
- The Borough provides curbside recycling, leaf collection services, and has access to a local recycling facility, which accepts a vast array of materials. These services provide a means for residents to reduce MSW costs.

The Borough also wanted to address the illegal dumping of bagged refuse on Borough streets from citizens of neighboring municipalities. In 2001, the Borough approved an ordinance that

requires all garbage to be bagged, and all garbage cans to be a maximum size of 32-gallons as well as labeled to identify an owner. A Code Enforcement Officer was hired to enforce the ordinance.

A PAYT program lends itself to these efforts because it provides Borough identification for garbage bags, as well. With a PAYT program, all garbage bags and cans will have identifying marks, which will make it easier for the Code Enforcement Officer to identify illegal garbage. An effort to identify the source of illegally dumped garbage will still be necessary. The use of these marked bags and cans, however, can further deter illegal dumping.

### Leechburg Borough

A PAYT program for Leechburg Borough is not feasible at this time because the Borough is under contract with a private hauler for MSW services until 2005. This contract sets a fixed escalating rate for services.

#### **Task 2: Discuss the advantages and disadvantages of PAYT as well as the methods of implementation and pricing structures.**

This section discusses the advantages and disadvantages of PAYT as well as the methods of implementation and pricing structures. Selected details from some Pennsylvania communities who have adopted PAYT are also provided.

#### **A. Advantages**

Similar to pricing structures for electricity, gas, and water, PAYT is equitable because customers pay for the amount of waste generated. As a result, PAYT gives customers a direct economic incentive to reduce the amount of waste generated either through recycling or source reduction. The PaDEP estimates that, under optimal conditions, as much as 61% of the waste stream can be diverted from landfills as follows:

- 18% through waste reduction, including backyard composting
- 34% through recycling, if all eight materials listed in Act 101 are collected
- 9% through municipal composting

## ***B. Disadvantages***

There is a perception that illegal dumping will increase once residents are asked to pay for each container of waste generated. According to the EPA, most communities with PAYT programs have found this not to be the case, especially when they offer their residents recycling, composting, and other programs to allow individuals to reduce waste legally. Sticker programs have been developed in some communities with PAYT to provide a legal outlet for bulky waste disposal. For lower income residents, coupon or voucher programs are being used to reduce trash collection costs.

## ***C. Pricing Structures***

An EPA publication entitled “Rate Structure Design: Setting Rates for a Pay-As-You-Throw Program” lists four common pricing structures. An initial challenge of program implementation is to quantify the amount of waste reduction that will result with PAYT. If waste reduction is not accounted for, then revenue generated from the sale of tags, bags, and cans will fall short of the budgetary requirements. Therefore, selection of a pricing structure should consider its impact on the stability of the community’s revenues and to residents’ waste reduction efforts. The four EPA pricing structures are:

Proportional Rate System: Households are charged a flat price for each container of waste that is set out for collection. Relative to the other pricing structures, this one offers a high incentive for customers to reduce waste while remaining relatively easy to administer and bill. Under this pricing system, each container is the same size and the same price.

Variable Container Rate: Households are charged a different rate for different sized containers. For example, households might be charged \$2 for every 30-gallon can of waste and \$1.25 for

every 15-gallon bag. Billing is complicated in this pricing structure in that rates must be carefully set to ensure revenue stability. To establish appropriate container rates, an estimate of the proportions of each container size that will be used is necessary. In other words, 40% of homeowners plan to use a 30-gallon can and 60% plan to purchase 15-gallon bags.

Two-Tiered Rate System: Households are charged both a fixed fee and a per container fee. The fixed fee can be used to cover the municipality's base costs for service whereas the variable rate is used to cover operating costs. Consequently, residents have less incentive to recycle due to fixed fees. The two-tiered system, however, provides greater assurance of stable revenue flows.

Multi-Tiered Rate System: Households are charged a fixed fee and a variable container rate. For example, a community might charge a \$10 monthly service fee plus \$2 per 60-gallon container and \$1 per 30-gallon bag.

Many communities use a tiered system initially as a means of gauging customers' response to unit pricing. Once the community feels comfortable with the unit pricing system, a proportional or variable container rate is then implemented. For Kittanning Borough, the two-tiered is recommended for at least the first year of a PAYT program. The Borough can use the 32-gallon maximum can sizes that are specified in the ordinance as a basis for establishing a unit price for both bags and cans.

#### ***D. Implementation***

The important components for implementation of a PAYT program are public education, negotiation, legislation, enforcement, and program design. An anticipated timeline for program implementation is provided in the **Appendix**. Of particular importance to implementing a PAYT program, however, is public outreach. Borough residents are accustomed to fixed-fee rate structure, and a change to this routine requires time, promotion (using all media outlets), and clearly defined reasons for the proposed change. As suggested on the anticipated timeline, approximately one year is necessary for program implementation.



### ***E. Case Studies***

The PaDEP lists 211 PAYT communities in Pennsylvania. Some of these communities have chosen to share the details of their PAYT program on the PaDEP website. Details for four communities are presented in **Table 2**. For all four communities, the cost for solid waste services per household is approximately \$100 per year on average. Three of the four communities have chosen to sell 30 to 40-gallon bags under the assumption that residents place a minimum of one bag per week at the curbside.

**Table 2:** Case Studies for Pennsylvania PAYT Communities

<b>Municipality</b>	<b>County</b>	<b>Budget</b>	<b>Households</b>	<b>Cost Structure</b>
Penn Township	York	\$650,000	5,700	\$2.20 per bag
Elizabethtown Borough	Lancaster	\$420,000	4,000	\$2.75 per bag
Douglas Township	Montgomery	\$209,000	2,500	\$2.00 per bag & \$5.00 per sticker for bulky waste
Perkasie Borough	Bucks	\$313,125	3,000	\$1.35 small bags, \$2.35 large bags

## **CONCLUSIONS AND RECOMMENDATIONS**

A PAYT program is feasible for Kittanning Borough at this point in time, and it compliments the on-going efforts to address the illegal dumping of bagged refuse on Borough streets from citizens of neighboring municipalities. For Leechburg Borough, however, a PAYT program is not feasible at this point in time due to a contract commitment with a private MSW hauler as of January 1, 2002.

A two-tiered pricing structure is recommended for Kittanning Borough to ease the transition into unit (bag or can) pricing. This pricing structure sets a flat fee to cover the base costs of MSW services and a per unit fee to cover operating costs. Once the Borough feels comfortable with the unit pricing system, a proportional or variable container rate can be implemented as a means of increasing the incentive for waste reduction and recycling.

For additional information on PAYT, there are many resources available through the PaDEP and EPA. The EPA has a PAYT hotline available at 888-EPA-PAYT and a dedicated PAYT website at [www.epa.gov/payt](http://www.epa.gov/payt). Resources from the PaDEP are available at [www.dep.state.pa.us](http://www.dep.state.pa.us). Click on Recycling in the Subjects section. The PaDEP Department of Waste Minimization and Planning can be contacted for a “Pay-As-You-Throw Toolkit” by calling 717-787-7382.