

FAQ:

FREQUENTLY ASKED QUESTIONS ON PAYT

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Communities have been implementing Pay As You Throw (PAYT) trash rate incentives in earnest since the late 1980s - as of today, they are in place in more than 7,000 communities. The programs can provide a cost-effective method of reducing landfill disposal, increasing recycling, and improving equity, among other effects.

... To learn more about how these popular programs really work, read on!

What is PAYT?

Pay as you throw (PAYT; also called variable rates, volume-based rates, and other names) provide a different way to bill for garbage service. Instead of paying a fixed bill for unlimited collection, these systems require households to pay more if they put out more garbage - usually measured either by the can or bag of garbage. Paying by volume (like you pay for electricity, water, groceries, etc.) provides households with an incentive to recycle more and reduce disposal.

Are there different kinds of PAYT Systems? How do they work?

PAYT systems are generally categorized into five major types:¹

▶▶ Variable can or subscribed can:

In this system, households sign up for a specific number of containers (or size of container) as their usual garbage service, and get a bill that is higher for bigger disposal volumes.



▶▶ Bag programs:

Households purchase special logo-ed bags (city or hauler logo, depending on the collection arrangement). The price of the bag includes some or all of the cost of collection and disposal of the amount of waste in the bag. Some programs have a customer charge or base fee in addition to the bag fees to help make sure they cover fixed costs. For convenience, bags are usually sold at convenience and grocery stores in addition to City hall-type outlets.



▶▶ Sticker or tag programs:

Households purchase special tags or stickers to put on their bags of garbage. The sticker price includes some or all of the cost of collection and disposal of the amount of waste in the bag. As with bag programs, some programs have a customer charge or base fee in addition to the sticker fees to help make sure they cover fixed costs. Bags are usually sold at convenience and grocery stores in addition to City hall-type outlets.



¹ Skumatz, Lisa A. and Cabell Breckinridge, 1990, "Variable Rates in Solid Waste: Handbook for Solid Waste Officials", Prepared for EPA Region X, Seattle, WA.

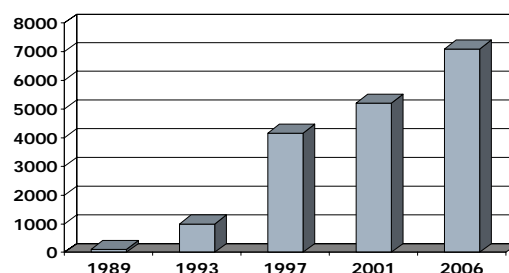
- ▶▶ **Hybrid programs:** In this system, households only pay for waste beyond a specified "base" set out volume. They pay a fixed bill or a tax bill that entitles them to a first can or bag of garbage (size limits are usually around 30 gallons). Then, additional waste is charged on a per-bag or per-sticker system as described above. This system is a "hybrid" between existing garbage programs and the new incentive-based approach, and minimizes billing and collection changes.
- ▶▶ **Weight-based:** Under this program² -- customer garbage cans are weighed on the back of retrofitted collection trucks, and the household is charged for the pounds of waste it actually disposes. This system is fairer, and communities can use large cans but still provide a strong recycling incentive.
- ▶▶ **Drop-off and Other systems:** In addition, some communities have a drop-off program, where customers pay by the bag or weight at transfer stations using fees, bags, stickers, or pre-paid punch cards. In addition, some haulers offer PAYT as one option, or customers may choose unlimited collection for a fixed fee.

How common are PAYT or Variable Rates Programs?

According to the latest national data, PAYT is available in more than 7,100 communities.³ This has grown substantially since the 1990s (see chart).

These programs are available to about 25% of the population, about 25% of all communities, and about 30% of the largest 100 cities in the US. PAYT programs are in place in 46 states (Kentucky, Hawaii, and Mississippi and the District of Columbia lack programs). The states with the most PAYT programs include MN, CA, WI, WA, IA, NY, OR, VT, MI, OH, among others.

Number of communities with PAYT available



(Source: Skumatz Economic Research Associates surveys)

Do most communities use the same system?

The most common PAYT system is the variable can program - and the percentage is growing as communities adopt fully automated collection programs. The next most common systems are bag programs (about 25%), hybrid (15%), and drop-off, sticker / tag, and optional programs. There are regional patterns in the system types. The west and southeast is predominantly can-based programs (they are often automated); hybrid programs are more common in the Rockies, bag/tag/sticker in the Midwest and northeast, midatlantic, and south central.⁴

Are all the programs in small communities?

PAYT programs are in communities with populations ranging from 100 to over a million.⁵ The average sizes of communities adopting PAYT can programs is 20,000, and range between 10-15,000 for sticker and tag programs, and larger for can-based programs.

² The first system was piloted in Seattle, and was called "Garbage by the Pound" (GBTP). For more information see Skumatz, "Garbage by the Pound", *Resource Recycling*, November 1989. This technology, designed for GBTP, has been recently adapted as a recycling reward program, called RecycleBank™; see www.recyclebank.com.

³ Skumatz, Lisa A., Ph.D. and David J. Freeman (2006), "PAYT in the US: 2006 Update and Analyses", Skumatz Economic Research Associates and USEPA, Superior, CO.

⁴ Skumatz, Lisa A., Ph.D., "The state of variable rates: Economic signals move into the mainstream", *Resource Recycling*, 1997.

⁵ Skumatz, Lisa A., Ph.D., "Metering the Garbage Spigot: Continued Growth for Variable Rates", *Biocycle*, 11/95.



Why are communities adopting these programs?

These programs increase equity, dramatically reduce disposal, and allow recycling households to save money (as well as offering environmental and cost benefits). Our community surveys find common reasons for adopting PAYT include: rising landfill/disposal costs; adoption of diversion goals; reports of successful programs, and legislative mandates. Most commonly cited sources for information on PAYT from communities adopting the programs were: case studies, neighboring community (hence the regional patterns in adoption), and trade journal articles about successful programs.⁶

Aren't these programs mandated in some states? Are there effective local regulatory options?

Some states have implemented legislation and policies around PAYT. The most recent inventory⁷ finds four states mandate PAYT with some caveats. One state includes PAYT as one of a menu of program choices from which communities must select. Thirteen states offer financial incentives or grants with PAYT preference, and 33 actively offer promotion or education about PAYT, and many others have voluntary recommendations.

Given that state legislation on PAYT has not changed much over the last decade, communities in states without PAYT legislation have been implementing local ordinances requiring any hauler operating in the area to use PAYT rate structures for trash.⁸ It creates a level playing field, avoids rate "setting" (structure only), and provides a PAYT recycling and diversion incentive.

Why should communities consider implementing PAYT? Do they really reduce disposal?

It is critical for communities to have realistic expectations about what will happen if they implement PAYT. Data from more than 1,000 communities around the country was used to identify the impacts of PAYT above and beyond any other recycling or yard waste program differences, demographics, and other factors. The research showed the following impacts on residential solid waste:⁹

- ▶▶ Disposal decreases by 16%-17%
- ▶▶ Increases in recycling of 5-6 percentage points or 5-6% of residential waste generation (usually about a 50% increase in current recycling)¹⁰
- ▶▶ Increases in yard waste diversion of about 4-5 percentage points
- ▶▶ Source reduction of about 6% of generation¹¹

⁶ Skumatz, Lisa A., Ph.D., "Metering the Garbage Spigot: Continued Growth for Variable Rates", *Biocycle, Biocycle*, 11/95.

⁷ Skumatz, Lisa A., Ph.D. and David J. Freeman, (2006) "PAYT in the US: 2006 Update and Analyses", prepared for Skumatz Economic Research Associates and USEPA, Superior, CO.

⁸ usually with embedded recycling costs

⁹ Skumatz, Lisa A., Ph.D., "Beyond case studies: Quantitative effects of recycling and variable rates programs", *Resource Recycling* 9/1996; and Skumatz, Lisa A., Ph.D., "Achieving 50% diversion: Program elements, analysis, and policy implications", *Resource Recycling*, 8/2000.

¹⁰ Analyzing Iowa communities, Frable, 1994, found an increase of 30% to 100% with an average of 50% increase in recycling tonnages.

¹¹ Skumatz, Lisa A., Ph.D., (2000) "Measuring Source Reduction: PAYT / Variable Rates as an Example", Skumatz Economic Research Associates Technical Report, prepared for multiple clients, included on USEPA website; and Skumatz, Lisa A., Ph.D., "Source Reduction can be Measured", *Resource Recycling*, 8/2000.

- ▶ Overall, we would expect a town with 100,000 tons of residential disposal to see a reduction to about 84,000 tons. Recycling tonnage would increase by about 5,500 tons, and yard waste programs would see an additional 4,500 tons. About 6,000 tons would be avoided through waste prevention, based on the study's estimates.

The research indicates that adding a PAYT program is the single most effective change a community can make to increase recycling. According to the research, PAYT increases recycling more than adding a new material, changing collection frequency, or many other potential program design or collection changes.

Are there other "incentive" options that might work as well?

One program, called "RecycleBank™"¹², does just that. The gripper arm on a fully-automated truck is retrofitted with a scale, and recycling is weighed. Each household can track their recycling online and they receive more "chits" the more recycling they accomplish. The "chits" can be used for free or discounted merchandise at a wide variety of partner stores like Starbucks, Target, and many others. This program provides a very strong incentive to recycle in communities. However, it should be noted that the program is designed to increase recycling. PAYT leads to recycling, yard waste diversion, and source reduction, which the research shows, in total, adds to almost three times as much diversion as recycling alone.



What about impacts on costs, customer acceptance, and other changes?

- ▶ **Cost impacts:** Based on detailed interviews, communities report that long term system costs are reduced; and the majority of communities in state surveys report short term system costs did not increase either. In two state surveys¹³ (WI, IA), about two-thirds of the communities reported that short-term system costs were lower or stayed the same after PAYT was implemented. Only one-third reported increases. These results show you can make "sensible" choices in PAYT that minimize costs and "fit" well with the community.

- ▶ **Disposal Savings:** Don't forget that in addition to savings in disposal tipping fees (perhaps 16%, but net out the recycling and yard waste program cost impacts), the programs can also allow communities to delay building a new landfill, and this results in real financial savings. Reducing 16% of the disposal extends the lifetime of the facility by one-sixth - and similarly decreases the money that needs to be set aside for a new facility and for closure costs because the funds can be accumulated over a longer period.



¹² www.recyclebank.com. Interestingly, the technology and RFID approach was first developed for a PAYT program – Seattle's "Garbage by the Pound" program. See Skumatz, Lisa A., "Garbage by the Pound", *Resource Recycling*, 11/1989; and Skumatz, Lisa A., Ph.D., "Garbage by the Pound: The Potential of Weight-Based Rates", *Resource Recycling*, 7/1991.

¹³ Frable, 1994 for Iowa, and Wisconsin DNR studies (citation to be completed)

- ▶▶ **Buying habits:** Reported results of customer survey research indicated 76% have purchasing decision-making affected by PAYT, and that PAYT has a demonstrable effect on waste-generation and buying habits.¹⁴
- ▶▶ **Cans set out:** Households put out fewer garbage cans for collection after PAYT is implemented - partly because of declines in tonnage, and partly because cans are "stuffed". (dubbed the "Seattle Stomp"). Seattle (WA) cans reduced from 3.5 30-gallon cans to 1.0 with PAYT and new programs; Hoffman Estates (IL), decreased from 3.1 units to 1.3 stickered bags. Many communities report 1-1.5 30-gallon equivalents after a variable rates program -- important for setting rate levels.¹⁵
- ▶▶ **Customer Satisfaction:** Multiple community surveys indicate more than 90% of customers are pleased with systems after they are implemented - and they don't want to return to the old system because PAYT is fairer.¹⁶ However, the challenge is getting the systems accepted prior to implementation. Change is always difficult.

Aren't there environmental benefits too?

Considerable attention has been paid to this issue. One study¹⁷ estimated the tons of emissions reduced through PAYT programs, and then computed the dollar value of these green house gas (GHG) reductions using valuations from the environmental literature. The study estimated that these environmental benefits were worth an additional \$1 to \$6 per ton.

An especially important point to realize is that solid waste programs can be both cheaper, and quicker to implement than other methods of achieving GHG reduction goals - even though energy and transportation receive the most attention for GHG goals. One community found that fully 40% of the first couple years of progress they had made in reaching sustainability goals had been attributed to their solid waste programs.¹⁸

Don't the programs lead to increased illegal dumping?

Illegal dumping is one of the first worries when communities consider going to PAYT. However, in reality, dumping does not appear to be a serious problem, based on research in PAYT communities. Illegal dumping exists in virtually every community now -- the question is whether illegal dumping will increase significantly in response to a new PAYT system. One complicating issue is that very few communities have quantitative information on how big a problem illegal dumping is before they put in new rates - making it tough to compare changes. However, because illegal dumping is almost always a fear, and because people will be looking for dumping, illegal dumping will be noticed, whether or not it actually increases over pre-PAYT levels.

¹⁴ Skumatz, Lisa A., Ph.D., (1993), "Variable Rates for Municipal Solid Waste: Implementation, Experience, Economics, and Legislation", prepared for the Reason Foundation, Los Angeles.

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ Skumatz, Lisa A., Ph.D. and David J. Freeman, (2006) "PAYT in the US: 2006 Update and Analyses", prepared for Skumatz Economic Research Associates and USEPA, Superior, CO.

¹⁸ Skumatz, Lisa A., Skumatz Economic Research Associates, Superior, CO, case studies 2006.

Several studies have attempted to address the illegal dumping issue (based on interviews with more than 500 PAYT communities), and the conclusions are:



- ▶▶ **Low Incidence:** Illegal dumping is a problem in a minority of communities (about $\frac{1}{4}$), and all the communities surveyed said the problem was short term and illegal dumping should not be considered a barrier to PAYT. The research showed the program was a much bigger fear up-front than real experience after implementation.¹⁹
- ▶▶ **Strategies:** The illegal dumping problem can be addressed and can through a variety of enforcement strategies.²⁰
- ▶▶ **Not Caused by PAYT:** The majority of illegally dumped material is not residential in origin - indicating residential PAYT/VR programs are not a large source of the problem.²¹
- ▶▶ **Bulky Items:** Incorporating a bulky waste collection program (by appointment, limited number of "free bulky" tags, a charge per item, or other strategies), can go a long way toward reducing the potential illegal dumping problem, and helps make sure the PAYT program works for all residents, not just the "average" resident.²²

Isn't PAYT Unfair for Low-income Customers and Large Families?

Concerns are often raised that PAYT programs might be unfair to large families. It is important to separate concerns about large families from concerns about low-income households. Addressing just the large family issue, consider turning the argument around. Has it been fair all these years for small disposers to be subsidizing large disposers all these years under fixed bill (or nearly fixed bill) systems?

Opportunities to reduce waste are available to all households (recycling, etc.) and those who limit their waste can get control over a bill they previously could not reduce. Although there is some relationship between family size and amount disposed, all households have opportunities to reduce. In most communities, large households do not generally receive discounts on water service, groceries, or other services that might also vary by family size. Subsidies for large families for garbage are not as easily justified as subsidies for low-income families.

One place this concern may be more important is the combined impact on large, low-income families. SERA conducted a specialized study of low-income strategies. We found that low income or elderly discounts are provided in less than 10% of communities with PAYT.²³ The report also details certification issues, and methods for administering the program.

¹⁹ Skumatz, Lisa A., Ph.D, 1993, "Variable Rates for Municipal Solid Waste: Implementation, Experience, Economics, and Legislation", prepared for Reason Foundation, Los Angeles, CA.

²⁰ Skumatz, Lisa A., Ph.D., Hans Van Dusen, and Jennie Carton, (1994, revised 2001), "Illegal Dumping: Incidence, Drivers, and Strategies", Skumatz Economic Research Associates Research Report #9431, Superior, CO. www.serainc.com.

²¹ *Ibid.*

²² *Ibid.*

²³ Skumatz, Lisa A., Ph.D. (1995, updated 2001), "How Can Low Income Programs Work? Addressing Special Populations Under PAYT/Variable Rates Systems", Skumatz Economic Research Associates, Research Report #9508-1, Superior, CO, www.serainc.com.

What Do We Do About Multifamily Buildings?

When PAYT systems are implemented, they commonly include various combinations of garden apartments, town houses, condominiums, and apartments of about 6 or fewer attached units. These buildings can usually be signed up and treated similarly to single family dwellings.

Although the PAYT systems have not historically been available for large apartment buildings with shared "chutes", recall that these larger multifamily buildings are already receiving a volume-based signal (although at the building and not tenant level) through dumpster charges, which are charged based on cubic yards of service. However, new hardware has become available that provides a workable PAYT system for large multifamily buildings with combined garbage chutes. Tenants push a button for garbage or recycling (up to 6 different streams). This makes recycling and garbage collection equally convenient; increases in recycling are 30%-300%, and payback is on the order of 3 years. More than 200 have been installed in new and retrofit to date, mostly in FL and NY,²⁴ and have led to significant increases in recycling and decreases in disposal. In addition, suggestions for variation on PAYT incentives that encourage recycling are being tried in communities across the nation.²⁵ These recent developments show promise for removing a barrier to economic incentives for multifamily residents.

Won't it increase Workload and Costs?

Of course, this answer varies town to town, based on the specific solid waste system that the City starts with, and the changes required by the system the town implements. However, some evidence was provided by surveys conducted by two states - Iowa and Wisconsin. These states asked PAYT communities whether the workloads increased, decreased, or stayed the same after implementing PAYT. They found that roughly 55-65% said their workloads stayed the same or decreased,²⁶ and nearly two-thirds stated that costs stayed the same or decreased. And the program discourages overuse of solid waste services, so in the long run, communities should have lower costs than if solid waste behaviors had continued unabated.

I'm worried about revenue shortfalls - what's the story?

Traditionally, solid waste revenues are based on fixed bills or tax payments - fairly reliable revenue sources. PAYT programs, because they depend on customer behavior choices, will inherently lead to more volatile revenue streams than systems with fixed bills. This is very commonly a concern both for haulers and for municipalities. Revenues are no longer based on a stable number like households, but rather on the number of individual *bags* or *cans* of waste sold/disposed. The number of bags disposed can vary month-to-month and week-to-week, based on diversion program availability, seasonal factors, advertisements and promotions, and many other factors, and this can cause revenue headaches.

However, several strategies can help reduce the potential volatility:

²⁴ Skumatz, Lisa A., Ph.D. and John L. Green, "Reaching for recycling in multi-family housing", *Resource Recycling*, 10/99.; and Skumatz, Lisa A., Ph.D., and John L. Green, "Movin' On Up - Strategies for Increasing Multifamily Recycling", Skumatz Economic Research Associates Research Report #9989, Superior, CO, September 1999.

²⁵ Ibid.

²⁶ Frable, 1994, Iowa DNR.

- ▶▶ **Up-front research:** Use the numbers from the research on disposal and program impacts listed above.
- ▶▶ **Pick a less volatile PAYT/VR system:** There are differences in the relative revenue volatility associated with different PAYT/VR programs. If revenue uncertainty is a primary concern, systems with less revenue volatility include variable can or hybrid programs, or bag/tag programs that include a customer charge. In these programs, every customer is at least paying some amount every month - whether for a minimal container or customer charge - helping provide a reliable base set of funding to support the program.
- ▶▶ **Reduce the aggressiveness of the "rate incentives" for recycling:** If the reliable size of the difference in rates between service increments - that is, the cost of an extra can or an extra bag of garbage - is set low, then revenue variations based on number of garbage set outs will have a smaller effect on revenues. Thus, revenue variations would be low. Under this system, the "first can" rate, or the "customer charge" would tend to be higher. However, adopting a rate system with very low incremental rates for more service will 1) not provide much incentive for reducing garbage, and 2) will resemble a flat fee, so it may not be worth the administrative hassle of implementing the change! A balance between revenue volatility and incentives must be found to make the PAYT system most successful. SERA's research shows that recycling impact are strong even if the difference between can fees are only 80% more for twice the service - so an incentive can be provide, but revenue risk reduced over "can is a can" pricing.²⁷

Is PAYT waste disposal pricing difficult to administer?

Anecdotal evidence from SERA interviews with hundreds of PAYT communities indicates that in most cases, after initial efforts to educate customers about PAYT, the programs "run themselves". However, as with most programs, there can be certain administrative challenges that need to be addressed depending on the community. However, statewide surveys in Iowa and Wisconsin found that nearly 2/3 of the PAYT communities reported no additional workload or cost from implementing the PAYT program. This indicates that: 1) PAYT programs don't have to be expensive or troublesome to implement, and 2) the programs are flexible enough that communities can make intelligent choices that help minimize disruption from PAYT programs. Communities can reduce the administrative load by picking a program that:

- **Blends well with the current (or planned) collection system:** if customers are currently using cans, with manual collection, selecting variable can or hybrid programs may cause minimal disruptions. If bags are common, incorporate a bag, tag, or hybrid program. If you are moving toward automation, a variable can (or weight-based) program will be much more suitable than other choices.
- **Blends well with the current billing system:** If the community does not currently have a mechanism to bill different rate levels, opt for a hybrid, bag, or tag program. Then the community can bill a fixed amount (or no bill), and the extra bags or tags are pre-paid - no bills are needed. Alternatively, the community can have grocery or convenience stores sell the bags or tags, and then the community only needs to invoice these stores for the bags - no "billing" for customers is needed.

²⁷ Skumatz, Lisa A., Ph.D., 2001, "7 Steps for Continued Recycling and Waste Diversion Progress", Skumatz Economic Research Associates Research Paper #2001-1004, Superior, CO; also Skumatz, Lisa A., Ph.D., "Seven Steps to Increase Recycling Cost-effectively", *MSW Management*, September / October 2002.

Won't citizens resist - won't they see PAYT as less service for more money?

Certainly, any change always leads to confusion and resistance to change. Even though there is generally resistance to change prior to implementation, numerous surveys have indicated that these programs are perceived as fair and are very popular after they have been implemented - upwards of 90% of residents are happy and prefer the system to past payment methods. SERA finds customers routinely view the programs as fair, and they end up being very popular with residents after the fact.

Getting customers to accept the change in the first place is the tricky part. Equity is a big part of the effort to "sell" the PAYT program. Public education is strongly emphasized by all communities to improve success of the PAYT program. All systems also establish weight limits for the cans and containers, to address both safety and equity concerns.

However, the perception that the new program results in higher rates and provides less service for more money is something that some residents (and potentially the press) may latch onto. Several points are worth mentioning. First, recall that "rates" are not the crucial element. Rather, "bills" are what customers pay, and customers now have some level of control over their bills - control they did not have under fixed bill or tax-based systems. Bills are based on rates AND customer choices about the level of service they choose to use. Those willing to recycle and reduce can now save money and lower their bills. Second, make sure they understand that the rates provide them with multiple services (if it is true!) - including garbage, recycling, and yard waste programs. The toughest part of the "sell" is getting customers to recognize that they aren't paying more (on average) than they were before. This is especially difficult if the charges were previously embedded in the tax bill and they didn't know what they were paying. Some communities recommend "line-iteming" the tax bill for a year before the change to point out the cost of solid waste management. PAYT/VR can help reduce current and future solid waste management costs; getting that message across to residents is an important part of the education program. To improve acceptance, education needs to emphasize:

- ▶▶ Why the community is making the change, and what you are trying to accomplish
- ▶▶ Options available to residents to reduce and recycle
- ▶▶ Previous bills and costs, and new bills and rates
- ▶▶ How customers can work with the system to reduce their costs
- ▶▶ Special collections, programs, etc.

Won't haulers resist this change?

Haulers (large and small) across the US offer these programs. In some cases, the haulers are under contracts with municipalities; in other cases the haulers offer the program community-wide, provide service through private contracts to citizens, or offer PAYT as an optional alternative to unlimited collection. In truth, haulers are very familiar with these programs. PAYT has been well publicized, and exists in thousands of communities nationwide. If concerns like revenue risk, workload, and education can be overcome, haulers basically will offer whatever citizens or communities want. Involving haulers in the program design, and providing a level playing field - requiring all haulers to offer the program - will help haulers make sure the program is well-suited to your residents and their waste behaviors. However, make certain that the concerns about revenue risk do not lead the haulers to offer rates that vary too little with increases in service - limiting the incentive for customers to recycle (see discussion of revenue risk above).

Can PAYT work in areas with Multiple Haulers?

Many communities with multiple haulers have successfully implemented PAYT. SERA nationwide surveys find that more than 10% of the surveyed communities with PAYT had multiple haulers operating in the area under the program. We find that if one hauler introduces PAYT, the other haulers end up also offering the program. Haulers in the area know and bill their own customers under the can-based system - no special considerations are needed. In areas that use bag or sticker programs, customers just purchase the color of sticker or bag associated with their particular hauler.

Haulers are usually concerned about revenues, and the revenue tips above can be helpful. Haulers are familiar with the system, and working with them can speed implementation. The fastest implementation of PAYT that SERA has encountered was in a county with multiple haulers. The County sat around the table with the haulers, refined the design of the sticker system, and implemented the program in 3 months. The system has been running successfully for more than a dozen years.

Can PAYT work in areas without mandatory garbage service?

A significant number of communities with PAYT/VR do not require mandatory refuse collection by residents. This has not generally been found to be a problem. Revenues and rate setting are slightly more complicated in this case, but not significantly so. However, if collection is not mandatory in surrounding areas (like the County surrounding a town) and there has been a history of County residents avoiding collection by bringing waste into town, the new charges may cause some initial problems regarding ownership of waste and complaints about paying for more service than the bill payer actually disposes. This has not been a significant problem in other communities. Non-mandatory collection has not been a barrier to PAYT elsewhere.

Can PAYT work with automated collection?

Automated collection is efficient, and can lead to significant labor and routing savings. Automated can-based PAYT collection is easily accomplished, and enforcement of can subscription levels is straightforward. Some raise concerns that automated collection has two features that complicate PAYT:

- Containers: Can-based PAYT requires specialized carts that fit the gripper arms, and small containers can slip in the arms or tip in wind, and are as expensive as large containers. Some communities are addressing this issue by allowing an option for fortnightly trash service.
- "Extras" in bags outside the specialized carts cannot be accommodated efficiently with automated collection. Extra fees keep these percentages low.

We're putting out an RFP for service - are there issues we should cover or sample language to help me change to PAYT/VR?

The website associated with this project has collected solid waste ordinances, tips for the procurement process, and samples of language for penalties for poor performance, language for separation (ending the contract), and other language and tips from communities around the country. Watch for these materials.

How long does it take to implement PAYT?

The amount of time it takes to implement PAYT programs varies from as little as 3 months to communities that are still studying the system after several years. Frankly, although billing system delays or technical issues are sometimes a factor, technical issues are seldom the problem in implementing PAYT. PAYT programs have tremendous flexibility in their design and can usually be tailored to accommodate most concerns. Instead, political will is usually the largest stumbling block and source of delay for implementing PAYT programs. Recall, however, that once these programs are in place, more than 90% of residents prefer the new system. There are a number of manuals available that provide steps, timelines, and tips for implementing PAYT.²⁸

Any Tips for Success?

Based on interviews with hundreds of communities nationwide what have implemented PAYT, SERA has assembled the following tips.²⁹

- ▶▶ **Pilot test:** Consider implementing the program in one area of the city first, and then spread to other areas. Learning lessons about subscriptions, set outs, containers, and other problems in $\frac{1}{4}$ of your town are much less expensive than making a mistake citywide.
- ▶▶ **Billing:** billing jointly with water service, if possible, can provide strong advantages. If the ordinance is arranged so that partial payments are assigned to solid waste first, then non-payments can lead to shutoffs of water service, a strong payment incentive. Bad debt is quite low under these systems.
- ▶▶ **Involve others in design:** Assembling a citizen or stakeholder committee to help assess and design the program can help sell the program to elected officials, and can make sure that the program addresses concerns of major stakeholders. Although this process may appear to slow down the decision-making, it can often speed it in later steps and can bring support for the program when it most needs it. Don't forget to meet with related city departments, including financial, billing, enforcement, customer service, police, and others that may be affected by PAYT changes.
- ▶▶ **Don't pile on other costs:** If you are just implementing PAYT, try not to pick that year to do a major renovation to transfer stations or other upgrades that are not visible to residents. The increased costs, whether or not they are due to PAYT will be blamed on PAYT and will undermine the buy-in for the program.
- ▶▶ **Determine whether to make changes at once or more slowly and design education accordingly:** Some communities argue that implementing many changes at one time confuses citizens and makes the education process difficult. Others argue that customers don't want to have to make decisions about solid waste in a piecemeal manner, and want to "deal with it once".

²⁸ Skumatz, Lisa A., Ph.D. and Cabell Breckinridge, 1990, "Variable Rates in Solid Waste: Handbook for Solid Waste Officials", Prepared for EPA Region X, Seattle, WA contained the first information; this has been adapted in USEPA's manuals (see EPA website), and SERA manuals for Ohio, Illinois, and others.

²⁹ Skumatz, Lisa A., Ph.D., "The state of variable rates: Economic signals move into the mainstream", *Resource Recycling*, 8/97; updated and adapted in multiple SERA manuals and publications.

- ▶▶ **Education and outreach:** None of the town interviewed wished they had done less education. This is a crucial component of a successful PAYT program.
- ▶▶ **Keep constant for one year:** If at all possible, keep the system and rates constant for at least one year to help build confidence in the program. Then the rates and program can be refined to account for unexpected outcomes.
- ▶▶ **Tracking / revising:** It is very important to track key indicators related to the program and its performance to assure that the PAYT program is achieving its objectives and that the program is sustainable. Items to track include container subscriptions or sales of bags / tags; enforcement issues; revenues; costs; time spent by various staff; tonnage changes by programs, etc. Use this information to gauge program progress, cost-effectiveness, and to provide a head's up for needed changes.
- ▶▶ **Keep key groups informed:** Use the monitoring information to provide feedback to program staff, elected officials, and others to keep them informed about program momentum and successes. Be sure to note problems and timely corrections as well, to make it clear you have a handle on the program and are making sure it is on track and as efficient and effective as possible.

Where can we get more information on these systems?

There are many journal articles, research papers, and manuals on PAYT systems. A list of publications and reports is included on the project website (www.paytwest.org),

Is PAYT the right answer for all communities?

Simply put, no. A number of factors affect the feasibility of these programs in a community, including: collection system type; availability and relative cost of recycling and diversion programs; recycling markets; disposal costs and lifetimes; acceptability / support; and "fit" with the community's short- and long-term goals. The programs might not be feasible because of timing issues, economics, local factors, or other considerations.

However, these programs are uniquely suited to increasing recycling, yard waste diversion AND waste prevention. They help reduce system costs, and improve equity, and most communities should at least examine these systems to see if they make sense. And the potential of the programs should be re-examined every few years as conditions, priorities, and options change. These programs can be an important part of an integrated, cost-effective solid waste system.

For more PAYT information, tools, fact sheets, talking points, and other materials, see:

www.paytwest.org

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