



Money in the Bank

Over the past five years, RecycleBank's rewards system has emerged as one of the more innovative methods of increasing recycling participation. Why has incentive-based recycling proven to be such an apparent success, and what impact will it ultimately have on municipal recycling?

By Henry Leineweber and Dylan de Thomas

RecycleBank, the New York-based recycling management company, is nothing if not innovative. Since its founding in 2004, the company's incentive-based system has been met with equal parts praise and derision and optimism and skepticism. But, there has been little debate among the communities partnered with RecycleBank. For them, the program has meant improved diversion rates for across all material streams and money in the pockets of local residents. Rapid growth within the United States, and new efforts at international expansion, all point to a bright future for RecycleBank.

Five years after the company's inception, how effective is the RecycleBank model and under what conditions is it the most successful? Furthermore, how does RecycleBank's service impact county and municipal recycling programs? Is RecycleBank the silver bullet that so many are looking for in the world of recycling? Finally, what does the future hold for RecycleBank and what impact will it ultimately have on the broader municipal recycling industry?

How it works

RecycleBank has experienced impressive growth over the past several years. In 2006, the company operated in just six municipalities, totaling approximately 20,000 homes. At press time, RecycleBank's rewards program was servicing over one million people – 500,000 households – in over 60 municipalities in the U.S. and U.K. Smaller communities that have signed contracts with RecycleBank have largely implemented the program city- or county-wide. Additionally, the company has signed contracts with some of the largest cities in the U.S., such as Chicago, Houston, Philadelphia and Phoenix, and other smaller municipalities have jumped onboard as well, although some communities have opted for trial, partial or phased implementation, due to their sheer size, the logistics of recycling collection and the vagaries of hauling contracts.

"In 2005, RecycleBank was in my apartment," explains a half-joking Ron Gonen, RecycleBank's CEO and co-founder. "In 2009, we are providing services in over 20 states and the U.K. In four years, we've started a completely new type of business and built a phenomenal team. We've deployed all over the country and we've signed contracts with major cities. We're growing really quickly, but we're following a strategy we laid out at the beginning, and we're exactly where we want to be."

At the center of this dramatic rise is the company's incentive program. The system rewards RecycleBank participants with RecycleBank Points, which can be redeemed with participating companies, such as Coca-Cola, Evian, Target, Bed Bath & Beyond and

many local businesses. Participants in the company's curbside program earn 2.5 points for every pound of recyclables diverted from the household waste stream, with more points earning greater savings, and even free products. To note, participants can also donate their earned points to local schools and non-profit organizations.

Early on, the company experimented with what was dubbed the "community weigh-based model," which gave out RecycleBank Points to households that had participated on a particular collection day based on the average weight of collected material per household. However, this was largely the result of needing to retrofit existing collection equipment with RecycleBank technology and has since been discontinued in favor of house-by-house accounting.

RecycleBank can determine how many points to award each participating household, thanks to specialized bins employed by the company's curbside collection partners. RecycleBank rollcarts are typically the 64- or 96-gallon units used for single-stream recycling collection. By implanting radio frequency identification (RFID) chips in the containers, Gonen, along with company co-founder Patrick Fitzgerald (who has since left RecycleBank) devised a way to track the exact pounds of recyclables a household sets out for pickup.

Collection vehicles recovering the recyclables are upgraded with scales that determine the weight of material in a container, recording that amount on the truck's onboard data collection system. The RFID tag embedded in the cart is then used to make sure the weight is attributed to a specific cart from a specific household. All data is uploaded to RecycleBank's central servers each time the truck unloads, and RecycleBank Points are allocated based on the most recent numbers.

Haulers are given a button to push to combat those seeking to game the system, by adding non-recyclables to their bins to increase their weight and, by extension, their rewards points. Pushing the button also generates a letter to be sent to the offending household and, if the button is pressed three times, the tipper will lock, disallowing the cart from being loaded. According to the company, however, fraud has never been an issue, even though a diverse group of communities are serviced.

High diversion rates generated by the incentive program generally equate to savings for the partnering municipality,

since tipping fees at a landfill or incinerator can be avoided. RecycleBank bills communities for its services based off this idea. Under this particular financing model, the money that is saved from tipping fees is split between RecycleBank and the municipality, which can use it to upgrade existing recycling infrastructure or fund other programs. Although each payment plan is customized for the needs of a specific RecycleBank partner, the company typically receives between 50 percent and 75 percent of the funds a city saves from avoided tipping fees.

Why it works

Hartford, Connecticut has been a RecycleBank partner since May 2008, following a brief, but successful, pilot program. The city was selected for the pilot at the urging of the National Recycling Coalition. Before the start of the pilot, Hartford provided curbside recycling using a dual-stream approach, with single-family households, multi-family buildings (with up to six units) and small businesses and institutions using 14- to 18-gallon bins for recyclables. NRC pledged the initial funding for the pilot in March 2008, totaling \$175,000, and the city agreed to a partnership with RecycleBank, which included providing RFID-equipped rollcarts and incentives for the 4,500 households selected for the pilot.

Demographically, Hartford is a lower-income community. Its population of 124,000 is predominantly Hispanic and African-American, and, with a median household income of \$24,800, the city has the second highest rate of people living below the poverty line in the U.S. Historically, poorer communities, like Hartford, do not have very active recycling programs, as evidenced by the participation rates prior to the start of the pilot. Yet, the introduction of RecycleBank incentives and single-stream recycling changed all that.

"Demographics are probably the most important factor to look at when considering a RecycleBank partnership. And, realistically, it's probably not for everybody," theorizes Marylin Cruz-Aponte, assistant to the director of the City of Hartford's Public Works Department. "You have to look at the needs of a particular community."

Over the course of the pilot, the volume of materials recycled by households more than doubled from eight tons to 17 tons per week. Household participation in the program also increased from the low

teens to well over 60 percent.

Cruz-Aponte believes two factors are to thank for the unusually warm reception by area residents. The first, which is true of most communities, is that a switch to single-stream collection generally yields higher volumes and participation rates, due simply to the ease of use. Studies repeatedly validate this claim, such as recent findings from Greenstar U.K., which observed a 78-percent increase in recycling tonnages among waste authorities that switched to single-stream approach.

The second, and more interesting, factor relates more specifically to the RecycleBank model, though Gonen doesn't chalk it up entirely to the switch to single-stream collection. "Take Greater Philadelphia – you had single-stream there for four or five years now and the recycling rate was 20 percent. So, single stream is helpful and it's convenient, but it doesn't seem to compel people to recycle that much more."

The Greater Philadelphia response to single-stream is atypical, however, as most communities moving to single-stream achieve significant increases in participation and volumes per household, according to numerous assessments published in this magazine and elsewhere.

Because it offers coupons and other economic incentives to recycle, the RecycleBank model is particularly attractive to lower-income communities. By rewarding households with coupons for groceries or services, RecycleBank is having a direct positive impact on family budgets. Therefore, recycling becomes something households participate in for financial assistance, rather than altruistic reasons.

This is not meant to suggest that the only people participating in RecycleBank are those on the lower end of the income spectrum, only that the incentives inherent in the RecycleBank model become increasingly attractive the lower on the spectrum a household lays.

"We went into Cherry Hills, New Jersey – a very affluent neighborhood in South Jersey – and they were already at a 25-percent recycling rate. Now, we've gotten them to 50 percent, a dramatic increase," says Gonen. "But that's different than going into a low-income neighborhood, where there's no recycling, and getting them up to 40 percent is a greater increase. But, that's because they're starting from a lower point. The program has been successful in both affluent and lower-income communities."

In Hartford, the city saves about

\$72 for every ton of material diverted to the recycling facility, and an additional \$10-per-ton rebate from the Connecticut Resource Recovery Authority incineration facility. The city's share of this saving has allowed Hartford to upgrade its collection infrastructure and processing facilities.

The primary method RecycleBank uses to generate income is from tip-fee savings. The more money a community saves on tip fees because of increased diversion, the more money RecycleBank earns as well, since it claims a percentage of any savings. The company's incentive program could theoretically work in any community; however, it becomes less feasible to enter into partnerships with communities that have tip fees of less than \$25.

But, this raises questions of how the RecycleBank model would be applied to a community that owns its own landfill, or has some other type of arrangement that allows for inexpensive waste disposal.

"If a community has 30 years left on their landfill, they're probably going to be just fine without RecycleBank," concedes Gonen. "But, if a community has five years left on their landfill, then RecycleBank starts to look very attractive from a diversion standpoint. They might be looking at a situation where their cost of disposal goes up 400 percent when material has to be transported 50 miles to an outside landfill. That's one reason we've been so successful in the U.K. Landfill space there is expected to be gone by 2015."

Additionally, partnering cities are allowed to use data collected by RecycleBank's RFID tracking system to improve their system. This data shows which homes recycle, and in what volumes. For Hartford, access to this data has meant dramatic improvements in system efficiency that have allowed for substantially increased collection and the simultaneous elimination of three collection routes.

How it started

In co-founding the company – originally coming up with the idea over a beer – Gonen was seeking to boost recycling rates, and change the way people look at green activities, such as recycling.

"Our mission, as a company, is to take something that is traditionally viewed as a cost – which is environmental action, the right thing to do, but a cost – and turn it into something people view as a smart economic decision," says Gonen.

The company received seed capi-

Figure 1 | What makes a good RecycleBank candidate community?

- ✓ At, or nearing, the end of a waste and recycling collection contract
- ✓ Low recycling rate/low participation in recycling
- ✓ Privately held and/or multiple landfill locations
- ✓ Tip fees over \$25 per ton
- ✓ Predominantly low to moderate income population (arguable)

Source: Resource Recycling and RecycleBank, 2009

tal from Columbia University's (where Gonen earned an MBA) Entrepreneurial Greenhouse Fund, and initially established corporate partnerships with over 50 prominent companies, such as Starbucks, Whole Foods Markets and Coca-Cola. Now, RecycleBank has a staff of 125 "and growing," says Gonen.

Philadelphia, much like Hartford, historically displayed low recycling rates and was chosen as RecycleBank's first test city. However, following several RecycleBank pilots, the city has actually witnessed recy-

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cling rates in some neighborhoods triple, if not quadruple.

To make a community RecycleBank-ready, you need a "commitment to recycling everything that's recyclable," says Gonen. "The first thing involves just recognizing that everything that's recyclable is recycled. The second factor is understanding the economics of waste, in that the value of recycling is not what you're being paid for, in regards to the commodity, but what you're saving by not having to drive that material to a landfill and pay a tip fee."

Once that willingness is shown, Gonen sees the program as "a great deal for municipalities, because they're getting

a phenomenal recycling program, plus they're getting the ability to track and measure what's going on by household, by street and by route," says Gonen. "And, they're getting the ability to drive local economic development, because we're putting money in people's pockets."

That said, some communities make better RecycleBank candidates than others (Fig. 1). Regardless of a community's demographics, recycling rate, or other factors, RecycleBank tends to not solicit the participation of a community that is currently locked into a current waste collection contract. Prime candidates for new RecycleBank affiliates are, therefore, communities actively seeking bids, those with contracts up for renewal, or municipalities supplying their own collection crews.

"We don't go after municipalities that have an existing contract with a hauler. If a municipality contacts us, we'll sit down with the hauler first and talk with them; however, there's a lot of business out there for self-haul municipalities, which is our primary focus, or municipalities where the contract is coming up for renewal," says Gonen. "We have no interest in trying to get people to go and change their existing contracts."

This policy sheds light on RecycleBank's expansion strategy and also helps account for its partial implementation in some communities. Using this strategy, it is possible for the company to negotiate with a specific hauler whose contract may be up for renewal in a city with multiple waste service providers. For example, the RecycleBank program is offered to Wichita, Kansas residents using Waste Connections' pickup service, but is not available to households served by other haulers, because their contracts with the city were not yet up for renewal.

From the perspective of the waste hauling companies, a RecycleBank partnership can be an attractive way of cost-effec-

tively upgrading collection equipment and infrastructure, collecting more material and expanding the company's regional profile.

The more the merrier?

Not surprisingly, increased participation rates and improved collection efficiency directly lead to higher volumes at area materials recovery facilities (MRF).

"They get a lot more material," says Gonen. "We did have one situation in Albuquerque, where our program was generating so much material that it was going to outstrip the city's MRF capacity; and that's a good problem to have."

Albuquerque residents in the RecycleBank test neighborhoods increased their recycling by as much as 200 percent in the first five months of 2009. And, Gonen's assertion above notwithstanding, city officials assert that they were already over their limit before RecycleBank came on the scene.

However, this problem – RecycleBank-caused or no – typically only affects MRFs already operating near, or at, processing capacity. Since many operate well-below their maximum capacity, they can more easily absorb additional increases in collection volumes. Furthermore, many MRFs service a wider area than that targeted by RecycleBank, mitigating any sharp increase in materials. To put it into perspective, a RecycleBank pilot project may run for a year and apply to 20 percent of a city's households. Even if those households see a 50-percent increase in curbside volumes, it is still diluted into the broader citywide recycling stream, making any overall increase smaller and more manageable from the standpoint of MRF operators.

The pilot project timeline also allows city waste management officials and MRF operators adequate time to plan for increases in collection volumes when or if the RecycleBank plan is adopted throughout the community. In Hartford, data gathered from the RecycleBank pilot program was used to justify new investments in waste management infrastructure. Using money saved by avoiding tipping fees, the city invested \$3 million in improvements to local MRFs and transfer stations.

From a broader perspective, the incentive-based approach at the heart of RecycleBank runs in direct opposition to waste reduction efforts. In researching this article, many in the recycling and environmental industry voiced their concern, on background, that RecycleBank essen-

RecycleBank pros and cons:

Pros

- Incentive-based program rewards recycling participation and builds good recycling habits
- Public awareness and participation in recycling rises
- Substantial rise in material volumes
- Data on the effectiveness of existing and proposed waste collection routes and strategies is collected
- Opportunity to modernize or upgrade the waste collection and recycling infrastructure

Cons

- System rewards consumption, not waste reduction
- Program may be a poor fit in communities with already high recycling participation
- Success relies on the participation of national and local businesses and retailers
- Upgrade costs could be prohibitively expensive for communities and smaller haulers if not adequately negotiated with RecycleBank
- Program not cost effective in areas with low-cost disposal.

Source: Resource Recycling, 2009

tially rewarded a "throw-away culture," in which households that discard the most materials, are given incentives to go and purchase more products, which will then be discarded.

If the concern is purely that RecycleBank does not actively discourage materialism and consumption, then those criticisms may have merit. Yet, the company does not claim to do those

"Single-stream is helpful and it's convenient, but it doesn't seem to compel people to recycle that much more."

things anyway. What it does claim to do, and what it has been largely successful in accomplishing, is diverting material that would otherwise go to a landfill into the recycling stream, and to achieve that goal, it uses market incentives.

Where it's going

Though the company is committed to expanding sustainably, RecycleBank is also aggressively seeking new markets for it to launch in. Recently, the company an-

nounced pilots in the Chicago and Phoenix areas, as well as the launch of pilots across the pond in various London Boroughs. There are also rumors that RecycleBank will announce a citywide program in an as-yet-unnamed West Coast city later on this year, though the company declined to comment at print time.


"First, we look at the top 100 cities, and the top 25 MSAs [metropolitan statistical areas] and that's where our [growth] strategy is focused," Gonen says, describing how RecycleBank finds communities to target. "So, for instance, we are currently providing service in 12 of the top 25 MSAs in the U.S. By 2010, we'd like to be servicing 15 of the top 25 MSAs and we'd like to be in 15 of the top 100 cities, as well. And I would say, by the end of 2009, we will have contracts with 5 of the top 100 cities by the end of this year."

The company doesn't merely look to cities like Philadelphia, which has depressed recycling rates, but even to such cities as San Francisco or Seattle, both of which have recycling rates hovering around, or above, 70 percent.

"When we started the company, we purposefully did not focus on cities, such as Portland [Oregon] or San Francisco because, if we rolled out the program there first, then tried to pitch RecycleBank to a city like Hartford, they would've said 'of course it works in Portland, everyone there's green,'" explains Gonen. "At the

outset, we would've faced an uphill battle in convincing people that an incentive system can work anywhere. So, we made a strategic decision to focus on areas of the country that didn't have a strong focus on green, and then we would eventually get into other more established areas," continued Gonen.

The next big growth opportunity for RecycleBank will include establishing its presence in communities like Portland, San Francisco, Seattle, etc., and the company feels its new Gconomy program (where the "G" stands for green) will be a way for RecycleBank to reach into these types of places. To note: RecycleBank's Gconomy financially rewards individuals, companies and communities for undertaking in other such green actions as using solar and wind power, riding public transportation, being efficient with water usage and buying products manufactured from recycled content.

"We're very focused on rewarding people for positively impacting the environment," says Gonen. "Initially, we used recycling as our core, because that enabled us to get 100-percent penetration into a community. And now, we're using that penetration to start rewarding people for recycling and other green actions." 

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