



# Money Talks

Part 2 of financial issues impacting the solid waste industry

BY MARC J. ROGOFF AND ROBERT B. GARDNER

**I**n the November/December 2016 edition, we summarized a few leading issues in solid waste financial planning (<http://bit.ly/2fOukxi>). Due to the length of the article, we were unable to cover a few topics that have bubbled up to the surface during the course of some recent financial studies. Here are a few of those important issues.

## **Benchmarking Operational Reserves**

Many local governments do not have a formal operational reserve or “rainy day” fund. State law typically governs how a target fund balance (i.e., operational reserve) can be established, and when it can be used and replenished. According to recent research, only 11 of the 30th largest cities in the US have operational reserve funds. Instead, most local governments use budget surpluses or unreserved fund balances as a rainy day fund, but one without the constraints of a formal fund policy.

Searching in the public finance literature for help when a jurisdiction wants to establish a policy on reserve fund balances can be confusing. One is as likely to see a group of solid waste agencies with a zero fund balance and another group of jurisdictions with fund balances at 70–80% of operational expenses. The average seems to be in the 15–25% range of annual operational expenses, or three months of budget spending. One municipality we work with bases their operational reserve fund on having sufficient fund balance to cover the costs of storm debris cleanup, which seems to occur on a routine annual basis in their region. The differences among municipalities and lack of benchmarking data seem to be centered on the following basic issues.

- Political decision making: Politicians are bombarded with problems that an individual or an interest group wants solved on a short-term basis. Thus, most local solid waste agencies in the US oftentimes fail to plan long term.
- Different business lines: Not all solid waste agencies or departments are alike. Solid waste agencies provide a wide and diverse range of services—some only deal with collection or transfer station operations, while others provide an integrated system (collection, recycling, transport, and disposal). Those with landfill disposal responsibilities oftentimes need to provide reserve funds for new cell construction, significant equipment purchases, landfill closure and post-closure care, and for environmental contingencies. In the case of a landfill operation, states require reserve funds or other financial assurance mechanisms for closure and post-closure care.
- Revenue stabilization: Many local solid waste agencies attempt to secure enough reserve funds to stabilize operational revenues to minimize the need for adjusting rates every year. We have observed little

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to no uniformity across the country for the level of these funds as a percentage of operational expenses. These funds are usually developed as part of overall rate study for the agency.

- Overall community financial policies: Again, local communities vary in the types of standard financial policies related to General Fund and Enterprise Funds. Based on our understanding, there are no uniform benchmarks across the country. Those with more conservative financial leanings tend to require

their individual departments to match the requirements of the General Fund. For example, a recent rate study completed by SCS for a client in Missouri required the reserve fund for solid waste services to match the overall requirement of 100% of the annual operational expenses. In comparison, another rate study completed for a community in Virginia used a 25% reserve fund rate goal, which aligned with that of the General Fund.

### Non-Ad Valorem Assessments

Some communities across the US have moved beyond the landfill tipping fee to solid waste assessments to help fund their programs. A non-ad valorem special assessment is a charge (or assessment) against a specific parcel of property based on a particular benefit, which the property has or will receive. Examples of non-ad valorem assessments include stormwater utility, street lighting, or fire and rescue. The assessment normally is billed annually as a separate line item on the property tax (or ad valorem tax) bill.

For collection purposes, it is considered a part of the tax bill and carries the same penalties for failure to pay as do the property taxes on the tax bill. However, unlike the ad valorem tax which is based on the assessed value of the property, the non-ad valorem special assessment is based solely on the benefit received by the property for the service received. Non-ad valorem special assessments typically are authorized and regulated by state statute and contain several provisions, which generally must be strictly followed to ensure the validity of the

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assessment. Many local governments across the country have utilized these statutes to impose sliding fees for solid waste disposal, collection, or recycling services.

### **Advantages Using a Non-Ad Valorem Special Assessment**

#### **Billing**

The billing structure of non-valorem assessments varies from that of ad-valorem assessments in a variety of ways. Non-valorem assessments can be tailored to suit a solid waste system and its stakeholders and are conducted on a "benefit unit" basis, meaning that a designated unit, such as a parcel or apartment, is used for the basis of assessment, rather than a declared value.

Also, since non-ad valorem special assessments are billed annually on the property tax bill, there are many benefits:

- **Low Administrative Costs:** The use of the property tax billing system results in low administrative costs.
- **High Collection Rate:** Property tax collection rates, and thus special assessment collection rates, are considerably higher than those obtained through monthly billing processes.
- **Mortgage System:** Those residents who pay their property taxes as part of their mortgage will be able to pay the assessment monthly as part of their mortgage payment.
- **Reliable Revenue Source:** The revenue source is very stable, very constant, and collection levels are predictable.
- **High Levels of Participation:** Historically, as solid waste charges increase, program participation decreases. In many cases, the very individuals who need the service the most are the first to drop out. Since the service is already paid for under the special assessment system, there is greater incentive to participate.

#### **Flexibility**

Non-ad valorem special assessment systems are flexible. They can be designed to support any or all aspects of a solid waste management system. A non-ad valorem special assessment program can be designed and implemented in a manner tailored to a local government's solid waste management system, which may include options such as mandatory, voluntary, franchised, or free-market service. Because of this flexibility, a solid waste system finds itself with a variety of assessment options, a few of which are highlighted in Exhibit 1 on the next page.

### **Areas of Concern**

There are two major areas of concern when designing and implementing a special assessment program:

1. The assessment for each "benefit unit" must be based on the benefit received by that parcel. Properties receiving like benefits should be assessed equally, and properties receiving unequal benefits should be assessed on that basis, since the assessment is based on the benefit rendered to the unit.
2. The "assessment role" (the list of all properties to be assessed), should be complete and accurate. The best source of data for compiling the assessment roll is the records of the county or city official responsible for property appraisal and valuation.

However, limitations may exist with the data because these records are maintained for the purpose of determining property valuations, not for performing solid waste or other non-ad valorem assessments. Additional information such as benefits rendered, occupancy, and frequency of benefits must be developed in order to convert the initial records into a complete and accurate assessment role.

### **Pro Forma Modeling**

To assess the financial feasibility of a solid waste project, it is often useful to develop a Pro Forma Model to help model such things as multiple scenarios of facility size, biogas production/cogeneration, site locations, and customer rate impact. A series of algorithms for cost assumptions and critical project assumptions, operating revenues, operating expenses, and debt service can be structured using Microsoft Excel. Assumptions are usually based on working knowledge of the solid waste industry, recently reported case history, and actual ranges in capital and operating costs.

The historical capital and operating costs for the particular project or facility different under examination is the first step in estimating the costs of a proposed solid waste or recycling program. In cases where there are limited capital and operating data, it is commonplace to collect data on similar recycling programs or facilities from both the literature and through formal manufacturer's quotes.

The capital costs should include all predevelopment and construction costs. Operating costs will typically include labor, maintenance, materials, testing, insurance, potable water, waste services, overheads,

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## Exhibit 1. Assessment Options

Options for Your Non-Ad Valorem Special Assessment		Residential Collection	Commercial Collection	Residential Disposal	Commercial Disposal
Option 1	Assess all solid waste system costs.	ASSESS	ASSESS	ASSESS	ASSESS
Option 2	Assess residential collection and disposal costs, charge a tipping fee for commercial disposal, and allow the haulers to bill all commercial collection services.	ASSESS	HAULER BILLS	ASSESS	TIPPING FEE
Option 3	Assess residential disposal costs, charge a tipping fee for commercial disposal, and allow the haulers to bill all residential and commercial collection services.	HAULER BILLS	HAULER BILLS	ASSESS	TIPPING FEE
Option 4	Assess the capital and debt portions of the disposal costs, charge a tipping fee for residential and commercial disposal operating costs, and allow the haulers to bill all residential and commercial collection costs.	HAULER BILLS	HAULER BILLS	ASSESS CAPITAL & DEBT TIPPING FEE - OPERATING	ASSESS CAPITAL & DEBT TIPPING FEE - OPERATING
Option 5	Assess all residents for disposal; assess all residents within an "urban" zone for collection; and allow the hauler to bill those residents outside the "urban" zone for collection as needed, charge a tipping fee for commercial disposal, and allow the hauler to bill commercial collection services.	ASSESS - "URBAN" HAULER BILLS - "NON-URBAN"	HAULER BILLS	ASSESS	TIPPING FEE
Option 6	Assess all disposal and recycling costs and allow all residential and commercial customers to choose their own collection options.	CUSTOMER CHOICE	CUSTOMER CHOICE	ASSESS - INCLUDE RECYCLING	ASSESS - INCLUDE RECYCLING

and training costs, as well as potential costs for residuals (contaminants) to waste disposal sites, including any transportation costs or required tipping fees at these facilities.

The end game of an economic feasibility assessment study is to prepare an estimate of the cash flows of the project over its useful life and determine at what rate they should be discounted. After

putting the projected revenue streams into the model as a starting point, the model must include assumptions about the future, including: future energy (electricity, biogas, or steam) revenues, tipping fees, and revenues from the sale of marketable products. All are elements that must be estimated to build the revenue side of the Pro Forma Model.



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In an era where the mantra of “doing more with less” is on the lips of most political decision-makers, it is critical to assess the financial performance of operating and proposed solid waste programs.

The results of the Pro Forma Model can be used for a number of purposes, including alternative comparisons, cash flow analysis, earnings estimates, capital planning, rate setting, and asset valuation. In the case of alternatives comparisons, the net present value of the estimated cash flows over a uniform time period is a common approach used. This approach allows for future expenditures to be discounted by the discount rate that is used in the analysis (i.e., time value of money).

The discount rate is typically selected considering such factors

as debt and equity interest rates, inflation, and risks for the project. A net present value analysis enables the feasibility engineer to provide a life cycle financial analysis of the project.

### Final Words

Not unlike our parting words in the first article, financial analysis is an increasingly important issue in solid waste decision making. In an era where the mantra of “doing more with less” is on the lips of most political decision-makers, it is critical to assess the financial performance of operating and proposed solid waste programs. The three issues discussed in this article provide some guidelines on how these kinds of assessments can be conducted.

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