

Get a Firm Handle on Solid Waste Costs to Optimize Performance

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Getting a firm handle on solid waste agency costs is an ongoing key focus for any professional solid waste manager. This article focuses on the major financial tools available to optimize agency performance and project feasibility.

Solid waste agencies are under more pressure these days to provide high-quality waste collection, facility enhancements and landfill operation services. In addition, the pressures from ratepayers and local government “lean and mean” initiatives to keep rates and expenses low, has many solid waste agencies struggling. Balancing real cost escalation factors such as rising fuel, material and labor costs against the push for keeping rates static is challenging. Further, full cost accounting is difficult because agencies oftentimes support activities not directly related to normal operations or provide “free services” such as street sweeping or free collection and disposal for community events (i.e. fairs, farmer’s markets, runs for charity, art shows). Allocating shared costs across agencies is complicated and many times inaccurate adding to the agency’s overhead.

The scarcity of reliable data available to benchmark solid waste management operations handicaps timely comparisons among solid waste systems. Benchmarking rates or service fees for collection and disposal is challenging, but not impossible using financial tools now considered critical to focus on an agency’s primary policy and management issues. These tools are the basis for

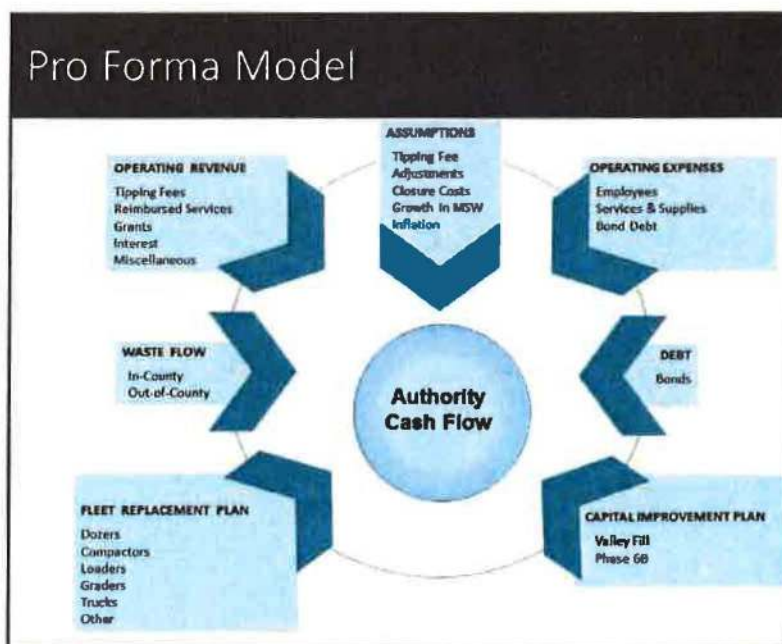
A Pro Forma Model

A Pro Forma Model is a financial tool crafted from the market dynamics influencing the life cycle of a specific project, cost center, or program (see figure below). In the solid waste business, every project is unique, and the design of the pro forma financial model should reflect these differences. To accommodate the various types of business models needed to analyze the

feasibility of recycling projects, we have developed different types of pro forma models that allow the client to tailor the financial statements to the particular project. Thus, each agency receives models that have the maximum flexibility to model multiple scenarios of facility size, energy production/co-generation, site locations and changes in operations.

For example, I have had clients desiring to evaluate the feasibility of a single-stream recycling program with multiple cart

sizes, evaluate alternative landfill cover systems, collection equipment, and whether or not a change from manual to automated collection made long-term economic sense. Another client, a private waste hauler, wanted to evaluate the business case for implementation of a leachate evaporator. Cost of leachate disposal



Example of a Pro Forma Model used to project an authority's cash flow. Figure courtesy of SCS Engineers.

budgeting, cost accounting, financial monitoring and evaluation aiming at recovering sufficient money to cover recurrent operational expenditures of the agency's services as well as to stock up capital for new investments or large maintenance. I will use illustrations from recent case studies to introduce some of these tools.

was increasing and our client needed to make a business case for the project. In each of these cases, a pro forma model was developed to help quantify the capital and operating costs for the proposed facilities or programs and then compare these long-term costs against current programs. The results from these modeling efforts enabled the clients to quantify the payback or return to their agency.

Evaluating Cost of Service

The use of financial tools to evaluate the agency's cost of service is another important area where pro forma modeling is used. Such cost of service studies evaluate the financial aspects of solid waste management programs and remain critical for ensuring sustainability of the agency. In short, these studies show how an agency determines the means to fill the gap between cost and revenues, alert authorities to options of how financial sustainability can be improved, and determine if privatizing some services is a reasonable option.

The lack of specific financial monitoring and analysis of data is one of the major barriers for not being able to sustain any envisioned improvement of an agency system. This concerns budgeting, cost accounting, financial monitoring and evaluation aiming at recovering sufficient money to cover recurrent operational expenditures of the collection service as well as to stock up capital for new investments or large maintenance. Many agencies do not know the actual cost of providing specific services. Before strategic decisions are made, an important step is to establish a full

understanding of the historical or current costs for provision of the services and the respective revenues. The studies serve to project financial sustainability in the short-term as well as long-term.

The growing national trend toward privatization of government-provided services demonstrates that the public sector solid waste agencies must operate efficiently and cost-effectively if they wish to continue providing these services to their citizens. Municipal governmental agencies must optimize the performance of their service utilities to ensure that costs are contained while service levels and customer satisfaction remain high. In fact, it is necessary for public agencies to think and act like the private sector service providers and spearhead efficiency gains and identify cost reduction measures to reduce operating costs while improving customer satisfaction.

The Use of Financial Tools

In conclusion, the use of financial tools to evaluate current and proposed solid waste programs and facilities is an increasing trend across the nation by many solid waste agencies. These tools provide a useful vehicle for finding optimal management solutions, while at the same time, providing quick answers on their projected financial performance for political decision-makers.

For more information, contact Marc Rogoff at SCS Engineers at (813) 804-6729 or e-mail mrogoff@scsengineers.com.

Resources

Refer to the following recent articles for detailed illustrations:

- "Cash Flow Analysis Forstalls Long-Term Debt," in Waste Advantage Magazine (<http://www.scsengineers.com/scs-articles/cash-flow-analysis-forestalls-long-term-debt-waste-advantage-magazine-december-2015>)
- "Conducting a Feasibility Study of a Small Community Solid Waste Infrastructure Needs," WASTECON 2012 (<http://www.scsengineers.com/scs-white-papers/conducting-a-feasibility-study-of-a-small-community-solid-waste-infrastructure-needs>)
- "Economic Feasibility 101 – Understanding the Tools of the Trade," in MSW Management (<http://www.scsengineers.com/scs-articles/economic-feasibility-101-understanding-the-tools-of-the-trade-by-marc-rogooff-msw-management>)
- "Can ADCs Work for Your Landfill? A Recent Feasibility Analysis Provided Some Valuable Lessons," in MSW Management (<http://www.scsengineers.com/scs-articles/can-adcs-work-for-your-landfill-a-recent-feasibility-analysis-provided-some-valuable-lessons-by-marc-rogooff-scs-david-thompson-wastech-services-ltd-and-ed-hilton-scs-msw-management>)