

Bettering Plant Operation

NESWC-Nothing Ever Succeeds Without Cooperation

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Abstract

The twenty-three member communities of the North East Solid Waste Committee will be paying over \$120 per ton in FY 2001 to dispose of their non-recycled municipal solid waste. This is very likely the highest tip fee in the country. The bad news is that it will continue to grow, reaching as high as \$160 per ton before the contract ends in 2005. The good news is that, without an aggressive effort over several years to reduce those costs, that cost would have been higher and could have grown to over \$250 per ton by 2005. The NESWC Board of Directors has, over the course of the past seven years, implemented a multi-faceted program to reduce the environmental and economic burden associated with managing the municipal solid wastes generated in the member communities. The program has included a series of novel approaches to obtaining negotiating leverage and support from diverse stakeholders to reduce the cost and implement innovative programs to help reduce the amount and toxicity of waste requiring disposal. What makes this particularly significant is that it was done on a regional basis, involved interaction with a broad, diverse group of stakeholders at the local, state and federal level and required the use of a wide array of change-inducing tools, including arbitration and litigation, to achieve the results.

The North East Solid Waste Committee (NESWC) is a coalition of twenty-three Massachusetts communities, with a total population of almost 500,000 residents, formed in the 1980's to address solid waste disposal issues. These communities deliver the non-recycled portion of their waste stream to a 1500 TPD waste to energy facility owned and operated by Massachusetts Refuse Tech, Inc., an indirect subsidiary of Waste Management, Inc.

The implementation of the strategic plan by the NESWC Board of Directors required direct involvement of key project stakeholders, including citizens, all levels of municipal, state and federal government, the media and the private sector. The overall goal of the strategic program continues to be to help reduce the environmental and economic impact associated with provision of integrated municipal waste management services by the 23 NESWC communities.

This paper addresses the strategy involved in reducing the costs associated with the ongoing operation and retrofitting of the 1500 TPD regional waste to energy facility. Fundamentally, the strategy was to identify opportunities to reduce costs; increase revenues; and obtain assistance from the state as well as the federal government, while continuing to manage the municipal solid waste in an integrated, environmentally sound manner.

Background

The North East Solid Waste committee (NESWC) is a coalition of 23 Massachusetts communities, formed by the Commonwealth of Massachusetts in the 1980's to enter into a solid waste disposal agreement with Wheelabrator Technologies, Inc. Under the terms of the twenty-year service agreement (1985-2005), the NESWC communities must bring all their waste to the Wheelabrator trash-to-energy facility in North Andover. While the NESWC communities do not own the plant, they do bear the financial obligations of the plant's operating and capital costs through 2005.

The NESWC communities are:

Acton	Burlington	Manchester-by-the-Sea
Wenham	Andover	Carlisle
North Andover	Westford	Arlington
Dracut	North Reading	West Newbury
Bedford	Hamilton	Peabody
Wilmington	Belmont	Lexington
Tewksbury	Winchester	Boxborough
Lincoln	Watertown	

Each of the 23 member communities has a representative on the Board of Directors, which oversees the administration of NESWC. The Board Chairman is Robert W. Moroney, P.E. of Manchester-by-the-Sea. NESWC has a management contract with EFI, Inc., a consulting firm which handles the day-to-day operations of NESWC under the management of the Executive Director, Shawn Worster, and the Senior Advisor, Steven M. Rothstein.

Wheelabrator Technologies, Inc. of Hampton, New Hampshire owns and operates the North Andover facility. Wheelabrator is a subsidiary of Waste Management, one of the largest waste management companies in the world. Their operating subsidiary for the North Andover plant is Massachusetts RefuseTech, Inc. (MRI).

In the late 1970's, the Commonwealth of Massachusetts urged communities to develop regional municipal solid waste facilities. At the time, the State indicated that it would soon close unlined landfills in the state, and strongly encouraged trash-to-energy as the best alternative. The State negotiated the terms of NESWC's construction and service agreement, and advocated for its acceptance among the communities.

The basic terms of the agreement were that the communities would pay for construction and operation of a trash-to-energy facility in North Andover. The communities are also obligated to deliver (or pay for) the disposal of a set amount of waste, called the Guaranteed Annual Tonnage (GAT). In return, the communities receive 89.5 percent of the revenues from sales of electricity generated, as well as revenues from non-NESWC trash brought to the plant. Original projections provided by the state's consultants indicated that the 23 communities would be getting paid for each ton of waste they delivered in the latter years of the contract.

Several unfortunate components of the agreement have resulted in much higher-than-expected costs to NESWC. In fact, the state originally predicted that the communities would recover a net gain from the contract. Reasons for the contract's failure to offer a financial benefit to NESWC include:

- ❑ The state failed to deliver on its promise to close unlined landfills, thus keeping the average cost of disposal lower than expected and NESWC costs comparatively high;
- ❑ Projected revenues from electricity sales were much lower than expected because of low energy prices, and failed to offset the costs of construction and operation of the plant;
- ❑ The contract makes the NESWC communities liable for "unforeseen circumstances and changes in law" resulting in substantial increased costs, including those associated with the federally mandated Clean Air retrofit.

Since the repayment of the original debt to construct the plant was backloaded under the terms of the service agreement, communities will pay increased tipping fees through the remainder of the agreement due to existing debt service alone. Over the next six years, even prior to factoring in the cost of the retrofit, the tipping fees could increase to \$160 per ton. Of the almost \$200 million in principal associated with the initial financing of the facility in 1983, over \$140 million is still outstanding .

In addition to placing many of the project risks on the communities, the NESWC service agreement also discourages recycling. Under its Guaranteed Annual Tonnage (GAT) provisions, communities have to pay disposal fees for a predetermined amount of waste, even if some of it is recycled and never brought to the North Andover facility. Still, by participating in innovative pilot programs to increase recycling, the NESWC communities achieved a 32 percent average recycling rate in 1998, despite the additional financial burden this placed on the communities. This is an increase from an average 18% recycling rate in the early 1990's.

Nearly 500,000 residents live in the NESWC communities, and these citizens now pay twice the statewide average for trash disposal. Because of the highly unfavorable terms of the original agreement, the communities are liable for ever-increasing costs at the facility, and may see their monthly disposal costs ("tipping fees") increase another \$40 per ton over the next few years. A significant factor in this projected increase is the

federal Clean Air Act Amendments of 1990, which require the installation of air emission control devices (“retrofit”) of the plant by November 2000.

The total costs to these communities for trash disposal during the remaining life of the agreement could amount to \$70+ million over and above what other, similar communities in Massachusetts will pay in tipping fees at the statewide market price. The communities have already paid tens of millions more than other communities. The NESWC contract is a huge financial burden on the member communities. -

The NESWC agreement has undergone enormous scrutiny by numerous attorneys for the communities, as well as the former Massachusetts Attorney General and the Inspector General over the past several years.

The Retrofit

The federal Clean Air Act Amendments of 1990 and the state’s recently enacted Municipal Combustor Regulations impose more stringent emissions requirements on waste disposal facilities. The systems to be installed, including a bag house, spray dryer, NOx control, and carbon injection technologies are designed to bring the Facility into compliance with the emissions standards promulgated by the state in response to the federal Emission Guidelines promulgated by the U.S. Environmental Protection Agency. The emission standards promulgated by the state of Massachusetts are in fact more stringent than those of the federal government and are the most stringent in the country in terms of mercury emissions. This technology will reduce emissions significantly, including those of most public concern—mercury and dioxin. Most emissions will be reduced by 80-90%. The retrofit of the plant is over 50% complete and is on track to be completed by November 2000, the deadline for compliance.

The capital cost of the retrofit was originally estimated to be on the order of \$60+ million. In October, 1997, MRI submitted a change in law notice firm price proposal pursuant to the Service Agreement with a price tag of \$43.5 million. NESWC responded with a letter detailing some 70 items of disagreement. The disagreements ranged from technology choice to who had to bear what portion of the costs. The technical issues regarding the scope of the retrofit and the total cost were resolved through an independent third party (ITP) process. The total cost of the retrofit was determined by the ITP to be \$35.5 million. Because of the language of the service agreement, which makes NESWC responsible for any costs due to changes in law, it had been assumed that NESWC would be responsible for the full costs of the retrofit.

The issue of how much of the Retrofit cost would be borne by the NESWC communities was the subject of litigation between NESWC and MRI/Wheelabrator, who disputed NESWC’s claim that it should only be responsible for a portion of the costs. MRI’s view was that the contract called for the communities to pay the entire cost of the retrofit. A

key aspect of NESWC's argument was tied to the fact that we should not have to pay the full costs of equipment on the grounds that we would only be using it for a few years, a fraction of its useful life. A superior court judge ruled in NESWC's favor on that particular issue on Massachusetts constitutional law, but left the determination of the specific allocation to a future proceeding. As part of a broader settlement, NESWC and MRI agreed to settle prior disputes related to the facility acceptance and waste composition issues and to resolve the allocation of retrofit costs. Pursuant to the Settlement Agreement entered into in the spring of 1999, the communities share of the \$35.5 million cost is \$17 million.

Preparation of the Strategic Plan

In the early 90's, the Board realized that strategic and financial options needed to be developed and explored, a consensus agreed upon, and a solution implemented in a timely manner to reduce the economic burden the project posed and support completion of the Retrofit project prior to the compliance deadline. The strategic plan implementation activities began in 1993. The NESWC Board of Directors has, over the course of the past seven years, implemented a multi-faceted program to reduce the environmental and economic burden associated with managing the municipal solid wastes generated in the 23 member communities. The program has included a series of novel approaches to obtaining negotiating leverage and support from diverse stakeholders to reduce the cost and implement innovative programs to help reduce the amount and toxicity of waste requiring disposal. What makes this particularly significant is that it was done on a regional basis, involved interaction with a broad, diverse group of stakeholders at the local, state and federal level and required the use of a wide array of change inducing tools, including arbitration and litigation, to achieve the results.

The implementation of the strategic plan by the NESWC Board of Directors involved several key stakeholder groups. The development and implementation of the strategic plan and its various elements required direct involvement of project stakeholders, including citizens, all levels of municipal, state and federal government, the media and the private sector. These included:

At the local level: the Board members themselves on an ongoing basis; their fellow town officials at all levels of government, including staff in the variously affected departments, members of the various Boards, including Boards of Health, and Finance; local elected officials (selectmen, mayors); citizens (via town meeting, citizen groups, etc.); the facility owner/operator and local media.

At the State level: Senators and representatives (A NESWC Legislative Caucus was formed in 1997); Regulators in various state agencies/organizations (The Executive Office of Environmental Affairs, the Department of Environmental Protection, Executive Office of Administration and Finance, the Massachusetts Technology Collaborative, etc.); the Attorney General and Inspector General; environmental groups; electric utilities; and regional media outlets.

At the Federal Level: Members and staff of the Congressional delegation and staff of the regulatory agencies (i.e. Environmental Protection Agency and the Department of Energy)

The strategy involved approaching the issue in several ways. Fundamentally, the strategy was to identify opportunities to reduce costs; increase revenues; and obtain assistance from the Commonwealth as well as the federal government, while continuing to manage the municipal solid waste in an integrated, environmentally sound manner.

The multi-faceted action plan including identifying mechanisms for obtaining negotiating leverage with key stakeholders, including the electric utility, the private owner/operator of the Facility, and the state, and implementing various outreach programs to obtain their support. NESWC also sought innovative ways to improve the level of recycling and diversion of hazardous substances. NESWC helped identify reasons the state should assist the communities and, working with project stakeholders, identified potential mechanisms for providing that assistance. An aggressive campaign was launched to advocate NESWC's position to the appropriate groups.

Results

NESWC has undertaken several measures since 1990 to mitigate some of its costs, including: refinancing the debt, renegotiating the power purchase agreement, reducing the cost of retrofit through various measures; and obtaining funding assistance from the state. The NESWC Board developed and implemented several programs that collectively have saved the 500,000 citizens in the 23 communities over \$90 million. Among these programs, they:

- Refinanced the 1985 project debt in 1993, saving over \$30 million in interest costs on a net present value basis.
- Brought the overall capital cost of the retrofit down from an initial \$66 million to \$35.5 million through a negotiation and arbitration process with Massachusetts Refuse Tech, Inc., the facility owner/operator.
- Brought the communities' share of the retrofit capital cost down to \$17 million (of the \$35.5 million) through negotiation and settlement of outstanding litigation.
- Renegotiated an electricity supply agreement that increased revenues by \$14 million.
- Received over \$1.5 million in funds from the Commonwealth to support recycling efforts.
- Added legislation to the electricity deregulation legislation that created a "renewables" fund that could bring up to \$20+ million to the NESWC communities.
- With the state Legislature and Administration, obtained \$3 million in the FY 99 Capital Supplemental budget to help reduce the cost burden of the project.

In addition to minimizing the financial impact of this project, NESWC has also aggressively sought ways to improve its waste management practices and reduce its environmental impact. The communities have participated in an innovative pilot program to improve recycling rates and have increased their overall recycling rates from 18

percent to over 30 percent in the last five years. This program served as the pilot for the statewide MRIP (Municipal Recycling Incentives Program). In the most recent DEP survey, more than half of the 23 NESWC communities received an A grade; 90 percent received a grade of B or better. Through two state programs, the NESWC communities have been awarded over \$1.5 million to help offset the economic penalty associated with paying for its guaranteed annual tonnage (GAT).

NESWC has also developed innovative ways of handling difficult-to-manage household hazardous products (HHP). For the past five years, NESWC has managed a regional procurement of one-day HHP collection events, which allow the NESWC communities to take advantage of economies of scale in obtaining private vendors to manage these events. In 1998, through the efforts of the Town of Lexington and with the support of several other NESWC communities and DEP, the Minuteman Regional Household Hazardous Products Facility was opened. The permanent regional facility, the first of its kind in the state, operates during the spring, summer and fall. In its first two years, over 80,000 gallons of HHP were diverted from the municipal waste stream.

Conclusion

NESWC's goal as it enters the 21st century is to continue to manage the municipal solid wastes of the 23 communities in an environmentally and economically sound manner. Through continued emphasis on innovation in managing wastes in an integrated manner, NESWC plans to continue to increase recycling levels and to further reduce its impact on the environment. The NESWC Board has, with the support and assistance of many individuals, developed and implemented innovative program measures that have reduced the environmental and economic burden associated with the provision of this critical municipal service, waste management.