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ART OF THE DEAL: BUILDING WTE IN THE 21ST CENTURY

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ABSTRACT

The nation's first successful commercial waste-to-energy facility went on-line in 1975 and the industry has accumulated a three-decade long track record—operating safely, improving efficiencies, and meeting new, tougher environmental standards. The industry has matured and has learned from operating experience.

But as the industry faces a revival, have we also learned to improve on the art of the deal?

In the past, the standard lump sum RFP approach forced project sponsors and vendors into a type of Russian roulette— one-sided gamesmanship that opened one or both sides to unreasonable risk with willing partners in the construction and financial community.

On today's financial and financial risk playing field, though, Wheelabrator believes that the road to prosperity—for sponsor *and* vendor—is found in above-board open book negotiations. It's a process designed to reduce economic risk and provides a more realistic picture of the actual cost of the project once it's in the ground and operating.

Mark Schwartz, Senior Manager of Business Development for Wheelabrator Technologies, and Cal Disney, Vice President of Whiting-Turner, will review the pitfalls of the past and discuss how the process can be improved when all parties participate in the design, permitting and construction oversight of a facility. They will discuss how the process can lead to contracts with fixed costs, lower capital costs, minimal risks and a public private partnership that gets the most value for taxpayer dollars.

INTRODUCTION

In the past year, the waste-to-energy industry has seen more potential for the construction of new facilities than at anytime during the last decade. A number of counties, cities

and authorities in North America have either expressed interest in developing facilities or have started the formal process of developing a new facility, from requesting expressions of interest to requests for proposals.

We believe renewed interest in the technology is based, in part, on its being “renewable”—recognized as such by the US EPA and at least 23 states and the District of Columbia. At the same time, waste-to-energy companies and Wheelabrator in particular, can now point to a three-decade long track record of experience. During what might be called the dawn of waste-to-energy in the US—the 80s and early 90s, cities and counties that developed projects pretty much took it on faith that waste-to-energy belonged in an integrated approach to solid waste management. Today, it's a tried and proven component that is second to none in its ability to take non-processable and non-recycled municipal solid waste and use it as fuel to generate clean, renewable energy.

The waste-to-energy moniker has come to define more than mass-burn or refuse-derived thermal destruction. Depending on the geographical location, it might also be used to define the process of recovering landfill gas. These projects are certainly viable in many areas where landfill space is available and the costs associated with hauling are economically advantageous.

But in many other locations, communities look to a Waste to Energy Power Plant to be centrally located within the particular jurisdiction and be integrated into the disposal regimen where these facilities play a crucial role. They include:

- Saving airspace in existing landfills by reducing the volume of waste that would typically go to the landfill by 90%, and 70% by weight.
- Releasing far less emissions than any other source of solid waste disposal and have a carbon negative

impact as compared to just about every other form of combustion for energy.

- Displacing fossil fuel for electrical production in a time where the world has seen the highest prices ever for a barrel of oil.
- Helping to carry the torch for environmental stewardship in Public – Private partnerships to new levels of awareness in the communities these facilities may be located in.
- Limiting transportation of waste over long distances, resulting in high cost and increased emissions.

All of these and more are the benefits a waste-to-energy facility can bring to your community. And, while these facilities are expensive to build, tipping fees, electrical rates, tax and renewable incentives as well as possible recycling streams and reuse streams all fit into the equation to pay for the cost of building plants and returning a profit to the stakeholders who have invested in the project.

With this brave, new world in mind how has the “The Art Of The Deal” that was once the mindset of an earlier generation of developers changed. How relevant is it in today’s world economy that has not seen a green field project developed in this country since Wheelabrator built the Lisbon, Connecticut facility in the mid-90s.

Admittedly, there have been a number of facility retrofits and expansions. But it is important to note that even these projects have gone over what was originally thought to be the price tag associated with equipment replacement and additions. Additionally, it is difficult to compare potential projects in this country with projects completed in Europe during this same period because cities or provinces have a high level of EU governmental support. There are also unpredictable fluctuations between the dollar and the euro. Laws pertaining to where waste must be disposed of in Europe, as well as different labor rules and in some cases equipment specifications all drive up the project cost overseas and make it difficult to project the “off-the-shelf” cost to use as a reference for domestic projects.

The relevance of the world economy has changed the way developers must view potential projects. Turn around times for major pieces of equipment, the availability of floor space in fabrication shops, and the volatile market for materials make for a process that is complex and lined with conditions that can bring upon unforeseen cost escalations that somebody must pay for. Additionally critical project and construction skills are in high demand as many domestic infrastructure projects are being developed in the U.S.

THE PAST OF LUMP SUM VS. AN OPEN BOOK FUTURE

This brings us back to the fact that we have seen numerous RFP’s released here in the U.S. for the development of WTE facilities. There are two approaches to the RFP’s that we have seen:

- The first approach is the Lump Sum proposal, which typically involves a public procurement where the vendor submits a lump sum capital cost bid that includes all permitting, engineering, procurement, and construction services required to deliver a “turn key” project. A lump sum proposal includes a risk premium from the vendor that is included in the lump sum price as part of the overall project cost. Normally at the end of the construction, the vendor negotiates an O&M “service fee” to encompass the long term operation of the facility.
- The second approach is called an Open Book procurement where the project capital costs are passed through to the owner of the project with a nominal mark up for the vendor’s management fee. The risk premium costs for engineering, procurement and construction integration that are provided to the Owner in the lump sum is not included in the price resulting in a lower capital cost. The trade off is that the Owner assumes the project integration risk. Similar to the lump sum proposal at the end of the construction the vendor negotiates an O&M “service fee” to encompass the long-term operation of the facility.

Some things we have seen this past year with the requests for Proposals that have been issued are:

- Requests for lump sum price proposals, (capital + O&M) for multiple construction options.
- Requirements that the WTE Company obtain all permits for the project over the next 2 to 3 years after a proposal has been accepted.
- Often little and sometimes no facility site information is available.
- Proposals for multiple project options required in 3 months after the issuance of an RFP.
- RFP’s issued with little or no advance notice or consultation with potential proposer’s.
- RFP’s often require commitments for bonding with no contract and a project that will not start for years.

With the lump sum approach to an RFP for a publicly owned plant, the plant technical criteria and project costs are estimated based on the level of detail that the issuer of the RFP provides with regard to performance design specifications and facility O&M requirements in the RFP. If the level of detail is low, then the vendors will submit a lump sum price for building the facility that reflects a higher risk premium due to the lack of detail on which to base engineering and construction estimates. Consequently, if the actual cost of the facility is higher than the proposed price, the vendor absorbs the loss. If the actual cost is less than the proposed price, the vendor keeps the difference. There then is usually a fixed O&M price with escalation and pass-through costs that are submitted to the owner for operation

of the facility once construction has been completed and commercial operations begin.

We believe that there are a few disadvantages to the lump sum approach that increase the risk premium. First, the project typically will not be built for 3 to 5 years from the proposal date. Therefore the pricing of equipment, materials, and commodities cannot be accurately predicted 3 to 5 years into the future. The final design of the facility will not be completed before the proposal date as detailed engineering has not been completed. Permits, as well, have not been issued at this point and final permit conditions can have a dramatic impact on capital and O&M costs. These uncertainties can result in very conservative (high) cost proposals because of these risk factors that will drive up the cost of the project to protect against all uncertainties.

With the open book-cost plus approach we see the potential to move through the process in a partnership with the vendor, the customer, and the customer's consultants. (once selected based on company performance, the ability to deliver, and a detailed estimate of a potential project opportunity). This leads to transparent, above-board negotiations where all details are finalized.

The process should start with the public owner requesting a good faith capital cost estimate, and a lump sum service fee proposal from pre-qualified vendors. The above-mentioned group can decide on the administrative and contingency components once they have received a price for these factors from the pre-qualified vendors. In their initial response, bidders specify what their proposed costs include and exclude. (i.e., capital components and O&M). As noted above, the owner then selects a proposer based upon price, experience, project guarantees, and financial viability.

We believe the advantages to this open book approach include:

- Owner participation in design, permitting, and construction oversight of facility.
- Fixed capital and O&M costs with a guaranteed maximum price once permitting and final design is completed and the construction manager has received all subcontractor bids.
- Lower capital cost
 - The method avoids large risk contingencies and the conservative estimates that could lead to a cancelled project.
 - Risks are minimized between both parties.
 - Savings can be shared among the partnership. The savings clause provides incentives to all members of the partnership to work together towards the common goal.

This open book public – private partnership allows the facility design to be customized to municipalities' needs. The process also encourages "value engineering" with the customer because of the teaming with the vendor, their construction

manager and the customer along with their consulting engineers.

We would also like to suggest some additional points that should be considered by all who may be considering the RFP process for potential waste-to-energy projects. Prospective clients should engage qualified companies early in the process to understand the incremental steps that need to be undertaken with negotiating projects. Clients should allow 2 to 3 months for companies to prepare RFQ packages and 6 months for proposal preparation. In some cases we've experienced deadlines that run half this suggested amount of time.

The prospective client should set reasonable but high qualification standards. Technology, as well as facility size and site along with the ownership approach to be utilized should be decided before an RFP is issued. With the issuance of the RFP, detailed site and commercial terms should be agreed upon within the owners group and the commercial terms for putting an arrangement together should be identified. With these commercial terms it's desirable to require any performance and payment sureties (bonds/LOC) when all costs are agreed upon and a contract is completed. Some RFP's have had bonding requirements pre-contract. This requirement has proven difficult given the risks associated with contract negotiations and a final completed contract.

CONCLUSION

Today's business climate combined with the proven operational availability of waste-to-energy leads us to believe that the open book arrangement is the best process to proceed with development. The owner benefits from the lowest overall cost. Vendors do not have to put aggressive contingency numbers into the proposal, as risks are minimized. And, the owner's involvement from the start of the process can help control pricing and deliver a far more cost-effective project for all stakeholders.