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Viability of Optional Approaches

as presented by

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The study was commissioned to look at the viability of optional approaches to both transport and disposal of solid waste in the three county region and beyond. Because the economy of scale particularly applies to solid waste handling and because several contiguous counties either do not own a landfill or face imminent permitting issues with necessary expansion, the two proven approaches to disposal were sized at 250 TPY. It is estimated that there is a high probability of 550 – 600 TPY in the current or near-term being available for disposal within a 50 mile radius of Howes Cave. Both the WTE and landfill options are readily adaptable to upward scaling of volume capability. Further, it is recognized that MOSA as a stand-alone is not realistically able to bond construction of any type of 100 TPY disposal facility, nor is it in a reserve fund position to field a fleet of tractors and trailers with attendant overhead costs even if a guaranteed long term (5 year) contract for economically desirable (\$20 ± /ton) air space could be secured.

Therefore without a vision or plan or both, MOSA initially, and several contiguous counties in the near term, will be challenged with transporting literally millions of tons of solid waste hundreds (or more) miles to burial sites, which themselves will eventually reach their permitted capacity.

- Regional Landfill – This option is the most cost-effective (over its planned capacity lifetime) and straightforward in its implementation. There are, however, significant drawbacks which should be considered:
 - The political will of officials to propose and proceed with hosting a site in their community is and probably will remain weak.
 - Public sentiment to siting a 100 acre footprint (in this case) has historically been negative. It would be even more so for a site sized to accommodate two or three times this volume of solid waste from the entire region.
 - Continuing impact of operations over its lifetime would impact local quality of life.
 - With the exception of possibly utilizing methane gas or the waste itself as fuel, the facility utility comes to an abrupt end when filled.

- The significant costs associated with closure/post closure for capping/monitoring /maintaining/remediation, etc. is distributed over at least 30 years but the necessary funds are accumulated over its useful life. If filling rate is accelerated, the contributions are annually larger out of necessity.
- Regional WTE – Although this option is straightforward in its implementation, its initial facility costs are beyond the financing capabilities of the Authority or any of the individual municipalities it would serve. Only shared initial costs by City, County, State, Federal, Public Authority and private partners would make it possible. There are a number of factors not mentioned in the study, which could have a positive impact on moving forward with a regional WTE facility.
 - Federal financial incentives associated with WTE including grant funding, production tax credits, investment tax credits, desirable bonding terms, loan guarantee programs, etc. are described in recent legislation.
 - A group of U.S. Senators (including both from N.Y.S.) have urged the Senate Committee on Energy and Natural Resources to define WTE as a renewable energy source. This action would ultimately lead to even further incentives.
 - One of our regional members of the U.S. House of Representatives is a degreed engineer with a significant background in energy policy at the State level via both public office and NYSERDA Directorship. He has publicly made energy and technology priorities in his legislative agenda.
 - There is significant support for WTE in N.Y. S. via both academia and trade organizations.
 - There is a growing trend towards considering regionalization of solid waste processing among the four major Counties immediately to the East of MOSA.
 - The “footprint” for a regionally sized WTE facility would be about 15 self-contained acres. There are virtually no visual, air, noise, water or other “pollution” impacts.
 - There exists a functioning facility within 100 miles, which could be utilized via visitation for both legislator and public group “education” (OCRRA).
 - By virtue of the study format, the most conservative assumptions were made for facility cost/operating costs/revenue generation and lifespan for spreadsheet projection purposes. The facility is presented as initially bonded for a fixed term at a fixed interest rate and is expected to retire debt under these terms via electricity revenue and the charging of a “tip fee” for MSW fuel. Because of the number of variables and the magnitude of the project, small incremental changes in these numbers are magnified in calculating the effect on “tip fee”. These include:

- Delivered tonnage – Although the facility is nominally sized at 250 TPY it could probably process 20 – 30% more tonnage. Any increased tonnage would result in more marketable electricity revenue, which could be applied to either tip fee or debt reduction. If the facility were to be sized incrementally larger, the up-front cost would not be increased at an equal rate. The net result again would be the opportunity to lower the “tip fee” or retire debt faster.
- If the market rate for electricity sold by the facility is higher even slightly higher than \$0.07, the net effect on revenue is dramatic.
- If the bond interest rate is even fractionally lower than used in the study, the annual debt service is equally dramatically reduced.
- If the bond term is increased even in single year increments, the annual debt service reduction can be shown to be substantial because of the magnitude of the numbers.
- If any or all of the above-mentioned variables are considered in combination, the combination of tip fee and transportation (50 mile radius) would make economic viability even more attractive than current situations.
- Finally, the facility is assumed to have a 20 year life for debt retirement purposes. In fact, it’s highly probable that the facility life will be 30 years if properly maintained and possibly could be in service for 40 years with proper preventative maintenance planning. The financial impact after year 20 is obvious.
- Gasification – The study provides an excellent overview of existing and in-development technologies. It does not appear that any are viable in the near term because of the nature of our MSW and the volumes generated. The exceptions would require initial expenditures most probably funded via private investment.
- Rail Transport – Again the study describes the geographical, capital and operational considerations of using rail transport in a local (MOSA) and regional context. The study clearly shows that capitalizing the cars, equipment to load them (and their attendant maintenance costs), transportation fee and remote landfill tip fee would be in the order of \$54 - \$62/ton. Even if higher guaranteed volumes could be realized, the slight cost reduction from transportation and tip fees would probably be offset by the need to capitalize and maintain more cars to back-up the primary fleet, the availability of which could easily be compromised by logistical problems with multiple siding pick-ups.