

Cleveland Public Power
Municipal Solid Waste to Electric Generation
Briefing Document

Summary of MSW to Energy Project

1. CPP has investigated the environmentally friendly use of MSW gasification technology offered by the Princeton Environmental Group.
2. Cleveland's MSW to Energy System Component include Collection Process, Sorting Process, Steam Compression and Fuel Cell Production, Pyrolysis Gasification and the Turbine Generator.
3. The Public Service, Division of Waste Collection will fully prepare waste for sorting and recycling. The current manual collection will be replaced by the City-wide Recycling Program operated by a *Semi-automated* and *Fully-* automated Collection System.
4. Pyrolysis Gasification will undertake all hazardous and industrial material to generate waste heat that is fed into a boiler.
5. The Princeton Steam Compression System using "clean" MSW can produce high value fuel pellets that can be marketed commercially as 90% cleaner fuel than coal or oil.
6. This project will include two steam turbines @10MW each which would reduce MISO transmission dependence and transmission cost.
7. Cleveland's approach will operate 24/7 in three shifts, fully staffed, estimating 90-125 jobs
8. For participating communities, this project could reduce tipping fees of 15% or more with a savings up to \$1 million dollars annually.
9. CPP to pay for total project cost through a pre-pay purchase power arrangement with Ohio Air Quality Development Authority and a third party.
10. Total facility cost including two steam turbines and the Recycling Program is estimated at \$150 million.

Summary of Next Steps

1. CPP has circulated a draft of the RFP to solicit proposals for a feasibility assessment of the MSW to Electric Generation Facility.
2. CPP plans to complete RFP process and select consultant by mid Dec. '07 at the budget cost of \$125,000.00.
3. CPP plan to obtain feasibility consultant's final report by end of Jan '08.
4. Based upon the feasibility assessment, the City will send a delegation to inspect Princeton's facilities in the Spring of '08.
5. Waste Management and CPP will negotiate terms such as: reimbursement for equipment purchase, avoided tipping fees percentage, lease of land and Ridge Rd. facility and recycling proceeds.

Summary of Regional and Economic Benefits

1. The waste-to-energy project will enable Cleveland to build strong relationships with foreign companies attracting other investments in the region.
2. Princeton Group has offered to Headquarter in Cleveland, if successful in earning the City's business.
3. Components of Cleveland's waste-to-energy approach would be assembled and some manufactured locally, providing more jobs.
4. Coupled with the City's recycling program and sustainability model, Cleveland's waste-to-energy approach would be the first of its kind offering the first U.S. application of Princeton's Pyrolysis Gasification and Steam Compression advanced energy technology.