

## **A Clean Trend Being Developed in Brazil for Electric Power and Municipal Solid Waste (Sao Paulo, Brazil)**

**Sidney Aluani** ([saluani@sgw.com.br](mailto:saluani@sgw.com.br)) and Andrea Aluani  
(SGW Services, São Paulo, SP, Brazil)

**Background/Objectives.** For decades, Brazil's main electrical power source has been hydroelectrical power plants. Due to the use of the main potential spots for hydraulic power generation and restrictions imposed by environmental regulation, in the last 20 years several diesel power plants have been installed to supply the constant increase of power consumption. Along with this scenario, the municipal solid waste (MSW) in Brazil has been disposed of in sanitary landfills or open dumps since always. These open dumps, allied with sanitary and environmental conditions maintain public health and environmental impacts as a long-term unsolved problem.

**Approach/Activities.** Since 2005, we have been working on changing the mindset of the environmental / residues market, bringing a clean, sustainable view for both problems, under an integrated solution. Waste to energy (WTE) plants can change the MSW management to another level, minimizing all of the impacts caused by the open dumps and the landfills, adding a new energy matrix and helping to balance the electric power demand. The benefits of this solution are not limited to sanitary aspects as it reduces the emissions of greenhouse gases. SGW has been working on WTE projects, together with MSW market investors, in order to develop a sustainable market that may convert the MSW, actually a contamination, and public health problem, into an electric energy source solution.

**Results/Lessons Learned.** Although WTE plants have been well known for more than 50 years, there is a big resistance in changing the approach for final disposal of MSW in Brazil, first linked to the economic aspects, since open dumps look like zero cost, but municipalities are not considering the impacts of public health, soil and groundwater, greenhouse gas emissions, and climate change. In parallel, the electric power industry prefers plants that run with a controlled and easily available fuel. The greenhouse gas emissions reduction in the formula is massive. The NGO's claims for recycling options instead of burning, without noticing all of the recyclable materials are legally required to be separated before MSW be burned in the WTE plant. The Unions claim that this kind of solution will terminate the waste collector activity, without understanding these people can perform a higher level of work. Municipalities and some stakeholders' claims for cheaper solutions without noticing the side cost for the population and planet. On the other side, we have been convincing the main stakeholders and the local authorities on the benefits of this process and have approved the environmental licensing of two WTE plants in Brazil so far.