Presentation 3. Abdullah Malik, Waste to Energy Ltd.

Q: Sukru Solmaz – are there any commercial plants yet in operation?
A: Only demonstration plants are currently working. New plant in the process of being built will operate in commercial mode.
Q: Graham Reed, Imperial College – do you have any concerns with Hg emissions? Where does the Hg distribute to?
A: Over 50% of the Hg present evaporates during the drying process. The remainder was found to be in the gas phase. All the gas is fed into the dryer boiler where it becomes part of the dryer exhaust. As the present plants operate in demo form, no further gas cleanup is carried out. Commercial plants might require additional gas cleanup measures such as activated carbon treatment.
Q: Francis Mosnier – what are the investment and other costs for your system?
A: For a sewage sludge gasification system without a drying stage, it should be ~£750,000. Operating costs will depend on how the gas is used. The main cost is for 50 kW of electricity as parasitic load. A scrubber liquor cleanup process would require 1-2 M^3/d of clean makeup water. We estimate costs for chemicals for non-sludge processes to be £5000-20,000; for sewage sludge, this would be roughly double this. Maintenance costs are estimated at 2-3% of the capital cost. Thus, overall, costs tend to be process-dependent.
Q: Sukro Solzman – your suggested cost figures seem higher than some other estimates.
A: The figures used here were only to allow comparison between gasification and other processes. They are only indicative as they are based on only a small number of plants. We estimate costs at ~£100/t dry sewage sludge. A feasibility study is the best way to confirm costs fully.