



Assessment of the Waste-to-Energy (WtE) Potential of Ido-Osun Dumpsite, South Western Nigeria.

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ABSTRACT

Ways to energy has emerged as one of the sustainable solution to environmental challenges facing waste management through dump site and landfill in Many developed and developing countries. This paper present the characterization study of the municipal study waste collected from Onibueja dump site ,Ido-Osun via Osogbo, South western Nigeria. The composition of the solid waste was determined through sampling method, waste collection, separation and characterization carried out at the dump site. The result of the characterization showed that the waste was made up of approximately 6% auto, 5.8%nylon ,11.4% metals, 17.4% wood ,19.4% textile, 16%paper, 7.6% electronics, 16.4%miscellaneous. The combustion fraction flow was 74.6% while the average moisture content was 20.4% (W.B).However, the type of solid waste collected at Onibueja dump site is suitable for incineration, because the moisture content is less than 45%(w,b) and the combustible fractions is high enough at 75%.the data in this report provide the information on the nature of municipal solid waste generation and management in Osun along Onibueja as a case study. The information obtain can guide researchers in assessment of waste to energy potential of the landfall, most especially in area of electricity generation. The report is however of equal or greater value as a solid waste management planning tool for government (at all level) and private establishment.

Keywords : Solid waste, Waste-to-energy, Dumpsite, Ido-Osun and Nigeria

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