

<b>Project name</b>	<b>Waste to Energy Using Integrated Plasma Gasification</b>
<b>Country</b>	Nigeria, Lagos State
<b>Background</b>	Installation of an Integrated Plasma Gasification Combined Cycle (IPGCC) plant capable of processing a variety of municipal solid wastes to produce electricity (50-60 cycle turbine) and by-products. The project will assist the local government in its MSW management, produce 'green electricity' (helping to bridge power supply gaps) and building materials while protecting the environment through reducing the need for landfills.
<b>Project type</b>	Renewable energy/ waste to energy (biogas)
<b>Project scope</b>	<p>The Average power charges (whether from waste or fossil) across the board in Nigeria is \$34. 0 per MWh. The price of power is also assumed to increase by 10% annually. Purchase cost of Nigerian Natural Gas from pipeline is \$12.5 per MWh generated.</p> <ul style="list-style-type: none"> <li>• Power produced from waste is 126 MWh per day.</li> <li>• Total waste processing capacity is 3000 tons per day.</li> <li>• Power produced from fossil fuel is 139 MWh per day</li> <li>• Total power produced is thus 365 MWh per day</li> <li>• Distilled Water Capacity is 3,000 m<sup>3</sup>/day</li> <li>• Ceramic Capacity is 45 tons/day 300 days in a year.</li> <li>• Ethanol 240 litres/ton MSW production is 23,040 m<sup>3</sup> per annum</li> </ul> <p>Revenue Streams:</p> <ul style="list-style-type: none"> <li>• Tipping Fees \$70/ton</li> <li>• Power Sales \$35.0/MWh</li> <li>• Distilled Water Sales \$2.0/m<sup>3</sup></li> <li>• Ceramics Sales \$2,000/ton</li> <li>• Ethanol \$0.40/litre</li> </ul>
<b>Emission reductions</b>	<b>t.b.d.</b>
<b>Funding method</b>	TPC: \$88 million (30% equity, 70% debt financing)
<b>Project period</b>	Phase I: 22-26 months to operation
<b>Project details</b>	<p>Special Purpose Vehicle (SPV) to be formed (project proponent, State Government, investors) that will be technology licensee, supported by local engineering companies. The project will be executed under a lump-sum engineering, procurement and construction contracting arrangement.</p> <ul style="list-style-type: none"> <li>• Pre-feasibility study completed</li> <li>• In-depth engineering and economic study pending</li> <li>• EIA pending</li> </ul>