

Technology Fact Sheet for Mitigation

Technology	Description	Benefits	Challenges
Biogas digester ⁱ	Biogas is generated during anaerobic digestion processes using waste water, solid waste (e.g. at landfills), organic waste, e.g. animal manure, and other sources of biomass. Can be used in a gas engines and modified gasoline and diesel internal combustion engines for electricity generation or used to produce steam which is then expanded on a steam reciprocating internal engines to produce electricity. Typical sizes range between 6-8 cubic metres and is capable of producing electricity up to 100kW suitable for rural application. typical costs range between 50-75 US\$/m ³	Benefits include social benefits (smoke-free and ash-free kitchen, so women and their children are no longer prone to respiratory infections; women are spared the burden of gathering firewood), increases sanitation; reduce deforestation levels where people heavily rely on woodfuel; sludge remaining after digestion is a good fertilizer, increasing land productivity (and farm incomes); contributing to climate mitigation. A single, small scale bio digester reduces between 3 and 5 tCO ₂ -eq./year), and economic(buying (fossil) fuel resources (e.g. kerosene, LPG, charcoal or fuel wood) is no longer needed; improves security of energy supply (locally as well as nationally or regionally) as the feedstock can mostly be acquired locally)	Challenges include need to have awareness and information programme for sensitising policy makers and financial providers on the potential of the technology and innovative financing mechanism aimed at leveraging the relatively higher electricity generating costs compared to other traditional energy supply systems.

ⁱ This fact sheet has been extracted from TNA Report – Technology Needs Assessment and Technology Action Plans For Climate Change Mitigation– Zambia. You can access the complete report from the TNA project website <http://tech-action.org/>