Technology Fact Sheet for Mitigation

Technology		Benefits	Challenges
Biomass-combustion [i]	This technology involves use of biomass which comes in various forms such as wood from conventional and short-rotation forestry, other energy crops, residues from forestry and agricultural production for production of electricity and if required heat for various process applications. A wide range of technologies and corresponding investment cost, O+M costs, and levelised costs exist to include co-firing with coal(760-900 US$/kW, 18 US$/kW, 2.6-7.1 US$ cents/kWh), low pressure boiler(2600-4000 US$/kWh, 84 US$/kWh, and 6.7-15 US$ cents/kWh), high pressure boilers(4100-6200 US$/kWh, 54 US$/kW, and 8.3-24 US$/kWh), internal steam reciprocating engines(6500-9800 US$/kW, 59-80 US$/kW, 12-32 US$/kWh)	Biomass is an interesting option for electricity due to its abundance and availability in Africa including Zambia. It can contribute to job creation at the plant, more jobs and increased income generation for farmers including small and medium as providers of biomass feedstock. Biomass combustion generally does not compete with food production, as they rely mostly on agricultural or wood residues. Economic and environmental benefits include: Increasing energy security, diversifying the industrial sector, supporting rural electrification with all its developmental benefits, reduced GHG emissions from the SAPP/SADC power sector.	The biggest challenge is awareness and information of the readily availability of these technologies by various stakeholders to include: policy makers, private sector, NGOs, and financial institutions

[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/**