Technology Fact Sheet for Mitigation

Technology		Benefits	Challenges
Biomass-gasification [i]	This technology involves production of electricity through gasification of biomass to produce a gaseous fuel which can be burned in a gas turbine to produce electricity and then hot gases emanating from gas turbine combustion is used to produce steam which is expanded on the steam turbine to produce electricity a system called integrated biomass gasification system. The technology is in its final stage of commercialization and has reasonable investment costs (1800-2100 US$/kW), O+M costs(65-71 US$/kW), levelised costs(3.0-13 US$ cents/kWh)	This technology has a relatively higher efficiency of around 60% since electricity is produced at two stages: gas turbine level and Steam turbine level using the same biomass input compared to biomass combustion with around 40-45% efficiency. This technology does not compete with land as it relies on agriculture and forest waste as feedstock material. In addition it will contribute to reduction of GHG emissions from the SAPP/SADC coal dominated interconnected electricity grid	The biggest challenge is awareness and information of the readily available 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/**