ELECTRIFICATION WORKING GROUP WORK PROGRAM

Activity	Main Steps	Delivery date	Accountable
Cost effective electrification technology options: Investigate on the various technological options for cost effective electrification practices applied in the region: Grid and off-grid supplies, conventional methods, renewable energy technologies, non-traditional methods and non-utility supplies.	List technologies Costs (US $) Benefits Drawbacks Example projects References Standards National, Regional, International	1st Draft August 2008	All members **Ester Ruto** To coordinate this report **Victor as alternative- David- Escom**
Investigate the status of low cost electrification and make recommendations for improvement and the most appropriate approach to the situation and the country concerned, and identify which areas need further study. In some cases one recommendation may be applicable for more than one country; if necessary several recommendations could be made.	To be integrated with the actions above. Gathering of info the accountability of team above. OR Delay execution if the scope is too much to execute.		
Capacitive coupled HV to MV and LV conversion: Investigate the use of capacitive voltage transformers and capacitor and shield wire conversion to supply small remote loads along power lines.	High level description of the technology Costs and comparison to conventional substation (US $) Benefits Drawbacks Pilot projects (Eskom 3) References Standards National, Regional, International	1st Draft report August 2008	ZESCO- Kennedy (inputs from Eskom)

Single Wire Earth Return (SWER): .	SWER training for all members **Technology review report.** High level description of the technology Costs vs conventional substation (US $) Benefits Drawbacks Example projects References Standards National, Regional, International **Video** **Standard and specifications:** Request standards committee to adopt the Eskom standard And specifications. Isolation transformer, customer transformers etc.	Done August 2008 1st draft August 2008	ESKOM Eskom Eskom Paul van Niekerk. COO
Single phase motors: Identify commercial single phase motor supply options 1) SA technology options 2) Milling requirements kVA, starting torque,	Identify technologies, suppliers and give costs	August 2009 August 2009	1) Eskom 2) Escom Malawi

"**Point of supply" connection equipment and service connection cable technology:** Meters, " Ready Boards'', Load Limiter circuit breaker", low cost metering, use of low cost material, etc. Considerations around internal wiring requirements and safety issues of internal wiring of homes. Airdac concentric cables split concentric and pilot wires etc. Connection options: Overhead connections underground connection etc.	**Technology review report.** High level description of the technology Costs (US $) Benefits Drawbacks Example projects References Standards National, Regional, International	Draft August 2008	LEC link with Stephen on split-metering etc.
Establish the status of low cost operating systems on co-operatives or individuals through private investors		Draft June 2009	REA Zimbabwe
Investigate possibilities of mini-hydro schemes for grid and off-grid supply, and for stand alone systems as well		August 2009	REA Zimbabwe
Investigate the possibilities of utility-run solar schemes.		October 2008	REA Zimbabwe

Activity	Main Steps	Delivery date	Accountable
For non-utility suppliers such as village co-operatives, private investors and co-generators make recommendations on: • Solar energy systems for rural electrification of households, small institutions and small industry, • Applicable wind energy generation systems, • Agri and forest products (by-products) generation systems for rural electrification, • Renewable energy resources and biomass generation, • Micro-hydro schemes for local supply.		August 2009	ZESA and REA Zimbabwe
Increasing sales of electricity in urban and rural low income electrification areas. Report : Energy alternatives: Electricity cost comparison to other energy carriers such as paraffin, wood, coal, LPG gas, batteries, etc. Benefits of electricity vs other energy carriers. Means of managing the initial cost of barriers Connection charge barriers			2009 or later
Investigate various funding options and make recommendations on the most appropriate funding mechanism including the sourcing of funds to be used in low cost electrification programs.	UPDEA/AU- fund for rural electrification ''FADER''		Not in defined scope

PIESA EWG ACTION PLAN 2008-2010 Blantyre meeting

Activity	Main Steps	Delivery date	Accountable
Establish a network of Centres of Excellence that will work in areas managed by the WG to support research and technological development.			PIESA Board/ external partner(s) Board to give direction on this issue.
Planning **Electrification planning course:** 1) Request board to pay for planning course; investigate what is being done currently at Kafue Gorge Regional Training centre. 2) Run course		1) May 2008 2) August 2008	P van Niekerk COO