

POWER SYSTEM ANALYSIS WORK GROUP FEEDBACK TO PIESA-IERE FORUM: MOMBASA, KENYA



Members present:- 14 – 15 September 2009

Stephen Delpont AMEU (SA)

Dr Clinton Carter Brown ESKOM (SA)

Erastus Kiruja KPLC

Albert Pambè SNEL DRC

Additional attendees

Joseph Kariuki KPLC

Bukhosi Siso ZESA

Clr Thibedi Molefi (Ekurhuleni)

Charles Ooko KPLC



POWER SYSTEM ANALYSIS WORKING GROUP MEETING

- ◆ **Previous meeting: 14-15 May 2009 Maseru,
Lesotho**
- ◆ **SERENA BEACH HOTEL, MOMBASA,
KENYA, Mon 14 – Tue 15 September 2009**

PSA WG Members

- ◆ Convener: Custom Nthara (ZESCO Ltd)
- ◆ Deputy Convener: Stephen Delpont (AMEU(SA))
- ◆ Act. Secretary: Erastus Kiruja (KPLC)

Members:-

- ◆ Dr Clinton Carter-Brown (Eskom (SA))
- ◆ Albert Pambe DRC SNEL
- ◆ Paulos Mazwazwa ZESA

Herman Beta Low Voltage design Tool: Presentation made by Dr Clinton Carter Brown – ESKOM(SA)

- ◆ Dr C Carter Brown, ESKOM(SA), presented a spreadsheet design tool on low voltage reticulation voltage drop. Highlights of this spreadsheet are:-
- ◆ Statistical design and planning criteria of low voltage networks can be modelled to verify voltage drops.
- ◆ Optimal LV layout .
- ◆ Importance of phase balancing .
- ◆ Selection of correct conductors sizes etc.
- ◆ Use of the tool should be incorporated in Zimbabwe SWER Pilot project. New version in development, possible joint initiative with EWG.

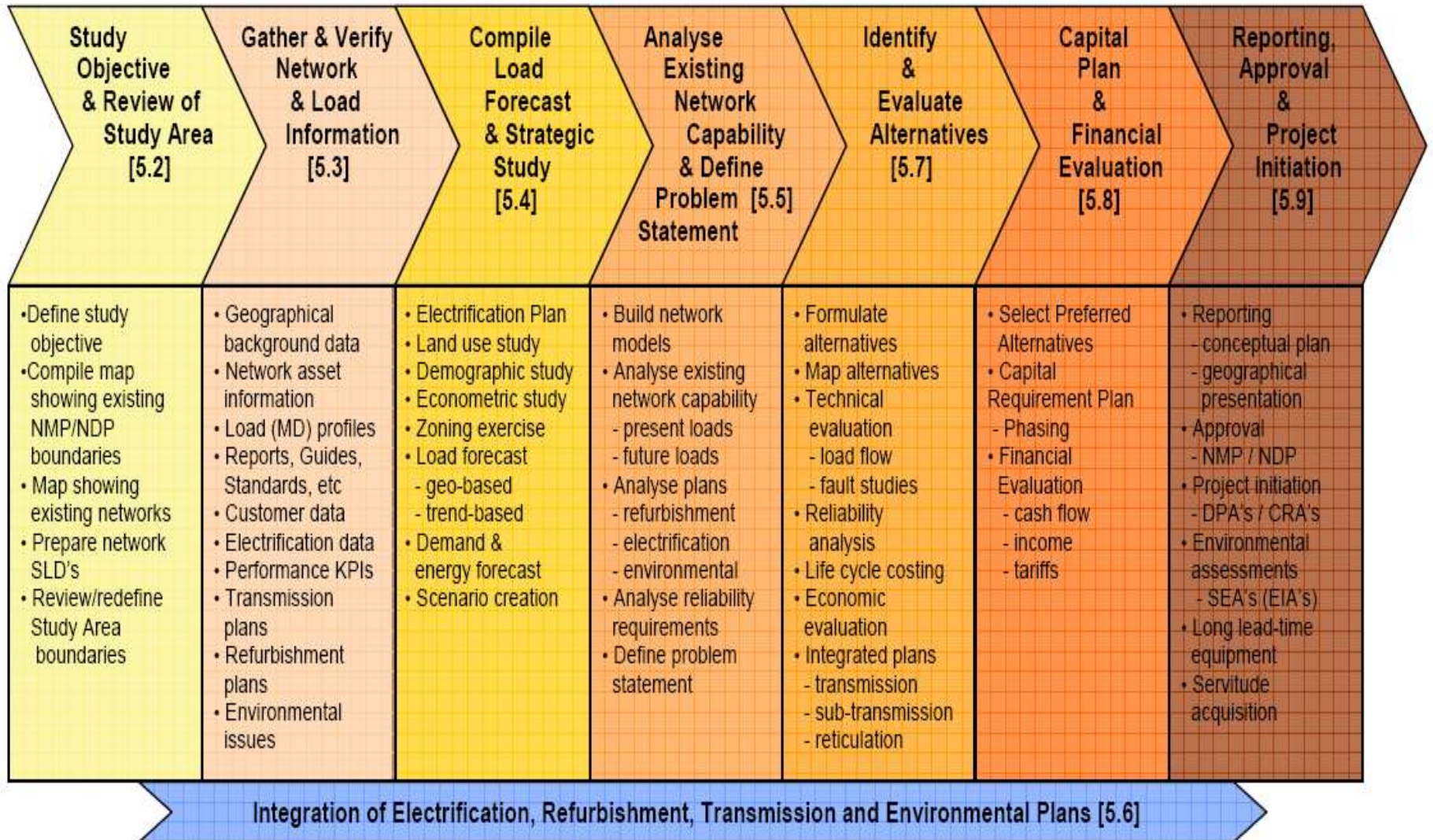
PSA WG: Convert Eskom Distribution Planning documents into PIESA Document(s) –Value adding combined with training courses. Ultimately “e-learning” training courses!!!

- ◆ **Planning methodology**
- ◆ **Cable planning guide**
- ◆ **Dx planning reliability guide**
- ◆ **Dx planning standard**
- ◆ **Geobased load forecast**
- ◆ **Line and cable**
- ◆ **Motor starting guide**
- ◆ **Shunt capacitor guide**
- ◆ **Technology and phasing**
- ◆ **Transformer guide**
- ◆ **Voltage limits**
- ◆ **Voltage Regulator**

PSA WG - Proposed focus and Vision

- ◆ **We need a resource to adopt relevant existing Eskom distribution planning documents into PIESA planning guidelines and training material.**
- ◆ **We need sustainable training and delivery of this material. (Training institute ? Ownership?)**
- ◆ **To capacitate the above may need assistance from NEPAD or other relevant institutions.**
- ◆ **Ultimately “e-learning” could ensure access to all role players.**

Planning Process



◆ **PROPOSAL TO PIESA-IERE FORUM**

- **Resource required to convert relevant existing Eskom distribution planning documents into PIESA planning guidelines and training material.**
- **HIGH LEVEL ESTIMATED COST AMOUNTS TO APPROXIMATELY US\$ 40 000 plus future funding may be required for continuous training etc.**
- **Recommended that PSA WG be actively involved in the Zimbabwe SWER pilot project to demonstrate the scope and benefits of planning and design.**



◆ THANKS FOR YOUR ATTENTION !