

Electrification Breakaways Session Notes

Thursday 09/10/14, Gallagher Estate, Midrand.

Note: A separate attendance register was completed.

1. Define clearly what we want to achieve. (Define what we want ...)

Key points to take into consideration:

- The exact meaning of “electrification” / “access to electricity” may vary from country to country.
- A common challenge: Large populations that require electrification, and small budgets to achieve this.
- A second common challenge is maintenance of electrification networks through their lifecycle.
- We should focus on system 33 kV and below only, ie not national grids!
- There are other options to grid supply, such as distributed renewable generation. Opportunity for emerging projects.

Quality of electrification projects:

- Quality, leading to long term reliability, is very important. This goes for the initial installation, as well as subsequent maintenance.
- The system design must be robust, but must be readily accommodate upgrades. There must be a reasonably inexpensive upgrade path. For example, avoid having to change transformer zones to accommodate an increased demand or new connections, as this is expensive.
- The skills of the designers and the installers are crucial.

Long term planning:

- Select and specify electrification master plan philosophy, to accommodate say 30 or 50 years. Take into account technology options that have been used by others.
- Load research – understanding how the uptake will develop.
- We need guidance on population development, as well as on how consumption profiles will evolve.
- Understand the customers. There may be regional variations, eg their ability to pay, other (competing) energy sources that may be available or preferred.

Knowledge sharing and design planning:

- Access to IEEE, EPRI knowledge base via PIESA.
- Access to information published by members. (For example the Eskom Power Series.)
- Is it possible to align quality of supply options with funding available for electrification?

What is the product of the electrification advisory committee?

- Share experiences amongst members. Provide a discussion forum for sharing experiences.
- Share experiences with “non-standard” but common technologies, such as 3,3 kV (IV), that may have applications in other members countries.
- Sharing electrification project details via the PIESA website. (Examples of completed projects.)
- Share contacts where the information required is specialized.
- Collaboration at specific project level. This should be triggered by a member identifying a specific need and seeking the experience learned by other members from similar projects already completed (*).
- Share different technologies, and the appropriateness of each, in each situation.

- Highlight research activities from member utilities.

(* Information on the technology choices that have been tried in each member country, together with some form of contact detail, should be provided on the website.

2. **Document what we want to achieve clearly for common understanding.** (And continuity.)

(See 1 above!)

3. **The roadmap, which must be clear.** (Short & medium term.)

Early days. The roadmap must align with an overall PIESA strategy.

4. **Members and partners that can assist, should do so.**

This is fundamental to the functioning of this committee.

5. **Action plans, commitments and communication.**

- Our strategy must be documented clearly and communicated to all members.
- PIESA should negotiate access to specific utility documentation on electrification, for member utilities and affiliates when required. (For example the Eskom Power Series, and Eskom Distribution Technology website standards.) If possible there should also be access to other organisations (eg IEEE, EPRI) via PIESA.
- As a start members must provide details of the technology being used for electrification projects underway and completed in their countries. This information will be made available on the website, and can be used to identify in more detail the information that should be shared.
- Sharing electrification project details via the PIESA website: Members must also provide information on specific studies. (Examples of completed projects.)