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South African National Energy Development Institute

South African Smart Grids Vision Document Review Workshop

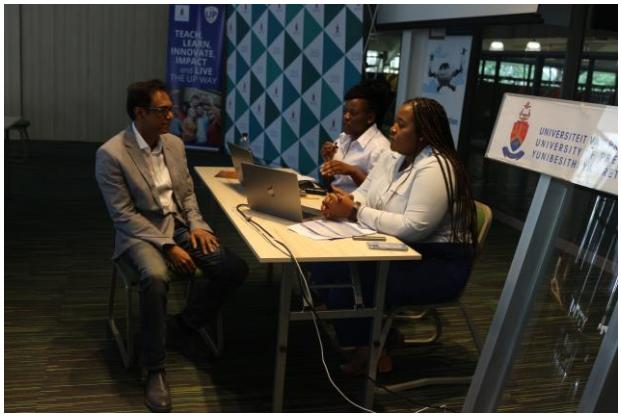
On the 22nd of November 2022, The South African National Energy Development Institute (SANEDI) in collaboration with the University of Pretoria (UP) hosted a consultative workshop titled "Smart Grids Vision Document". The workshop was a hybrid session aimed at soliciting the inputs from key stakeholders on their perspective with the changing electricity landscape. The key point was how Smart Grid is a technology enabler to address the present and future needs of electricity network and can be leveraged by role players across the industry. The workshop highlighted some observations since 2017 when the first South African Smart Grids Vision document was released to date given our current generation capacity constraints.

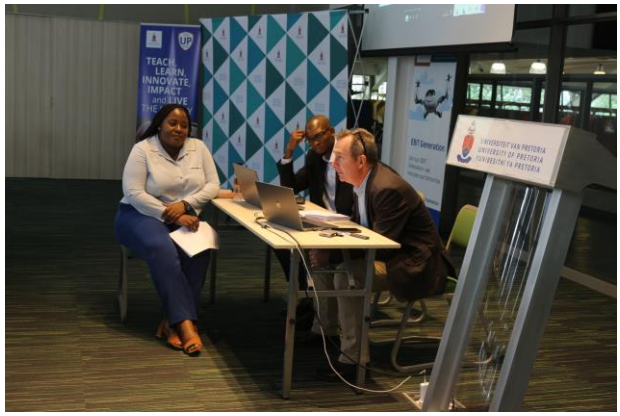
These highlights include but are not limited to:

- The lack of investment by utilities in relevant technologies like smart metering, asset management systems, financial, billing and business integration systems.
- The challenges when motivating for funding to drive large scale projects.
- The need for smart grids maturity assessments that inform technology deployment is key.
- The absence of standardized performance reporting complicate SG progress tracking.

From left: Ms Unarine Mudau (SANEDI), Mr Hendri Geldenhuys (SAIEE), Mrs Vera Kriel (Utility Coach), Ms Simphiwe Mokonza (SANEDI), Prof Raj Naidoo (UP), Dr Linoh Magagula (NMISA), Mr Barry MacColl (EPRI), Ms Palma Maluleke (City Power), Mr Teslim Yusuf (SANEDI).

Global trends discussed during the workshop include the need for improved grid reliability and energy security, climate change mitigation and digital transformation at all levels of the grid. The local industry trends touched base on the grid operation and management, smart asset management and their relevance to our current situation.





Highlights of discussions on the review of the Smart Grids vision document are as follows:

- The need for a common definition of "Smart Grid" is required to drive the message in a unified manner.
- The importance of a clear mission statement as to HOW to achieve the SG vision.
- The challenges of embedded generation for utilities and dynamic tariffs schemes needs.
- A common approach to smart metering specifications, load management and aggregation of distributed energy resources.
- The importance of a Meter Data Management Systems (MDMS) that integrates to other utilities systems.
- The need for an implementation strategy and monitor the progress of deployment of SG technologies.
- The importance of leveraging upon local content requirements and building a sustainable industry.
- The need for sustainable financial models to drive the uptake of Smart Grids.

The next action is for SANEDI to update the vision document and incorporate the recommendations from the workshop and share a draft document with stakeholders. SANEDI plans to launch the vision document in the fourth quarter of 2022/2023 financial year.