

59th Convention Summary – Howard Whitehead

My task of summarising this convention has been made a lot easier by the planning and selection of papers undertaken by our papers committee under the able leadership of our President. The theme: “**Solutions for Electricity Distribution Sustainability**” could not have been chosen at a more appropriate time and the papers presented at this convention will serve as a useful reference for our members.

After a welcome address by the Mayor of Polokwane, the lively opening session included a thought provoking and topical keynote address by Mr Smunda Mokoena the CEO of the NER who appropriately set the scene for our convention - outlining the challenges of the 6+1 RED model, the new regulatory bill (which he challenged with much vigour), investment in infrastructure, skills shortage, service levels and the need for electrification cost reduction innovations, all of which impact on the sustainability of our industry. Our President in his address added more value to the deliberations that lay ahead in the conference.

I am not going to deal with each paper but endeavour to identify the salient points from the sub-themes:

Take the Environment, innovation & management covered on the first two days. The strong thread that ran through those papers is that of asset management. I am sure that we believe we are managing our assets but to varying degrees of success due to lack of funds, resources and/or systems. The papers certainly made me aware that there are gaps in the way we do it in Durban. Do we really know the condition of our assets? What condition should they be in? Are we able to plan effectively for their maintenance, refurbishment and replacement? And to do this in such a way that we can avoid fighting fires?

Wouldn't it be great to have a condition index for individual assets and as a collective? I learnt something from our Civil engineering colleagues the other day; they measure the condition of their roads in terms of a Visual Condition Index (VCI), which appears to be being adopted on an international level so that bench marking can be carried out. Benchmarking being a topic well covered in a paper from Ron Millard. But as the saying goes, “no pain, no gain” - we will need to do a lot more data gathering to be able to reach a stage where we know our assets and their condition.

It took Durban 4 years to develop a VCI for every road in our Municipality not to mention the cost. Their system affords them the facility to simulate expenditure/surface treatment options and demonstrate the effect of under investment and to prioritise refurbishment. In spite of the cost and effort, bite the bullet we must if we are to get ourselves into a position to properly sustain our electrical networks.

We had a couple of complicated definitions of Asset Management, which I will never remember but at the end of the day we need to convert that into practical terms. In my book there are four key aspects to Asset Management:

- Asset Choice
- Asset Condition

- Asset Maintenance (including first line fault repair to planned maintenance, refurbishment & replacement.)
- Asset Performance.

Each aspect requires a policy associated therewith and all are inter-related informing or defining each other. Policies need not, in my view be overly complicated – let’s not create rocket science – and in terms of the old adage, “you haven’t got a plan (policy) unless it’s committed to paper.”

For example, a policy around CHOICE could take into account required performance, past performance of assets, SABS compliance. Deon Steyn reminded us very forcefully of the need to test components, which individually may be sound, as a system to get the desired system. This could be incorporated in our choice policy.

For example, our policy around CONDITION – if we are able to index our asset condition, what should the desired condition be for sustainability, 50%? 60%? What should the minimum condition be before the asset should be replaced, refurbished or maintained?

For example, our policy around MAINTENANCE must embody a record of whether we will maintain our assets on the basis of condition monitoring through inspection, measurement and suitable processes to assess condition, which must continually update the condition status record. The result will determine maintenance, refurbishment, and replacement action.

To close the loop we must measure the PERFORMANCE of our assets. We must not forget that many of our undertakings are suffering from institutional memory loss and by documenting our policies we will contribute to managing the knowledge in our undertakings. We must have Key Performance Indicators (KPI’s/Targets) for each aspect so that our assets can be managed. Remember if you can’t measure it you can’t manage it.

When planning our maintenance based on condition wouldn’t it be great if we could simulate longer-term scenarios and have a tool to justify to our politicians/principals the need to invest and to demonstrate the extent of deterioration or consequences of underinvestment. We could even get to a point where we are “clever enough to put two and two together to predict/prevent surprises” as Stephen Delpont quoted an expert.

Unfortunately the systems that will give us these abilities are costly and resource hungry and the 6 RED model was seen to be an ideal structure to support such systems, bearing in mind the limited resources, and to optimise the resources that do exist. Unfortunately the 6+1 model may not achieve these benefits in the same way and the smaller municipal electricity undertakings, if their Councils choose to remain outside of the national RED, are unlikely to have resources to establish and operate such an asset management system.

Even the humble often-neglected servitude is an asset, which requires management as we heard from one of our speakers. Talking about the environment did you know that

three indigenous trees in contact with each other constitutes an indigenous forest which can't be cut without a permit – so mind what you do in your own back yard.

We finished day 2 with an excellent update on opportunities in the Telecom field, in particular “last mile” PLC which at the end of the day could result in our optimising the utility value of our assets and growing our income stream.

No conference on sustainability would be complete without dealing with renewables and on the last day we had two papers, which amply recorded the current situation, targets and the challenges we will have to face. The petrol price at the expected R6/litre is a reminder of the finite limit of fossil fuels and consequently the impact on global warming or climate change. Clearly there is a need for a paradigm shift in our thinking around renewables and the fulfilling the future energy needs of the world.

Our President Elect Vally Padayachee gave us an overview of the “constipated” green power market and Max Clarke suggested that castor oil as a bio-fuel source might relieve the constipation or de-constipate to quote Vally.

In finishing off the subject of sustainability, Joao Zoio gave us an interesting peek into the future of intelligent homes, networks and distributed generation driven by future challenges such as population growth and global warming. The future would be enabled by the burgeoning communications technology.

The hardy annual of EDI restructuring was again under the hammer as it has been at every AMEU conference and technical meeting for the last 10 or more years. Had we known upfront that it was going to take this long; the time may have been better spent focussing on asset management.

Ryno Mathee very succinctly re-emphasised the impact of EDI restructuring on Municipalities and made some useful proposals on how to deal therewith. This impact of course is one of the drivers of the recent change in model. As long as a clear mechanism for addressing the impact had not been adequately addressed, the risk to the 6 RED model was apparent.

The new EDI restructuring model and the Regulatory Bill requires some digestion on my part and I will reserve my comments at this stage. After chewing away at this elephant for some 13 years, to find that it has morphed into a camel could give me constipation. But we also heard that after modelling over the next 6 months it could revert back to an elephant.

Finally our member's forum provided an update on scenario planning around the future of the AMEU. Perhaps we must go back to the drawing board in terms of the latest EDIR developments. On a sad but nevertheless informative note, the accident discussions reminded us of the importance of safety in regard to the commodity electricity. We have been provided with some useful information to take back to our staff - even the matter of using the correct cleaning materials.

In conclusion, we have heard a good mix of practical and theoretical papers of significant use to our members covering almost every component of our assets which need to be managed - cables, lines, streetlights, switchgear, etc - and our President provided adequate time for discussion which also added value to those papers. The

best paper adjudicators are no doubt having difficulty in choosing a winner from the high standard set by presenters. Well done to the Papers Committee, presenters and delegates for a valuable contribution to our knowledge base.

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