

PIESA Meetings hosted by ZESCO in September 2007 at the Zambezi Sun Convention Centre, Victoria Falls, Livingstone, Zambia



Technical Working Groups

All five Working Groups met during 23-24 September 2007 to review and consolidate ongoing work and adjust plans to incorporate priority tasks assigned by the PIEASA Board.



Electrification Working Group members

Many changes had taken place in their membership - particularly during July/August 2007. This meant that a fair amount of time was spent on familiarising new members with current and planned workloads. However, the active participation of our Affiliate members was welcomed by all the Working Groups as an important and essential step to augment the considerable skills scarcity experienced by all our members and to provide practical support and information on techniques and methods to meet the evolving needs of the electricity distribution industry.



Non-Technical Loss Reduction Working Group members

The PIEASA Board members participated in the Working Groups to assess progress and to ensure focus on key issues to be addressed in

line with the 2007-2009 PIEASA Strategic Business Plan.



Standardisation Working Group in action

ZESCO, as host, used the opportunity to deploy a large number of its young engineers to also participate in the Working Groups to gain insights into members' experiences elsewhere in the region and to provide for future continuity in ZESCO membership in the Working Groups if changes need to arise.

Exhibitors

ZESCO invited local and international manufacturers of equipment, consultants and contractors involved in the planning, design and construction of electrification projects to exhibit during the week 24-28 September 2007. All aspects of the exhibition were managed by ZESCO.

International exhibitors were: Aberdare Cables, ARB Electrical Wholesalers, Circuit Breaker Industries (CBI), Cullinan Electrical, Doble, Elsewedy Electrometer, Elsewedy Cables, Landis+Gyr, NU-LEC Africa, Megger and Pfisterer.

Zambian exhibitors were: ABB Ltd, Bestbuy Lighting (Phillips), Copperbelt Energy Corporation Plc (CEC), Energy Regulation Board (ERB), Kafue Gorge Regional Training Centre (KGRTC), Lunsemfwa Hydro, National Housing Bonds Trust (NHBT), National Institute for Industrial and Scientific Research (NIISR), Rural Electrification Authority (REA), Timber Producers Association, Zambia Development Agency (ZDA), ZAMEFA and ZESCO Limited.

Exhibitors were encouraged to participate in the various proceedings. A number of them provided demonstrations, presentations and lectures of great interest to the Working Groups and the ZESCO engineers.

Annual General Meeting (AGM)

The AGM was held on 24 September 2007.



The Chairman, Mr Greg Tosen, reported that the past year was characterised by:

- significant growth in Affiliate membership;
- increased active participation by AMEU and Affiliate members in Working groups; and
- high emphasis on training.

The Chairman welcomed the four new Affiliate members who had joined during the year.

The Chairman also reported that some twenty PIESA standard specifications have been developed to date, but rather than produce a large number of unique specifications, PIESA encourages the adoption of other standards as harmonized regional standards through the appropriate regional institutions such as SADCSTAN. The process may involve some modification to existing standards, and PIESA members have the vital value-adding role to ensure that the standards are appropriate technology solutions for the region.

He commended the Working Groups for their sustained efforts but drew attention to the fact that progress slowed in some instances by the many changes in members' representatives.



PIESA Chair Mr Greg Tosen

He further reported that the PIESA Board held a strategy and business planning workshop during the year to prioritize specific urgent tasks to be undertaken by the Working Groups. He urged the Working Groups to meet the target completion dates to enable meaningful reporting of results and delivery of value-added outputs for members.

The Chairman presented the 2006/07 Annual Report and audited Financial Statements. (The Annual Report is available on <http://www.piesa.com>).



*Discussions after the AGM
(L-R: (representatives of KPLC, LEC, Eskom and AMEU))*

Board Meeting No. 22

The Board meeting was held on 24 September 2007.

On behalf of the Board, the Chairman, Mr Greg Tosen welcomed the New Board member representing KPLC, Mr John Ombui. Mr Ombui is the Chief Manager, Distribution & Customer Service of KPLC.

Mr Tosen also expressed the Board's deep appreciation to Mr David Mwangi for his strong support PIESA's aims and activities during his years as the KPLC member of the Board.

The Working Group Convenors presented their reports on the priority projects assigned by the Board for completion by end-September 2007. In most instances the reports comprised descriptions of process and progress rather than results, and the Convenors were urged to ensure that the tasks assigned were completed without further delay. The Board agreed that all Working Group members should be present for future reporting to the Board in order to ensure that the Board's comments and requirements are fully shared and understood.

The Board approved for publication PIESA 1048: QUALITY OF SUPPLY: Voltage characteristics, compatibility levels, limits and assessment methods.

The Board approved that a Single Wire Earth Return (SWER) application course be conducted during November 2007 at a SWER site in East London, South Africa. However, the Board pointed out that there appeared to be a

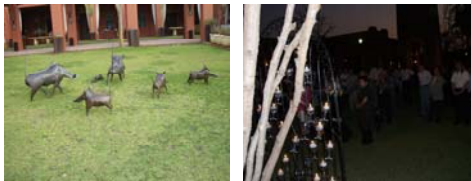
growing tendency to regard training courses as 'outputs', whereas they were intended as *inputs* to assist the *delivery of outputs* in Working Groups and the member utilities.

Mr Paul Johnson, Convenor of the Standardisation Working Group, reported that the Working Groups had explored potential areas/projects where IERE expertise could contribute towards achieving PIESA's objectives, and he presented the proposed 'PIESA-IERE Legacy Projects' selected by the Working Groups. The Board agreed that the proposed projects should be tabled in the IERE General Meeting to be held on 25 September 2007 for consideration by IERE as a possible international collaboration opportunities following from the joint PIESA-IERE Africa Forum that would take place on 26-27 September 2007.

Welcome Reception/Cocktail

ZESCO hosted a splendid cocktail party in the early evening of 24 September 2007.

The Warthog Gardens of the Convention Centre were transformed by Sun International's Functions team into a candlelit fairyland.



Delegates enjoyed themselves well into the night.



L-R: Mr Daniel Sichela (ZESCO, Zambia), Mr David Mbewe and Mr Alfred Kaponda (ESCOM, Malawi)



L-R: Ms Thelma Battiss (National Cables, RSA), Mrs & Mr Hannes Roos (AMEU/Ekurhuleni Electricity, RSA)



Mr Stan Rosinski (EPRI, USA)

The Seventh IERE General Meeting

The Keynote Address by Mr Rhodnie Sisala, Managing Director, ZESCO, Zambia, set the scene for the general theme of "Efficient Electricity Supply and R&D Roadmap" of the 7th IERE General Meeting which took place on 25 September 2005.



Mr. Rhodnie Sisala welcomed by Dr. Sang Doug Park (Chair of IERE, KEPCO, Korea) and Mr Greg Tosen (Chair of PIESA and IERE Board member, Eskom, South Africa)

The Technical and Strategy session dealt with efficient electricity supply in rural areas, and delegates from China EPRI, Electricité de France (EDF) and Tokyo EPCO provided diverse insights into challenges and solutions.



The IERE Secretariat's Mr Ken Asajima consulting with speakers

Two Special Lectures focused on nuclear power generation:

- The current status of Pebble Bed Modular Reactor (PBMR) development in South Africa, and

- Earthquake impact and countermeasures at Kashiwazaki-Kariwa Nuclear Power Station in Japan.

Topics in the Round Table Debate included:

- Scenario-based technology R&D strategic planning and wild card analysis,
- The European technology platform “zero emission fossil fuel power plants” (TP ZEP),
- European Smartgrid platform, and
- Hydro Quebec Research Institute strategic objectives and collaborations.



Speakers in the Round Table Debate

International collaboration opportunities between IERE and PIESA were presented on behalf of PIESA by Mr. Paul Johnson. The proposed ‘PIESA-IERE Legacy Projects’ were received with great interest by IERE members and the IERE gave its clear commitment to provide support and specialist resources towards the realisation of successful results of the joint efforts. It was agreed that the modus of collaboration will be developed in joint consultation in the next few months.

Papers presented in the IERE General Meeting are available on <http://www-iere.dcc.co.jp>.

After the stimulating day of deliberations, some delegates continued the discussions.....



.....while others went to view the many exhibitions



PIESA-IERE Africa Forum: “Technology Transfer in Africa in Support of Electrification”

The prestigious two-day event was officially opened by the Hon. Kenneth Konga, MP, Minister of Energy and Water Development of the Republic of Zambia.



Mr. Rhodnie Sisala introducing the Hon. Kenneth Konga, MP, Minister of Energy and Water Development of the Republic of Zambia, to Mr Greg Tosen



Dr. Sang Doug Park greeting the Hon. Kenneth Konga

The Keynote Address was delivered by Mr Sandile Maphumulo of eThekweni Electricity.



The distinguished panel and delegates heard his sobering message on the effects of HIV/AIDS on skills: we can invest in plant, equipment, and technology but declining intellectual capital and experienced skills are impossible to replace overnight as this is acquired through education, training and development over a substantial number of years.



Session 1 dealt with policies and institutional and regulatory frameworks, and the papers presented were:

- Development of the Rural Electrification Master Plan in Zambia targeting 2030;
- Technology choices and institutional arrangements for Namibia's 1991-2007 Rural Electrification Programme;
- Perspective from Namibia on the establishment of Regional Electricity Distributors (REDs); and
- Development of PIESA standards for technical regulation of power quality.

Session 2 covered various aspects of the importance of electricity supply reliability and quality. Eight highly informative papers were presented: three by IERE members and five by PIESA members:

- Failures by Voltage Distortion and the Limits for Harmonic Currents of Electric Appliances;
- Analysis of Voltage Compensation by DVR using EMTDC Program;
- Reliability and Quality Improvement on Power Distribution System of Tokyo (EPCO);
- Non-technical loss protection challenges and solutions in Africa;
- Effects of Ferroresonance on Distribution Transformers Supplied by Long Overhead Lines in Zambia;
- Kafue Town Substation Insulation Enhancement Project,
- Mini-grid applications; and
- Power Quality Monitoring System and Program for Ekurhuleni Metropolitan Municipality.

Session 3 explored various aspects of the analysis and optimization of electrification technologies, and six papers were presented – all by PIESA members and/or African associates:

- NRS-096: Sealing standards for electricity metering;
- Cost-benefits of VSC-HVDC transmission technology application in the Northwest Province of Zambia;
- Eskom's experience with SWER (Single Wire Earth Return);
- Lessons learnt in South Africa in cell phone vending of prepaid electricity;
- Transformer oil vandalism; and
- Risk, environmental management and compliance in Zimbabwe.

The session concluded with a highly informative presentation by Phillips on energy savings to be obtained through the use of efficient lighting products now available.

Session 4 focused on alternative and renewable energy. IERE members presented two high-level research papers, while PIESA members took an 'application' perspective:

- Technology innovation in renewable energy

development;

- Research and development of CO₂ capture system;
- Future prospects for distributed generation in the region;
- Utility-operated pilot wind energy project in Namibia; and
- Durban's landfill gas-to-electricity CDM project.

Papers presented in the PIESA-IERE Africa Forum are available on <http://www.iere.dcc.co.jp> and <http://www.piesa.com>.

In their concluding remarks Dr Nanno Bolt (Vice Chair of IERE) and PIESA Chairman Mr Greg Tosen commended all presenters for the excellent quality of the papers and presentations, and they conveyed their appreciation to all Session Chairs for ensuring lively debates while generally also managing to keep to the scheduled time allocations!

In his capacity as PIESA Chair and member of the IERE Board, Mr Tosen conveyed the deep gratitude of the two organisations to ZESCO for its magnificent hosting of the highly successful Africa Forum as well as the many PIESA meetings. He also thanked the numerous entities that had generously sponsored various associated aspects associated with the event.

Sponsors:

- Conference bags provided by ZESCO: sponsored by Finance Bank.
- Golf shirts provided by ZESCO: sponsored by ZAMEFA.
- Conference satchels provided by PIESA: sponsored by PIESA Affiliate member Aberdare Cables. (The colourful cloth panels were sourced from all the PIESA utility members' countries, and the bags were made by an HIV/AIDS support group in South Africa).
- Bags of assorted seals contained in conference satchels: provided by PIESA Affiliate member Integrity Control Systems.
- Name cards provided by PIESA: sponsored by EE Publishers. (The bead lanyards were made by another HIV/AIDS support group in South Africa).
- Reception Cocktail: sponsored by ZESCO.
- Sundowner cruise on the African Queen: sponsored by PIESA Affiliate member NULEC Africa.
- Mid-morning refreshments:
 - 24 September: sponsored by Energy Regulation Board.
 - 25 September: sponsored by ABB.
 - 26 September: sponsored by Lunsemfwa Hydro.
 - 27 September: sponsored by ABB.
- Lunches:
 - 24 September: sponsored by Copperbelt Energy Corporation.

- 25 September: sponsored by PIESA.
- 26 September: sponsored by PIESA.
- 27 September: sponsored by Philips (Bestbuy).
- Afternoon refreshments:
 - 24 September: sponsored by Lunsemfwa Hydro.
 - 25 September: sponsored by Lunsemfwa Hydro.
 - 26 September: sponsored by ABB.
- Dinners:
 - 25 September: sponsored by IERE.
 - 26 September: sponsored by Eskom / PIESA.
 - 27 September: sponsored by ZESCO.

In recognition of the disproportionately higher expenditure incurred by PIESA in connection with the joint meetings and associated activities, the IERE Board approved a grant to meet the projected shortfall.

Time for Relaxation

The demanding programme made provision for networking and much-needed relaxation over splendid dinners in magnificent settings under the stars.



Unfortunately, on 25 September the gala dinner on the sprawling lawns of the Royal Livingstone was interrupted by a sudden violent storm. Sun International's ever-resourceful Brandon and his team sprung into action and rescued diners, enough bottles and lots of food, and very quickly accommodated us in the Zambezi Sun restaurant. The cosy atmosphere provided an ideal drenched and

By the following evening the clouds had vanished, and we were able to dine under the stars in the Kingfisher boma. Brandon and his team had prepared a feast: the white table settings gleamed in the light of hundreds of lanterns, and long tables groaned under vast mounds of delicious eats!



In the relaxed atmosphere, conversations soon became animated and the lively discussions continued well into the night.



The Highlight: Zambezi Sunset Cruise



The planned cruise on the African Queen created much excitement but also much anxiety as it was likely that the boat's maximum capacity of 120 persons would be over-subscribed. Rick St John, CEO of NULEC Africa who sponsored the wonderful cruise, insisted on personally inspecting the Queen, and was keen to also hire the smaller African Princess to ensure that everyone could participate. However, the Princess was already fully booked but almost everyone got on board the Queen on 27 September.

The leisurely cruise provided opportunity for a meander past the rich green islands and close encounters with hippos and crocs emerging in the balmy air of early evening.



The Grand Finale

A more fitting end to the week could not have been imagined than that arranged and hosted by ZESCO: straight from the boat to the Boma for a traditional feast and dancing under the stars!

Once again, Sun International's Brandon and his team laid on a feast: an elaborate barbecue, an assortment of traditional and international dishes, and even a pig roasting to perfection on a spit!

Mr Chris Mubemba, ZESCO Senior Manager Distribution and Customer Service, who

welcomed everyone on behalf of ZESCO, was a wonderful 'master of ceremonies' and created the relaxed, happy atmosphere from the start.



He introduced the ZESCO team of dancers and musicians who provided an energetic demonstration of their talents.....



to the great delight of both local and international guests.



Pretty soon everyone joined in the dancing! ZESCO ladies in resplendent dresses



PIESA members from ESCOM and LEC, the IERE Secretariat:



These Chairmen don't only deal with the serious stuff:



But none had more fun than.....



Our thanks to our host ZESCO, the many sponsors, the excellent presenters, and everyone in the PIEsa and the IERE involved in making the Africa Forum and all the associated meetings such a very successful and highly enjoyable event.



Photographs have been posted on the website: <http://www.piesa.com>.

Optional Post-Conference Tours:

On 28 September 2007 ZESCO provided optional tours to the following:

- Victoria Falls Power Station: a run of the river power station with an installed capacity of 108MW and utilizing an average head of 107m, it is the third largest of ZESCO's generating plant.
- Mukumi Village rural electrification. Traditional dances, as well as a variety of crafts serve to attract tourists. The village was electrified in 1999 under the Rural Electrification Programme. It is supplied through a 7km 11kV OHL from the Sun International Falls resort's 33/11kV substation.
- ZESCO substation: demonstration of auto-reclosers recently installed by NU-LEC Africa.

PIESA Secretariat News:

Postgraduate Study Leave



Mr Alfred Kaponda, ESCOM Malawi's representative in the Standardisation Working Group, will be in Scotland until mid-2008 to complete his MSc studies.

Website

Please send any photographs you have taken during the September 2007 meetings held at Victoria Falls to the PIESA Secretariat for posting on the website. Please forward them to Judi Koncz (judi.k@telkomsa.net).

Newsletters

Please provide inputs to the Newsletters by sending news about developments in your organisation or the electricity distribution industry in your country. Please send your contributions to the PIESA Secretariat (judi.k@telkomsa.net).