What's Hot @
SA Energy Storage, SSEG & Smart Grid 2018

22 – 23 October 2018
Emperors Palace, Ekurhuleni


Co hosted by:

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Copper and energy storage

Copper has long been prized in electrical systems because of its unmatched reliability, efficiency and performance and these same properties make copper a metal of choice in wind turbines, photovoltaic panels and other renewable energy systems. Whilst these new technologies generate and supply sufficient electricity for daily use, the energy is not always available on call due to nature’s fluctuations. Companies have sought ways to safely and efficiently store the energy created so that it can be consumed on demand. The most mature technologies to capture and store this electricity are thermal energy storage and battery technologies. Copper plays a significant role in these technologies and will continue to do so in the future as these developments improve. Without effective energy storage, the supply of uninterrupted renewable energy will be adversely limited. Copper has the highest conductivity of any non-precious metal. No matter how electricity is generated, stored and distributed, copper will perform better than any other material.

Contact Copper and Energy Storage, Tel 011 824-3916, www.copperalliance.org.za

ABB

Stands 20, 21, 22, 23, 24, 25

The ABB FIA Formula E Championship is a natural fit between two pioneers at the forefront of the latest electrification and digital technologies. It perfectly supports the company’s commitment to running the world without consuming the earth. Formula E is one of the most exciting developments in sustainable transport and sport today, providing a unique opportunity to engage with customers around the world while building a sustainable future. The company is a world leader in electric vehicle charging solutions, with the largest installed base of fast-charging stations worldwide. Formula E, as the world’s first fully electric international FIA motorsport series, serves as a competitive platform to test and develop e-mobility-relevant electrification and digitalisation technologies. By joining forces, we will be ideally positioned to push the boundaries of e-mobility. Together, we will write the next chapter of a major sport and fostering high-performance teams.

Contact Yuri Ramsamy, ABB, Tel 010 202-5600, yuri.ramsamy@za.abb.com

Specialized solar systems

Stand 26

Redflow’s unique zinc-bromine flow batteries are designed to power critical sites in the toughest conditions, including temperatures as hot as 50°C with no external cooling. This makes Redflow’s 10 kWh, ZBM2, batteries the ideal solution for problems such as poor quality or unreliable power supplies, intermittent renewable energy sources and high demand tariffs. Integrating seamlessly with renewable power supplies such as solar and wind, ZBM2 batteries can also reduce energy costs by storing off-peak electricity and supplying it to the business during peak demand pricing periods. These battery-based energy storage systems can deliver emergency backup power for sites ranging from shopping centres, data centres and factories to telecommunication towers, rural pumping stations and mines.

Contact Specialized Solar Systems, Tel 044 878-1126, www.specializedsolarsystems.com

CSIR

Stand 9

The Council for Scientific and Industrial Research’s (CSIR’s) Energy Centre hosts all energy-related research within the organisation. The centre has identified six key areas of research: energy demand, energy supply, energy storage, energy systems, energy markets and policy, energy industry and energy-autonomous campus. One of the projects that the CSIR Energy Centre has been working on is the Photovoltaic (PV) testing facility under the energy supply banner. The first phase of the new solar energy research and testing facility has been completed. The PV testing facility will support the domestic solar PV industry with aspects of industrial development, research, quality assurance, knowledge generation and human capital. The facility, with its outdoor test area and its indoor reliability laboratory, will be the most advanced in the country.

Contact Larry Pratt, CSIR, Tel 012 841-2055, lpratt@csir.co.za
ABB and Formula E: pioneers united.
A new era of technological leadership.

Together, Formula E and ABB are defining the roadmap for electric mobility through motor sports. Our partnership for the ABB FIA Formula E Championship is fostering high-performance racing around the world to pioneer the latest energy and digital technologies – one electrifying race at a time. Let’s write the future. Together. 
www.abb.com/formula-e
BlueNova specialises in the design, manufacture and distribution of high performance ultra-reliable Lithium-Iron Phosphate batteries with rare earth Yttrium-enhanced cathodes. These batteries have been specifically designed for suitability to African environments and offer operation as a clean and safe energy source. BlueNova presents hydrogen fuel-cell technology through working small-scale prototypes and existing exhibition materials.

Contact BlueNova, Tel 021 205-2000, info@bluenova.co.za

DNV-GL’s energy storage advisory helps industry keep up to date with new innovations and developments in this fast-moving market and choose the right technology. Energy storage solutions will eventually become ubiquitous within the electricity grid. But today it is still an unfamiliar area for the electricity industry, and many players lack in-house expertise. The company acts as an external knowledge base, offering help with the implementation of energy storage systems as part of renewable integration projects, or for ancillary services to support distribution. Its range of services runs from market and business case analyses to economic assessments, technology evaluations and independent third-party testing and certification.

Contact Matthew Rowe, DNV-GL, matthew.rowe@dnvgl.com

**HySA Infrastructure**

HySA’s goal is to develop and guide innovation along the value chain of hydrogen and fuel cell technologies in South Africa. It comprises three centres of competence: HySA Infrastructure, HySA Catalyst and HySA Systems. The HySA Infrastructure (for hydrogen production, storage and delivery), is co-hosted by the North-West University (NWU) and Council for Scientific and Industrial Research (CSIR), and directed by Dr Dmitri Bessarabov. Public awareness plays an important rôle in establishing hydrogen as a clean and safe energy source. HySA Infrastructure presents hydrogen fuel-cell technology through working small-scale prototypes and existing exhibition materials.

Contact HySA Infrastructure, Tel 018 285-2466, hysa@nwu.ac.za

**DNV-GL**

DNV GL’s energy storage experts work with manufacturers, utilities, project developers, communities and regulators to identify, evaluate, test and certify systems that will integrate seamlessly with today’s grid, while planning for tomorrow. Through our dedicated labs and expertise around the world, we have created an industry-leading combination of analytical and testing experience that gives us a unique advantage in finding energy storage solutions.

Learn more at www.dnvgl.com/storage

**UNVEILING THE TRUE POWER OF ENERGY STORAGE**

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Learn more at www.dnvgl.com/storage
Battery and energy storage technology has rapidly advanced in recent years, driven by breakthrough science and accelerating product applications. Many of the world’s leading cell, battery module/pack, system integrators, and end product manufacturers rely on UL as a technical and safety science expert to help navigate the risks to battery safety, reliability, and performance. As active participants in the world’s leading working groups and standard bodies, such as IEC, ISO, NEMA, NFPA, SAE, GB (China), BSMI (Taiwan), UL provides valuable clarity and insight into the current landscape and future direction of battery and energy storage safety. With the growth of the renewable energy sector in South Africa, it is important to address the need for safe and sustainable energy storage systems. South Africa has many positive attributes that can be used to expand the use of energy storage, through the adoption of best practices in technology, standards and deployment. UL has assisted clients in bringing storage innovations to market in a safe and sustainable manner.

Contact UL, Tel 010 822-3950, customerservice.sa@ul.com

Choosing the optimal energy storage solution for a particular application can be critical. Many different battery technologies exist including lead-acid, lithium-ion, vanadium redox flow, as well as supercapacitors and flywheels. Each technology offers different options and technologies. With its 39 years of experience in the design, manufacture and installation of AC and DC power systems, Aztec is well-positioned to assist in making this critical choice. At SA Energy Storage 2018, Aztec will showcase some of its premium energy storage solutions including the NorthStar lead-carbon battery and the Schmid vanadium redox flow battery. Aztec’s Sales Engineer, Dean Marcus, will present a case study on the NorthStar Battery Company’s 1 MWh Thin Plate Lead Carbon (TPLC) based energy storage system for City Utilities of Springfield, Missouri, USA. We look forward to engaging with you on our exhibition stand.

Contact Dean Marcus, Aztec, Tel 011 828-0800, dean@aztec.co.za

SUPERCHARGING THE SAFETY SCIENCE OF ADVANCED BATTERIES

Compliance, research and risk management solutions across the global value chain

Universally recognized as the global leader in battery safety science, UL published its first standard for lithium batteries 30 years ago. Since then, batteries have expanded dramatically in size, chemistry, energy density and applications. UL is committed to advancing battery safety science in tandem with the fast pace of innovation: through targeted safety research, standards development activity and certification testing that deliver trust and acceptance to global markets.

Learn more at UL.co.za

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Bushveld Energy

Bushveld Energy is an African energy storage project developer and manufacturer on a mission to address Africa’s electricity shortage through cost-effective storage, advance South Africa’s industrialisation through value adding manufacturing and augment vanadium applications in high technology fields. The company is becoming one of the largest electricity storage providers in Africa, focusing on vanadium redox flow batteries (VRFBs). It develops energy storage sites and solutions for power utilities, off-grid industry and mini-grids for grid-connected commercial and industrial electricity consumers. The company brings the energy storage value chain to South Africa through deeper beneficiated vanadium into higher value products, such as vanadium electrolyte.

Contact Bushveld Energy, Tel 011 268-6555, info@bushveldenergy.com

Rhino Energy

Rhino Energy Solutions (RES) provides renewable energy solutions, with a specific focus on solar PV, and is currently ranked among the top three EPC solar companies (independently measured) in South Africa. RES has a Level 2 BBBEE rating, with 88.2% black ownership and 44.8% black woman ownership. The company has over 10 years EPC experience with over 11.5 MWp PV installed, including BKB: 700 kWp with 600 kWh battery storage; Crossways Farm Village Residence: 18 kWp, 16 kVA battery hybrid system; Kia Motors: 69 kWp PV, 1300 Ah/720 kWh battery system; Rhino off-grid house; Sani Pass Lodge: 18 kWp, 2400 Ah PV/battery off-grid system; Telkom: The largest solar PV carpark in Africa: 3 MWp, 11 kV grid-tied. The company will reveal a game-changing battery technology: the first scalable mechanical battery.

Contact Stuart Fredman, Rhino Energy, Tel 083 227-7072, stuart@rhinoenergy.co.za

Concilium Technologies

Concilium is a trusted provider of equipment, applications, services and solutions to associated markets. The company focuses on professional broadcast, test and measurement, as well as enterprise network performance and test equipment and services. It is an ISO9001:2015 certified facility, ensuring consistent quality of service to the many leading international partners it serves to facilitate complete solutions backed by full local support. The company was awarded the Frost & Sullivan Award for customer service leadership. With a wealth of experience, its primary aim is to achieve full customer satisfaction throughout all of its business engagements.

Contact Concilium, Tel 012 678-9200, info@concilium.co.za

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Victron Energy

Stands 27, 28

Victron electronic power conversion products are used for mobility, industrial, backup and solar off-grid/grid parallel (ESS) and many more applications. The company’s product range includes sinewave inverter/chargers, battery chargers, DC/DC converters, transfer switches, battery monitors, batteries, solar panels, solar charge regulators and many more. The company’s ESS products are grid-tied, grid-parallel installations, incorporating solar and battery-storage, which behave as though it were an off-grid installation, thereby offering the best of both worlds. Every system requires at least one inverter/charger and a Venus-device. The equipment can work with any number of different battery technologies, which makes the system flexible to a particular client’s requirements and preferences.

Contact Gerrit Tromp, Victron Energy, tromp@victronenergy.com

Terratech

Stand 3

Terratech has demonstrated that loss of equipotential during lightning ground potential rise (GPR) can be a significant contributor to lightning damage in large photovoltaic (PV) plant. This effect, including the importance of the correct bonding of surge protective devices has been clearly demonstrated through experimentation. Based on these findings, improvement of installation has been demonstrated by in-situ lightning impulse current injection at a large, utility scale, PV plant. The company has developed an earthing, EMC and lightning protection philosophy and user requirement specifications document for one of the world’s leading renewable energy companies which also offers engineering, procurement and construction services. The use of this document, as input to the design, demonstrates proper and responsible engineering when a demand for higher accountability in lightning protection is placed on the design-engineer. The company also offers personal safety and equipment protection support.

Contact Pieter Pretorius, Terratech, Tel 082 412-8257, office@terratechnology.co.za

Innomatic Solar

Stand 2

Innomatic Solar, based in Kyalami, serves the renewable energy sector by supplying quality solar products to installers and dealers in the African market. The company is the sole distributor of Fronius Grid Tied Inverters in southern Africa and service both the residential and commercial sectors. The company is also a distributor of Victron off-grid inverters, battery chargers, solar DC cables, MC4 connectors, and many other solar components.

Contact Anesh Lakha, Innomatic Solar, Tel 011 840-0840, anesh@innomatic.co.za

TERRATECH

Optimised Solutions and support, beyond the ordinary, delivered in earthing, Electromagnetic Compatability (EMC) & Lightning Protection

- Specialist investigations into and root cause analysis of lightning damage at power and industrial plant, including Large Photovoltaic (PV) Plant;
- Earth electrode and earthing system design (from mini-substation, distribution substation to large industrial plant);
- Lightning protection system (LPS) design.
- TERRATECH is an accredited ELPA LPS Designer.
- TERRATECH is an accredited ELPA LPS Installer.

Contact: Dr Pieter H Pretorius
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Web: www.terratechnology.co.za
Enel X

Enel X provides turnkey storage solutions (hardware, software and maintenance) which include system design and simulations, installation and operational monitoring, control, and financial optimisation; enabling quick and easy deployment of storage and solar PV systems. The company’s software (DEN.OS) maximises the economic returns of storage systems alone, or in combination with distributed generation on either side of the utility meter. The system provides solutions that cover aggregated peak load reduction, time shifting, frequency regulation, and backup power to ensure the resiliency of your business. Its intelligent storage solutions can provide up to 30% additional savings on energy costs by reducing demand and time-of-use charges, as well as offering the necessary flexibility to clients using Eskom’s Demand Response Programmes.

Contact Nina Kenyon, Enel X, Tel 086 092-2233, nina@34.co.za

Siemens

Siemens offers substantial automation and digitalization technology, processes, and financing options. Siemens helps to make future energy systems secure and stable — from the power producer to the customer. The electrical energy storage system SIESTORAGE is a key element of Siemens solution towards the three main challenges of power supply: optimising grid connections, proving flexible energy for modern grids, and supporting large energy consumer. Customers benefit from a comprehensive portfolio and a fully integrated solution. Through demonstrations, use case presentations, and keynote speeches we will show how our products, solutions, and services can help you acquire the key to future success in the energy business: agility. The Siemens booth will prove that all required technologies and solutions are already available — a one-stop-solution based on our comprehensive and proven end-to-end portfolio.

Contact Kalai Pillay, Siemens, Tel 011 652-2000, kalai.pillay@siemens.com

Wärtsilä

Wärtsilä Energy Solutions is leading the transition towards a 100% renewable energy future. As an energy system integrator, the company understands, designs, builds and serves optimal power systems for future generations. Its offering includes ultra-flexible internal combustion engine-based power plants, hybridised solar power plants, energy storage and integration solutions, as well as gas-to-power systems. The company’s solutions provide the needed flexibility to integrate renewables and secure power system reliability. Wärtsilä has 68 GW of installed power plant capacity in 177 countries around the world.

Contact Wayne Glossop, Wärtsilä Energy Solutions, Tel 082 040-4778, wayne.glossop@wartsila.com
The primary activity of EE Publishers is publishing in the print and electronic media, with a particular focus on the energy, electrical, electronics, measurement, automation, control, computer, information, geo-informatics and communication technology sectors of Southern Africa. Other activities include production services and event management.

Magazines published in print and online are Energize, Vector, EngineerIT and PositionIT and are all ABC audited. They are FREE to access worldwide via our website www.ee.co.za or Android and Apple mobile APP.

We look forward to welcoming you to our stand No 14 at the SA Energy Storage, Smart Grid and SSEG 2018 conference and Exhibition at Emperors Palace, Johannesburg.

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What's hot @ SA Energy Storage, SSEG & Smart Grid 2018
22 – 23 October 2018
Emperors Palace, Ekurhuleni

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Silver
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