

Programme



SA Energy Storage, SSEG & Smart Grid 2018

22 – 23 October 2018

Emperors Palace, Johannesburg, South Africa

Taking Energy Storage, Small Scale Embedded Generation, Renewable Energy & Smart Grid forward in Africa.

Co hosted by:



Sponsors:

Diamond



Platinum



Gold



Vanadium



Silver



Silver



Silver



Lithium



Copper



Copper



Conference Programme: Day 1

MAIN CONFERENCE PROGRAMME: Emperors Palace, Assembly Room		
Day 1: Monday 22 October 2018		
07h30 to 08h15	Registration and refreshments	E x h i b i t i o n
	Introduction	
08h15 to 08h30	Welcome: Chris Yelland, EE Publishers; Programme director: Bohlale Mathathe, Quantum Leap	
08h30 to 08h45	Opening address: Hon. Jeff Radebe, Minister of Energy	
	Morning Session 1	
08h45 to 09h15	Keynote address: Dr. Fereidoon Sioshansi, Menlo Energy Economics, USA: "Electricity sector in transition: integration, service innovation and business disruption"	
09h15 to 10h35	Paul Vermeulen, City Power: "Energy storage application definitions and how these relate to SA policy, legislation and regulation"	
	Mike Barker, Building Physics: "Energy storage safety - hazard analysis, battery failures and installation guidelines"	
	Dr Matthew Rowe, DNV-GL Energy, UK: "Safer, smarter, greener - the role energy storage will play in sub-Saharan Africa"	
	Dr Thomas Krause, Blue Sky Energy, Austria: "New generation saltwater electrical energy storage"	
10h35 to 11h00	Morning tea in Exhibition Hall	
	Morning Session 2	
11h00 to 12h20	Dr Farshad Barzegar, University of Pretoria: "Supercapacitor or battery?"	
	Prince Moyo, Cigre SA: "Battery energy storage systems"	
	Cord-Henrich Dustmann, Zebra, Switzerland: "Zebra battery flat plate design"	
	Paul Tuson, Mott McDonald: "Managing seasonal hydrology with energy storage in Asia"	
12h20 to 13h30	Lunch in Exhibition Hall	
	Afternoon session 1	
13h30 to 14h00	Keynote address: Stuart Michie, ABB: "Distributed energy resource management - the way forward"	
14h00 to 15h00	Dean Marcus, Aztec SA: "Thin plate lead carbon batteries – a viable alternative for large scale energy storage systems"	
	Loïc Charmoille, Wärtsilä, France: "Future-proofing energy storage investments"	
	Sherwin Harris, GE: "Lessons learned from advanced battery energy storage and microgrid projects"	
15h00 to 15h30	Afternoon tea in Exhibition Hall	
	Afternoon session 2	
15h30 to 17h20	Dr Dmitri Bessarabov, HySA, North-West University: "Renewable energy storage and microgrids for clean mining"	
	Daniel Günther, Younicos/Aggreko, Germany: "Cost-effective OPEX-models for energy storage as a game-changer for improving operation and resilience of electricity"	
	Corentin Baschet, Clean Horizon, France: "The role of energy storage in the energy transition"	
	Ravin Singh, ABB: "Increasing profit margins with microgrids"	
	Maurice Johnson, UL, USA: "New energy in battery infrastructure"	
17h20 to 17h30	Wrap up: Mike Barker, Building Physics	
17h30 to 20h00	Cocktail party	

Conference Programme: Day 2

MAIN CONFERENCE PROGRAMME: Emperors Palace, Assembly Room

Day 2: Tuesday 23 October 2018

07h30 to 08h20	Registration and refreshments	E x h i b i t i o n
	Introduction	
08h20 to 08h30	Welcome: Programme director: Bertha Dlamini, ABB	
08h30 to 09h00	Opening address: Thava Govender, Eskom Group Executive: Generation/acting Group Executive: Risk and Sustainability	
	Morning Session 1	
09h00 to 09h30	Keynote address: Doug Staker, Enel-X, USA: "Using rate design to optimise the energy transition system"	
09h30 to 10h30	Gregory Ireland, University of Cape Town: "Combined system-wide value of demand flexibility in South Africa's energy system"	
	Dr Linoh Magagula, NMISA: "Smartgrid - as smart as the quality of its measurements"	
	Randall September, ABB: "Deploying battery energy storage systems on the SA grid"	
10h30 to 11h00	Morning tea in Exhibition Hall	
	Morning Session 2	
11h00 to 12h30	Beth Cilliers, Eskom: "The role of battery storage in the future electricity utility"	
	Peter Oldacre, Bushveld Energy: "Vanadium value chain innovation to reduce energy storage costs"	
	Duncan Abel, Nedbank: "Approaches to funding of energy storage and renewable energy for corporate clients"	
	Prof. Daniel Chowdhury, Tshwane University of Technology: "Hybrid energy storage system for transport"	
12h30 to 13h30	Lunch in Exhibition Hall	
	Afternoon session 1	
13h30 to 14h00	Keynote address: Madina Mukhanova, Fluence, The Netherlands: "The value of energy storage – enabling renewable energy"	
14h00 to 16h00	Dr Peter Klein, CSIR: "Overview of thermal energy storage technologies for sector coupling and waste heat recovery"	
	Doreen Kanetey-Essel, Juwi: "Grid parity analysis of a PV-BESS hybrid case study"	
	Hiten Parmar, uYilo: "Resilient smartgrid infrastructure for electric vehicles"	
	Matimba Mathebula, Xahumba Engineering Consulting: "Design, installation and maintenance of solar home systems in rural areas"	
	Dr Pieter Pretorius, Terratech: "Earthing and lightning protection of utility-scale PV plant - what's missing?"	
	Aradhna Pandarum, Eskom: "Trends and statistics of solar PV distributed generation in South Africa"	
16h00 to 16h15	Closing wrap-up: Prince Moyo, Cigre SA	

WORKSHOPS AND SEMINAR

Day 1: Monday 22 October 2018

13h30 to 15h00

SAESA meeting

Day 2: Tuesday 23 October 2018

07h30 to 16h45

Small Scale Embedded Generation (SSEG) Seminar NCC Room

SSEG Seminar Programme: Day 2

Small Scale Embedded Generation (SSEG) Seminar: Emperors Palace, NCC	
Day 2: Tuesday 23 October 2018	
07h30 to 08h20	Registration and refreshments
	Introduction
08h20 to 08h30	Welcome: Roger Lilley, EE Publishers: Welcome and housekeeping
08h30 to 09h15	Dr Hendri Geldenhuys, SAIEE president: Introduction
	Jacob Mbele, DoE: Keynote address: <i>The Draft IRP 2018 and the SSEG environment</i>
	Joanne Dean, SAPVIA / SAESA: <i>Status and implementation of the SSEG legal and regulatory framework</i>
	Morning Session 1: Regulation, standards, safety, certification and quality assurance
09h15 to 10h30	Dennis Seemela, NERSA: <i>"SSEG Regulations - the regulatory framework - quo vadis?"</i>
	Robbie van Heerden, CSIR: <i>"SANS 10142-1-2 standard for SSEG installations – status and progress"</i>
	Dr Hendri Geldenhuys, Eskom: <i>"Safety of SSEG systems in public networks"</i>
	Niveshen Govender, SAPVIA: <i>"Greencard quality and safety assurance for roof-top solar PV installations"</i>
10h30 to 11h00	Morning tea break
	Morning Session 2: Technology, systems and components
11h00 to 12h20	Norman Jackson, SAESA: <i>"Battery technologies in SSEG systems"</i>
	William van Wyk, ABB: <i>"State-of-the-art inverter technologies in SSEG systems"</i>
	Andre Anderson, Energyneering: <i>"Smart remote control, protection and monitoring of SSEG systems"</i>
	Hano Oelofse, Dehn Africa: <i>"Lightning and surge protection of SSEG installations"</i>
12h20 to 13h30	Lunch break
	Afternoon session 1: The business case, business models, return on investment and financing
13h30 to 15h00	Davin Chown, SAPVIA: <i>"The business case for small scale embedded generation in Africa"</i>
	Vally Padayachee, AMEU: <i>"Impact of SSEG on municipal electricity distributors and emerging new business models"</i>
	Shirley Salvoldi, Eskom: <i>"Tariff design to cater for the growing use of SSEG within distribution networks"</i>
	Deerosh Maharaj, Standard Bank: <i>"Innovative financing of SSEG installations"</i>
	Duncan Abel, Nedbank: <i>"Challenges and solutions in financing rooftop solar PV systems"</i>
	Christopher Gross, GIZ: <i>"Challenges and opportunities for integrating SSEG in commercial and municipal distribution networks"</i>
15h00 to 16h00	Panel discussion
	Conclusion
16h00 to 16h15	Summary and thanks: Nivesh Govender, SAPVIA

E
x
h
i
b
i
t
i
o
n

Keynote speakers

Jeff Radebe, Minister of Energy

Jeffrey Thamsanqa "Jeff" Radebe is South Africa's Minister of Energy. He served as Minister in the Presidency from 2014 to 2018. Prior to that, he was Minister of Justice and Constitutional Development from 2009 to 2014. Radebe is South Africa's longest continuously serving cabinet member, having been part of every national administration since 1994. He holds an LLM in International Law from the Karl Marx University in Leipzig.



Thava Govender, Eskom

Thava Govender is a member of the Eskom Executive Committee and serves on the Social, Ethics and Sustainability Committee of the Eskom Board of Directors. He is a director of Eskom Enterprises and a member of the board of the Rotek and Roshcon (an Eskom Enterprises subsidiary), and the chair of the council of Eskom's Academy of Learning. He is a board member of EPRI, the vice-president of the GO15's steering board for 2017 and president designate for 2018. He is also a member of the Coal Industry Advisory Board and a member of the executive committee of the Southern African Power Pool (SAPP), and the executive sponsor for the Eskom Expo for Young Scientists.



Dr. Fereidoon Sioshansi, Menlo Energy Economics

Dr. Sioshansi is President of Menlo Energy Economics, a consulting firm based in San Francisco advising clients on the implications of the rapid transformation of the electricity sector and emerging business models. He is the editor and publisher of *EEnergy Informer*, a monthly newsletter with international circulation. He has over 35 years of experience including working at Southern California Edison Company (SCE), the Electric Power Research Institute (EPRI), National Economic Research Associates (NERA), and Henwood Energy, now part of ABB. Since 2006 he has edited ten books, published by Academic Press, the latest being "*Innovation and disruption at the grid's edge: How distributed energy resources are disrupting the traditional utility business model*", which was published in May 2017. His next book, "*Consumer, prosumer, prosumer: How service innovations will disrupt the utility business model*" will be published in early 2019. He has degrees in Engineering and Economics, including an MS and PhD in Economics from Purdue University.



Madina Mukhanova, Fluence

Madina Mukhanova is the marketing manager for Fluence, a Siemens and AES company. She oversees the origination, development and coordination of energy storage sales and project proposals for clients across the Middle East and Africa. She is a founding member of Fluence, a leading global energy storage technology and services company with over 500 MW of operational or contracted energy storage in 16 countries. Prior to this, she worked in various positions within AES including as a quality specialist in the project management department. She holds a MEng degree in technical physics from the Siberian Federal University. In 2006 she was awarded a German academic exchange service scholarship for her MEng in energy and environmental management at Flensburg University.



Doug Staker, Enel-X

Doug Staker is an energy professional who has worked globally for 28 years. He is a pioneer in the world of smart grid technology and focuses on smart metering and intelligent energy storage. He is vice president of utility business development at Enernoc, a distributed energy management and storage company and a subsidiary of Enel. The company is a thought leader in the development of both delivery and supply rate structures which align the goals of utility load management with commercial power and energy savings. Enernoc led the growth of behind-the-meter energy storage in New York City and collaborated with local approval agencies in developing the permitting process for in-building installations.



Stuart Michie, ABB

Stuart Michie is a registered professional engineer and has Bachelors and Masters degrees in Electrical Engineering from the University of Cape Town. He has spent 22 years working in the area of automation in the power industry, starting in the operations of a medium sized electrical distribution utility and, since 2001, progressing through various engineering, sales and management positions in ABB South Africa. He is a member of ABB South Africa's country management team. As the digital lead, he is responsible for driving the digitalisation agenda of ABB in Southern Africa, which is seen as a key driver as the world moves into the Fourth Industrial Revolution.





Co-hosted by



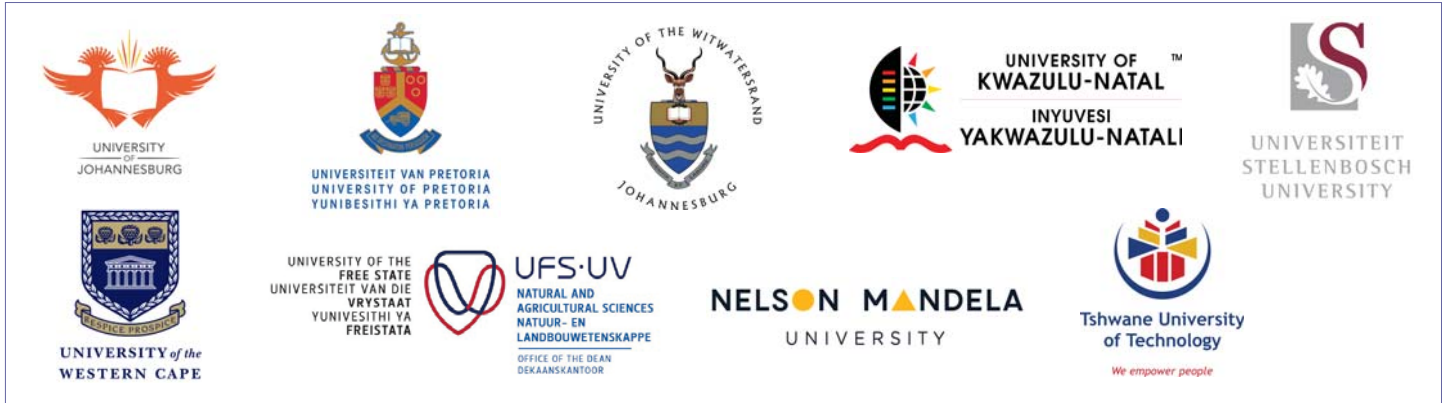
Sponsors:



Supporting Institutions and State-Owned Enterprises:



Supporting Universities:



Supporting Industry Associates:



Media Partners

