

## Standby Power Operators Klub Conference – 2005

SPOK is a focussed technical event that provides an opportunity to share experiences. Aimed at all standby power users and industrial suppliers from the wide range of technologies that support the backbone of the UK's emergency back-up systems; batteries, UPS, rectifiers, generators, load banks, testing and monitoring equipment.

SPOK is a unique opportunity for standby power users and industrial suppliers to network; identify current issues, discuss future developments and establish best practices for the design, build and ongoing maintenance of the systems that provide secure power for critical applications in a time when the supply of power from the grid has an uncertain future.

Building on the success of last year's conference we have produced an informative programme of papers, many of which have been prepared specifically for this conference by some of the major industrial users and leading suppliers.

If you are involved in the rapidly changing world of standby power systems you need to be there to understand where it is going and how it will affect you. We look forward to seeing you in Manchester.

### Who should attend?

Users of standby power products, designers and specifiers of standby power systems for industry, facilities management companies and power generating organisations

## Monday

14.00 – 1600	Pre Conference Tutorial	Battery Monitoring and Testing - System selection criteria - Hardware availability - Data analysis, meaningful interpretation
16.00	Registration	

## Tuesday

08.30	Registration	
09.00	Opening Remarks	Dr Geoffrey May – The Focus Partnership
09.10	Key Note: Richard Ford – BWEA	"keeping the lights on – the contribution from wind" Onshore and offshore windfarms, installed capacity to date, expectations for 2010 and 2020, emergence of other renewable technologies and why intermittency isn't a problem

09.30	Session 1	Facilities Management Chairman: Steve Proctor – Delta Europe Standby power control systems Gary Middlehurst – Mardix/Geoff Rodbard – Triplex Power Ltd <ul style="list-style-type: none"> <li>Control systems to manage today's highly specified equipment</li> <li>Using technology to minimise disruption to the end user and environment</li> <li>User expectations and design criteria</li> </ul>
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Incipient Faults and Latent Defects [IFLDs] reduce the reliability of critical facilities  
Ed Ansett – EYP Mission Critical Facilities®, Inc.

- The complexity of critical systems and their susceptibility to failure is exacerbated by variations in size, topology and functionality. Thereby making each critical facility bespoke
- This paper reviews the need and the means to identify IFLDs at design stage and the problems associated with IFLD detection.
- Total elimination of IFLDs may be impractical, and compromise may be justifiable.

Practical considerations for reliable power solutions  
Tony Sharpe – Harmer & Simmons

- Environmental considerations
- Practical suitability
- Service accessibility



10.30	Q & A
10.45	Refreshments – Exhibition

11.15	Session 2	Case Studies Chairman: Mark Kniveton – British Telecom Replacement of essential batteries in nuclear power plant Peter Hurrell – British Energy <ul style="list-style-type: none"> <li>Overview of Plante battery replacement project at the Heysham 2 AGR site</li> <li>System design criteria and previous operational record</li> <li>Qualification of new vendors for Plante cell supply</li> </ul>
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Disposal of industrial batteries  
Chris Gilliard – Northern Industrial Battery Services Ltd

- COSHH implications
- A recent decommissioning exercise
- Licensed carrying of hazardous materials

Local loop unbundling in BT exchanges  
Mick Morling – Eaton Power Solutions Limited

- BT requirements for collocation facilities by statute
- Solutions from entry level at 300 tie-pairs to a maximum of 4800 tie-pairs
- Secure DC power systems and AC UPS for routers

12.15	Q & A
12.30	Lunch

14.00	Session 3	Fuel Cell Technologies for Standby Applications Chairman: Heston Harper – Fuel Cell Marketing Fuel Cell technology myth or reality? Nicolas Pocard – Idatech <ul style="list-style-type: none"> <li>Introduction to fuel cell technology</li> <li>Overview of opportunities and challenges for fuel cell technology</li> <li>Fuel cell systems for back-up/UPS applications</li> <li>Fuel cell systems for CHP applications</li> </ul>
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Fuel Cell UPS  
Dieter Braechtken – P21-Power for the 21st Century GmbH

- Reliability of PEM fuel cells in stationary backup applications
- Total cost of ownership in applications with long life cycles such as telecom installations
- Technical and maintenance service aspects of fuel cells in such applications

Hydrogen Fuel Cell UPS – USA Field trials  
Shri Karve – MGE UPS Systems Ltd

- Overview of North American field trials using Ballard Fuel Cells in Pulsar UPS
- Realistic hopes for long duration and high power solutions
- The AirGen™ portable fuel cell generator for indoor operation

15.00	Q & A
15.15	Refreshments – Exhibition

15.45	Session 4	Integration of New Technologies Chairman: Daryl Robinson – Crestchic Loadbanks Fuel cell based UPS system performance Dave McGrath – siGEN <ul style="list-style-type: none"> <li>Field trial test programmes conducted in the UK</li> <li>Technical performance, particularly during the ride through period</li> <li>Hydrogen storage issues and how easy it is.</li> <li>Life cycle costs comparisons</li> </ul>
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Off grid solutions  
Simon Jarvis – Genasys Power Systems

- Opportunity charging and intermittency
- Hybrid diesel project for Altanharrie Inn

16.45	Q & A
17.00	Cocktail session – Exhibition
19.30	Banquet/Awards – International Suite

## Wednesday

09.00	Opening Remarks	Dr. Geoffrey May – The Focus Partnership
09.10	Key Note: Mick Morling – Eaton Power Solutions Limited	"Critical Power Demands and Solutions in a Distributed Environment" The paper follows the DTI-sponsored Global Watch mission to the USA in November under the auspices of the IPSS, and covers grid shortages and failures, the impact of renewables, the need for storage all leading to the need for standby provision, security and microgrids for critical loads

09.30	Session 5	Battery/UPS Maintenance and Monitoring Chairman: Andrew Parkin – Eltek Energy Power system design reliability concepts and overall cost of ownership Mostafa Bandar – MGE UPS Systems Ltd <ul style="list-style-type: none"> <li>Critical parameters in selection of equipment Availability, reliability, MTTR and MTBF considerations</li> <li>Maintenance and servicing protocols</li> <li>Reporting and management tools for business managers in controlling operational cost of ownership</li> </ul>
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Portable cell tester  
John Millard/Dr. Kurt Salloux – World Energy Labs

- The Interrogator technology: A brief overview
- Current lead acid battery testing capabilities (voltage, conductance, sulphation, dryout, grid degradation)
- Experience from the Field (Case Studies)



10.30	Q & A	UPS Battery monitoring projects Dave Smith – CellCare Technologies Limited <ul style="list-style-type: none"> <li>Battery monitoring equipment and specification</li> <li>Installation of cell wiring and Interfaces</li> <li>Using installed monitors and interpretation of data</li> </ul>
10.45	Refreshments – Exhibition	

11.15	Session 6	Lithium Based Back-up Solutions Chairman: Herbert Giess – IEC / EN TC-21 Development trends in secondary Lithium batteries Bill Macklin – AGM <ul style="list-style-type: none"> <li>Comparison of key performance characteristics of different battery chemistries</li> <li>New material developments in Li-ion batteries</li> <li>The emergence of Li-ion for high power applications</li> </ul>
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Lithium-ion batteries for stationary applications  
Anthony Green – Saft

- Operating principles and recent developments of lithium ion batteries
- Characteristics relative to industrial applications
- Forecasts on possible costs and realistic timescales

Lithium-Metal-Polymer batteries  
Chantal Robillard – Avestor

- Electrochemical composition and construction of a Lithium-Metal-Polymer battery
- The 24V and 48V battery modules for telecommunication market
- A 125V high power battery for utility switchgear and control system backup

12.15	Q & A
12.30	Lunch

14.00	Session 7	Power and Protection Chairman: TBC Generators integrating power James Beck – Ocktoom <ul style="list-style-type: none"> <li>Emission control using catalytic converters</li> <li>Conformance with Preventative Pollution Guide 2 (PPG2), by September 2005</li> <li>Harmonics affecting generators</li> </ul>
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Comparison between fuses and automatic circuit breakers for computer type loads  
Ian Bitterlin – Emerson Network Power  
A review of the voltage fidelity that a microprocessor needs (hence "why UPS?"), and what happens when a load branch has a short-circuit fault and the effect on the other branches.

The Alaska : BESS The first year of operation of the most powerful battery in the world  
Anthony Green – Saft

- Overview of requirement of Golden Valley Electric Association
- Main components of the GVEA BESS
- Construction and commissioning
- Interfacing issues with the utility network
- Overall experience in the first year of full service

15.00	Q & A	
15.15	Closing Speech	Mike Barkwith
15.30	Refreshments – Exhibition	

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The programme may change due to unforeseen circumstances. Batteries International, CellCare Technologies Ltd. and SPOK Committee reserve the right to alter the venue and or speakers.

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# SPOK

Standby Power Operators Klub

## Conference 2005

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**CONFERENCE DELEGATE PASSES**

27th-28th September (full day)  
Access to the Conference and the Exhibition includes one year free membership to the SPOK £700/€ 995

TUTORIAL SESSIONS  
26th September (14.00-16.00)  
Access to SPOK tutorial sessions £75/€ 110

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**ADMINISTRATIVE INFORMATION**

Standby Power Operators Klub 2 • 27th – 28th September 2005, Manchester, UK

**CANCELLATION POLICY**  
If you cannot attend you must cancel your registration in writing before 1st September 2005 to receive a refund less 10% administration charge. We cannot accept verbal cancellations. Cancellations received on or after 1st September 2005 are liable for the full conference invoice fee. We therefore suggest that you send a substitute to attend in your place at no extra charge.

**CANNOT ATTEND?**  
If you cannot attend please pass this brochure and/or booking

form to a colleague. Alternatively you can purchase the Conference Papers and Documentation folder for £250/ 375. This includes courier dispatch. Special price to academics on request.

**REGISTRATION FEE**  
The conference (only) registration fee includes participation in the conference, lunches, documentation material, which will be distributed during the conference. All bookings are considered binding on receipt of the booking form.

**VENUE**  
International Suite, Jarvis Piccadilly Hotel, Piccadilly Plaza, Portland Street, Manchester, M1 4PH, United Kingdom.

**Accommodation**  
Delegates wishing to book accommodation should ring the hotel on +44 (0)161 236 8414 and mention that they are attending the SPOK conference.

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# SPOK

Standby Power Operators Klub

## Conference 2005



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27th - 28th September 2005, Manchester, UK  
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Find out more about the Standby Power Operators Klub online at [www.spok.biz](http://www.spok.biz)

