

INDUSTRY-WIDE CALL FOR PAPERS!

Deadline for submission of abstracts: 29 February 2012

HYDROPOWER

A F R I C A

4 - 5 September 2012

CAPE TOWN

South Africa



INDEX

1. Invitation to submit your proposal	-	page 2
2. Submission guidelines	-	page 2
3. About the event and target audience	-	page 3
4. Paper topics	-	page 4
5. Advisory Board Member invitation	-	page 6
6. Paper Reviewing Committee Member invitation	-	page 6
7. About the organisers	-	page 7
8. About the host publication	-	page 7

Invitation to submit your proposal

If you have ideas, experiences, products or strategies for the hydropower sector, then this is your chance to spread the word!

ESI Africa's Hydropower Africa 2012 is a niche meeting forum for hydro power managers and specialists, utility CEOs and generation managers, government representatives, financiers and investors, engineers, dam design and construction specialists, environmentalists and consultants.

Top-level speakers from all key industry stakeholders will present their views using case studies, in-depth presentations and on interactive panels.

We invite all those interested in:

- presenting a paper
- facilitating a workshop
- participating in a panel discussion

to submit your proposals now.

Submission guidelines

When making a submission, please ensure that:

- Abstracts are written in English and do not exceed one A4-size page
- Each abstract contains full contact and designation details of the speaker
- The abstract has not been presented before
- The abstract and presentation is of a non-commercial nature
- A short biography (100 words) and a photograph (high resolution; jpg) are included

Presenters are asked to submit these by **Wednesday, 29 February 2012** via e-mail: nicolaas.loretz@spintelligent.com. The abstracts will then be evaluated by the *Paper Reviewing Committee* (see details below on how to become part of this committee) and presenters will be informed of their acceptance on or before **Friday, 30 March 2012**.

Please note that no commercial papers will be accepted. If the abstract is accepted, you will be asked to submit your presentation slides according to a format that will be sent to you. Accepted abstracts, papers and presentations will be published in the proceedings.

Non-vendor companies (utilities, government, academics, NGOs/NPOs): All non-vendor companies/organisations are invited to submit their proposals. For more information, please contact: Nicolaas Loretz at +27 21 700 3555 or nicolaas.loretz@spintelligent.com.

Vendor companies (non-utilities, private companies, manufacturers, consultants): All vendor companies are invited to submit their proposals. Note that preference will be given to sponsoring companies. For more information, please contact: Andrew Dooley at +27 21 700 3531 or andrew.dooley@spintelligent.com.

As the author you commit yourself to presenting the paper at the event, should the abstract be selected by the Reviewing Committee. Speakers have free access to the conference sessions, but are responsible for their own travel and accommodation arrangements and expenses.

About the event

Established in 1996, ESI Africa has become the leading provider of information relating to the African electricity and energy industry, delivering news to the continent and beyond.

With strong quality content and niche information, highlighting generation technologies that work in Africa (for both large and small hydropower projects), Hydropower Africa 2012 will once again facilitate close-knit peer-to-peer networking and information exchange at the highest level.

Now in its 5th consecutive year and co-located with Solar Energy Africa in 2012, this has become Africa's largest meeting of power generation and energy experts that attracts the full generation ecosystem under one roof.

Target audience:

<p>Utilities and IPPs</p> <ul style="list-style-type: none">▪ Utility CEOs and Managers▪ Hydro Managers and Specialists▪ Heads of Generation▪ Plant Engineering Managers / Power Station Managers▪ Project and Procurement Managers▪ Maintenance and Operational Managers▪ Environmental Managers <p>Municipal/Government</p> <ul style="list-style-type: none">▪ Municipal Managers▪ Senior Government Representatives▪ Heads of:<ul style="list-style-type: none">○ International Relations○ Planning and Development○ Energy and Water Affairs○ Environmental Affairs○ Procurement▪ Municipal Managers and Representatives of Mayoral Offices▪ Municipal Project Managers and Engineers▪ Heads of Technical Support▪ Heads of Electricity, Utility, Energy Services <p>Regulators</p> <p>Power Pools</p>	<p>Consulting and Construction Engineers</p> <ul style="list-style-type: none">▪ Hydro construction engineers▪ Managing Directors and Regional Managers▪ Heads of Operations▪ Senior Engineers▪ Project Development Managers▪ Environment Consultants▪ Renewable Energy Experts▪ Dam Monitoring and Safety Specialists <p>Private and Multilateral Finance and Commercial Banks</p> <ul style="list-style-type: none">▪ Fund Managers▪ Heads of Investment, Infrastructure, Energy /Power, Utilities <p>Equipment and service providers</p> <ul style="list-style-type: none">▪ CEOs, MDs, COOs and GMs▪ Heads of Business Development▪ Regional Heads and General Managers for Energy Projects <p>Large Industrial Power Users</p> <ul style="list-style-type: none">▪ Generation/Co-generation Managers and Directors▪ Heads of Energy▪ Project Managers
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Paper topics

Africa update – current activities and potential for development

- Current status and potential for hydropower development in Africa's major basins
- Updates on major projects
- Hydropower plants in arid regions – challenges and successes
- Potential and development of small hydropower projects
- Pumped-storage potential in Africa
- Rural electrification and village hydro
- Small hydro and distributed generation
- Renewable energy regulatory frameworks in Africa and its effect on project development
- Multipurpose dam schemes to accelerate regional development

Project finance: current policies, priorities and activities for hydropower project finance and support in Africa

- Insights into current approaches to project financing
- Guidelines on advancing projects towards financial closure
- Economic aspects of hydro development
- Risk allocation and management
- The role of technical due diligence in project financing and mergers and acquisition transactions
- Investment barriers for development of hydropower projects

Environmental implications – climate change and hydrology

- Changing climatic parameters and its impact assessment on hydropower generation
- Flood management during the construction phase
- Inflow forecasting and optimisation - Decision Support Systems (DSSs) for dams and reservoirs
- Stream-flow prediction based on satellite and in situ measurements for hydropower operations
- The challenges of water resources management in the context of anticipated increase in hydropower generation
- The role of hydropower in sustainable multipurpose water resources development
- Environmental considerations in the planning and feasibility design of hydroelectric projects and EIAs
- Conservation and biodiversity implications of constructing green field power plants

Social and economic impacts of hydropower projects

- Resettlement and social disruption - stakeholder engagements and local consultation best practice
- National multi-stakeholder dialogue around dams and sustainable development
- The implementation and management of social impact assessments (SIAs) – case studies

Engineering, process design and operation

- Project process perspective – assessments, preparation, implementation and operation
- Appropriate dam engineering for hydropower projects in Africa
- Project Management of a large hydropower scheme
- Interface between dam engineering and power engineering
- Application of advanced voltage source inverter (VSI) technology in hydropower plants
- Tunnelling challenges
- Experiences with RCC dams
- New technologies for small hydro
- Micro-hydro for energy recovery in drinking or irrigation systems
- Recent developments in pump turbines
- New developments in and performance characteristics of hydrokinetic turbines
- Turbine flow measurement at intakes
- Maximising hydropower generation within a multi-user water supply system
- Energy generation from current water supply and distribution systems / Hydropower potential of municipal water supply dams

Operation, maintenance and refurbishments

A. Machinery & equipment

- Power supplies for critical generator monitoring and control equipment
- Performance and maintenance of hydraulic machinery in peak load operation
- Turbine operation and maintenance challenges
- Predicting and combating sediment erosion in turbines
- Safety and stability strategies for turbine generator unit operations
- Reducing the risk of cracks in blades
- Synchronous and induction generators for mini hydro power stations

B. Dam management

- Dam management, operation and maintenance
- Digital test system for hydropower plants
- Innovative leakage detection techniques
- Sediment monitoring and management in run-of-river hydropower plants
- The challenge of predicting reservoir sedimentation
- Technologies for the extraction and disposal of sediment from reservoirs
- Sediment bypass tunnel design
- Sediment monitoring technology for turbine erosion and reservoir siltation applications
- Successful sediment handling case studies
- Terrestrial imaging systems for engineering structural monitoring
- Protection of power transformers against explosion

C. Rehabilitation, modernization and upgrade

- Unexpected occurrences during rehabilitation work
- Refurbishment of hydraulic turbines
- Hydropower plant upgrade case studies
- Refurbishment of high head Francis turbines
- Rehabilitating oil-free Kaplan runners

Non-conventional hydropower options

A. Combining hydropower with wind

- Hybrid wind/hydro energy systems / Combined wind - hydro power systems
- Wind/hydro pumped-storage systems: an integrated energy solution / Combined conventional hydropower plants and pumped-storage units to support large wind penetration in electric grids

B. Pumped Storage

- Small pumped-storage power plants and possibilities of their use in the electric power system
- Identification of potential pumped-storage sites
- Sustaining the grid during low voltage ride through / Adjustable speed pumped storage system for electric grid stability /
- Project updates

Invitation to become a 2012 Conference Advisory Board Member

The Hydropower Africa 2012 conference advisory board consists of senior executives from a cross-section of organisations/companies active in Africa's hydro generation sector and includes academics, engineering professionals, consultants etc.

The board's role includes:

- Advising the management team on the latest industry trends
- Providing advice on programme topics and discussion issues
- Suggesting speakers with relevant expertise
- Possibly chairing a session or presenting a paper (not compulsory)
- Assisting in disseminating information about the event
- Assisting with reviewing abstracts for inclusion in the programme

...thus creating an event developed by and for the industry.

Benefits include:

- Acknowledgement on the Hydropower Africa website (www.hydropowerafrica.co.za) where your biography and photograph will be listed
- Free conference attendance (1 free pass)

Invitation to become 2012 Conference Paper Reviewing Committee Member

The Hydropower Africa 2012 paper reviewing committee consists of senior executives from a cross-section of organisations/companies active in Africa's hydro generation sector and includes academics, engineering professionals, consultants etc.

The committee's role includes:

- Reviewing speaker PowerPoint slides and presentations/papers
- Possibly chairing a session or presenting a paper (not compulsory)

Benefits include:

- Acknowledgement on the Hydropower Africa website (www.hydropowerafrica.co.za) where your biography and photograph will be listed
- Free conference attendance (1 free pass)

Please **submit your application** with a short biography (100 words) and a photograph (high resolution; jpg) via e-mail: nicolaas.loretz@spintelligent.com by **Monday, 6 February 2012**. Please indicate your preferred role (Advisory Board Member / Paper Reviewing Committee Member / both).

About the organisers

Spintelligent is part of Clarion Events, a global business-to-business event organiser with offices in the UK, Netherlands, United States, South Africa, Brazil, UAE and Singapore. Spintelligent has established itself as the key strategic information provider to the global metering and utilities industries and as a specialist in African infrastructure development, focusing on power and mining.

www.spintelligent.com



About the host publication

ESI Africa is a leading energy publication, delivering news and information and connecting industry leaders in the power sector. With over a decade of highly skilled research and consulting resources specialising in Africa's electricity supply industry, ESI Africa is distributed quarterly to over 5000 decision makers. The ESI Africa website offers users direct access to integrated marketing and editorial opportunities and is updated with news and information daily. ESI Africa also offers a monthly electronic newsletter, a series of specialised events and exhibitions, and a presence as a critical media partner at industry events globally.

