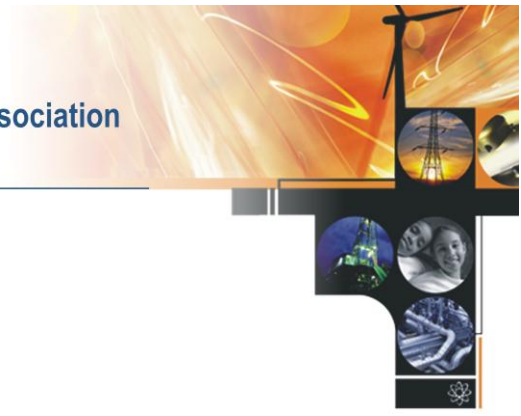




**SANEA**

The South African National Energy Association

Energy People Working Together



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## **SANEA ENERGY AWARDS 2011**

### **Short-listed Candidates**

### **Awards Ceremony & Gala Dinner – 25 August 2011**

## **ENERGY JOURNALISM AWARD 2011**

### **Siseko Njobeni, Energy Editor: Business Day**

Siseko Njobeni was singled out among the very worthy competition in this category for one main reason – his expert absorption of complex subject matter and his balanced, impartial treatment of issues in a diverse industry driven by multiple variables and conflicting interests. No doubt Siseko's well-rounded education (economics and public finance, marketing management, journalism and media studies) and his distinguished work history across a range of industries (including government, the media and the diplomatic corps) contributed to his nuanced grasp of the myriad issues at play in the industry. From government policy to geopolitical factors, through to the environmental lobby, shareholder aspirations and staff issues – he has satisfactorily dealt with all of these, both undauntedly and fairly. We commend Siseko above all for his analytical ability and approach, his honesty and his commitment to the greater goal of growing the industry in equitable, inclusive fashion.

### **Antonio Ruffini, Editor: ESI-Africa**

Having become familiar with the workings of Africa's largest electricity utility, Eskom, where he was employed as an engineer, he later pursued a career in technology and science journalism, which has included a significant focus on the energy sector at specific times. This encompassed the conceptualisation and start up of an energy sector publication (African Energy Journal) in 1999, which was focused on the energy sector in Africa, and which he edited for a year. His interest in the energy sector also came to the fore during another start-up in which he was involved in 2007 (WattNow) which he also edited for a year and which included a number of topics relevant to the energy sector. More recently, it involves his current editorship of a long standing electricity sector publication (ESI-Africa).

## Mike Rycroft, Editor: Energize

A retired professional electrical engineer, Mike Rycroft joined EE publishers in 2008 as the Editor of Energize journal. Energize is a highly respected technical journal that focuses on the “heavy current” sector of the electrical spectrum. Before he joined EE, Mike contributed several articles on energy to the company for publication, and authored a number of technical papers on the subject. Some of these were presented at international conferences. Mike was inspired to take up journalism after taking early retirement in 2004. The inspiration came from the comments of the editor of a national newspaper who was the guest speaker at an EE customer event. He said that there was a huge gap in the media for people who understood technology and could write, as *“People who understand technology can’t write, and people who can write don’t understand technology.”*

## **ENERGY EDUCATION AWARD 2011**

### Energy Research Centre, University of Cape Town, Andrew Marquard

The Energy Research Centre of the University of Cape Town undertakes a wide range of work, much of it with a focus on delivering public benefits - taking forward the mission of the Energy and Development Research Centre, as it was mandated as we entered the 21st century and carried into the restructuring that merged the EDRC with the ERI (Energy Research Institute). Civil society at all levels has benefitted not just from commissioned outputs, but from the generous dedication of time and egalitarian sharing of knowledge and insights that continues to characterise the participation of many staff in public discourse and stakeholder processes, including strategic deployment of post-graduate students. The production and dissemination of the SNAPP Tool is an exemplar of academic innovation to build capacity for participatory development planning and governance in the energy services field, in this instance supported by the Living Planet Unit of WWF South Africa.

### Prof Dieter & Henning Holm, Omnibus Engineering

The life passion of both Prof Dieter Holm and Henning Holm as educators was demonstrated in the success of this training program. With each announcement of a new session, it was fully booked within days. The training helped to:

- Inspire decision makers, architects and engineers about the potential of solar water heating;
- It demonstrated to over 700 hundred people the advantages and risks of solar thermal systems and gave many confidence to implement project;
- The measurement and improvement part of the project saved electricity of more than 320 MWh/annum;
- The implementation of social solar water heating systems demonstrated the success of simple programs and added over a 1 000sqm collector to SA, saving over 700MWh/annum;
- The training was done at cost for the participants; and
- The training will be extended in the coming years.

## **ENERGY PROJECT AWARD 2011**

### Exxaro Resources

Exxaro's housing development project at Lephalale, Limpopo Province is nominated for a SANEA Energy Project Award as an innovative energy efficient housing development project model. The first completed houses were handed over to the occupants in 2010. Exxaro's commitment to energy efficiency in its operations has carried through to its socio-economic development initiatives and in the process is making a significant contribution to South Africa and the country's energy environment. The Lephalale housing project demonstrates multiple energy efficiency building methods that can be applied at any development project. The project has had an enormous impact in the area both in terms of the housing development itself, but also in terms of infrastructure and skills development. Exxaro has played a leadership role in the community in demonstrating how such energy efficiency initiatives can save money for people and continues to influence on-going social responsibility initiatives with regard to energy efficiency.

### Dr Anthony Keen, Individual

A Cape Town family reduced their electricity consumption 71% by installing a solar water heating system and other simple measures including an innovative swimming-pool energy-reduction system. They went on to install a rooftop photo-voltaic generating system, with full energy management and recording features. They explored how best to utilize solar, battery and grid power for the house. Taking the house essentially off the grid helped the grid, but the family had to learn to live by the sun for their electrical loads. It was simpler to use photovoltaic power when it was available and grid power when it was not, with the batteries used only when grid power failed. Solar PV worked well in Cape Town, with a 20% capacity factor averaged over the year. The project has aroused much interest and has spread knowledge about energy saving, solar water heating and solar power generation, which was the purpose of keeping careful records. Cape Town is now using the system to study the impact of feeding surplus electricity into the local distribution grid.

### SANERI, Dr Tony Surridge

The Atlas for Geological Storage of Carbon Dioxide in South Africa was launched by the Minister on 10 September 2010. This was the culmination of two years of work initiated by SANERI and undertaken by the Council for Geosciences with the assistance of the Petroleum Agency of South Africa and financially supported by PetroSA, Anglocoal, Eskom, Sasol and SANERI. The Atlas has indicated sufficient storage potential to sequester carbon dioxide in geological formations rather than releasing it into the atmosphere and thus contribute to global climate change. This public/private partnership produced the baseline document for all future CCS activities in South Africa. Already the Atlas has led to two projects that will investigate a suitable location to undertake a Test Injection, the next milestone for CCS in South Africa.

### Sasol Synfuels

Sasol Synfuels (Pty) Ltd operates a synthetic fuels and petrochemicals plant at Secunda, South Africa. The production of synthetic fuels from coal is an energy intensive process. Current electricity demand at the Secunda synthetic fuels and petrochemicals plant is some 1,300 MW. Approximately 800 MW of the 1,300 MW total demand of the Secunda plant is imported from Eskom via the South African national electricity grid, with the balance supplied by on-site coal-fired self generation using 10 x 60 MW steam turbine generators (STGs) fed by 17 coal fired boilers. Most of the electricity imported from the national grid is generated using coal fired plant. The Sasol Synfuels combined cycle gas turbine (CCTG) project substitutes some of the electricity imported

from Eskom with electricity generated on site at Secunda using natural gas (NG) as fuel. This is done by using two 100 MW gas turbine generators (GTG) that at first operated in open cycle mode. The system is being extended to operate in combined cycle mode with the installation of two 145t/h heat recovery steam generators (HRSG) on each GTG, which will generate steam from the energy in the exhausts of the two GTGs. This steam will be fed into available existing steam turbine generators capacity to generate 68MW. The project therefore supplies about 268 MW effective capacity using:

- 2 x 100 MW gas turbine generators (GTGs) (In operation since June 2010)
- 2 x 145 t/h heat recovery steam generators (HRSG) (In Operation from End June 2011)
- 68 MW steam turbine generator (STG) capacity (unused capacity from 10 x 60 MW existing plant)

### Standard Bank

Kayema Energy Solutions designed, installed and commissioned a solar-heat pump hybrid system at Standard Bank's head office complex in Johannesburg. The system, commissioned in November 2010, is expected to reduce electricity demand by around 500 000kWh per year. According to James Shirley, General Manager of Kayema, Standard Bank took the initiative to fund the project themselves, as part of their drive to take a strong leadership role in SA and reduce the electricity demand of their buildings. The results of this project will have far reaching effects, both in terms of energy savings, and as proof to other organizations that the technologies work well pay for themselves. Having set the example on a corporate level, the Bank have subsequently rolled out a scheme allowing special rates for staff members wishing to install solar water heaters at their own homes.

## **ENERGY AWARD 2011**

### Dr Duncan Clarke, Global Pacific & Partners

With 30 years in global energy, and founder of *Global Pacific & Partners*, a leading private Advisory Practice in worldwide petroleum, Duncan Clarke has been advisor to numerous companies and Governments on Six Continents. Author of foundation research on world oil from the early 1980s, covering strategy, competitors, National Oil Companies and exploration in Africa, Asia, Latin America, and MidEast, he conducts annual Strategy Briefings on private/state oil companies worldwide, notably the landmark *Scramble for Africa* held in South Africa. The firm, based in Johannesburg, is the preeminent organiser of management events in African oil and gas (its annual Conferences held for 18 years in Cape Town, Johannesburg, Nairobi, Lagos, and elsewhere). His work has shaped ideas, strategy and deal-flow within Africa's petroleum business over many years, and he is a worthy recipient of the prestigious *SANEA Energy Award* recognising this role and contribution to Africa's oil-gas and energy industry.

### Prof W H van Zyl, University of Stellenbosch

The laboratory of Prof van Zyl is well established in the microbiology and biochemistry of plant degrading enzymes and he is research leader in South Africa with significant international recognition in the recombinant production of these enzyme in Bakers' yeast for biofuel production and filamentous fungal (*Aspergillus niger*) for application in food and feed industries. Prof van Zyl has established collaboration with researchers in Europe and the USA, particularly in the field of biomass conversion to bioethanol and has several joint international patents in these fields. He gained international recognition as research leader in the development of recombinant yeast for

biofuel production from total plant biomass. In 2007 Prof van Zyl was awarded the prestigious Senior Chair of Energy Research (CoER) in Biofuels and other clean alternative fuels by the South African National Energy Research Institute (Pty) Ltd (SANERI) and is currently heading up a Biofuels Research Team. In this capacity he is steering a large research programme towards the development of advanced second generation technologies (both biochemical and thermochemical processes) for the conversion of total plant biomass to biofuels. The CoER team also (i) put emphasis on human capital development with a strong scientific and engineering training, (ii) interacts with South African experts from industry, businesses and NGOs, and (iii) tries to stay abreast with latest technologies and research through extensive international collaboration networks. Prof van Zyl's group generated several patents in the early 2000's that are part of the technology package of Taurus Energy (<http://www.taurusenergy.eu/EN/>), listed on the Stockholm Stock Exchange in Sweden. Since 2006, Prof van Zyl's group is also conducting research for Mascoma Corporation (<http://www.mascoma.com>) in New Hampshire, USA towards commercializing cellulosic yeasts for bioethanol production. Taurus Energy and Mascoma Corporation are both listed 30th and 8th on the Biofuels Digest 2008 listing of 50 hottest biofuels companies in the world and Mascoma Corporation 10<sup>th</sup> in the 2009 listing (<http://www.biofuelsdigest.com/>).