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Top energy ranking for Three Cities Bantry Bay Suite Hotel

Abstract

Three Cities Management introduced the National Energy Barometer Survey (NEBS) to its portfolio of hotels so that an annual review of energy trends in each hotel could be analysed whilst instilling a sense of responsibility at each property from an energy management and sustainability perspective. Three Cities Bantry Bay Suite Hotel, a Three Cities Management hotel, received the top ranking for the Hotels category in the 2012 Utility Year NEBS.

Introduction

Three Cities Management was formed in 1988 as a hospitality group offering specialized services in the tourism industry. Today the Group manages and markets over 25 quality tourism and leisure properties and has a strong network of sales and marketing specialists based in Johannesburg, Durban, Cape Town, United Kingdom and Germany.

Three Cities Management established an Energy Strategy in 2009. Apart from this a number of properties have adopted 'environmental' certification programmes as well as individual 49M pledges (an Eskom initiative). This has resulted in awareness throughout the group although there is a way to go in terms of fully incorporating all levels of staff functions. The barometer offers relative comparisons allowing Three Cities Management to focus on the key areas i.e. identify and target anomalies from a Group perspective.

Three Cities taking energy efficiency action

Almost 20 years ago heat-pump technology was installed at the Royal Hotel, previously one of the Three Cities Management portfolio hotels—

Three Cities Bantry Bay Suite Hotel in Cape Town, overall top ranked energy efficient building in the 2012 National Energy Barometer Survey

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already recognising the importance of efficient hot water generation long before the energy efficiency drive was in full swing.

Three Cities Management has subsequently in 2011 started a preliminary audit program at selected properties, followed by an energy reporting programme for the group set up in 2012 which is currently under further development.

Many projects have been implemented and initiatives are ongoing, according to Murray Burger, Group Engineer, of Three Cities Management, 'Equipment control according to occupancy limiting wastage in unoccupied sections, are done through, for example, building segmentation and individual room control. Measurement & Verification (M&V) of various technologies is underway for integration including, heat-pumps, geyser optimisation, lighting, occupancy control and HVAC systems, and the installation and rollout of a high resolution advanced metering infrastructure at various properties.' Full commitment to the Eskom IDM program – including comprehensive energy efficient lighting installations and the low-flow showerhead program, has been instrumental in making many reductions possible. Across the board these initiatives are proving beneficial, and have ensured that Three Cities Bantry Bay Suite Hotel occupy the top ranking in not only the comprehensive Three Cities portfolio, but nationally in the Hotels Category of the 2012 NEBS.

Apart from the Eskom standard product program, Three Cities was also involved in Eskom's mass rollout of low-flow showerheads – in fact Three Cities went a step further and also introduced low-flow aerators on standard faucet outlets as a water and energy management measure. In total over 700 low-flow showerheads were installed throughout the group.

Development with Old Mutual Group Properties of the pioneering Three Cities Gateway Hotel in 2010 included many energy efficiency interventions.

Across the board energy efficiency initiatives are ongoing, such as:

- Laundry control system – integration of the OTEK cold-water ozone dosing system including comprehensive M&V during initial trial period at the Three Cities Riverside Hotel, Three Cities Peninsula all-Suite Hotel and Three Cities Alpine Heath Resort.
- Pump optimisation at Three Cities Royal Palm and Three Cities Gateway Hotel.
- Heat-pump integration at the Three Cities Peninsula all-Suite Hotel including all ten Jacuzzi's and the main heated pool.
- Efficient lighting technology installations as Three Cities Le Franschhoek Hotel, Three Cities Royal Palm, Three Cities Riverside Hotel, Three Cities Alpine Heath Resort and Three Cities Peninsula all-Suite Hotel.
- Chilled water link between the Gateway Centre and Three Cities Gateway Hotel.

Behavioural improvements and awareness

By monitoring the portfolio's performance, Three Cities has been able to track its ongoing progress through its continued commitment to NEBS. All initiatives have been based on an overall focus of integrating environmental/sustainability standards and certifications into the management of the portfolio.

Challenges

Capital investment is always challenging in any industry, but Three Cities provided sound proposals and product verification, resulting in investor buy-in. 'Old habits are always difficult to break,' said Murray Burger, 'but through effective communications and on-site management various initiatives were adopted and are now part of daily operations.'

Murray continues, 'Without doubt the most significant challenge is funding large-scale turnkey energy efficiency capital intensive projects. Fortunately CAPEX planning has led to improved uptake and incentives will aid in the implementation of energy efficiency initiatives when returns are borderline.'

Conclusion

NEBS offers a relative comparison allowing Three Cities Management to focus on the key areas, for instance identifying and targeting anomalies from a Group perspective.

When asked whether energy savings initiatives implemented at the hotels have made any difference to the bottom line, Murray's answer was convincingly, 'Without any doubt, especially with Measurement & Verification (M&V) to prove it in as many instances as possible. Apart from general operational improvements in line with tariff structures, the initiatives themselves have made a significant impact across the Group.'

With such an active recognition of the value of energy efficiency, Three Cities Management continues with projects where efficient lighting installations are still underway, control systems are being integrated and the properties are encouraged to implement their own internal energy management programs in line with behavioural improvements and general staff awareness. Three Cities Management will continue driving energy efficient operations.

In conclusion, Murray said when asked whether he would recommend participation in the NEBS annually: 'If they are serious about making an energy efficiency impact and benefiting from their efforts then participating in the National Energy Barometer Survey is a must.'

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Clicks using benchmarking to monitor energy saving initiatives

Introduction

The Clicks Group saw the National Energy Barometer Survey (NEBS) as an opportunity to collate energy use information for entry, whilst being able to see what the Group's energy baseline is, so that it can improve its performance on energy-saving projects year-on-year. This effort awarded Clicks with the top performer in the Head Office NEBS category for the 2012 utility year. NEBS's focus is on new and existing buildings and whether they are occupied and operated in an energy-efficient manner.

The Clicks Group head office building in Woodstock, Cape Town has 1 200 employees that use the building. Besides being a facility that has existed since 1960, which is according to the latest records available, the building has still showcased that it can be a top-performer by ensuring efficient use. The Clicks Group head office has measured up to industry standards by achieving the top energy efficiency score in the NEBS 2012, winning this category.

'With the energy industry being complex at the moment, due to energy-efficient products developing at a very fast rate – and not knowing which products are most effective, it becomes a challenge to implement the most appropriate equipment for your building,' said Siglinda Losch – Sustainability Facilitator for The Clicks Group. 'This way, a yearly check is done in order to be able to see if the technology being implemented works and gives back the savings as anticipated.'

Initiatives

Employee engagement contributes to the success of the energy saving initiatives at Clicks. Staff members are encouraged to save energy at home and are regularly informed about company energy-saving initiatives. The Group has an online sustainability report where initiatives like these are communicated. Customers are also informed about these initiatives through the Clicks ClubCard Magazine whenever there is an opportunity.

'Luckily, the building has been designed in such a way that energy savings or switch-offs are done from a central point and are adapted to the behaviour of the employees in the building,' continues Losch. Some of the other savings initiatives implemented, that have delivered positive results, include fitting all equipment, like computers and printers with power-save modes. The new bathrooms in the building are all fitted with motion sensors and LED lights. Building lights are switched off whenever there is an opportunity to do so.

A project currently being undertaken is the installation of two heat pumps to replace all the current geysers that are being removed.

Challenges

To overcome challenges, Clicks found it best to install products in certain areas of the business, measure the performance of the products and evaluate the savings achieved, before further deployment to the rest of the building, once they are proven to deliver financial savings.

The greatest challenge for further energy saving initiatives has been the capital expenditure needed for implementation, and this is almost a fact for most organisations. Technology is expensive and implementing great savings comes at a great cost, so measuring performance assists with justifying capital expenditure.

Conclusion

Contemplating the value of the exercise Losch said, 'The Energy Barometer provides us with a clear indication of how we are doing against other buildings. In some instances, we tend to implement technology without knowing how we are performing. This initiative gives us a clear indication that the Group is performing well within the sector.'

NEBS participation takes 2 minutes the register, 10 minutes to complete the whole survey, and there is no charge. This will add tremendous value to facility managers, building owners, and energy and utility manager's challenges to monitor building performance every year against other in a similar industry.

To see where your hotel, shopping centre, car dealership, airport, general office building, head office, retail store or hospital ranks, enter your building in the 2013 NEBS, logon to www.energybarometer.com.

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Clicks Group Head Office Building, top ranking building in the National Energy Barometer Survey for the 2012 utility year in the head offices category

PHILIPS

Philips' breakthrough energy-efficient LED lighting solutions contribute to Kenya's energy saving ambitions

Royal Philips, the global leader in lighting, showcased its newest LED technology by illuminating the Kenya National Archives in Nairobi as part of the fifth consecutive pan-African Cairo to Cape Town roadshow. The stunning light makeover of this iconic Kenyan monument beautifies the central business district of Nairobi, provides energy savings of up to 80%, and supports the ambitions of the Kenyan government to be more energy efficient.

The digital LED technology creates more light, while making it more focused and controlled. The state of the art lighting system will allow the Kenya National Archives to minimize light spill and directs light exactly to where it is needed. The system will also simplify the maintenance schedule as the innovative LED lights have an extended lifetime of up to 100 000 hours compared to only 20 000 hours with conventional lighting solutions. Philips has provided all aspects of the LED lighting at the building, including design consultation, management of the installation with local contractors, programming, commissioning and overall project management.

Greening the Kenya National Archives with energy-efficient LED lighting innovations

'It is a moment of pride to see our efforts transform the Kenya National Archives into such an impressive spectacle', says Mary Kuria, General Manager, Philips Lighting East Africa. 'Using a state of the art lighting system, the façade and masts of this iconic monument now have lights complementing its architecture and adding to its glory. Moreover, with the energy-efficient LED lighting, the National Archives has not only become more colourful, it also has become a great deal greener. The beautification underlines Philips' commitment to contribute to Kenya's energy efficiency ambitions. The people in Nairobi can look forward to many more nights of splendour as the majestic monument flaunts its new look.'

According to the United Nations), energy used in buildings in Africa is estimated at 56% of the total national electricity consumption. As part of the part of Kenya's Vision2030, the government aims to green the economy to stimulate energy efficiency. As in many countries, electricity demand is highest in the evenings in Kenya. According to the Kenyan Ministry of Energy and The Kenya Power & Lighting Company Ltd, efficient lighting technologies offer the cheapest and fastest option to reduce this evening peak in electricity demand. By giving the Kenya National Archives a light makeover, Philips demonstrates that LED lighting technology can save energy while enhancing the beauty of a city. It reconfirms Philips' commitment to contribute to energy efficiency in Kenya.

Kenya National Archives

21st century light technology sheds new light on Kenya's National Archives

Philips is placing its state-of-the-art LED technology at the service of the iconic Kenya National Archives. Situated in Nairobi's central business district, the archives holds and preserves all public records and archives in Kenya. The Kenya National Archives is a museum and an art gallery, all rolled into one. The building was constructed back in 1931 by the National & Grindlays Bank. From 1970 through to 1978, it was owned by Kenya Commercial Bank. It was later acquired by the Kenyan government for the National Archives. The use of Philips' LED lighting will further enhance the beauty of this iconic building and will ultimately contribute to the tourism value of the Kenya National Archives.

Advantages of the LED lighting installed at Kenya National Archives

The advantages of using LED lighting installed at the Kenya National Archives include:

- The LED lighting system reduces energy consumption by up to 80% compared to conventional lighting.
- A far longer lifespan: around 100 000 hours compared to 20 000 hours with conventional lighting.
- A reduction in maintenance costs: LED luminaires require little maintenance.

The fifth pan-African Cairo to Cape Town Roadshow

Nairobi was the fifth destination on Philips' annual flagship Cairo to Cape Town Roadshow (from 14th April to 3rd September 2014) which focuses on two key challenges facing Africa today - the need for energy-efficient lighting and the revitalization of African healthcare infrastructure. Philips has committed to illuminating one iconic monument in every city visited during the roadshow with the latest LED technology. As the number one LED lighting company in the world, Philips will now provide a stunning lighting makeover of historic, well-recognized monuments in African cities.

The Roadshow made its way across seven countries and ten cities in Africa.

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www.unep.org/greeneconomy/AdvisoryServices/Kenya/tabid/56352/Default.aspx
www.usea.org/sites/default/files/event-presentations/WangombeIhuthia PPT.pdf

Guidance on data quality for energy performance measurement and verification

The Global Superior Energy Performance (GSEP) initiative was launched in 2010 by the Clean Energy Ministerial (CEM) and International Partnership for Energy Efficiency Cooperation (IPEEC). Through GSEP's Energy Management Working Group (EMWG), government officials worldwide share best practices and leverage their collective knowledge and experience to create high-impact national programs that accelerate the use of energy management systems in industry and commercial buildings.

A newly published guidance document titled: Energy Performance Measurement and Verification – Guidance on Data Quality was published in June 2014. South Africa is a member of this multi-country initiative, the GSEP Energy Management Working Group that developed this guidance.

The guidance document provides practical guidance for professionals involved in measuring and verifying energy performance in commercial buildings and industrial facilities. Measurement and verification (M&V) practitioners can use the guidance to enhance data accuracy, isolate the impacts of energy-saving measures, and increase investor and stakeholder confidence in the reported results. This unique document covers all critical aspects of energy data M&V, including minimum reporting measures, formats, statistical methods, data quality levels, cost implications, and strategies for managing uncertainty. The document also serves as a resource for those who require robust data for energy management systems or ISO 50001 certification.

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UNIVERSITY OF WESTERN CAPE
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Sector skills plan for the energy and water sector

Professor Sulaiman Gool, School of Business and Finance, University of the Western Cape, has developed the Sector Skills Plan for the Energy and Water Sector for a number of years. He wanted to include a greater section on the profile of the Energy Sector, its challenges and a section on the situational analysis of the sector.

He is also doing the profiling and mapping study of the South African Oil and Gas sector. A number of companies in the Energy sector will be included in the profiling exercise.

If you are interested in exploring this initiative, then please contact him.

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CIRCLE in Sub-Saharan African programme

The Climate Impact Research Capacity and Leadership Enhancement in Sub-Saharan Africa programme (CIRCLE) is an initiative of the UK's Department for International Development (DFID) to develop the skills and research output of early career African researchers in the field of climate change and its local impacts on development. The programme will run from 2014 to 2018.

The programme will offer one-year Fellowships to support research proposals on the impact of climate change in Africa, with up to 100 fellowships funded over three years. Fellowships will be available for 40 post-Masters researchers and 60 researchers who hold a PhD. The fellowships will be specifically targeted at early career African researchers nominated by their home institutions in Africa and hosted by African universities and research institutions. Both Home and Host Institutions will receive support and training to develop their institutional research capacity, with an emphasis on supporting early career researchers.

The University of Cape Town (UCT), through the African Climate & Development Initiative (ACDI), has been shortlisted as both a Host and Home Institution under the CIRCLE programme. The CIRCLE Thematic Areas are: (i) water; (ii) energy; (iii) agriculture; (iv) political economy; (v) health and livelihoods.

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Data on the impact of load shedding in South Africa

Rebecca Weber is a journalist working on the South Africa section of a book about solar energy and is trying to locate good data about the economic impact of load shedding in South Africa. The data she needs is either a good estimate of total costs in 2008, or more recent projected expenses.

Readers are requested to contact her should they be able to assist.

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Innovative waste water treatment technologies focused on energy production and nutrient recovery

Christ van Schaijk of Aquest Colsen's presentation on 18 July forms part of the Department of Design, the Dutch contribution to Cape Town's World Design Capital 2014 programme and aims to connect South African businesses to Dutch counterparts with the aim of fostering mutually beneficial long-term relationships.

In this presentation, the latest developments in municipal waste water treatment were presented, and focused around energy production through efficient conversion of organic matter to biogas. Can a waste water treatment works be energy neutral or a nett energy producer? The latest developments in this field were provided, both from a theoretical background, and the experiences with pilot research and full scale installations from the Netherlands.

In addition, the latest developments in the treatment of sludge were looked at, which is released in waste water treatment installations and new trends and possibilities in anaerobic digestion of sludge. The advantages of treating waste water sludge at thermophillic conditions were demonstrated, resulting in higher energy production and less residual sludge. The technologies which have been developed in the Netherlands around recovery of fertilizers from urine were demonstrated. Instead of being only a waste product, urine can be seen as a source of nutrients, which have a residual value. The theoretical background and show pilot and full scale results of these technologies was also highlighted.

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Map of solar in South Africa reveals key development trends

A map showing all of the photovoltaic projects awarded under the government REIPPPP program in South Africa has been revealed.

The map produced by PV-Insider has for the first time collated information from the first 3 rounds of the REIPPPP about the project size, the location and the developer into one document. The map plots all 33 PV projects awarded under the REIPPPP onto a colour coded map of South Africa according to solar resource concentration.

Most projects under the REIPPPP are concentrated around Kimberley and Upington – the areas which have the highest GHI concentration level. Many developers have been active in the REIPPPP and the map features projects from key developers, such as Enel Green Power, SunEdison, Scatec Solar, Acciona, Momentous Energy and more.

Total PV allocation in the REIPPPP has a cumulative capacity of over 1 400MW – about 4 250 football pitches worth of solar panels! The government program means that South Africa is one of the world's hottest solar growth markets, attracting investment from all over the world.

The map was produced in conjunction with PV Project Development Africa 2014 (9 - 10 September, Johannesburg). The event focused on the development of the South African PV market within the government REIPPPP program. There was also a discussion about new opportunities in commercial, residential and industrial markets.

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New WWF Studies

The World Wide Fund (WWF) has recently launched three new renewable energy studies. The first is a detailed finance review of the Renewable Energy Independent Power Producer Procurement Programme (REIPPP). It is a first study where specific focus has been on the financing aspects, especially foreign currency risks, and hedging of REIPPP projects and some insights on innovative financing models that can be introduced in future to fund a larger uptake of renewables.

Then a second study is looking at whether the renewables ambitions can be scaled up. They think a 19% RE Integrated Resource Plan (IRP) target by 2030 is feasible. The title of the paper is RE Vision 2030. The third is a study on corporate uptake of renewables outside of the REIPPP process and the indication of some interesting trends in this area.

A study on the implications of a higher RE target on the grid and other costs is being commissioned, which is linked to more granular work that they are doing on embedded and distributed generation models.

In the next 6 months, they will have two new reports – the first looking at the role pension funds can play in the renewables investment space and they will have a detailed study on the impacts of the REIPPP on broad base black empowerment and community benefits. It will be a critical review.

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New renewable energy books

The following new titles have been added to the Earthscan Expert Series, a major new book series providing clear, practical information for people who want to work with environmentally-friendly low-carbon technologies. From specific handbooks to more general guides, each highly illustrated title is essential reading for professionals keen to expand their skills base and take advantage of the low carbon revolution.

NEW TITLES:

1. Energy Management in Buildings
2. Energy Management in Industry
3. Pico-solar Electric Systems
4. Solar Cooling
5. Anaerobic Digestion – Making Biogas – Making Energy (due out later this year).

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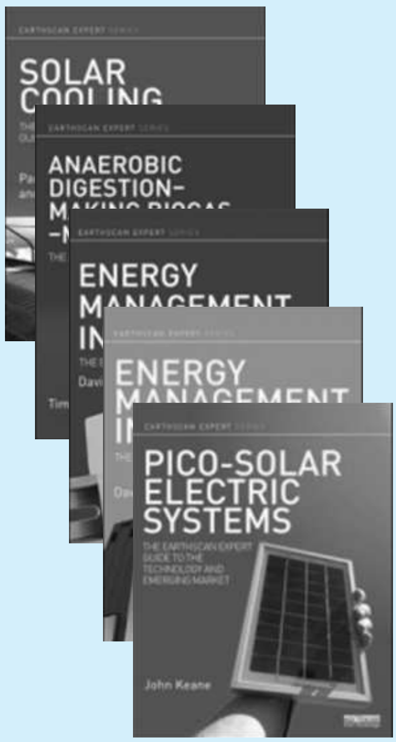

Investment environment key to closing Africa's energy gap, says Standard Bank

Standard Bank and General Electric today reaffirmed their commitment to Africa at a power financing roundtable held in Washington DC

Standard Bank, Africa's largest lender by assets, and General Electric reaffirmed their commitment to Africa at a power financing roundtable held in Washington DC on 5 August. The partnership sees both parties aiming to bridge the power financing gap in Africa and forms part of the US Africa Leaders' Summit, the largest gathering of African heads of state and government as well as key stakeholders to visit Washington on any one occasion.

The strategic partnership has already seen both companies commit to a $350 million financing agreement aimed at improving access to power infrastructure in Africa. Africa needs to add an extra 300 gigawatts (GW) of power generating capacity over the next 15 years in order to meet demand which is expected to grow at an average annual rate of 3% over the next two decades. According to the International Energy Agency, sub-Saharan Africa requires more than $300bn in investment to achieve universal electricity access by 2030.

Mr Sim Tshabalala, Chief Executive Standard Bank Group, says solutions to meet Africa's growing energy demands will only be possible once developers, governments and funders reach a common understanding of the risks, pricing and regulatory imperatives needed to facilitate the required investment.

'There are significant opportunities and a viable investment case for governments across Africa to provide the lion's share of long tenor debt funding given the solid returns on investments in power generation and distribution.'

Mr Tshabalala says 'Standard Bank works with investors to offer them a sustainable and structured model to finance power and infrastructure projects appropriately. Ongoing strategic partnerships with stakeholders like GE, allows us the opportunity to provide access to energy across the continent. In tandem, we are also playing an active role in supporting the policy reform process that should facilitate additional private sector investment in power.'

Africa's inadequate power infrastructure is a serious constraint to sustained growth and creates significant transaction costs for firms operating on the continent, which is home to 15% of the world's population yet produces just 3% of the its energy output.

Decades of inadequate investment in infrastructure along with a lack of policy clarity and poor planning by regional governments means that many sub-Saharan African countries continue to battle inadequate power supply. Power outages cost more than 5% of gross domestic product (GDP) in Malawi, Uganda and South Africa; and between 1 and 5% of GDP in Senegal, Kenya and Tanzania.

While the continent has seen heavy investment in the natural resource sector, global investors are quickly realising the potential benefits of investments in other sectors such as power and infrastructure. Financial institutions such as Standard Bank are pioneering innovative funding solutions to help close the energy gap on the continent.

'Standard Bank's view is that there are many financing options on the table, if the economic opportunity is considered seriously,' said Mr Tshabalala. 'For example, new generation planning requires a complete financial model. Critical to success is the need for greater certainty in terms of creating environments conducive to investment which then makes it easier to attract the required investment into the sector, especially within emerging markets.'

He cautions however, that in terms of pricing, there are still many hurdles to overcome. One example is where

power tariffs are set below the replacement cost of production, which then acts as a disincentive to investment in new plants.

'The bottom line is that African governments need to take these harsh economic realities into consideration and advance sector reforms,' said Mr Tshabalala. 'Only then will they boost their access to capital markets and better position themselves to fund the large-scale power developments that are crucial to their economic futures.'

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Nuclear project benefits will accrue to harbours and shipping industry

Casting back a few years, South African ports have handled some remarkable cargoes for which the shipping industry brought special ships onto the South African trade. Some will recall those heavy lift ships *Adventurer, Tactician, Custodian* and others that Harrison Line built in the 1960s to carry railway locomotives, power station machinery, giant pumps and turbines for the spate of hydro-electric projects in southern Africa, while Safmarine had SA van der Stel whose curious heavy lift gear could lift 250 tons and *SA Vergelegen* with her 250-ton Stulken derrick.

Among the project cargo landed in South Africa was the Safmarine-managed Richigata project that entailed dismantling an aluminium smelter in Niigata, Japan, and shipping the parts in reverse order to Richards Bay where it was re-assembled. Besides the ships that carried the smelter parts, the project involved masses of logistics work, ranging from forwarding and clearing procedures and documentation, to complex stevedoring operations to load and land the parts, as well as hiring massive road-haulage trucks to move the parts to the construction site.

And new challenges await local shipping personnel. Awaiting confirmation of a South Africa-Russia agreement to build nuclear power stations will generate significant debate, particularly as this potentially-crippling deal worth mega-dollars seems to have been rather opaque, even to some of the country's eminent nuclear scientists. However, should the various power station projects actually get off the ground, benefits will accrue to the harbours and to the wider shipping industry. As happened during the industrial and mining boom in the 1960s, most of the machinery, parts for the reactors, masses of electronic equipment and switchgear will be imported, bringing to local ports more of those interesting project cargo carriers that have replaced the multi-purpose ships with heavy lift capacity. Saldanha Bay will probably be the import port for much of the equipment for the second plant, said to be built at Koeberg.

The movement of nuclear material and waste will trouble the green lobby. In contrast to the hullabaloo, road closures and blue-light convoys surrounding the landing of material for the Koeberg power station in Cape Town was a more relaxed approach when it was loaded in a European port.

We should not count our gulls before they hatch as much will happen before the first spade hits the ground for another nuke plant! The green lobby and red pyjama brigade will be asking many questions.

With acknowledgements to the Cape Times

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Africa's oil and gas sector continues to show substantial growth, despite regulatory uncertainty and corruption, according to PwC Review

PWC'S 'AFRICA OIL & GAS REVIEW' ANALYSES WHAT HAS HAPPENED IN THE LAST 12 MONTHS IN THE OIL & GAS INDUSTRY WITHIN THE MAJOR AFRICAN MARKETS

The challenges facing oil & gas companies operating in Africa continue to be diverse and numerous fuelled by fraud, corruption, theft, poor infrastructure and a lack of skilled resources, among others. Regulatory uncertainty and delays in passing laws are severely inhibiting sector development in many countries around the continent. 'Some key players have delayed or cancelled projects until further clarity can be sought in their respective jurisdictions as they cannot move forward with doubts given the long-term nature of the needed investments,' says Chris Bredenhann, PwC Africa Oil & Gas Advisory Leader

'As a result of the number of challenges in the market, meticulous planning is required,' adds Bredenhann.

PwC's 'Africa oil & gas review' analyses has happened in the last 12 months in the oil & gas industry within the major African markets. The survey draws upon the valuable experience and views of industry players in Africa, including international oil companies operating on the continent, national oil companies, services companies, independent oil organisations and industry commentators, to provide insight into the latest developments affecting the industry.

The Review shows that the oil & gas industry in Africa continues to show substantial growth, with new hydrocarbon provinces developing at a significant pace. 'Large gas finds in Mozambique and Tanzania have caused the world to take note of East Africa as an emerging player in the global industry,' says Bredenhann.

Africa has proven natural gas reserves of 502 trillion cubic feet (Tcf) with 90% of the continent's annual natural gas production of 6.5Tcf coming from Nigeria, Libya, Algeria and Egypt.

Developing the business

The major challenges identified by organisations in the oil & gas industry have remained largely unchanged with the top three issues of uncertain regulatory framework, corruption and poor physical infrastructure also identified as the biggest challenges in 2010 and 2012.

While uncertain regulatory frameworks remain a concern across the industry, Nigeria was one of the few countries where respondents did not consider it to be of the top-three challenges to developing the industry. According to the Review, this suggests that companies have accepted the lack of ratification of the Petroleum Industry Bill (PIB), which has been in the process of implementation for six years.

Chris Bredenhann, PwC Africa Oil & Gas Advisory Leader

In other countries where uncertainty exists concerning the development or revision of energy policies, such as South Africa, DRC and Tanzania, respondents indicated that the uncertain regulatory framework was a significant impediment to developing an African oil & gas business.

The inadequacy of basic infrastructure also ranked much higher in the current Review than in prior years. Respondents are concerned about the lack of infrastructure in developing countries and the negative consequences this may have for their businesses, especially those operating in Nigeria, Namibia, Madagascar and South Africa. Taxation issues have also become a concern to companies across Africa as uncertain taxation as well as new tax laws have created an additional financial burden for companies.

Financing and investing

Respondents indicated that their companies will largely be relying on their own cash flows to fund their own businesses over the next 12 months. E&P companies are funding their operations differently from the other industry players with less than 40% of funding coming from cash flow. This can largely be attributed to blocks and regions yet to come into production. For E&P companies, farm-outs are the second-most common form of financing in Africa, with around 100 farm-out deals being made across the continent during 2013.

E&P companies also stated that

equity funding was more difficult during the course of 2012 and 2013; however, it has started to pick up momentum as investors look to Africa as a good place to invest despite a difficult year in the market. The industry has become one of the biggest sectors for merger and acquisition activities in Africa. On average, transactions worth USD1 billion occurred every 17 days in the oil & gas industry during 2013, with more activity expected as new licence rounds are opened up and regulatory uncertainty is removed.

Combatting fraud and corruption

No less than 90% of respondents indicated that their companies have anti-fraud and anti-corruption programmes in place. Of these, 54% believe that the programme is very effective at preventing or detecting fraud and corruption. Six percent of organisations indicated that their anti-fraud and anti-corruption programmes were ineffective, the same level as the 2012 research. More worrying is that 9% of the companies stated that they had no programmes in place at all.

Safety, health, environment and quality

Organisations identified safety, health, environment and quality (SHEQ) as the most significant factor that would affect their companies' businesses over the next three years. 'This is not a surprise as companies recognise the environment and human health and security as a pressing issue which, when viewed in conjunction with regulatory changes and poor infrastructure, will have resulted in their carefully assessing the risk and financial burden of working in certain areas,' adds Bredenhann.

Developing local skills and socio-economic growth

The mandate for local skills development has become a concern for businesses operating in the oil & gas sector throughout Africa. In 2012, the survey showed that 25% of the total workforce at respondents' companies comprised expatriates. This year, the proportion of expatriates has dropped significantly – down to a mere 10.6% of the workforce surveyed.

Fortunately, most companies have been able to fill middle to senior management as well as specialist technical roles with locals from their host nations. Over 70% of companies acknowledged that skills, people training and development are among their top-five strategic priorities over the next five years. Bredenhann says: 'This shows the importance that industry is placing on local content initiatives and the significance that skills development has on executive-level agendas.'

Operational excellence

New, small and agile, E&P, service and other companies as well as large multinationals should continue to find opportunities to operate efficiently and effectively, reduce cost and create stakeholder value through operational excellence. Insufficient planning was noted as the most important internal factor hindering operational excellence for a business in the oil and gas industry. In Africa the reduction in the number of surprises, the need for good governance and realistic schedules were deemed necessary for cost management and improved operational efficiencies.

Sustaining growth and development

Governments and national oil companies play a significant role in sustaining growth and development in Africa's oil & gas sector. Many African countries have a host of stringent laws and regulations that create challenges for companies and international investors to overcome. 'Operational planning therefore needs to be carefully thought out, taking into account demand growth, infrastructure requirements, investment needs and potential, long-term strategies and the role of government if companies and countries want to sustain growth and development in Africa,' concludes Bredenhann.

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African oil and energy sector fuelling global investor growth, says DHL

WHILE EXPLORATION ACTIVITY IN AFRICA IS AT ITS HIGHEST LEVEL EVER, THE CONTINENT REMAINS LARGELY UNEXPLORED

While Oil and Gas activity in West Africa is nothing new, it is the activity in East Africa which is creating a stir amongst exploration companies and of course, their suppliers.

This is according to Steve Harley, President, DHL Energy Sector, who says that while Angola and Nigeria have always been the most notable producers within the Sub-Saharan region, more recently, significant gas discoveries in Tanzania and Mozambique, has led to East Africa now receiving its share of attention from global oil companies and potential investors.

'Oil discoveries in Uganda and Kenya have also added to the excitement in the sector as new players look to enter these markets, including some of the largest independent and international oil companies, otherwise known as the super majors, who are now also witnessing the potential in this region.'

He says that in addition to the developments in East Africa, both Namibia and South Africa are also on the radar of investors within the sector. 'South Africa in particular is receiving much attention, mostly because of the potential of shale gas in the Karoo, but also because it has a long and largely unexplored coastline, off which many believe large hydrocarbon fields may exist. As a result of the region's potential, there are several offshore drilling exploration expeditions currently being planned in South Africa by the major oil companies.'

'While exploration activity in Africa is at its highest level ever, the continent remains largely unexplored', says Harley. PwC's Africa Oil & Gas review titled: From promise to performance released in June 2013, revealed that Africa currently supplies approximately 12% of the world's oil and boasts untapped reserves estimated at 8% of the world's proven reserves.

'With the ever-increasing need for energy in Asia and in particular China, many of these countries are positioning themselves strategically in Africa as they seek to tap into new resources to support their growing energy needs.'

'Despite the significant developments in the renewable energy sector, the world's dependency on hydrocarbon-fuelled energy resources will continue for many years to come. According to the BP Energy Outlook 2035 report, global energy consumption is expected to rise by 41% from 2012 to 2035, and that 95% of that growth in demand is expected to come from the emerging economies.'

Steve Harley, President, DHL Energy Sector

'Across the globe, existing and previously significant oil reserves are being depleted and so the need and desire to explore new geographies and develop new technologies to reach and extract difficult oil and gas reserves becomes ever more apparent. These new technologies are being developed at a rapid rate, which is allowing previously challenging operations and inaccessible deposits to be economically extracted and produced.'

He adds that DHL is also beginning to witness many exploration companies, as well as the oilfield service companies, outsource non-core functions within their own supply chains. 'This is creating opportunities for small and medium enterprises to provide products and services required to support oil and gas operations locally. The knock-on effect can therefore be game-changing for any single country or region in terms of economic development. The importance of this outsourcing and localisation trend therefore cannot be underestimated,' says Harley.

The company is also witnessing stronger relationships and increased levels of collaboration between African countries as they seek to share risk and jointly benefit from a united approach and vision. This is particularly evident in East Africa in countries such as Kenya, Uganda, Tanzania and South Sudan. A recent example of collaboration in Mozambique is the expansion of oil and gas company Sonangol, from Angola.

Harley says that there is no sign of the activity within the sector slowing down. 'The increased activity within the sector bodes well for the continent in general, and the fact that the company is already seeing positive economic effects of the new investments across the continent is extremely encouraging.'

'At DHL, we work closely with our customers to optimize their complex supply chains and manage logistics costs better, so that companies can focus on their core activities. And, our team applies the same exacting HSSE and compliance standards as the industry itself. We have been operating in Africa since 1978 and our unrivalled footprint is only rivalled by the size of our air network – we are the only logistics company to operate our own aircraft in Africa which currently consists of 14 dedicated aircraft, servicing all corners of the continent. When it comes to the oil and gas sector, it rings true, that Nobody Knows Africa like we do,' concludes Harley.

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meeco clean energy services and solutions

BDO Zimbabwe and meeco: new partnership for mutual benefits

THE MEECO GROUP STARTS COOPERATION WITH BDO ZIMBABWE - A MEMBER FIRM OF BDO INTERNATIONAL, ONE OF THE LARGEST ACCOUNTANCY NETWORKS

On the 17th of July, a memorandum of understanding was signed between OurSun Energy (Private) Ltd. and BDO Tax & Advisory Services, Zimbabwe, binding accordingly and respectively as partners the two parent companies: The meeco Group and BDO Zimbabwe. In the context of this collaboration, BDO Zimbabwe will help OurSun to develop its activity in Zimbabwe by offering Clear Advisory and Asset Management Services of The meeco Group in partnership with the Zimbabwean unit of it, OurSun Energy.

BDO Zimbabwe was founded in 1981 by Mr Ngoni Kudenga, being the first black Chartered Accountant in Zimbabwe. The firm was then known as Kudenga & Co Chartered Accountants. In 1996, Kudenga & Co joined BDO International and thus gained international presence and expertise. In 2010, BDO adopted a single brand name for all its member firms, and thus BDO Kudenga & Co became known as BDO Zimbabwe. BDO Zimbabwe's real strength lies in its ability to exploit the BDO global network but at the same time remaining a truly local and independent firm by keeping its founding values at the heart of its mission.

Simba Mhuriro, who was responsible for negotiating this partnership, expresses his excitement 'We are pleased by the prospect of exploiting BDO's expertise and to start working with a partner such as this one, strongly renowned for building long-term and close personal customer relationships. We are sure of the future success that this opportunity promises'.

In the near future, OurSun and BDO Zimbabwe will work together as a team to satisfy a great variety of customers such as governments, investors and companies thanks to worthwhile renewable energy Advisory and Asset Management services in Zimbabwe.

The meeco Group was consolidated in 2000 and oriented its main focus towards the energy sector. With world headquarters located in Zug, Switzerland, the group currently has over 50 employees working across 4 continents. Thanks to a structured but flexible approach based on its core competencies, meeco has delivered over 320 MW of clean, renewable energy solutions across four continents. The meeco Group accomplishes its mission by providing project developers, investors, governments, and private businesses with the services necessary for timely financing, installation, and operation of clean energy assets.

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Swala Oil and Gas (Tanzania) Plc Debut on the Dar es Salaam Stock Exchange

THE FIRST PUBLIC OWNED OIL AND GAS COMPANY IN EAST AFRICA

Swala Oil & Gas (Tanzania) Plc ('Swala' or 'the Company') listed on the Dar es Salaam Stock Exchange ('DSE') on 12th August, becoming the first public owned Oil and Gas Company in East Africa. The company is the 20th to list on the DSE and the 2nd to list under the Enterprise Growth Market ('EGM'), an equity market specifically intended for Small and Medium Enterprises (SMEs) and start-ups.

The company listed on the EGM with 99 million shares after a very successful Initial Public Offer ('IPO') which raised 6 650 000 000 Billion TZS. This IPO was oversubscribed by nearly 4 million shares and has raised nearly 2 billion TZS more than the maximum subscription of 4.8 billion TZS.

The momentous event took place at the DSE offices and was graced by His Excellency the former President of the United Republic of Tanzania, Ali Hassan Mwinyi who rang the bell at 10:30 am EAT to officiate the event, the traditional symbol signifying the opening of Swala's first trading day.

Former president Mwinyi asserted that Swala's oversubscription shows a great investment appetite amongst Tanzanians in investing in their country's economy and a growing confidence in the national Stock Exchange.

Mr. Moremi Marwa, CEO of the DSE remarked, 'In October of 2013, the DSE introduced the EGM segment at the Exchange whose main objective is to enable Small and Medium Sized business access to the capital market. Swala is the second company to list on EGM within a year of its launching. Listing on DSE comes with transparency, good corporate practices and proper disclosures. Swala has made the right decision to join the family of companies aiming at being open and transparent to their shareholders, the public and the world at large'.

Chairman of Swala, Mr. Ernest Massawe further added, 'Today's listing on the EGM marks a new chapter for our company and another step forward in realizing our ambition to achieve a successful venture based on private and public partnership. We wish to extend our thanks to all those who have made this possible: the regulators, our advisors and, most importantly, our new investors. The company is now ready to commence its 2014 seismic programme and we look forward to fruitful results. I am confident that Swala, as a public company, will be able to capitalize on its achievements to date and continue to deliver for all its stakeholders'.

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His Excellency the former president of the United Republic of Tanzania, Alhaji Ali Hassan Mwinyi, rings the bell officiating the first trading day of Swala Oil & Gas Tanzania Plc on the Dar es Salaam Stock Exchange. With him is Swala CEO, Mr. David Mestres Ridge (Left) and Swala Chairman, Mr. Ernest Massawe (Right)

PHILIPS

Philips strengthens Nigeria's ambition to improve energy efficiency

- **Nigeria seeks to expand access to electricity to 75 per cent of the population**
- **Lagos' historic 'National Theatre building' illuminated with innovative, energy-efficient lighting during Philips' fifth consecutive Cairo to Cape Town Roadshow**

Royal Philips (AEX: PHIA, NYSE: PHG), the global leader in lighting, unveiled a stunning lighting makeover of the well-renowned Nigerian National Arts Theatre in Lagos, one of the most iconic buildings in the city, as part of its fifth consecutive pan-African Cairo to Cape Town roadshow. Philips has installed its latest range of RGB (red, green, blue) LED luminaires around the National Theatre complex, emphasizing the beauty of the structure and cutting energy consumption by up to 80% as compared to the existing conventional lighting.

Philips' concept is focused on highlighting the significance of this iconic building as an architectural masterpiece and as a source of national pride to Nigeria, and in so doing assist with the buildings energy saving performance. The new Philips lighting will transform the theatre façade, while illuminating the distinctive, memorable and eye-catching mass and structure. The visual lighting concept will provide the building with an imposing look in the Lagos skyline.

LED lighting solutions improve energy performance in public spaces

'The spectacular lighting of Nigerian National Arts Theatre demonstrates the incredible advances that are being made in the efficiency and beauty of LED illumination', says Abdallah Hussein, CEO, Philips West Africa. 'LED lighting innovations provide completely new opportunities to policy makers and governments to enhance city beautification and at the same time contribute to energy saving. We are extremely proud to see how Philips' lighting solutions are contributing to improving the attractiveness of this stunning architectural marvel while reducing energy consumption in Nigeria'.

The National Arts Theatre is a cultural landmark located at Iganmu, in the heart of Lagos. It is the primary centre for the performing arts in Nigeria and, as such, is considered a monument and a celebrated icon within Lagos. Covering an area of about 23 000 square meters and standing well over 31 meters tall, the multipurpose National Theatre was established for the preservation, presentation and promotion of Arts and Culture in Nigeria. It is a sophisticated building which acts as a rallying point for both Nigerian and international artistes wishing to share experience with their Nigerian counterparts.

The National Arts Theatre is already a popular attraction in the city, with thousands of visitors annually. The spectacular Philips LED lighting is likely to further improve the tourism value of the monument.

Philips has used a total of 48 LED luminaires, combining red, blue and green in each single luminaire, which provides an endless spectrum of colours to highlight the features of this architectural masterpiece. There are also 30 LED white light projectors, which highlight the pillars of the theatre.

Abdallah Hussein, CEO, Philips West Africa

The advantages of the LED lighting installed at National Arts Theatre, Lagos include:

- Compared to almost 14.5 kW of the older installation, reducing energy consumption by up to 80%.
- Dynamic lighting that makes it possible to adjust the atmosphere of the site (change of intensity and colour).
- A longer lifespan of the installation: around 100 000 hours compared to 20 000 hours with conventional lighting.
- A reduction in maintenance costs: LED luminaires require less maintenance (there is no need for lamp replacement).

Philips strengthens Nigeria's ambition to improve energy efficiency

Nigeria has set a clear growth and development agenda in its Vision 20:2020. It seeks to become one of the 20 largest economies in the world, raise living standards, expand access to electricity to 75 per cent of the population and decouple growth from dependence on petroleum. Philips' innovative LED lighting solutions tie in greatly with Nigeria's ambition to improve energy performance in public spaces.

'We're delighted with the project Philips has completed at the National Theatre of Arts here in Lagos,' states Mr. Mallam Kabir Yusuf, General Manager and CEO of the National Theatre. 'To think that such an iconic building in the Lagos skyline now has a state-of-the-art digital lighting technology for the façade is just wonderful. Now the world class and environmentally friendly look of the building ascetically from outside at night will complement the top class contribution of performers and artists inside the building, as well as the breath-taking renovations that have recently taken place in and around the big edifice.'

The fifth pan-African Cairo to Cape Town roadshow

Lagos is the fifth stop on Philips' annual flagship Cairo to Cape Town roadshow (from 14 April to 3 September 2014) which focuses on key challenges facing Africa today - the need for energy-efficient lighting and the revitalization of African healthcare infrastructure. Philips has committed to lighting up and illuminating iconic monuments in every city visited during the roadshow with the latest LED technology. As the number one LED lighting company in the world, Philips will now provide a stunning lighting makeover of historic, well-recognized monuments in African cities.

The Roadshow will make its way across seven countries and ten cities in Africa.

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Renewable Energy Professional training going carbon neutral

The Energy Training Foundation (EnTF) will be hosting its second Certified Renewable Energy Professional (REP) training programme at the carbon neutral Hotel Verde in Cape Town from 14-17 October 2014. A tour of the hotel explaining the green aspects will be hosted on the 13th of October followed by a welcoming networking function where delegates and their guests can view exhibits followed by a short welcoming speech and relevant speakers in the industry.

REP will be presented by Dr Stephen Roosa from the USA, and EnTF is running a train the trainer programme during this time to create local lecturing expertise in REP. REP is a copyright training course of the Association of Energy Engineers (AEE) in the USA, EnTF is the sole approved training partner of the AEE for the Southern African region. AEE's qualification programmes are recognised in 90 countries, and are unique in that experiential background is recognised for obtaining Certification, as well as having to pass the AEE examination with 70%. No prior learning is necessary to attend REP. REP carries 3 CPD credits with ECSA.

To maintain Certification with the AEE, three-yearly re-application for Certification is required. Thereby AEE ensures its Certified members are up to date on the latest knowledge, education and information in the industry – and being listed on the international database that is easily accessible for HR managers which provides professionals in the renewable energy industry with a world-renowned qualification.

REP provides the ideal platform to stimulate thinking on the very many levels of alternative methods to generate energy whilst keeping costs down, considering renewing and re-using of sources. It is not a technically challenging course, but content heavy with information that can be referred to and built on during a career in renewables. Therefore, the EnTF chose Hotel Verde as the venue for the next REP course in Cape Town as the innovation for greening at the hotel is in line with what is advocated in REP.

Hotel Verde was built by owners Mario and Annemarie Delicio. It is the Delicio family's vision and philosophy of, 'Looking after our world we live in and handing it over to our children in a responsible manner,' that has been created a team of experts dedicated to finding alternative concepts and angles to look at energy, water and waste reduction.' Hotel Verde is not hailed as Africa's greenest hotel for nothing. Platinum accredited by international recognised LEED, every aspect of the hotel is aimed to be as sustainable as possible - literally from below the ground up. From initiatives like a grey water plant, water tanks, void formers, a plant room, a green roof, wind and PV generation, an eco-pool, rain water harvesting, energy efficient lighting and use of natural lighting, chalk boards in the conference room, to name but a few.

Should you elect to reside at Hotel Verde, by BON Hotels, during the REP course, you can even assist in generating energy by visiting the gym as gym equipment used generates energy used within the hotel. REP delegates can therefore attend at Hotel Verde, at hotel rates within the range of other luxury hotels in Cape Town.

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ENERGY TRAINING FOUNDATION SINCE 2002

Standard Bank
Also trading as Stanbic Bank

Momentum gathering in Power Africa initiative across Africa

STANDARD BANK GROUP, AFRICA'S LARGEST LENDER BY ASSETS, HAS RENEWED ITS COMMITMENT TO THE POWER AFRICA INITIATIVE

Standard Bank Group), Africa's largest lender by assets, has renewed its commitment to the Power Africa Initiative, a multi-stakeholder project driven by US President Barack Obama, which aims to double access to power in Africa by significantly accelerating investment in the sector over the next five years. The US government has committed more than US$7 billion dollars in financial support to Power Africa over five years.

Power Africa aims to add more than 10 000 megawatts of cleaner, more efficient electricity generating capacity, and in the process electrifying at least 20 million new households and commercial entities with on-grid, mini-grid, and off-grid solutions. The six initial partner countries - Ethiopia, Ghana, Kenya, Liberia, Nigeria and Tanzania - have set ambitious goals to boost their power generating capacity with the ultimate aim of enhancing energy security, decreasing poverty and fostering economic growth.

'We are seeing an increasing pipeline of power projects across sub-Saharan Africa,' said Mr Sim Tshabalala, Chief Executive of Standard Bank Group. 'In 2013 we committed to arrange funding of at least $150m of debt in the near term across the Power Africa countries, while more recently that amount has risen to over $400m, principally in Kenya and Nigeria, with smaller transactions in Ghana and Tanzania.'

Standard Bank is using its extensive balance sheet and on-the-ground presence across 20 markets across sub Saharan Africa to help finance projects under the Power Africa initiative, while at the same time actively leading the policy reform process required to facilitate increased private sector investment in Africa's power sector. The bank expects more than $1bn in commercial projects to be realised across the six Power Africa partner countries by 2018, and as much as $5bn when one includes the rest of sub-Saharan Africa.

'Standard Bank will strive to arrange or underwrite at least half of the debt required for these projects,' said Mr Tshabalala. 'As such, our commitment to Power Africa is to help fund an additional $600m of debt in the Power Africa countries through 2018, taking our total since joining the initiative a year ago to $1bn, and another $2bn across the rest of sub-Saharan Africa over the same timescale.'

The Ghana Power Compact (GPC) is the largest US Government transaction to date under the Power Africa banner. The GPC takes a system-wide approach to Ghana's energy challenges with six projects across three areas: distribution, generation and access to energy.

The GPC also supports Ghana's efforts to mitigate climate change by funding major energy-efficiency initiatives and improving the investment climate for renewable energy. At the heart of the GPC is a strong commitment from the Government of Ghana to change the laws and regulations needed to transform its power sector and put it on a path to profitability and sustainability.

The Millennium Challenge Corporation (MCC) will invest up to $498m over the next five years, to support the transformation of Ghana's energy sector, helping the country provide a safe, reliable source of power to households and businesses. The Government of Ghana will contribute an additional $37m, bringing the total investment to $535m. This initial investment is expected to catalyse at least $4.6bn in additional private sector energy investment and activity from American firms in the coming years.

'Ghana is one of Africa's most dynamic and exciting economies and the GPC will make a significant contribution towards putting the country on a sustainable long-term economic growth path,' said Mr Tshabalala. 'Standard Bank will use its presence in Ghana and the rest of the continent to further support the Power Africa Initiative as well as other power projects across the continent.'

(from left to right) Dr Donald Kaberuka President of AfDB, David Mark Rubenstein co-founder and co-chief executive officer of The Carlyle Group and Mr Sim Tshabalala, Chief Executive of Standard Bank Group, during the panel discussion at the African Leaders Business Forum)

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Site usage reports for the *Journal of Energy in Southern Africa*

These are the statistics available so far for the journal on the Scientific Electronic Library Online (SciELO) South Africa platform.

Journal requests summary – as at August, 2014

	number of requests			
start date	*home*	*toc*	*Articles **	*other*
July 24, 2013	2103	733	6044	677

* Number of times *JESA* articles have been viewed via the SciELO SA platform

Most visited issues

This is measured by access to the table of contents, abstracts, html articles and PDF articles.

nr. of requests	*issue*
1913	Vol.24 No. 2 May 2013
1779	Vol. 24 No. 1 February 2013
1406	Vol. 24 No. 3 August 2013

Source data list

year	*no. of issues*	*no. of articles*	*no. of granted citations*	*no. of received citations*	*average articles per issue*
2014	2	20	496	3	10.00
2013	4	33	687	15	8.25
total	**6**	**53**	**1183**	**18**	**8.83**

10 most viewed articles

nr. of requests	article reference
353	KLUNNE, Wim Jonker. Small hydropower in southern Africa - an overview of five countries in the region. J. Energy South. Afr., 2013, Vol. 24, No. 3, p.14-25
312	CHAMOLI, Sunil. Exergy analysis of a flat plate solar collector. J. Energy South. Afr., 2013, Vol. 24, No. 3, p.08-13.
299	STAFFORD, William, COHEN, Brett, PATHER-ELIAS, Simisha et al. Technologies for recovery of energy from Wastewaters: Applicability and potential in South Africa. J. Energy South. Afr., 2013, Vol. 24, No. 1, p.00-00.
251	MULAUDZI, Sophie T, SANKARAN, Vaithianathaswami and LYSKO, Meena D. Solar radiation analysis and regression coefficients for the Vhembe Region, Limpopo Province, South Africa. J. Energy South. Afr., 2013, Vol. 24, No. 3, p.02-07.
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216	BRADNUM, Chris. The Manica Charcoal Stove Project. J. Energy South. Afr., 2013, Vol. 24, No. 2, p.02-15.
213	ZIUKU, Sosten and MEYER, Edson L. Implementing building integrated photovoltaics in the housing Sector in South Africa. J. Energy South. Afr., 2013, Vol. 24, No. 2, p.76-82.
206	BOTHA, Frikkie, DOBSON, Robert and HARMS, Thomas. Simulation of a syngas from a coal production plant coupled to a high temperature nuclear reactor. J. Energy South. Afr., 2013, Vol. 24, No. 2, p.37-45.
203	BVUMBE, Tatenda J and INAMBAO, Freddie L. Operational evaluation of the performance of a solar powered absorption system in Pretoria. J. Energy South. Afr., 2013, Vol. 24, No. 3, p.26-32.
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Book review

Palz, Wolfgang. 2014. *Solar power for the world. What you wanted to know about photovoltaics.*
Pan Stanford, 2013. Hardback. $29.95. Print ISBN: 9789814411875 eBook ISBN: 9789814411882

The title says it. No less than 41 of the world's top personalities – including Franz Alt, Karl W Böer, Michael Eckart, Hans-Josef Fell, Adolf Goetzberger, Stefan Krauter, Hermann Scheer, to name just a few – contributed to this 774 page lavishly illustrated book.

Well, the book is actually about the PV revolution: its visionaries, pioneers, early business adopters, detractors, opponents, success stories and worldwide lessons learnt.

Wolfgang Palz's introduction stresses the phenomenal technical, social and legislative changes that have taken place in the last few years, showing the linkages between the semiconductor world, LED, PV, communication and democratisation of power generation. 'It has been shown for many countries that areas available on the existing buildings are more than enough to provide, when equipped with PV, all electricity needed in the country.' While Germany leads with a per capita PV installation of over 400W, he expects China to lead in the area production.

The technology leadership of the US in developing PV for space travel is contrasted with the actions of the Ronald Reagan administration. The life stories of the great global pioneers, written by themselves make fascinating reading. Hermann Scheer and Hans-Josef Fell describe the ups and downs of the successful German Feed-in-Tariff in vivid terms, including the devious moves by monopoly utilities and their lobbies. This is a remarkable piece of history showing governments in cahoots with big business and its vested interests, while ignoring the voters' needs and wishes.

Monica Oliphant presents the narrative of the International Solar Energy Society interwoven with personalities like Farrington Daniels and Adolf Goetzberger, founder of Fraunhofer ISE in Freiburg.

Michael T Eckard, ACORE President does not mince his words: '...[T]he people at the World Bank were sandbagging the study and setting op the outcome for failure'. His experiences in South Africa in the years 1997-2002 are quite illuminating. With reference to the Department of Minerals and Energy's solar home concession scheme, he writes: 'The whole enterprise of concessions that our Shell-Eskom joint venture spawned ground to a messy halt.'

'My last effort in South Africa was to rescue $900 000 of funding that the US government had given to the South African government to renewable energy development but went unused.' He proposed an $18 million revolving fund to finance PV in rural areas for 'productive uses' of energy. It was approved by all the relevant parties including the DBSA and ready to go, awaiting the formal approval of the DME Deputy Minister. 'With considerable flourish, the Deputy Minister with 6-8 staff in the room, folded her arms and said: 'No! You will not do this. You will not help those banks loan the money to my people. That money belongs to my people and was taken from them over the years by those banks. No, you will give the money to me and I will take care of it myself!'

Eckart left in silence. Years of work had been wiped out. On a holiday visit in 2008 he was '...saddened to see that forces of bureaucracy and corruption had mired the solar PV strategy into doom.'

On the more positive side is the story how he advised Hermann Scheer to extend the REFIT from 5 to 20 years.

Harry Lehmann discusses realistically updated scenarios showing Germany can phase out nuclear and have 100% RE by 2050, while reducing GHG proportionally. Interestingly, as a result of energy efficiency and other measures, the power consumption is expected to fall from 45 TWh to 25 TWh. 'There is no need for nuclear power' and '...The restructured system will not result in higher costs...'

In summary, a fascinating book, brimming with a wealth of material and presented in an entertaining way.

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Energy events 2014–2015

NOVEMBER 2014

3–5

WINDABA 2014
Cape Town International Convention Centre, Cape Town, S. Africa
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E-mail: Kirsten@windaba.co.za

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AFRICAN EXPLORATION SHOWCASE
Glenhove Conferencing, Melrose, Johannesburg, South Africa
Contact: RCA Conference Organisers
Tel: +27 11 487 2260/ 3819
E-mail: robbie@rca.co.za

17–21

ENERGY AND SUSTAINABLE URBAN DEVELOPMENT IN AFRICA
Graduate School of Business, University of Cape Town, Cape Town, South Africa
Contact: Heidi Tait / Sandra Jemaar
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Website: www.cpd.uct.ac.za

DECEMBER 2014

1–5

THE FUTURE ENERGY MIX MODELLING SCHOOL
London, United Kingdom
Website: www.greenpowerconferences.com

JANUARY 2015

3–31

3RD SOUTHERN AFRICAN YOUNG SCIENTISTS SUMMER PROGRAMME
South Africa
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21–22

LIGNOFUELS 2014
Madrid, Spain
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