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Firms take up eco challenge

Local companies in tune with global demand to sustain the business environment and reduce carbon emissions, writes ALF JAMES

MANY South African organisations are making significant progress in taking up the challenge to reduce greenhouse gas emissions and move towards greater energy efficiency, with 74 of the JSE's top 100 companies responding to the 2010 Carbon Disclosure Project (CDP) in which about 4 500 of the world's largest corporations were surveyed.

"This suggests that, notwithstanding short-term concerns and the pressures associated with the economic downturn, climate change remains sufficiently high on the South African corporate agenda," says Jonathon Hanks, of Incite Sustainability, authors of the 2010 South African CDP report.

The report says climate change issues appear increasingly to be integrated in companies' governance activities. Of the 74 respondent companies, 68 report having board committees or executive bodies with responsibility for climate change, and 36 provide incentives to management for achieving climate change goals.

Shireen Naidoo, director of KPMG Climate Change and Sustainability Services, says that KPMG has seen an increasing number of requests from companies to have their carbon emissions independently assured.

"This points to the need for companies to have accurate information in the public domain, as well as a baseline for setting reduction targets. Investors have emerged as a key group in motivating change in the businesses within which they have an interest."

SA's chemical sector is reducing its own emissions through improving processes and developing innovative products and technologies that create a net emission reduction along the value chain, says Dr Laurraine Lotter, executive director of the Chemical and Allied Industries' Association (CAIA).

She says SA's chemical sector has reduced the energy intensity of production (based on electricity use) significantly, improving energy efficiency by 25% from 2003 to 2009.

CAIA is the custodian in SA of Responsible Care, a global initiative by the chemical industry to improve safety, health and environmental performance. At a local level, Responsible Care signatories are assisted in the practical implementation of environmental management systems, including energy efficiency and carbon footprinting and keeping abreast of relevant legislation.

Lotter says last year CAIA Responsible Care won the green supply chain award in the category Best Project up to Rim for the Responsible Care carbon footprint guideline, which assists companies about to embark on a carbon management programme, and those looking to improve on existing measures, in formulating and implementing effective strategies.

"CAIA works to develop and implement a climate change response that puts SA on a low carbon growth path to meet international standards, while addressing local development imperatives. The transition to a low carbon, resource-efficient economy is a global environmental and economic imperative. Companies that demonstrate leadership will benefit enormously from staying ahead of legislation that is likely to include mandatory standards for energy efficiency, emission regulations and monitoring and reporting," says Lotter.

Local company MiX Telematics has launched a MiX carbon offset initiative that helps fleet operators to take responsibility for their carbon footprint.

MiX Telematics says it has become carbon neutral and is submitting a voluntary response to CDP 2011 to disclose its CO_2 emissions for climate change analysis.

"The road transport industry is responsible for 18% of global CO_2 emissions," says Brendan Horan, GM sales and marketing at MiX Telematics. "Considering this statistic and also that we service the fleets in this industry, the decision to get involved in carbon offsetting came as a natural step towards sustainability. Although carbon offsetting is not compulsory it is in our best interest to help secure a healthy future for our business and our customers' operations, the surrounding environment and the community."

World Heritage Site Maropeng, which has more than 250 000 visitors to the Cradle of Humankind a year, continually re-evaluates measures to reduce its environmental footprint.

Mark Fouché, environmental and maintenance manager at Maropeng, says an attraction the magnitude of Maropeng needs to commit to preserving the environment around it to ensure sustainability.

"From the start Maropeng has been environmentally focused and we look at innovative ways to reduce our wastage. We believe it is our responsibility as custodians of the past also to be ambassadors for the future.

"Maropeng's heritage environmental status is currently silver and we are already engaged in a strategy to achieve gold status," says Fouché.

An exciting aspect of Maropeng's green strategy is an ozone wastewater purifications system at the Sterkfontein Caves, which uses ozone from the atmosphere to accelerate the breaking down of solids by bacteria and also to sterilise water. It was designed to replace Sterkfontein's septic tanks and provide a far more eco-friendly solution to waste management in the area.

"This new initiative at Sterkfontein Caves, as well as a series of complex wetland systems that process impurities in water allowing it to be reused for irrigation purposes, proves that we are well under way to achieving our green goals, although they need to be seen as parts of a long-term project," says operations manager Zanomsa Zozi.

"We believe Maropeng needs to set an example of how to care for the environment if we hope to teach others how to do it," he says.

Lanseria Corporate Estate is an industrial hub that is intent on environmental sustainability. According to a comprehensive environmental assessment by global construction and management consultants Turner & Townsend, the estate has offset its carbon footprint for the next 15 years.

The business park is being planted with indigenous vegetation, including 4 900 trees, to please the eye and to pay the development's carbon debt. Using South African specifications for the absorption of carbon by trees, the 78,73 tons a year carbon emissions from the estate's annual activities will be negated by the 96 tons a year of carbon dioxide sequestrated by the lush landscaping, says Jurgen Erhart, of Lanseria Corporate Estate.

These impressive figures are based on research conducted by the University of Pretoria, which concludes that "the average urban tree will gain 500kg of carbon over a 15-year period, with a 60% survival rate", according to the Turner & Townsend report.

The development also has the most modern wastewater works in Gauteng, a joint venture with neighbouring Lanseria International Airport. Treated water is returned to the environment for irrigation and other grey water uses, which should result in substantial water savings at the estate.

Lighting accounts for about 55% of the estate's footprint and various street lighting strategies are used to keep environmental and financial costs down.

Erhart says a recent study at Michigan State University in the US found that a green-certified work habitat results in a 60% decrease in allergies and asthma in staff and a 30% drop in absenteeism.

Greater access to daylight proved a factor because it cuts the need for artificial lighting and makes the environment more welcoming.

The park has light-coloured roofing materials to limit surface reflection, which the report estimates will reduce the estate's cooling requirement substantially and equate to offsetting an equivalent of 2 970 tons of carbon dioxide a year.