Minding the gap

MORE OF THE JSE'S TOP 100 COMPANIES ARE COMMITTING TO CARBON EMISSIONS CUTS BUT THERE'S STILL A GULF BETWEEN WHAT HAS BEEN PROMISED IN THE LATEST CARBON DISCLOSURE PROJECT AND WHAT'S REQUIRED BY SCIENCE

BY LEONIE JOUBERT

The eyes of the world were on SA in December last year when environment ministers and government technocrats from across the globe came together for another round of the protracted negotiation efforts to draw up a universal law aimed at tackling the causes and consequences of climate change. The question for many local observers was whether the UN Framework Convention on Climate Change Conferences of the Parties (COP) – then in its 17th occasion of the process – would make a difference in terms of how domestic business is grappling with the idea of planning for a carbon-constrained future.

One way of mapping attitudes within business sectors is by means of the annual voluntary Carbon Disclosure Project (CDP). The CDP is an organisation based in the UK that works with 551 investors from around the world – valued at a collective $71 trillion – to push for transparency on corporate greenhouse gas (GHG) emissions and set targets to reduce those emissions. In 2008 the National Business Initiative (NBI) and sustainability consultants Incite Sustainability teamed up to bring the CDP to SA, targeting the top 100 JSE-listed companies.

It's too early to show whether COP 17 has influenced corporate reporting on the CDP (this might only be captured in the 2012 report, scheduled for release in early November this year) but there was nevertheless bullish growth ahead of the COP last year, in terms of responses to the 2011 CDP reporting period: 83 out of the 100 targeted companies responded, up from 74 voluntary respondents in 2010, 68 in 2009 and 59 in 2008. The year-on-year growth puts local businesses in second place after Europe in terms of regional CDP responses.

The JSE's top 100 listed companies and Eskom (SA's biggest emitter) produce 65% of the country's emissions. They will have to accommodate the lion's share of government's commitment, made public at the 2009 COP 15 climate summit in Copenhagen, to reduce SA's GHG emissions by 34% below the business-as-usual trajectory by 2020, and by 42% by 2025. These voluntary targets are conditional on countries reaching an international agreement under the UN, and that the global north provides technological and financial support to enable the transition to a low-carbon economy.

Based on SA's 2010 figures, in which national emissions were estimated at 500 million tons of carbon dioxide equivalent (CO_2e) (by 2011 this was up to 510 million tons), this means that the country's emissions will need to be cut by half by 2020 – a total of 253 million tons of CO_2e, according to the 2011 report *South Africa's Carbon Chasm*, an analysis of the previous year's CDP data by auditing firm KPMG. 'When adjusted for the JSE 100 targets (as of 2010) this chasm is more than halved to 105 million tons CO_2e. This illustrates that the private sector holds great potential for achieving SA's desired emissions reduction,' states the report.

The international CDP reporting process has also gathered information on water for the past three years, using the data as an 'opportunity to report publicly on how (companies) are managing their water risks, leveraging opportunities, and contributing to the overall management of the planet's freshwater resource', states a special report on water by the CDP.

In 2011, the NBI and the South African branch of the CDP chose to highlight the intersection between climate and water in SA – already a water-stressed area – by releasing a special report on this water-disclosure process. Some 56 of the JSE 100 – all either heavy water users or in sectors regarded as potentially vulnerable because of where water features in their supply chain – were invited to report on their water footprints and reflect on the potential risks that could their operations could face in a water-constrained future.

CDP Water Disclosure South Africa Report 2011, released in March, indicates that by 2030 there will be a gap between water supply and demand amounting to about 17%, largely in SA's most 'economically important catchments'. Most of the 26 companies that participated came from the financial, consumer and material sectors and implicated the main threats as being physical water shortages, higher water prices, and decreased water quality while supply-chain risks include water shortages, water quality, lack of infrastructure and reputational damage. One of the key findings is that the climate-linked water impacts for companies are not being taken as seriously by top management as climate change is.

Financials

The financial sector – constituting 17% of the JSE 100's market capitalisation – remains the sector in which the greatest climate response could be measured in terms of the leverage it might exert over other sectors. Its role as a 'key enabler of a low-carbon economy' thus has more to do with where the finance houses choose to invest rather than whether or not these corporations retrofit the buildings in which they operate to be greener or more energy efficient.

For instance, the CDP report highlights the need for the sector to investigate 'new technologies, solutions and infrastructure that reduce emissions and promote adaptation', singling out 'carbon trading, mobile banking, environmental liability insurance products and "green" property developments' as avenues of opportunity for reducing SA's emission profile.

This sector is at a key intersection of so many different roads of the economy. Therefore the impact of climate change on other sectors – direct physical impacts such as extreme weather events on agriculture or property, for instance, or the shifting local policy and international market landscapes in response to climate change – ultimately ripples through to hit the banks and insurers.

Therefore the actual company targets and carbon disclosure figures for this sector are probably less important than how the companies' leaders are articulating their awareness of the risks and opportunities of operating in a carbon-constrained future. Diversification of investments was one suggested way to absorb this risk. 'Understanding to what extent, and how, climate change will impact or enhance the value of investments is crucial if we are to protect shareholder value, respond to customers' increasing demands and remain competitive,' the CDP quotes Old Mutual in its 2011 report.

Nedbank and Sanlam have been in the CDP's top 10 carbon disclosure leadership index (CDLI) for the past three years, joined this year by FirstRand but, while these high achievers emphasise a level of engagement with the risks and opportunities faced by global engagement with the climate change issue, the JSE stands out as the weakest performer in the CDP's financial sector, both in terms of performance and disclosure.

The property sector once again emerges as one of the consistent under performers in the latest CDP. Of the nine sub-sector firms invited to participate, two-thirds didn't respond: Capital Property Fund, Fountainhead Property Trust, Hyprop Investments, Pangbourne Properties, Redefine Properties, and the Resilient Property Income Fund. Consistent respondents over the past two years, Capital Shopping Centres Group and Growth Point Properties, were joined by a new respondent, Emira Property Fund.

Financials: water

Nedbank leads the 'blue-ing' of the banking sector with its water-stewardship programme, in which the focus is on scarcity, access and quality. According to its CDP report back, the banking group is meeting its reduction targets by installing waterless urinals and dual-flush toilets, discouraging the use of carbon-guzzling bottled water and steering employees towards filtered water points in its buildings.

Similarly, Standard Bank's solar water-heating system, installed on the roof of its Johannesburg building in November 2010, ties into the often overlooked nexus between water and climate: the R2.3 million system will 'increase energy efficiency and reduce its carbon footprint', reported *Engineering News* at the time.

Similarly the in-house water footprint for this sector is less critical than the ripple effect of water-linked vulnerability on other sectors. Santam, for instance, is on the receiving end of risk associated with drought and flood-related claims from its clients in the agriculture, property and mining sectors. To prepare better for that in a climate-altered future, the insurer has devised a risk analysis process geared towards understanding 'current and future water-consumption patterns, from both an operational and client-responsive position'.

Consumer – discretionary and staples

The consumer sector comprises two clearer categories in the 2011 CDP report: discretionary, such as apparel, luxury goods and department stores (9% of the JSE 100's market capitalisation); and staples, such as food, beverages and tobacco. Consumer staples comprise 20% of the JSE's market capitalisation, second after energy and materials.

A first in the latest round of CDP surveys is that food retailer Shoprite Holdings finally came on board in 2011 after not participating previously.

Also new in 2011 is that two consumer-sector firms appear on the CDP's carbon disclosure leadership index (no consumer staples were in this list last year): British American Tobacco and Woolworths Holdings. This index is a measure of transparency and accountability in the provision of data to the CDP, rather than a statement on a company's climate change management, emissions levels or efforts in achieving emissions cuts, reminds the CDP report. These two also featured amongst the CDP's top performers on the carbon performance leadership index (CPLI), which is a way of 'measuring the ambition and success of a company's short- and long-term actions to mitigate climate change' and 'recognises evidence of action' rather than how 'low carbon' a company is.

Transparency and reporting mechanisms, such as the CDP and the Global Reporting Index (a sustainability reporting index), are two mechanisms that might help focus the mind of corporates in terms of planning for a carbon-constrained future, analysts say. The UN climate negotiations, such as the Durban COP, might also influence more climate-astute thinking. Similarly, the rising costs of inputs such as electricity, fuel or water emerge in the CDP report as raising the flag around sustainability.

Market forces also steer corporate response. Both commodity sectors viewed energy security and rising costs as potential risks, as well as shifting market demands as technological innovation occurs. The buying public's demand, particularly among higher LSM groups, is affecting how the consumer sector engages with sustainability issues.

Woolworths noted in its 2011 CDP feedback that in the next two years consumer demand is expected to increase for merchandise that is produced in more socially and environmentally responsible ways as the region pulls out of the recession climate. The corporate also indicates need to avoid reputational damage and foster trust through meeting customer demand.

The arrival of Walmart, when its protracted merger with Massmart finally goes through, is also expected to shake up the consumer sector and its up- and downstream supply chains. Other concerns about the merger aside – that Walmart's bulk-buying power would put an unfair pinch on suppliers, that it would drive out competition and cause job losses – the multinational's green credentials might force local businesses to respond accordingly.

A regular participant in the CDP process, Walmart is likely to bring its supply-chain efficiency, recycling efforts, improved fleet management and emissions reduction efforts to its SA partnerships. This might drive greater local participation in the CDP in future, where companies in these sectors see opportunities in developing green product ranges, optimising operations or even moving into biomass energy production.

Notable, too, is that the Oceana Group and Rainbow Chicken chose to participate in the 2011 CDP process, even though neither fall within the JSE 100.

Consumer: water

There was a good response from the consumer sector with regards to water disclosure, in which risks and opportunities around management were reported, among others. SABMiller set targets to 'reduce water use per hectolitre of beer by 25% between 2008 and 2015'. Woolworths has mapped its supply-chain risk associated with water and British American Tobacco is assessing the risk in its chief leaf-growing areas 'to provide strategic direction for future business'.

Energy and materials

The energy and materials sectors are grouped together in the 2011 CDP analysis (previously they were treated as separate sectors). Together, they dominate the JSE in terms of market capitalisation, by 41%, and 21 of the 28 companies sampled responded.

As a state-owned entity, Eskom doesn't fall within the catchment of the CDP survey process, but the parastatal has voluntarily participated since the first CDP report in 2007. Eskom remains the country's biggest emitter, producing 45% of the country's annual emissions. According to its 2011 integrated report, this amounted to the equivalent of 230.3 million metric tons of CO_2e last year, up slightly from 224.7 million tons in 2010. Eskom and the JSE 100 companies account for 65% of the country's emissions.

Energy providers need to secure the flow of their commodity on to the national grid and, as a result, the energy-materials sector includes the country's biggest economic drivers. This makes a case for stronger partnerships between different sectors, which both the *National Climate Change Response White Paper* and the CDP call for. The white paper underscores the need for partnerships with 'key stakeholders', including the business and industrial sectors, to harness their capacity 'in driving the transition to a

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climate-resilient, equitable and internationally competitive, lower-carbon economy and society'.

Meanwhile, the CDP's report for 2011 indicates that there is greater scope for fostering partnerships 'with peers, critics and competitors ... along the lines of some of the progressive partnership initiatives that have been pursued for example in Europe'. The 2011 surveys did indicate more business-to-business partnering, as well as collaborations between the business sector, civil society, academic institutions and the government. Similarly, some co-operation with Eskom on demand-side management was recorded.

After Eskom, Sasol remains the next biggest energy emitter and therefore is exposed from a reputation perspective. Half of Sasol's direct emissions come from energy generation and half come from industrial processes but the synthetic-fuel producer is responsible for around 12% of SA's total GHG emissions. Its direct (scope 1) emissions climbed slightly between the two reporting periods, from 60 million metric tons in 2010, to 61.2 million metric tons in 2011.

After tightening up its emissions reduction pledges between 2009 and 2010, Sasol's targets remain largely unchanged by 2011: in terms of its emissions (scope 1 emissions) and electricity-related emissions (scope 2 emissions), Sasol still aims to reduce intensity by 15% by 2020 from the 2005 baseline; there's a 20% reduction target in absolute scope 1 and 2 emissions on the 2005 coal-to-liquids design by 2020, which will be upped to a 30% reduction on those by 2030. This year, though, a shorter-horizon goal is included: to reduce the intensity of its direct emissions by 15% per gigajoule per ton of production from 2000 levels by 2015.

After Eskom, all of the country's top 10 direct (scope 1) emitters fall in this crossover sector: Sasol, at 61.2 million metric tons of CO_2e, ArcelorMittal South Africa (11.9 million metric tons), Pretoria Portland Cement Co (4.8 million metric tons), BHP Billiton (3.1 million metric tons), Evraz Highveld Steel and Vanadium (2.8 million metric tons), Anglo American (2.7 million metric tons), Sappi (2.7 million metric tons), Harmony Gold Mining Co (1.5 million metric tons), Mondi Group (1.0 million metric tons) and Gold Fields (1.0 million metric tons).

Because the materials sector makes up the largest emitting group after Eskom and Sasol, and because these companies are so exposed to climate-related risk with regards to both the physical and policy implications, the CDP says they are historically among the best performers when it comes to emissions disclosure. Companies seem aware of the reputational damage and potential fall-out from disinvestment through not appearing to respond to climate change, while others reported seeing opportunities for growth in terms of energy- and water-efficiency measures.

One of the big talking points, post COP, is the long-anticipated domestic carbon tax, the details of which were finally announced by the treasury in the 2012/13 budget speech and which will be tightened up with the release of related policy later this year. Even though 60% of emissions will be exempt from the tax until 2020, the energy and materials sector will feel the impact keenly, along with obvious downstream effects. This group notes in its 2011 CDP feedback that 'carbon taxes and international agreements present significant risks to companies' ability to operate, with potentially significant economic impacts including on job creation'.

Energy and materials: water

Eskom uses 2% of the country's water and most of this water extraction happens in the Vaal, Orange and Limpopo catchments. Given the importance of the resulting electricity in lubricating the economy, assurance of water supply from the Department of Water Affairs is crucial. Eskom now has a five-year drive to optimise water consumption, improve efficiency and implement conservation measures, according to its disclosure reporting process. This requires strategic partnerships with 'regulatory bodies, suppliers, customers', the CDP water report states.

The mining houses noted their water-climate vulnerability in terms of flooding risk and operational disruption associated with pollution of water sources. BHP Billiton, for instance, operates in arid areas, yet needs clean water for mining, smelting, refining and petroleum operations. The mining house reported needing to focus on 'reuse and recycling of water, efficient use and responsible waste water disposal'.

All materials sub-sectors dependent on forestry and agriculture are aware of risks associated with extreme weather events resulting in water shortages. SABMiller noted the need to increase efficiency to offset the rising cost of water, while Mondi was singled out for having mapped its upstream (supplier) and downstream (consumer) water footprint, reporting that 79% of its footprint is from suppliers.

IT and telecoms

Like the banking sector, the world of telecoms has the potential to wield significant influence outside of its sector both in terms of offering low-carbon alternatives to business-as-usual operations (doing away with the carbon associated with producing and shipping information on paper, for instance), something which in Europe 'could contribute to a 15% reduction in GHG emissions against business-as-usual [practices] by 2020'. Telecoms also has tremendous potential to leverage societal behaviour change through its media footprint.

The sector does see the opportunities and regards the key risks as being related to possible damage to infrastructure due to extreme weather events. Even though it only represents 7% of JSE market capitalisation it nevertheless disappoints in that the sector isn't represented in the carbon disclosure leadership index top 10.

Senior executive buy-in is repeatedly noted as critical in steering businesses towards survival in a carbon-constrained future. It's noteworthy that all five companies representing the sector in the JSE 100 (down from eight last year) reported having a corporate structure tasked with dealing with climate issues. 'While this trend would suggest an encouraging level of executive engagement on climate issues it is not possible ... to assess the nature and extent of the executive bodies' engagement specifically on climate-change issues meaningfully,' notes the report.

IT and telecoms: water

There was no mention of this sector in the water-disclosure report.

Industrials

Although the industrial sector constitutes only 3% of JSE market capitalisation, it performed well in the CDP. All nine companies polled agreed to take part in the survey and three featured in the top 10% of the CDLI: Barloworld, Bidvest Group and Group Five. Alongside carbon tax as a concern for this sector, talk of carbon budgets will also become an increasing focus for the industrial sector. The allocation, under the UN process, of country-specific carbon budgets – divvying up the remaining 'atmospheric space' per nation – will filter down to sectoral budgets within SA, says Incite Sustainability's Jon Hanks.

Hanks says the business sector is aware of the implications of carbon taxes and budgets and has made 'progressive' statements on the matter, which have been picked up by policy makers and academics, such as the National Planning Commission and the University of Cape Town's Energy Research Centre, some of which are involved in the climate-negotiation process. There are concerns about the impact these will have on competitiveness and job creation, but ultimately the social value of sub sectors will likely be considered when carbon budgets are allocated.

Energy costs and security remain some of the greatest risks for the industrial sector, along with the potential damage to infrastructure and projects due to extreme weather events. Meanwhile the evolving carbon markets might present future opportunities in terms of producing greener products and services.

Industrials: water

The industrial sector uses only 4% of SA's water, and mining and energy only 2%, compared with the 65% used by agriculture, according to the water-disclosure report, but nevertheless it states that 'the impacts of these sectors (industry, mining and energy) on water management are far more significant when one includes impacts on water quality and contributions to climate change via carbon emissions'.

The water-energy-emissions nexus is obvious: increased emissions mean greater uncertainty around water supply;

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improved efficiency means reduced cost of water and lower energy use – creating a positive feedback loop. By probing companies around water the CDP's objective is to improve governance and management of water, driven by both investors and corporates but, as National Business Initiative CEO Joanne Yawitch points out, many leading companies aren't well enough aware of the 'multiple issues surrounding water with particular reference to water scarcity, projections of the impacts on water availability due to climate change, energy requirements and rapid urbanisation'.

Healthcare

Healthcare – comprising clinic groups and pharmaceuticals, mostly – constitutes 3% of market capitalisation. Response rates to the latest CDP were good (of the five companies recruited for the survey only Life Healthcare Group Holdings didn't respond) but the performance rates were the lowest average on the carbon performance leadership index.

The sector generally sees some of its main opportunities in the rising patient intake due to the increased risk of certain diseases associated with increasing temperatures and extreme weather events. The UN Intergovernmental Panel on Climate Change, the IPCC, has already documented the link, for instance, between higher temperatures, increased pest activity, and food poisoning such as salmonella.

'Contact between food and pest species, especially flies, rodents and cockroaches, is ... temperature sensitive. Fly activity is largely driven by temperature ... In temperate countries, warmer weather and milder winters are likely to increase the abundance of flies and other pest species during the summer months, with the pests appearing earlier in spring,' the IPCC states in its 2007 report on the implications of climate change for human health.

The changing footprint of other vector-borne diseases such as malaria will alter patient recruitment for certain healthcare facilities, while health risks associated with heatwaves and flooding could be more widespread. 'It is envisaged that the effect of climate change on viral and bacterial distribution will impact population health. This could result in increased need for treatment for diseases and ailments caused by these distribution shifts,' reports Netcare. The rising cost of inputs such as electricity, or raw materials, and unstable energy supply remain chief threats.

Healthcare: water

Water quality is the critical issue for the healthcare sector, particularly in terms of bacterial control, sanitary food preparation and basic cleaning and sterilisation, and in drug manufacture.

Corporate influence

Sustainability specialist and CDP consultant Alex Hetherington, with Carbon Calculated, believes corporations could exert greater collective influence on the domestic energy mix, the key driver of SA's high emissions. Individually, corporations don't have much sway over the carbon intensity of the electricity they use, some 90% of which comes from Eskom's low-grade coal burning (higher grade coal is exported to China and India). For every kilowatt hour of electricity generated in SA, 0.99 kg of CO_2 is emitted.

'In the UK, it's 0.524 kg per kilowatt hour. If I consume the same amount of electricity in SA as my counterpart does in the UK, their carbon footprint is much lower than mine and that's purely because of the Eskom story,' he explains.

Working together, heavyweight corporates could leverage the Department of Energy and Eskom in terms of how the domestic grid is powered and grown in terms of reducing the carbon intensity of the coal and calling for the introduction of greater renewable sources of electricity into the energy mix.

Hetherington, whose company assists corporations in submitting their annual CDP paperwork, maintains that companies need to take CDP principles beyond just doing the submissions. He says that executives need to apply their minds regarding how they can reduce carbon emissions actively, both through their company's internal operations and through cross-sectoral collaboration in terms of pressuring Eskom and the government. 'That requires leadership. There's a tremendous need for collective leadership among businesses about this,' Hetherington concludes.