

CARBON TAX: FRIEND OR FOE?

Raising the question of whether mitigation strategies to overcome the financial burden of carbon tax will improve climate change but impact negatively on mine operations.

Industry across the board was pleasantly surprised by the South African Budget Speech presented by Finance Minister Pravin Gordon in February announcing the postponement of the carbon tax implementation to 2016. The announcement to postpone implementation on 1 January 2015 follows the publication of a Carbon Tax Policy Paper in May last year.

This policy paper proposed that a carbon tax be levied at R120 per ton of CO₂ emitted from 1 January 2015 and that it should increase by 10% per annum.

Carbon tax – foe: 8% increase in electricity price

According to the Budget Review 2014, National Treasury has received more than 100 written comments on the issue following the publication of the policy paper. Two public workshops have since been held as well as a number of bilateral meetings. “Overall, the comments acknowledged the need for a carbon pricing mechanism to reduce greenhouse gas emissions and address climate change. Ninety-

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four percent of respondents support the policy intent, and more than half are in favour of the carbon tax, with some suggesting changes to improve its effectiveness and minimise negative economic consequences,” the review states.

However, one of the main concerns is around preliminary estimates suggesting that the tax would lead to an increase of around 8% in the electricity price and that it could add up to an additional R20 billion per annum to government coffers if not allocated significantly to climate change reduction programmes.

Sarah Ward, Head: Energy & Climate Change, Environmental Resource Management Department, City of Cape Town, welcomes the postponement: “There are too many exclusions and more importantly it needs to be very clear on just where the funds get spent.” Ward continues: “If it is felt that the tax income will be spent on reducing carbon emissions such as

efficiency projects and subsidies, then people will resist it less. I think the best way to manage the tax income would be to spend every cent on public transport – this is redistributive and directly assists employers and employees. The tax should be ultimately self-defeating (if tax income is invested in carbon reductions).”

Carbon tax – friend: changing diesel habits

In June 2012 the World Health Organisation (WHO) reclassified diesel emissions from ‘probable carcinogenic’ to a Group 1 carcinogenic, prompting global mining operations to review their underground mining operations’ ventilation risks and implement actions that reduce the health risk to mine workers.

The WHO announcement is particularly relevant to underground mining personnel where the use of diesel powered equipment within a confined workplace environments occurs. In fact, underground miners are typically exposed to concentrations of diesel exhaust that are more than 10 times higher than other workplaces that utilise diesel powered equipment such as the transport industry.

The challenges are in the application of global standards in a developing environment where infrastructure, education and resources need to be developed and fast-tracked. A co-ordinated, multi-disciplinary approach is required to meet internationally acceptable emission and exposure standards within the proposed time-frames.

“The postponement of the carbon tax will allow National Treasury time to refine the design of the tax and ensure it fully integrates with the carbon budget approach developed by the



It was estimated that Australia’s carbon tax in 2012 would reduce the value of its coal industry by approximately \$8 billion through increased fuel costs and the pricing of mine emissions. Will South Africa’s proposed carbon tax have the same impact?

Department of Environmental Affairs. It will also give the opportunity to Government and all stakeholders to better understand the short- and long-term impact on the South African economic, social and environmental structures,” says Gaylor Montmasson-Clair, Assistant Programme Manager, Sustainable Growth, Trade & Industrial Policy (TIPS).

This brings underground mine ventilation to the fore. It is the sole provider of airflow to the underground workings of a mine to provide sufficient volume to dilute and remove noxious gases such as NO_x, SO₂, methane, CO₂ and CO. The source of these gases is equipment that runs on diesel engines, blasting with explosives, and the ore-body itself. The largest component of the operating cost for mine ventilation is electricity to power the ventilation fans, which may account for one third of a typical underground mine’s entire electrical power cost.

More to carbon emissions than meets the eye

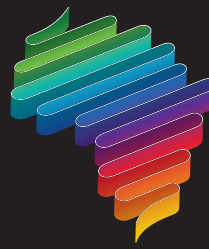
Anita Steyn, consultant at NOSA, South Africa, suggests that, “each mining operation can approach the energy regulator in that country and based on the ISO 50001 energy management standard, invest in a renewable energy project to supply the mine with energy specifically for pumping, cooling, heating and ventilation purposes”. Steyn continues: “Depending on where the operation is located, this could be a mini or pica hydro scheme, solar plant or wind farm. The mine would continue to rely on their country’s national grid for electrical supply of critical activities, but would reduce the impact of carbon emissions from diesel operations and provide reliability of supply where pumping and extraction activities require uninterrupted energy supply.”

In this way the carbon tax could be a key component to reducing carbon emission, increasing the use of renewable energy at mining operations, as will be shown in a case study presented at the upcoming African Utility Week, and potentially change the health risks of underground mine workers.

Mining companies and large power users such as Anglo American, Mbada Diamonds, Catoca Mining Company, ArcelorMittal, Transnet, PPC and Sappi are amongst the 5 000 industry professionals due to assemble at the 14th annual African Utility Week conference and exhibition in Cape Town in May. Activate your free exhibition pass online at www.african-utility-week.com to join the debate on carbon tax and get the latest industry case studies on energy and water management solutions towards sustainable business practices. New for 2014 is the Industry Awards gala dinner celebrating Africa’s 2013 triumphs and successes.

GET AHEAD OF CARBON TAX

“When the sun rises over Africa, the antelope knows it must run faster than the fastest lion if it is to survive. And when the sun rises over Africa, the lion knows it must run faster than the antelope if it is to eat. So the bottom line is: whoever you are, when the sun rises over Africa, you’d better start running!”



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