

## South Africa and Copenhagen

The best news of 2009 has been the announcements in November by the world's two biggest carbon polluters, America and China, that they are prepared in principle to set limits to their carbon emissions by 2020. The Copenhagen summit, taking place this month, is intended to set out binding agreements to curb global emissions after 2012, when current obligations under the Kyoto Protocol come to an end. South Africa is uniquely positioned to take the lead on the African continent in reducing its carbon emissions, yet to date its track record has been disappointing. Its belated (<http://www.thepresidency.gov.za/show.asp?type=pr&include=president/pr/2009/pr12061648.htm&ID=1930>) response on the eve of the summit is a case of too little, too late: a target reduction of *circa* 34% by 2020 and *circa* 42% by 2025 of 2009 emissions, with the proviso that this is financed by the developed world.

South Africa's excuse—that our huge developmental challenges need 'carbon space' in order to meet our needs—conveniently ignores the fact that we are the African continent's worst offender in terms of CO<sub>2</sub> per capita from energy combustion. We are in fact the world's 16th-most electricity-intensive economy, which arises mostly as a result of 70% of our primary energy and more than 90% of our electricity coming from coal. In 2007 South Africa emitted 7 266 kg CO<sub>2</sub> per capita, more than three times that of any other African country apart from Libya (<http://www.iea.org/co2highlights/>). This figure is only just behind that of the European Union (7 917 kg), and way above the global average of 4 382 kg. It is significantly higher than other major developing economies, such as China (4 567 kg), Brazil (1 812 kg), or India (1 179 kg).

Instead of proffering excuses, our government should act bravely and set an example to the developing world by committing us to binding targets for reducing emissions. South Africa has already gone some way in adopting measures to curb emissions, but needs the stimulus of binding targets to follow through. It should continue to phase in annual increases in electricity prices as a means to shift consumption patterns. The electricity regulator has at last approved feed-in tariffs to Eskom that could support private investment in renewable energy, but now needs urgently to clarify both power purchasing agreements and transmission connection arrangements, so that such investments can become a reality. The potential benefits are multifaceted: since Germany introduced analogous measures nine years ago, for example, over 150 000 jobs have been created as a direct result of the development of its renewable energy sector.

Blessed as we are in terms of climate, a simpler measure which should be adopted immediately is the replacement of South Africa's conventional domestic water geysers with solar ones. This should be coupled with national legislation to require solar geyser installation in all new dwellings. Domestic electricity usage accounts for 17% of consumption in the country, and approximately 40% of residential consumption is used for heating water geysers, 70% of which could be replaced by solar energy. This would amount to 5% of current national consumption—equivalent to the energy to be provided by the new Medupi coal-fired power station currently under construction—and a concomitant reduction in carbon emissions. Yet national government, while granting loans to Eskom to build new coal-fired

power stations and handing out R6 billion for the development of pebble-bed nuclear technology, has been slow on offering assistance on this score.

Most municipalities have offered no incentives to homeowners to install solar geysers either, for a simple reason: they derive a large portion of their income by selling electricity to users at excess profit. A commendable exception is the Nelson Mandela Bay Metropole, which has instituted a scheme to replace all of the estimated 120 000 conventional geysers within its remit over the next six years. Working together with the Central Energy Fund, it has secured a low-interest loan from a Nordic country which it will pay using carbon credits. Taking additional advantage of the modest subsidy offered by ESKOM for solar geyser installation ([www.eskom/dms](http://www.eskom/dms)), this will mean that householders should pay off the residual costs of installation by savings on their monthly electricity bills alone.

The challenge to developing countries is to develop using 'clean' technology. The common African position, adopted in July, calls for the international community to fund Africa's mitigation efforts to the tune of US\$100 billion per year by 2020. Adopting a common position may help to get Africa's needs onto the agenda at Copenhagen, but this funding (which is deserved in principle) will not be forthcoming unless detailed proposals from African countries are tabled. For example, the continent houses just 32 out of *circa* 1 800 projects funded by the programme under the Kyoto Protocol whereby rich countries pay developing ones to run emission-reducing projects. The constraint here is often one of capacity, but this is clearly not applicable to South Africa. □