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CLIMATE CHANGE & TECHNOLOGY

Window of Opportunity

Climate change presents opportunity to move into new growth areas – CSIR

CHRISTY VAN DER MERWE | CONTRIBUTING EDITOR

Achieving economic growth and tackling climate change are not divergent issues, and a number of countries are seeing them as an opportunity to reorientate some of their industries by getting “out of the old failing industries and into the new growth area of green technology”, says Council for Scientific and Industrial Research systems ecologist Dr **Bob Scholes**.

Climate change is topping almost every agenda across the world, as developed and developing nations seek to reach a fair global climate change agreement at the Copenhagen climate change conference in December this year. A number of technological solutions are being developed as a way of mitigating greenhouse gas (GHG) emissions, which are responsible for global warming.

Scholes says that the big drivers of the global economy in the first half of this century will be energy efficiency, and low-energy-intensity products. “[The South African] economy is currently not very well positioned for that. Historically, we have very high emissions per unit of [gross domestic product]; we need to turn that around, and the only way to [do that] is to set challenging targets,” he adds.

Scholes commends the Department of Water and Environmental Affairs for producing the country’s long-term mitigation scenario (LTMS), which sets out South Africa’s long-term GHG emissions reduction ambitions. It is also considered positive that Cabinet did not debate the issue and accepted the LTMS.

The LTMS states that South African emissions could continue to increase from the current level of about 440-million tons a year of carbon dioxide equivalent, peaking in 2020. After this, emissions would plateau for about a decade, and then start to decline, reaching a level of 30% below 2000 emission levels by about 2050. These ambitions “could set us ahead of the game in a new global economy”, says Scholes.

South Africa's Advantages

“To me, the big, big opportunity is solar,” emphasises Scholes. He notes that there are things that could be done for internal mitigation purposes, which may not give South Africa a big market position, but which are economically feasible, such as installing a solar water heater (SWH) on every roof in the country. “We know that it is economically beneficial

Africa tends to work on a number of technology options, but never gets them to critical mass. “I would choose solar, because we have a comparative advantage. We also have a comparative advantage in coal – at the moment, that is a comparative disadvantage but, if we can turn that into an advantage, it would be good.”

He feels that carbon capture and storage, underground coal gasification and other advanced coal technologies should be part of South African technology research because the country is dependent on coal for 90% of its electricity generation and for some of its liquid fuel.

“There are a small number of niche technologies that we could choose, but we need to pick one – it doesn’t matter which one – and stay with it,” Scholes says.