

Developing economies see no escape from coal

November 25 2011, by Sibongile Khumalo



File photo of a coal-powered power plant in China's Shanxi province. Coal currently generates 70 percent of power in China. The nation plans to reduce this 63 percent by 2015.

Concrete towers rise over the African bush, as the continent's largest coal-fired power station takes shape in a multi-billion-dollar testament to developing nations' love affair with coal.

South Africa, like China and India, has large domestic coal supplies that provide a cheap source of [energy](#) to meet an ever-growing demand.

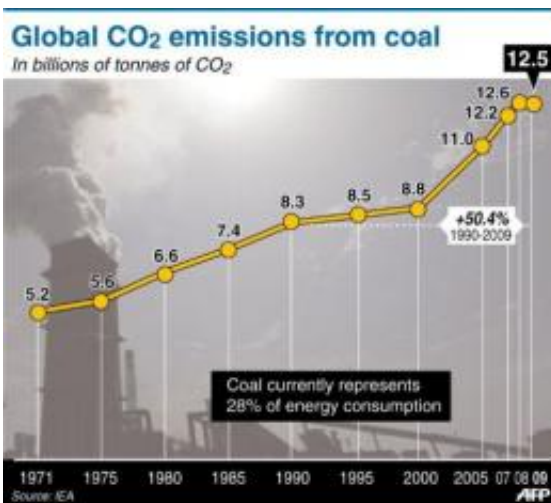
But this has also placed the three nations among the world's leading producers of [carbon dioxide emissions](#), which are a key driver of climate change.

The countries are among the world's top five producers of coal, which generates 90 percent of electricity in South Africa, 70 percent in China, and 55 percent in India.

The three nations are collectively pouring tens of billions of dollars into new coal plants, while also pushing ahead with plans for nuclear and renewable energy generation.

"These days coal has become something like a swear word. No one likes it, but the country needs electricity," said Cornelis van der Waal, a South African energy analyst at consultancy firm Frost and Sullivan.

"Everyone would love clean energy but coal is cheap and at this stage this is what the country can afford," he said.



Graphic showing world carbon dioxide emissions from coal since 1971.

South Africa plans to double its energy supply over the next 20 years, but despite ambitious proposals for renewable and nuclear power

production coal will still make up 65 percent of the mix.

The 125-billion rand (\$14.8 billion, 11 billion euro) Medupi station outside the northern town of Lephalale, expected to go online in two years, will be the fourth-largest [coal power](#) plant in the world. The equally large Kusile station is already under construction.

Medupi is touted as Africa's first "supercritical" [coal plant](#), using higher temperatures that produce more energy from less coal, while emitting less ash and [carbon dioxide](#). The plant will also have bag filters to trap more emissions.

China is pressing ahead with new carbon capture and [storage technology](#) that would trap carbon dioxide underground. South Africa and India say such technology remains a distant prospect for them.

One such scheme is being built in Inner Mongolia by state-owned China Shenhua Group, which plans to pump liquefied carbon dioxide underground in the desert, where it could be stored for 1,000 years.



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China has not revealed the cost or extent of its power expansion but plans to bring coal down to 63 percent of its energy mix by 2015.

India, on the other hand, expects coal to grow to 65 percent of its supply by 2030. It has built 55 coal-fired plants since 2007, and plans another 100 over the next decade, the coal ministry says.

Environmental activists complain that nations are not doing enough to develop renewable energy sources, and are piling particular scorn on South Africa, as the host of UN climate talks that begin on Monday in Durban.

"Renewable energy beats coal in every context, and building colossal coal-fired power stations is absurd in the face of the catastrophic effects of climate change," said Melita Steele, a Greenpeace Africa climate campaigner.

"There are no environmentally acceptable ways of burning coal. Burning coal is one of the most destructive practices on the planet, and the true cost of coal is destruction at every step," said Steele.

But emerging nations argue that technologies for wind and solar power are only able to address a small part of their energy needs.

"Renewable energy projects are good for remote areas but for urban centres coal is the only source to generate power as it caters to our demand of continuous energy needs," said Umashankar S., programme manager for Industry and Environment at India's Centre for Science and Environment.

"In a developing economy, there is no getting away from [coal](#)."

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