

CO₂ causes heavy breathing in cement sector

■ Emissions cap would lead to imports – PPC

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Carbon dioxide (CO₂) emissions from the cement industry, one of the biggest producers of greenhouse gases after Eskom and Sasol, are expected to rise as a result of strong demand for infrastructure and housing.

While the industry says it is working to cut its efficiency ratio, which stands at about 750kg of carbon dioxide released for every ton of cement produced, its absolute emissions are expected to rise with growth in cement production.

The Association of Cementitious Material Producers (ACMP) said last week that a potential future cap on absolute emissions of carbon dioxide would "impact on the ability of the industry to supply cement to the nation".

The government supports efforts to include mandatory emission reduction levels for developing nations under a renegotiated global climate change treaty in Copenhagen next year.

Demand for cement in southern Africa is projected to increase to about 24 million tons a year in 2014. Last year, South African sales of cement amounted to 14.1 million tons, of which 12.6 million tons were produced locally.

Using the ACMP's average

efficiency ratio, the locally manufactured product would have generated about 9.5 million tons of carbon emissions last year – about 4.5 percent of Eskom's emissions for that period.

By the middle of 2009, capacity at Pretoria Portland Cement (PPC) will rise by 1.6 million tons a year. Lafarge SA, the local unit of the French building materials group, is raising capacity by 1 million tons a year. And mining empowerment group Sephaku Cement is commissioning a new cement plant with annual capacity of 2 million tons in 2010.

John Gomersall, the chief executive of PPC, said replacing ageing technology was the way to cut emissions. "Every line we replace will take out the next oldest lines and we'll get down to [the] best practice in the world."

But if an emissions cap was placed on the cement industry, South Africa would have to resort to imports, he warned.

Carbon dioxide is generated in two processes in the manufacture of cement: 60 percent from the chemical process involved in the calcination of limestone and 40 percent from burning coal.

ACMP executive director Naude Klopper said the industry had reduced specific emissions for years by reducing the clinker factor in cement, instead using

extenders and fillers; using alternative fuels and raw materials in the manufacture of cement; and improving technology to enhance plants' thermal and electrical energy efficiency.

Emissions from the cement industry came under the spotlight last year, when the World Business Council for Sustainable Development's cement sector initiative acknowledged the global industry was responsible for about 5 percent of all carbon dioxide released as a result of human activities.

Eskom's heavy emissions from burning coal skew the local ratio. The only known estimate comes from the greenhouse gas inventory of the UN Framework Convention for Climate Change, which puts the cement industry's contribution at 1.7 percent of the total.

Bobby Peek, the director of the environmental organisation groundWork, believed the only realistic way to reduce carbon emissions in the industry was to "move beyond cement" and seek alternatives.

South Africa should give greater attention to recycling building rubble, he added.

For example, Durban's soccer stadium was demolished to make way for a World Cup venue. "That concrete was just dumped," said Peek. "It wasn't crushed to be reused."



The PPC cement factory in Germiston. The company prefers to replace ageing technology to tackle the problem

PHOTO: LEON NICHOLAS

