

### Research Predictions unlikely to be fulfilled.

Coal analyst Xavier Prevost said that the methodology used in the research described in the *South African Journal of Science* is not applicable to the coal mining sector. He said that the main factors in the establishment of coal (mineable) reserves are the economics of coal extraction and marketing. Those factors will play the most important role in determining the lifespan of the South African coal mining industry, rather than the theory developed by Hubbert for petroleum in another continent.

The predictions given in the paper are very unlikely to be fulfilled. One of the reasons coal reserves in SA (or what remains of them) will cease to exist will not be due to the exhaustion of coal in the ground, but due to the increase in the cost of extraction and factors related to marketability (cost of production, beneficiation and transportation vs. price at the market place) changes. In years to come, as the easier coal deposits become mined out, the price of extraction will increase and the quality and grade will decrease. Eventually the cost of production will become higher than the selling price or another energy commodity will replace coal if it costs less per unit of energy.

One of the reasons why the extraction of coal will increase in cost is related to the environmental taxation and legislation to be introduced as prevention of further impact of emissions. Eventually coal mining will disappear not due to the depletion of reserves, but due to environmental regulations which will make it too expensive to mine, as government seems to seek to punish those responsible for CO<sub>x</sub> and SO<sub>x</sub> emissions.

South Africans should not become concerned about the depletion of coal reserves. Reserves in the traditional coalfields will probably last for another 40 to 50 years. (The reserves in Mpumalanga in the Witbank, Highveld and Ermelo Coalfields).

There will be resources, converted into new reserves, once the Waterberg Coalfield in the Limpopo Province is provided with enough infrastructure and more water. The area will not replace fully the Mpumalanga reserves, but will extend the lease of life of our coal industry, at least until coal usage becomes obsolete, due to new, cleaner technologies or when it is just replaced by new energy sources.

The solution for a possible future energy crisis is to create public awareness of the fact that all energy sources are finite. If we continue to waste energy we will come to a point where everybody will suffer the consequences.