

Memo 06/08

Energy crisis

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South Africa is experiencing an energy crisis that has all the dimensions of a national disaster. Yesterday all South Africa's gold, platinum, diamond and some coal mines closed. This was because of the dangers to miners during unexpected power failures. Energy-demanding ventilation and dewatering are critical requirements for our mines. Large energy-consuming aluminium and other smelters have closed down. Tens of thousands of workers are out on the streets. Gold and platinum account for about 25% of South Africa's exports. Losses are estimated to exceed R200 million per day from these sources alone.

The mining industry uses 12% of Eskom's capacity, accounts for 7% of the economy, 30% of exports and 25% of foreign exchange earnings.

This is only one of the consequences of the energy crisis. This morning's newspapers have many examples of how the crisis is affecting all aspects of life in this country. Our national economy has already been adversely affected. On two occasions I visited local shopping centres. The lights were out, doors were closed, and the staff were waiting in the corridors for the power to come on again.

In order to overcome the problem, the authorities intend imposing severe restrictions on the use of electricity. These will be in place for the next five years at least. They include industries (10%), commercial use (15%), shopping centres and hotels (20%), large office complexes (15%), agriculture (5%) and household use (10%). The target is the reduction of national energy demand by 10% to 15%. No mention is made of the mining sector or of the natural growth in demand.

The relative use of electricity of the various sectors is as follows: households (35%), industry (35%), mining (12%), commercial use (9%), export to neighbouring states (4%), agriculture (3%) and transport (2%). The economies of our neighbouring states will also suffer.

I was directly involved in the imposition of water restrictions during the severe drought of the 1980s. These were very difficult to implement. The control of electricity use will be even more difficult. Voluntary reductions on the required scale will not be achieved. It will take at least a year to implement enforceable measures.

Other long-term measures are proposed. They include the compulsory use of energy-saving light bulbs and the installation of solar water heaters. It is not a coincidence that these restriction measures have long been proposed by climate change activists. They are also the basis for South Africa's support for internationally enforceable and economically damaging greenhouse gas control measures.

Now the South African public will directly experience the consequence of these measures long proposed by climate alarmists. There is little prospect of South Africa meeting its goals of halving unemployment and poverty by 2014, and we will not achieve the targeted 6% annual economic growth.

Will the South African representatives at the UNFCCC ad hoc meeting within the next few weeks, inform the participants of the consequences of the imposition of the restrictions in the use of electricity from our coal-fired power stations? Will they inform the meeting that the emergency

power generators that are becoming widely used, produce more greenhouse gas emissions per unit of electricity than the coal-fired power stations? How can the South African representatives dare continue to support costly control measures while the people of South Africa are suffering from the electricity shortages?

How can they dare encourage the other developing countries of the world to follow our example? Or will they remain silent? Or will they do the honest thing and recommend to the developing nations that they re-evaluate the science underlying the whole climate change issue?

Admission

The South African authorities have admitted that the crisis is the consequence of not heeding the advice that our power generation capacity should be expanded as a matter of urgency. I believe that the reason for the delay in building new power stations goes further. It is a direct result of the decision made at the Midrand Conference on Climate Change held in October 2005, more than two years ago. At the end of the conference the ministers agreed to take measures to control undesirable greenhouse gas emissions. The reduction in electricity production from our coal-fired power stations was one of them. (See my memos distributed before and during the conference. My memo of 11 October 2005 was titled *National conference on climate change – another charade*. That of 12 October was titled *An appeal for honesty and integrity*. On 20 October the title was *For the record*. The following are from this memo. Note how my dire warnings have now come true.)

Re South African National Conference on Climate Change

20 October 2005

For the record

There is no way that my views will influence the outcome of the conference. I nevertheless find it necessary to place the following on record. My motivation is that I believe that the South African authorities and the public have been seriously misled on the issue of climate change. I fear that policies will be developed that will adversely affect the future welfare of the people of this country.

Climate change issues are not cut and dried

The Minister's opening address contained the following statement prepared by his scientific advisers.

'We will not be derailed from our responsibility to act by endless engagement with fringe scientists... we have reached and passed this in the debate about the science of climate change.'

This is the most arrogant, self-serving statement that I have ever come across in my long national and international career in science. It is also false and misleading.

I have never heard or seen a statement that so firmly closes the door on scientific endeavour. **This example of scientific opportunism has no place in modern society.**

Here we are dealing with one of the most important issues of our time. Surely any responsible authority or entity would encourage the widest possible participation in seeking solutions. Instead, the whole issue has been hijacked by a small group of scientists in the environmental and climatological sciences who have deliberately excluded scientists in the applied sciences who

hold opposing views. The thrust of the Minister's address is that the climate change issues are cut and dried. This is remote from the truth.

Civil engineering is an applied science. It is the oldest of all professions, being as old as civilisation itself. Floods, droughts and water resource development are bread and butter issues. There is a wealth of information and publications on these subjects, none of which are referenced in the climate change literature. Statements made by climate change advocates on these subjects are incredibly naïve and display a complete lack of knowledge in this field. In this situation surely civil engineers should have been involved in seeking solutions. Instead, no civil engineers were invited to participate in the conference. The reasons are obvious. Despite many enquiries in South Africa and overseas, I have yet to meet a single professional who considers that climate change science is anything more than an untested hypothesis in these fields.

The majority of scientists in the agricultural sciences reject the exaggerated conclusions of climate change advocates.

For the reaction of statisticians and economists read Lomborg's book *The sceptical environmentalist*.

Other international climatologists have also expressed opposing views. For example, scientists at the University of Calgary in Canada recently produced a video titled *What your'e not being told about the science of climate change*.

Only a week ago the government of the United Kingdom appointed an adviser on the economics of climate change and development. He is required inter alia 'To examine the evidence on ... the economic, social and environmental consequences of climate change in both developed and developing countries ...' Note the emphasis on the word 'evidence', not theory.

The implication in the Minister's address that the climate change issues are cut and dried is without foundation. This in turn casts serious doubts regarding the legitimacy of the conference and any policy statements that arise from it.

By labelling all those in the applied sciences as fringe scientists, the Minister has effectively excluded these professions from making any contributions to this nationally important issue. I trust that he realises this.

Participation in the conference

Climate change is a complex issue that is the concern of a number of scientific disciplines, and affects different sectors of the community in different ways. My principal criticism of the conference is that the presentations were by a selected group of invited presenters in specific fields rather than open invitations to contributors from both the natural and applied sciences.

I was naturally disappointed when I was not invited to address the conference despite the fact that I have a longer and wider knowledge and practical experience, and have produced more publications on this and related topics than anybody else in South Africa. The reason for my exclusion is obvious. My detailed and comprehensive studies of the largest climate-related database yet assembled in South Africa demonstrated unequivocally that the principal grounds for concern have no substance. This information has deliberately been withheld from the public and the decision makers.

I detail them in the chapters of my 300+ page technical report that is now nearing completion. I distributed the chapters as I completed them and will not repeat the conclusions here. Despite all this I am labelled as a fringe scientist.

Future situation in South Africa

What will happen in South Africa will be decided before the end of this week. This in turn will depend on the scientific integrity of the presenters and participants at the conference. If they propose costly control measures, then they are under a professional, ethical and moral obligation to provide the decision-makers and the public with the following information.

1. A precise and complete description of the effect that global warming has had and will continue to have on the prosperity of South Africa. This **must** include beneficial as well as adverse consequences. Vague descriptions are not enough. It would be dishonest and misleading if they omitted consideration of contrarian views of those in the applied sciences. They are professionally required to consider and comment on them.
2. Accurate estimates of cost of the control measures and their effects on various sectors of the economy especially the inevitable increase in unemployment. This has become an internationally recognised requirement.
3. The effect that these measures will have on reducing the postulated effects of global warming (a) in South Africa and (b) globally. The scientific consensus is that no action that South Africa takes will have a discernible effect on global warming and its consequences in South Africa or elsewhere. Any sacrifices that South African citizens make will be in vain.

The future of climate change science

The international emphasis in the global warming issue has shifted from prevention to adaptation. But how can you adapt to something if you cannot quantify it in the first instance. An advanced numerical understanding of climate variability is essential for the implementation of adaptation procedures. This is what I have been doing for the past three years.

The South African climate change advocates have not produced one jot of information on the sequential properties of the processes that they maintain will be adversely affected by global warming. Civil engineers have the knowledge, experience and ability to do this but have been labelled as fringe scientists.

The ethically dubious, self-serving practices of many climate change advocates have already widened the divisions between the natural and applied sciences. Unless the climate change advocates change their ways and work towards developing co-operative solutions especially the development of adaptation measures, the rift will widen, public confidence in science and scientists will be lost and political support will vanish.

Finally

Regardless of any policy decisions, I will continue with my studies at my own cost and complete my technical report. I will also prepare a submission to the recently appointed UK adviser. I am not prepared to be associated in any way with the present coterie of self-serving climate change alarmists.

A long time ago I signed an oath of allegiance to my country and I was prepared to give my life for it. I survived but many of my colleagues did not. I often asked why I was spared. Perhaps this has influenced my strongly held views on morality, ethics and honesty.

WJR Alexander

Cooperation or confrontation?

I continued my studies and published the results. The solar linkage is unequivocal.

On a number of occasions during the past year I suggested to the climate change scientists that we get around a table to discuss the way ahead but I was rebuffed.

I also approached a member of the South African delegation at Bali and recommended that the Department of Environmental Affairs and Tourism should seek a second opinion as a matter of urgency. This has not happened.

Let me summarise my position.

1. I believe that one of the reasons for the present national energy crisis is the undertaking by the South African authorities to control future undesirable greenhouse gas emissions from coal-fired power stations made at the Midrand Conference on Climate Change in October 2005.
2. Variations in solar activity and not greenhouse gas emissions are the dominant cause of global warming.
3. The control of greenhouse gas emissions from coal-fired power stations, heavy industry and road transport will be a fruitless exercise and waste of expenditure.
4. There is a very high probability that sequences of severe droughts will occur during the period 2009 to 2016. It is very likely that this will result in the imposition of water restrictions as soon as the dams start emptying. This is likely to happen while electricity restrictions are still in place. Simultaneous electricity and water restrictions will result in a crippling blow to South Africa's economy with all the consequences of unemployment. It will also reverse our progress towards the reduction of poverty, malnutrition and disease.
5. The worst has yet to come.
6. The authorities have failed to follow the usual procedure in situations of national importance. That is to appoint a multidisciplinary commission of experts including scientists and economists to advise it. Instead it chose to rely on advice from a small and unrepresentative group of environmental activists.
7. I have therefore made an unusual request to my professional colleagues. I have suggested that they arrange for my studies and conclusions to be evaluated by a multidisciplinary panel of independent experts. The conclusions of the panel should be conveyed to the South African authorities and made known to the public.

The Australian government, which supports the Kyoto Protocol, has followed a similar route. The terms of reference of its recently established Climate Change Review include:

*The Review will examine the impacts of climate change on the Australian economy, and recommend medium to long-term policies and policy frameworks to improve prospects for sustainable prosperity. In carrying out this task the Review **will undertake an extensive consultation process to encourage open and informed debates on key climate change issues.*** (My emphasis.).

This is what the South African authorities failed to do in October 2005.

The crippling energy crisis is the result of this failure.

I will keep you informed on this matter of critical national importance.

Will Alexander

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