

The right way to go

Despite recognising that renewable energy is vital to SA's energy infrastructure, some environmentalist scientists are coming around to realising that it is not enough to curb carbon emissions

The UK newspaper *The Guardian* of 3 November 2013 carried a story to say that environmentalist had come out in favour of nuclear power.

The article was entitled: 'Top US climate scientists support development of safe nuclear power.' The article carried a subtitle: "Open letter to environmentalists and world leaders says wind and solar power are not enough to diminish carbon emissions".

That is quite a story. Those who follow these developments will see that there is much more to this story than initially meets the eye. For a start the so-called 'top climate scientists' are a group of the extreme pro-climate change fraternity.

These are the people who for decades have pushed for extreme solar and wind solutions and told the world that everybody is headed for doom. They came up with exaggerated scenarios of walls of rising sea water flooding coastal cities, of parched crop lands, and a dying world.

Now they say that solar and wind will not be enough to head off 'extreme global warming' and so we need carbon-free nuclear power to bail us out of trouble. In fact,

this open letter of theirs is really an admission that solar and wind just will never supply reliable electricity at an affordable price. So it is a major step down for them.

They are now grasping at straws by being pro-nuclear because nuclear does not emit carbon dioxide. Myself and many other scientists who have tried to present a reasonable picture for years have been shouted down.

When we have said that nuclear power emits no carbon dioxide we were shouted down and told that the exhaust pipes of trucks in the uranium mines do emit carbon dioxide and so on.

The carbon dioxide actually has nothing to do with the issue. Significant indications show that there is probably no carbon dioxide-induced climate change anyway. The reason for going for a nuclear power station is just that it is the best way to produce electricity.

Nuclear power is extremely safe. It is very clean. A nuclear power plant emits nothing into the outside environment. Nuclear is very cost-effective without any carbon dioxide argument being brought into the debate to justify nuclear power.

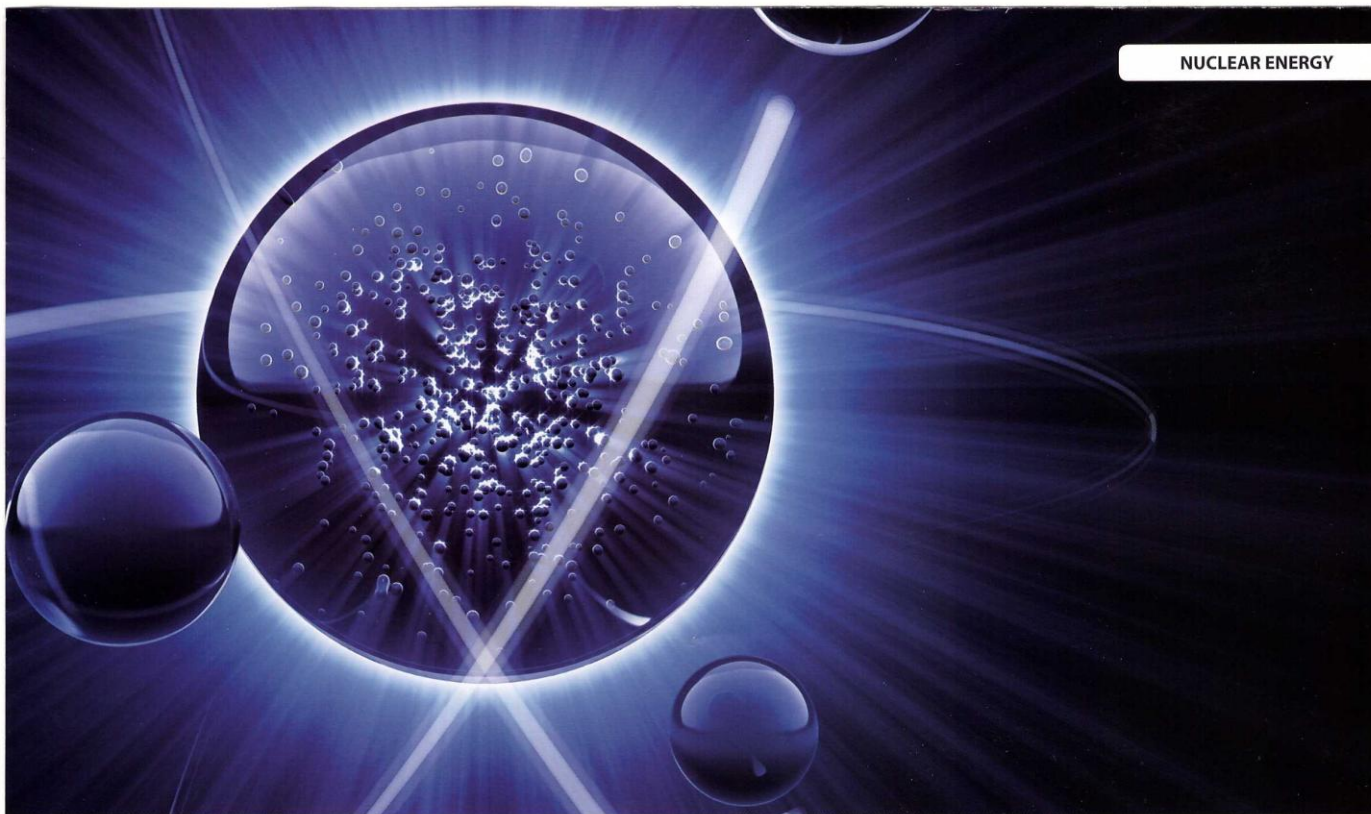
A great compliment should be paid to the South African Department of Energy

and the South African government who have continued to support nuclear energy ever since the decision was taken a few years ago to add a further 9600MW of nuclear power to the national grid.

When the Fukushima incident occurred the Minister of Energy at the time Dipou Peters, a few days later, said that South Africa's plans for nuclear energy were going ahead unchanged. She was one of the very few ministers in the world who did not run for cover and hide behind an anti-nuclear shield for months.

The Director-General of Energy, Neliswe Magubane has said that not only is the nuclear power programme going ahead at full speed, but she wants to aim for a 50% localisation target with the first nuclear power plant. She has pointed out that this target requires local companies to plan to fabricate for the world nuclear export market. That is the vision that we want.

South Korea has a population about the same size as South Africa, but uses twice the amount of electricity. Their GDP is much higher than ours and they started major industrialisation much later than we did. What this tells one, with absolute clarity, is that South Africa needs to double electricity production, very fast, to be



able to push the living standards of all our citizens forward.

The government has already said that a doubling of electricity production is a national target.

Do you hear first world countries aiming for 100% increase in electricity consumption? No, definitely not. So stop looking to them for leadership in electricity production strategies. Think African solutions for Africa. The first world is not trying to save us or help us. They are trying to make money out of us. Bear that in mind when you look at their proposed solutions to our problems. Solar panels in our dry dusty desert regions are not going to drive an electric train from Pretoria to Durban. The solar panels are likely to be so covered in dust, that they will require an army of cleaners. We will see.

South Africa must build the new nuclear power stations rapidly. We must build them ourselves. What that means is that we must take project management control so that construction unfolds in a South African way, in the best accordance with our climate, culture and regulatory framework.

Obviously we need significant foreign partnerships. So the nature of the teams

will be a multiplicity of different teams composed of local and international people, all working together. We need to get this right, so that processes are optimised and that consequently money is not wasted.

South Africa has the professionals required to organise all this. Such a system also requires adherence to a strict set of quality protocols. In the challenge of nuclear fabrication and construction it is not only a case of showing that quality standards have been met when the device is sold to the customer, one also has to store detailed records for decades.

If some device fails years into the future it is not just a case of saying: "bring it back to the shop and we will give you a new one under our customer friendly warranty policy".

What would be required is an analysis of what failed and why, so that any fault in manufacture could be corrected and improved. Companies getting into the nuclear business will have to adopt a nuclear frame of mind, so that the whole company operates within a constant nuclear culture.

The mere mention of nuclear power is scary to a substantial segment of the population because so little is known about the reality of the benefits of nuclear: It is

therefore very important for the nuclear industry to realise that public confidence is critical.

The government has committed itself to moving ahead rapidly with the nuclear project. But it has also committed itself to being open and transparent with the public. This is critical. So a major responsibility falls on the shoulders of the nuclear-related companies to ensure that they collectively help the public to understand what is going on, so that the government can move with maximum speed.

Nuclear power is the right way to go, because it is good. We are not going nuclear because we want to get rid of fossil fuels.

Nuclear power is already a major world business and will become much larger. South African industry must get into this international business now.

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