

Nuclear Futures in Australia

Edited transcript from a talk by Dr Adi Paterson, ANSTO
CEO, December 09

Since joining ANSTO as CEO in March, 2009, Dr Adi Paterson has immersed himself in the organisation's research and business culture, and proactively engaged staff in forums and seminars that promote a "Proud to be nuclear" message.

Dr Paterson, formerly Business Development and Operations at the Pebble Bed Modular Reactor Company in South Africa, has also immersed himself in understanding complex and contentious global and national issues, such as climate change and nuclear energy.

After several months of deliberation, he recently agreed to share his thoughts on these and other matters in a talk entitled *Nuclear Futures in Australia*.

Held in ANSTO's OPAL auditorium, the talk was directed at Bragg Institute scientists but clearly signalled his intent to talk more widely about the role that nuclear science and technology should play in Australian life.

"It seems to me, having come to Australia and looking at nuclear in Australia, one of my greatest fears is that it's got a great future behind it," said Dr Paterson.

"In fact, it's my view that in Australia we are hanging onto nuclear science and technology by our fingernails and we face some massive challenges to make nuclear science and technology relevant."

As Dr Paterson pointed out, Australia's nuclear past is filled with science luminaries such as William and Lawrence Bragg and Marcus Oliphant, highlighting the fact that as a nation we have the capability to produce such greats.

"In my opinion, no modern nation will survive the 21st Century unless it is deeply immersed in nuclear science and technology," Dr Adi Paterson.

However, a lack of young talented scientists entering the field, along with dedicated resources, is a real concern today.

"Australia is falling behind other nations when it comes to preparing the next generation for a knowledge-based future," he said.

"Australia's record for the number of students completing post graduate studies is not adequate to meet demand, and does not compare favourably to similar sized countries.

"Nor are we giving nuclear research students the opportunity to study abroad. A good example of this is the fact that just one Australian university is sending just one student a year to participate in the world's largest physics experiment, the Large Hadron Collider," he said.

Given what he calls "the global nuclear renaissance" Dr Paterson fears that Australia will not be in a position to capitalise on future opportunities.

He expressed his personal views on the various energy options, from wind to geothermal, and concluded that any rational, scientific debate must include nuclear energy.

"Even if we don't choose to have nuclear energy in Australia - and that's a political

decision – we have to have enough nuclear knowledge to be informed about the options that are available.

“We have to be able to support people in the fuel cycle, in reprocessing, in waste management, and we need to keep in touch with what’s going on with reactor systems.”

He indicated that the challenge is not about energy alone.

“There are new approaches in nuclear medicine and imaging, the use of stable isotope techniques and in accelerator science and technology that are passing Australia by,” he said.

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ANSTO CEO, Dr
Adi Paterson.

But first, he acknowledged, the public needed to be better informed.

“The scientific illiteracy of the society in which we are engaging is a consequence of our failure to communicate,” he said.

“In my preferred future, the public embraces the notion that science, engineering and technology are crucial contributors to national discourse, to national knowledge resources, to the ideas that are important for our society, and the way we want to live in the future,” concluded Dr Paterson.

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