

The Senate,

Australia is in a unique position to capitalise on the climate change concerns of the world by offering safe and controlled access to nuclear fuel to the world. By setting up a cradle to grave nuclear fuel supply of manufactured fuel rods and retrieving the used rods for reprocessing we can eliminate the opportunity for diversion of uranium to weapons and other programs. This would open up exports to China India and Iran with a reliable non political supply of fuel rods for peaceful energy generation helping to solve the peak oil, Carbon dioxide and nuclear proliferation issues in one go. All that is required is for the government to accept that the only proven low carbon large scale energy producer is nuclear. A properly regulated nuclear industry is very safe and provides clean low cost energy that can be managed to eliminate long life waste.

Recent developments have lead to improvements in the nuclear fuel cycle where it is now possible to re-process fuel and use what was previously long life waste as fuel in new reactor types. This has the triple benefit of increasing the total energy available from existing uranium fuel, reducing the radioactive waste and making diversion of radioactive materials to weapons that much more difficult.

In my view the greatest concern for the nuclear fuel cycle is the possibility of nuclear terrorism. The greatest potential for nuclear terrorism rests in terrorists gaining access to highly radioactive material for a dirty bomb. The most likely source is spent fuel rods left in long term storage without adequate protection or re-processing to which Australia contributes to by mining uranium without accepting nuclear waste.

Irrespective of the use of nuclear power in Australia the issue of our involvement in the nuclear fuel cycle should be addressed. As an exporter of yellow cake (uranium ore) we increase the world availability of fissile material and potential weapons material for terrorists or rouge states. This is a short sighted and irresponsible approach. We need to take responsibility for the fissile material mined in Australia and ensure it is disposed of properly.

Although simple Storage of Nuclear Waste in Australia has merit on economic grounds, this would not the problem of proliferation and a more holistic approach needs to be taken. Australia should move away from exporting uranium ore towards supplying manufactured fuel rods, where a condition of supply is that the used fuel rods are returned to Australia for recycling. This is a much more accountable and controllable method of restricting access to fissile material. This would also remove the need for other countries to develop enrichment capabilities outside the supervision of the International Atomic Energy Agency (IAEA), as is happening in Iran.

Australia could then enrich, process, and manufacture fuel for our export customers and retrieve the expended fuel rods for recycling, reprocessing into new fuel rods and storage of waste material. This would all be done openly and with IAEA oversight to ensure no nuclear material is lost or reaches the hands of potential terrorists. Australia has the technical, regulatory and political capability to do this in a safe and reliable manner, not to mention a vast geologically stable continent which is sparsely populated.

A move in this direction would have economic benefit to Australia through value adding and would decrease the risk of nuclear proliferation making the world a safer place. With a safe and reliable fuel cycle nuclear energy could be used to reduce the world's greenhouse gas emissions and cut global warming.

With the development of an indigenous fuel cycle there would then be no reason not to develop a nuclear power industry.

In summary Australia is a large geologically and politically stable country with a good technology base that can safely provide safe and sustainable fuel and at the same time provide substantially greater export earnings, all it requires is for the government to have a

rational look at the nuclear issue and challenge the faith based anti nuclear lobby to look at the science and not the faith.

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