

Nuclear Greenwash

Mark Diesendorf
Institute of Environmental Studies
University of New South Wales

The Switkowski draft report on uranium mining processing and nuclear energy is an exercise in 'greenwash' for a dirty and dangerous industry.

It skates over the major risks of proliferation of nuclear weapons, nuclear terrorism and nuclear waste management, ignores the carbon dioxide emissions from the nuclear fuel chain, and presents an excessively optimistic estimate of the cost of nuclear electricity.

The single positive outcome of this report is its recognition that carbon pricing – either in the form of a carbon tax or emissions trading scheme – is essential for reducing Australia's greenhouse gas emissions. However, a more realistic assessment of nuclear economics would recognise that the carbon price range envisaged in the report – \$15–\$40 per tonne of carbon dioxide emitted – is too low to make nuclear power competitive with dirty (conventional) coal-fired power stations.

The report claims that nuclear power is only 20–50% more expensive than coal power. It does this by assuming that it is financed with much lower interest rates than are currently available for nuclear power stations in competitive markets. A more realistic pronuclear study by an expert group at the Massachusetts Institute of Technology found that electricity from a new nuclear power station in the USA would cost 9–10 cents per kilowatt-hour (c/kWh) Australian. For comparison, electricity from dirty (conventional) coal-fired power stations in eastern Australia costs 3.5–4.0 c/kWh and wind power costs 7.5–8.5 c/kWh.

In the UK, when the electricity industry was privatised in the 1990s, nuclear power was propped up by means of the Fossil Fuel Levy, which amounted to about 1.3 billion pounds per year (\$3.2 billion). The cost of electricity from Britain's newest nuclear power station, Sizewell B, has been estimated at 6 p/kWh (15 c/kWh). For comparison, wind power in the UK costs 3–4 p/kWh (7–9 c/kWh).

As spelled out clearly in the unbiased Ranger Uranium Environmental Enquiry, published a generation ago, nuclear power is contributing inadvertently to the spread of nuclear weapons and hence the risk of nuclear war. Since then, the risk has become much worse. India, Pakistan and North Korea have all used civil nuclear technology to develop nuclear weapons.

Furthermore, the fragile barrier to nuclear proliferation – the Nuclear Non-Proliferation Treaty – is being undermined by the USA and Australia which are selling uranium to India and Taiwan, countries that are non-signatories to the NPT.

These sales are obviously part of a US strategy to build a nuclear wall around China. China's response will be to expand its own nuclear weapons arsenal. However, China's uranium reserves are too small to do this and to fuel its nuclear power stations as well. So, Australia has come to the rescue with its uranium sales to China, freeing up Chinese uranium for more nuclear weapons. A future confrontation over Taiwan could be hot indeed!

The report's conclusions on proliferation are breathtaking in their complacency: "Increased involvement [in the nuclear industry] would not change the risks" and "Australia's uranium supply policies reinforce the international non-proliferation regime". This goes beyond greenwash to repainting black as white.

The report dismisses nuclear terrorism with: “nor would Australia’s [electricity] grid become more vulnerable to terrorist attack”. What about an attack on a nuclear power station, high-level nuclear waste in a cooling pond, or highly radioactive nuclear materials being transported? Even if they don’t hijack a jumbo jet, a small paramilitary group with suicidal tendencies could take over the control room of a nuclear power station and initiate a core-meltdown, creating hundreds of thousands of casualties.

The report assumes incorrectly that carbon dioxide emissions from the nuclear fuel chain are negligible. In reality, emissions (especially from fossil fuel use in mining and milling uranium) will become much larger as the uranium ore grade declines over the next few decades. As a result, nuclear power will become a substantial greenhouse gas emitter beyond 2040.

It is difficult to avoid the conclusion that the Federal Government’s push for nuclear power, assisted by the Switkowski report, is simply a means of distracting attention away from its failure to implement strong greenhouse response policies. The key measures needed are carbon pricing to encourage cleaner energy supply and regulations and standards to mandate efficient energy use.

As shown in the report, “A Clean Energy Future for Australia”, we could cut carbon dioxide emissions from the electricity industry by 80% by 2040, by using a mix of efficient energy use, bioenergy, natural gas and wind power. The barriers are neither technological nor economic, but rather are the political power of the big greenhouse gas emitters.

Dr Mark Diesendorf teaches and researches at the Institute of Environmental Studies, University of New South Wales.