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For Australia to adopt some dependence on nuclear-powered electricity generation we need to address not only the impact of the Fukushima accident, waste management and the evolution of technologies but also the lack of a nuclear installation regulation within the Commonwealth and each of the States.

An opportunity for nuclear power could arise from growth in demand for base-load low-carbon electrical energy due to population growth and continued societal concerns about higher carbon emissions, particularly from coal burning. If the economics for electricity generation is impacted by a carbon tax or a compulsory carbon capture and sequestration, then nuclear generation will be economically competitive.

While the Fukushima accident has impacted Japan and some European countries with ageing nuclear power plants, the rapidly expanding programs of China, Korea, India and the United Arab Emirates have been re-appraised and are continuing strongly.

Each of the developed nuclear power countries has a form of ‘inspectorate’ that has regulatory control over the choice of technology, its siting, construction and operation. These responsibilities do not fit within the charters of the existing Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), Australian Safeguards and Non-Proliferation Office (ASNO) or the Australian Nuclear Science and Technology Organisation (ANSTO) but elements for such an inspectorate could be drawn from each. Legislation to form a Nuclear Installation Regulator will be complex due to constitutional Commonwealth/State relationships and will require political support at both levels.

Useful precedents exist in the US, Finland, Sweden and UK. If Australia is to have nuclear power by 2030 then it must develop an effective inspectorate by 2016.

263