



## Nuclear Fuel Cycle Royal Commission

Dear Commissioner/Staff

Thank you for the opportunity to make a written submission to the Commission and to now comment on the tentative findings. I congratulate all involved in producing such thorough and even-handed document.

My comments are

1 Locating and developing a major new source of uranium in Australia, hopefully in SA, with uranium as the sole or dominant metal present would further strengthen the SA position in the uranium fuel market. Roxby has been a great benefit to SA but production of uranium is interlinked with copper production and as such is a by-product with output dependant on current demand for copper (to some extent).

2 Fuel leasing is the obvious way to track and control uranium throughout the fuel cycle, assisting with prevention of high grade nuclear material becoming obtained by rogue States, groups or individuals.

3 The assumption that electricity demand will remain flat in SA may be right but it is pessimistic. It could be that there are many practical ideas/projects to expand SA business opportunities - but has, for instance, Advertiser surveys on this matter been largely directed to the wrong people? This affects some of the conclusions such as continued reliance on interstate supply of a proportion of base load electricity (at contract or fluctuating price?)

With Arrium steelworks kept operational and news that a German company may engage in shipbuilding and manufacture of army vehicles at Whyalla an increase in power demand could be expected.

Although far from a solid proposition at present the mooted Arkaringa shale oil production undertaking would be massive, with a huge power demand (but possibly not externally supplied).

Then there is the power needed for the construction and operation of the high level waste storage facility itself.

Even modest growth in electricity demand, from your own data, could justify a package nuclear power plant at Port Augusta. An alternative would be to at least keep the Playford coal fired station running until such time as the proposed Leigh Creek fuel gas plant is operating

(2018??) with piped supply to Port Augusta to keep the existing power station in operation for another 10/20 years. And SA in charge of its base load power supply.

4 A strong case has been made for storage of low and intermediate and high level waste. For South Australia's sake let us hope that implementation of each of these opportunities is commenced as soon as possible (but with sensible precautions).

5 I recommend establishment of a local (and locally owned) R&D organization, along the lines of AMDEL, before it was absorbed into Bureau Veritas to become, presumably, primarily a quality control verification set-up. AMDEL did pilot plant work 50 years ago now, for instance, to establish extraction and concentration procedures for Rum Jungle yellow cake production.

The new AMDEL could facilitate development of

1. mining and extraction techniques
2. enrichment techniques
3. application of package nuclear power plant to suit SA circumstances
4. design of special containers
5. ship design? in conjunction with revamped Whyalla shipbuilding?
6. design of port facilities for handling the special cargoes
7. design of the secure transfer railway to ultimate storage facility
- 8 and particularly the design of the three classes of these storages.

6 The wealth fund is an excellent idea. There needs to be clear guidelines on how the money can be accessed and to what purposes it can be put - and what purposes are forbidden. All expensive projects using wealth fund money must have justification by strict cost/benefit analysis. Unjustified politically driven brainwaves are the cause of much of the current State debt.

7 All developments associated with all aspects of the fuel cycle should seek to maximise employment of suitable country located Aborigines, but in proper employment only, not money transfers to traditional owners negotiated by lawyers for "access", especially to land seldom, if ever traversed, let alone occupied. Useful employment increases self esteem.

PCC 22/02/16