

15th September 2019

The Standing Committee on Environment and Energy
Committee Secretariat
By Email: Environment.Reps@aph.gov.au

Dear Committee Members

Inquiry into the Prerequisites for Nuclear Energy in Australia.

Thank you for the opportunity to submit to the Standing Committee on Environment and Energy in relation to the prerequisites for nuclear energy in Australia.

I am an agriculture advocate living in Latrobe Valley at the hub of Victoria's power generation. Too many times poor planning decisions are contributing to significant negative consequences for health, environmental degradation, and economic, legal and social impacts.

Addressing the terms of reference:

a. waste management, transport and storage

Can radioactive waste from nuclear energy generation be considered a sustainable energy option if the end waste product is a long term dangerous radioactive contaminant.

- The transport and storage disposal of asbestos is problematic and an unacceptable risk in some areas let alone what risks storage and disposal of radioactive waste would pose.
- What areas of Australia would be locked up for hundreds of years to secure the long term waste imposing burdens on future generations to manage?
- Whilst disposal of nuclear waste remains an unresolved issue from domestic use so any potential variation of value adding needing reprocessing of spent fuels rod would greatly increase the risks. **See (e) economic feasibility**

Whilst the volume of high level nuclear waste is small the need to engineer storage and isolate the waste is huge into the hundreds and potential a thousand years. For this reason nuclear energy cannot be acceptable.

The reality of this image and its quote is powerful.

Source - <https://australianmap.net/wp-content/uploads/2012/03/Romans-PerthOct2009-IMedia.jpg>



b. health and safety

If the potential for catastrophic risks from nuclear reactors exist then plant location should be remote.

Health and safety risks associated with radioactive exposure would occur across the whole nuclear fuel cycle from generation, management from the operation of nuclear reactors, transport of radioactive waste, disposal and storage but also waste from the source mines. The risks are too numerous when other viable energy options are considered.

c. environmental impacts

Nuclear energy generation in Australia has the potential to cause the most impact to the environment out of all thermal energy when the full life cycle of the fuel is considered for reaction, transport, use, disposal and storage. For the small amount of potential nuclear energy generation that may occur in the future the storage and disposal aspect cannot be supported.

d. energy affordability and reliability

How can affordability for nuclear energy be calculated when the energy market is continuing to develop, renewable energy is becoming cheaper and its deployment more viable.

In context to the lengthy time for a regulatory framework to be established, then construction and operation of a facility, forward modelling of cost vs energy affordability is just guesswork.

Reliability of renewal energy is continuing to evolve and network infrastructure improvements could challenge the need for nuclear options in the future.

This is particularly relevant where significant investment funds from taxpayer monies are needed to provide business incentive.

e. economic feasibility

In the past, damage to the environment from fossil fuel energy generation was never accorded a monetary value so the capital worth of water overuse (from both surface and ground waters) and degradation of the surrounding ecosystems was not factored into the full cost analysis of negative impacts.

All thermal energy generation has an effect and cost on land use changes (agricultural land to industrial), conflict from over extraction of groundwater, buffer zones; land acquisition, accessing insurance for the project and those living nearby to name a few.

It would be expected that significant costs would be passed on to consumers. To what end would be dependent on taxpayer investment funding research & development, construction/wage costs, transmission and distribution. Victoria's desalination plant is a perfect example of cost blowouts with its exorbitant costs yet to be proven as a good decision.

<http://economicstudents.com/2015/08/was-desalination-the-right-option-for-victoria/>

What is more worrying is the potential for the Federal government to value add to the fuel cycle if nuclear energy is approved.

Currently, federal and state governments see thermal coal as an important economic export commodity determining policy based on Gross National Product.

Could domestic use of nuclear for energy generation morph into a business proposal for private gain from the multitude of pro-nuclear luminaries in Australia?

A submission to the **Uranium Mining and Processing and Nuclear Energy Review** in 2006 by the Nuclear Fuel Leasing Group highlights their plans for value adding by leasing fuel rods to the international market and taking back the spent rods for disposal and storage in Australia.

http://web.archive.org/web/20070831021553/http://www.pmc.gov.au/umpner/submissions/134_sub_umpner.pdf

In a speech from Senator Milne to the Senate on 4th December, 2006 on the **COMMONWEALTH RADIOACTIVE WASTE MANAGEMENT LEGISLATION AMENDMENT BILL 2006**- Second Reading, she likens this plan to,

... developing an Australian nuclear fuel leasing company, which would facilitate and manage enrichment, fabrication, leasing, transport and storage of 15 to 20 per cent of the world's nuclear fuel needs. This person has a very grand vision for Australia as a global waste dump.

<https://greensmps.org.au/articles/govt-attack-indigenous-people>

Chapter 12 Value adding

https://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=isr/uranium/report/chapter12.htm

A 'Nuclear Fuel Cycle Complex' and fuel leasing

12.81 The Australian Nuclear Association (ANA) proposed the eventual development of a 'cradle to grave' concept for Australia's uranium, which would involve the construction of an 'Integrated Nuclear Fuel Cycle Complex' (NFC Complex) in Australia. The concept would:

... take Australia's uranium through the front end of the nuclear fuel cycle to the production of fuel elements which would be leased to overseas nuclear power programs. The spent fuel would be returned to Australia, stored, reprocessed and the unused uranium and plutonium recycled into MOX fuel for lease to overseas nuclear plants. The high level waste would be converted into Synroc and placed in a deep repository in the most suitable part of Australia.⁹⁰

See Recommendation 12

https://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=isr/uranium/report/chapter12.htm

f. community engagement

Community engagement will always be a challenge when Fed and State governments have poor regulatory oversight and the environmental is not accorded the protection its needs even though an adequate regulatory framework is in place. The public have good reason to not trust their elected leaders through past mismanagement of project development and gaining acceptance of a nuclear future would seem a long way off.

g. workforce capability

The workforce capability for such a small industry would be problematic to progress a proposal in the Australia context, to construct a facility and then to operate a nuclear power plant. Attracting the appropriate skilled workers would be in competition to other construction projects around the Australia.

The Victorian Desalination plant is a good example of needing to pay much higher wages just to attract skilled workers from Western Australia.

<https://www.smh.com.au/national/fourday-pay-bonanza-20091223-ldg3.html>

h. security implications

The world is a vastly different and unstable place on both a geopolitical perspective as well as through climate variability.

Simply put, water sustains life so water security should be at the forefront. This means nuclear production, generation and waste storage cannot be anywhere near a water source.

For areas that would be dependent on a nuclearised central grid system for energy security, any shutdown in delivery via terrorist threat, accident or grid reliability could be catastrophic economically, environmentally and socially.

i. national consensus

consensus definition:

'A decision achieved through negotiation whereby a hybrid resolution is arrived on an issue, dispute or disagreement, comprising typically of concessions made by all parties, and to which all parties then subscribe unanimously as an acceptable resolution.'

<http://www.duhaime.org/LegalDictionary/C/Consensus.aspx>

Expecting a national consensus from all states that are currently fighting over a crossover in water and environment impacts under poor Commonwealth policy settings and regulatory oversight is a pipedream away when you factor which state will be forced to take the waste storage. Only an economic incentive can sway a state government but no incentive will sway the people.

j. other matters -decommissioning nuclear reactors

In consideration of the inability of federal and state governments to resolve how to decommission and rehabilitate a coal pit void how they could plan for the challenges to decommission a nuclear reactor with the economic, legal and social implications while being transparent and accountable to the people would be a planning nightmare.

Yours sincerely

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