

South Australia's Citizens' Jury on Nuclear Waste

Final Report

November 2016

“Under what circumstances, if any, could South Australia pursue the opportunity to store and dispose of nuclear waste from other countries?”

Jury Summary Statement

The Citizens Jury would like to Acknowledge that we have been meeting on Kurna land and we pay our respects to the Traditional owners, past and present, across South Australia.

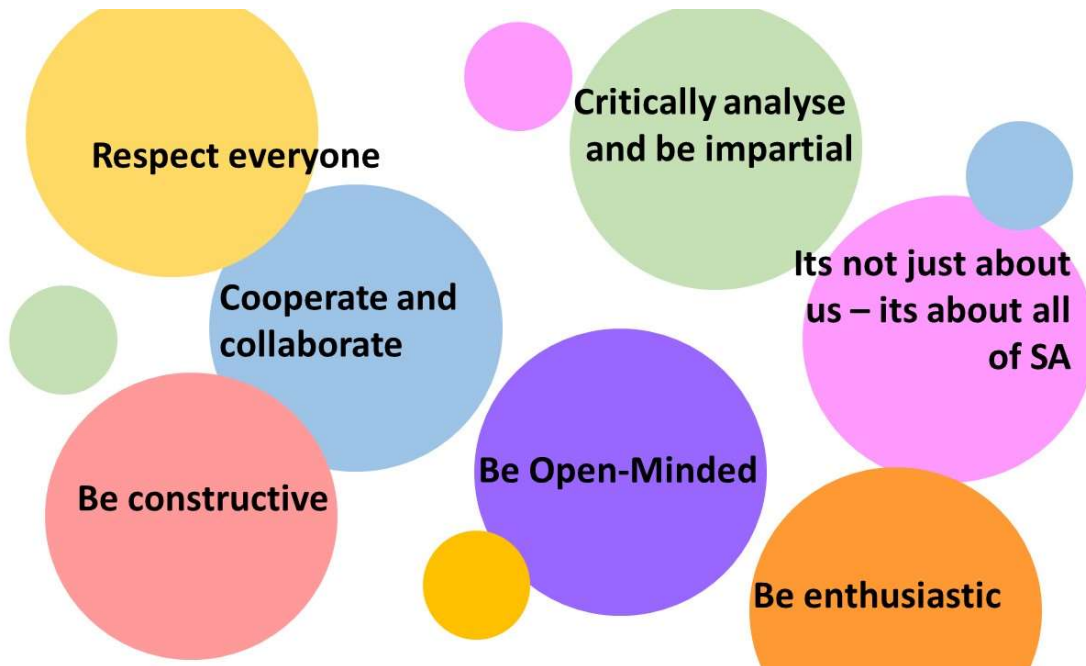
The jury generally had a strong conviction in taking a position one way or another. Two thirds of the jury do not wish to pursue the opportunity under any circumstances and one third support a commitment to pursue under the circumstances outlined in this report.

Introduction:

Citizen's Jury 2 (CJ2) was a group of 350 residents of South Australia who were brought together under the remit of discussing and reporting on the question: “Under what circumstances, if any, could South Australia pursue the opportunity to store and dispose of **high level** nuclear waste from other countries?”. To be clear, the jury considered only high-level nuclear waste.

The people on Citizen's Jury Two were selected to be broadly representative of the population of South Australia based on demographics (as best as was possible based on the responses to the initial invitation to take part). The 50 jurors from Citizen's Jury One were also invited back to be part of the second jury process and approximately 30 of them decided to take part in the second jury.

On the first day of the jury, we established some guiding principles for how we should approach the process. These are shown on the image below.



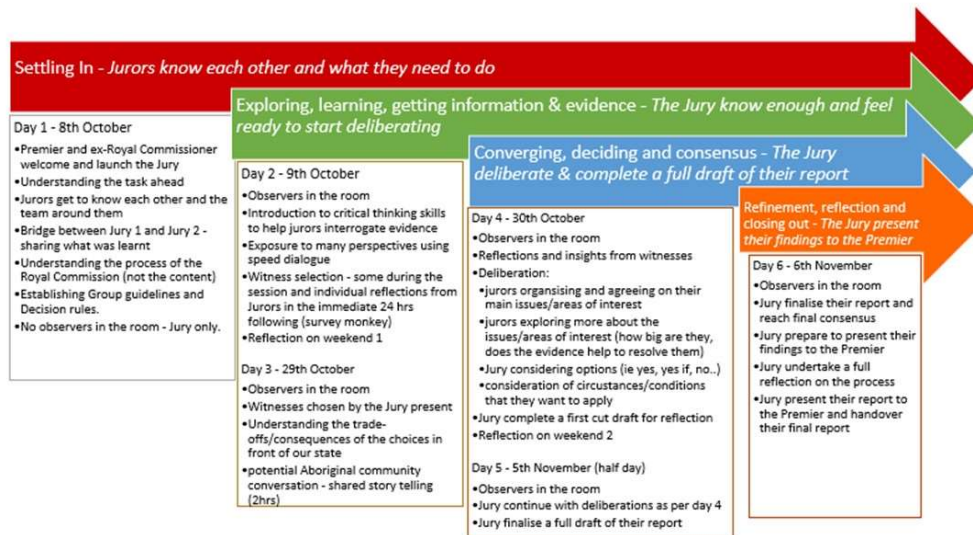
Over the course of six days, the jurors were provided with a lot of information in the form of reports, witness presentations, stakeholder meetings and data from the Government's public consultation. The information was broadly based around the four themes of:

- 1) Safety
- 2) Trust, accountability and transparency
- 3) Social and community consent
- 4) Economics and benefits/risks to our state

The tasks that the jury undertook over the 6-days of deliberation are detailed on the figure below.

Jury Methodology Overview

The table below provides a snapshot of the process which is being designed by democracyCo to support the Nuclear Citizens Jury to deliberate on the remit of: "Under what circumstances, if any, should SA pursue the opportunity to store and dispose of high level nuclear waste from other countries".



Witnesses: There was an initial 'potential witness list' provided by Democracy Co. with input from the Stakeholder Reference Group, which had 160 potential witness on it. This witness list had been selected on the basis of their experience and/or expertise in areas relevant to the four topics identified above and on advice from Citizen's Jury 1. During the jury process, jurors were given the opportunity to identify additional witnesses that they would like added to the 'potential witness list', which increased the size of the list to 200. After these additions, the jurors went through a process of witness selection via voting, after discussions with members of the Stakeholder Reference Group and opportunities to talk with jurors from Citizen's Jury 1. The top witnesses from each of the four themes were invited to attend, plus 3 additional witnesses who were invited by Democracy Co in order to fill knowledge gaps identified by the jurors. The jurors were given the opportunity to hear from 31 witnesses that they had selected from the 'potential witness list' as well as an additional 20 (approximately) Aboriginal witnesses. Witnesses spoke in concurrent sessions, so it was not possible for a juror to attend all witness sessions. However, the witness sessions were recorded and made available on YouTube (except those involving Aboriginal witnesses, at their request). Aboriginal witnesses spoke in a single session, which all jurors attended.

The jury would like to recognise the traditional custodians of this land and thank them for their participation during this Jury process. We would also like to commend the State Government for initiating this citizens jury process for the deliberation of matters significant to the future of South Australia.

Recommendations:

Based on information provided to the Jury there is insufficient evidence to support yes.

There is a lack of aboriginal consent. We believe that the government should accept that the Elders have said NO and stop ignoring their

opinions. The aboriginal people of South Australia (and Australia) continue to be neglected and ignored by all levels of government instead of respected and treated as equals.

It is impossible to provide an informed response to the issue of Economics because the findings in the RCR are based on unsubstantiated assumptions. This has caused the forecast estimates to provide inaccurate, optimistic, unrealistic economic projections.

We remain unconvinced that estimates relating to the cost of infrastructure.

South Australia has a reputation as a green state and has a commitment to pursue clean energy and participation any further in the nuclear cycle (specifically foreign High Level Nuclear Waste Storage Facility) be detrimental to our image.

Evidence -

No, not an option for the state under any circumstances for reasons of consent, economic, trust and safety.

- Under no circumstances should South Australia pursue opportunity to store and dispose of nuclear waste from other countries for reasons of consent, economic, trust and safety.

Rationale

The Jury has identified that the four key determining principles for deliberation are: consent, economics, trust, and safety.

Multiple threads of concern are present that undermine the confidence of jurors in the Royal Commission report's validity. These concerns collectively combine to affect a powerful NO response to the concept of pursuing the storage and disposal of high level nuclear waste in SA.

Indigenous, community and social consent is absolutely required; currently not provided and a resounding 'No', see UN Declaration of the Rights of Indigenous Peoples, 14 September 2007, Articles 18-24 and 25-32.

Many have no confidence in the economics of the project which is a major concern to the Jury. [Richard Denniss, Richard Blandy, Barbara Pockock, Mark Diesendorf] The assumptions made to potential income are based on assumptions with little support. The disposal fee relied upon for the entire project is based on securing the majority of the global market from countries who do not have disposal plan, with limited or no competition. Competition is already developing globally, e.g. General Electric Hitachi. With no market testing and understanding the appetite with potential customers for the use of, and at what fee, for an Australian repository, is a reason not to undertake further expenditure and investigation.

Political agenda in continuing the investigation for the disposal of nuclear waste, with evidence of lack of consent and poor economics, demonstrates this as an agenda of the government.

No evidence of regulatory bodies (EPA for example) to act independently and to be funded properly to adequately regulate an industry. For example, Radium Hill closure due to the waste tailings dam dispersing tailings into the surrounding landscape (Royal Commission Report p14-15). A further example is the nuclear waste dumping at Arkaroola in 2008 by Marathon Resources.

The premise for the Royal Commission was to extend the Nuclear Fuel Cycle in South Australia, which predisposes the Jury (i.e. the public) to follow the recommendations leading to a yes to continue which the Jury disagree with.

Accidents are inevitable in any industry, the cost of accidents may outweigh the economic benefit, and undermine any consent previously given. Jurors have also raised concern of long term quality assurance for safety measures both in Australia and client countries. This includes the safety associated with shipping in international waters and the security of the waste. Tim Johnson's provided comment that no inclusion of costs associated with accidents had been considered. Some Jurors are less concerned with Safety as a predominant issue for consideration.

The long-term viability of the project is in doubt as it does not consider new technology providing potential alternatives for the use of the waste. This undermines the economics to the project resulting in disposal of waste redundant. The production of high level waste would reduce with recycling improvements, alternative generation, storage and improved use through more efficient generators.

Many jurors believe we don't have the right to make a decision that will have such long term and **irreversible** consequences for future generations.

Many Jurors say "No" to the State being a "dump" due to consent, economics, trust, and safety and we should cease spending any further public funds.

Should Section 13(2) of the Nuclear Waste Storage (Prohibition) Act 2000 (SA) be amended to allow economic modelling?

Most say that community consultation in Section 13(2) equates to the ordinary meaning of 'community', and precludes talking to other countries to develop a proper business case.

Concern was raised by a few jurors that changing legislation would open the door for unrestricted expansion of the nuclear industry.

Any change to legislation should not be seen as a go ahead for an unrestricted expansion of the nuclear industry.

The proviso is that change to the law should be incremental. Provisos mean not drilling holes etc. It should be a multi-step process. Approve the economic modelling first, analyse the economic viability of the proposal, and if viable go back for further

community consultation or debate to see if the legislation needs to be incrementally changed again.

Rationale

- The ability to gather information is hindered by the current legislative prohibition.
- Community consultation is referred to in the Royal Commission report (p. 121). This is a common sense definition and similar to the standard dictionary definition.
- In order to establish the economic viability or otherwise of a high level nuclear waste repository in South Australia, the legislation **may** need to be amended to allow for information gathering from industry and other countries.
- Information gathering would include market testing with the federal government, other countries, formal conversations around price, timeframe, and potential commitments, the specific agreements and forms.
- Legislative change should be incremental, not repealing whole Acts.
- Consideration should be given for a sunset clause in relation to amending the Act.
- Wording should include 'potential client countries'.

A possible rewording, and/or addition of a subsection 3:

- to facilitate community consultation or debate, subsection 1 does not prohibit the appropriation, expenditure or advancement to a person of public money for the purpose of consultation with national and international stakeholders to obtain information for economic modelling only.
- stakeholders could be IAEA, current countries with waste management arrangements or potential client countries.
- the process of consultation with other stakeholders should be open and transparent as possible (taking in account confidentiality surrounding price of high level waste and negotiations). For example, with continued oversight by a relevant parliamentary committee. It should also involve providing information to the public.

Madeline Richardson (CEO of the Community and Response Agency) provided some advice as to the interpretation of 'community'. The word 'community' could be open to interpretation.

- There should be cap on the appropriation of public money. The jury would not suggest that this should be taken as a blank cheque to spend public money on consultation including information gathering and economic modelling.

- Public money expenditure should be subject to budgetary oversight by parliament or relevant committee.

Evidence

The Nuclear Waste Storage Facility (Prohibition) Act 2000 (SA) Section 13(2) states:

- Subsection (1) does not prohibit the appropriation, expenditure or advancement to a person of public money for the purpose of encouraging or financing **community** consultation or debate on the desirability or otherwise of constructing or operating a nuclear waste storage facility in this state.

South Australia should not be a first mover (trailblazer) in High Level Nuclear Waste Storage.

- Under no circumstances because...

Under no circumstances should South Australia be a trailblazer in High Level Nuclear Waste Storage because it is an emerging technology, a lack of local expertise and a high level of risk economically, socially and environmentally.

A well-known example of where a first mover did not achieve an economic advantage is the original social media platform or 'Trailblazer', MySpace, which was greatly surpassed by the second mover Facebook.

Although being a first mover could create an advantage any shift in market, technology or customer demand could undermine that same advantage.

Disadvantages of being a first mover include 'free-rider effects, resolution of technology or market uncertainty, shifts in technology or customer needs, and incumbent inertia.'

There are other investment opportunities in new research, science and technology and current and emerging industries they warrant further investigation.

1 See: The Half Truths of First-Mover Advantage, Harvard Business Review, April 2005

<http://hbr.org/2005/04/the-half-truth-of-first-mover-advantage>

2 Liberman, Marvin B.; Montgomery, David B (Summer 1988). "First-Mover Advantages" (PDF). Strategic Management Journal. Strategic Management Society, pg.: 41-58

Impacts of new technologies on the proposal to store nuclear waste

- Under no circumstances

Rationale

South Australia should not pursue the opportunity to store high level waste based on unknown future technologies that may or may not ever be developed. While future technology could provide alternatives for the reuse of nuclear waste, nuclear waste storage is a long-term liability so making assumptions based on theories around future technology have the potential to make South Australia's proposal for an underground nuclear waste storage facility economically unviable and potentially redundant. The high degree of uncertainty in the global market for mid-high level nuclear waste is also a contributing factor.

Evidence - The Australian Nuclear Science and Technology Organisation (ANSTO) - Fact Checker Response to Question 44 - 'the degree of increase is

uncertain and largely dependent to the degree to which the world decides to decarbonise energy supply to meet climate change goals.
Royal Commission Report - Appendix E.

New industries or opportunities within nuclear industry

- Something else...

Rationale: Many of the jury felt that this isn't a part of the remit but some jurors believe it is a relevant topic to examine when deliberating on whether or not South Australia should become involved in storing nuclear waste.

The project has the potential to provide multiple opportunities to invest not only in nuclear technology but also other technologies/ industries that could benefit us within Australia and internationally. New technologies may come from further research and development as a result of the investment in the nuclear industry. For example: new methods/ techniques to use and save nuclear waste, the safe transportation of nuclear materials, geological sciences, health sciences and the mining industry.

It would be fair to assume that any involvement in the nuclear industry would lead to expertise development in other areas.

- Port Building

Australia needs to modernise its ports. This would benefit other industries e.g. electronic industry.

- Automation (Ports, Roads, Rail)

This would lead to short-term improvement for employment but in the long-term, there will be less opportunity.

- Research opportunities (Radiation research, Nuclear Medicine etc.)

This will lead to an increase in education, leading to new university courses available in universities. Ventures in the nuclear industry will require researchers to assist in planning future endeavours.

- Technical training (Waste Disposal expertise)

Workers will require training as new technologies within the industry emerge.

- Nuclear Power

Our involvement in nuclear waste disposal may lead to nuclear power becoming a feasible alternate power source.

- Nuclear Innovation

Through our involvement we may find better methods of disposing nuclear waste.

Anything we say about this is in the future; any opportunities are set in the future. We think that a nuclear reactor (and expertise) is a mainstream spin off. There would be high tech port construction and would gain more technical expertise. It would be fair to assume that any involvement in the nuclear industry would lead to expertise development in other areas but this is true of expansion into many other industries.

This can also provide Australian a voice in the international nuclear discussions through our technological developments.

Evidence - Given this is not part of the remit, our assumptions are speculative at best.

Thorough diverse community engagement

Under the following circumstances, South Australia could *pursue the opportunity to store and dispose of nuclear waste from other countries*

Rationale

South Australia is a diverse and multicultural state and each community should be engaged on a level that is appropriate for them, not on a “one size fits all” basis.

- Many jurors agree that this can be done by consulting international industry professionals and building relationships with community leaders.
- Almost all jurors agree that appropriate time needs to be allowed for engagement
- Many jurors agree that whether or not we proceed, further engagement with all communities is needed
- Many argue that detailed economic analysis should be known before community engagement is done, but this is up for debate. This is very important to the community to assess the risks and benefits associated with the proposed facility
- Some have said that the consultation program should be ongoing and that there should be an expiration date on the legislation change regarding the government being allowed to consult the community.
- Many agree that the consultation process needs to account for cultural and linguistic diversity in a format appropriate for the community. It needs to be held in an accessible location. And be conducted by an independent body.
- Consultation process needs to maintain transparency and accountability
- Some jurors argue there should be an objective review of the Government consultation process
- Many jurors agree the engagement process needs to discover what issues are most important to the community and how to address these concerns

- Engagement must occur for everyone involved - Both South Australians and take into consideration the views of all of Australians - Aboriginal communities, potential local site communities, the broader SA community
- Some jurors mentioned that since the younger generations are more likely to be affected by this proposal, they should be educated appropriately and be encouraged to speak their concerns

Evidence

NGO Document. Aboriginal community prefers the word “engagement” rather than “consultation”

South Australia could take a role in ensuring the safe disposal of international nuclear waste as a global citizen

Answer the remit.

- Under the following circumstances we could participate in the storage and disposal of nuclear waste

Rationale

Part of being a global citizen is accepting the part we play in solving global problems - we live in a globalised world and interact internationally, using products and services from other nations. Part of this is accepting the social cost of using these items. (For example, e-waste or international shipping scrap).

- We have a stable geology and political system
- Social responsibility infers we ‘could’ be part of the solution while ethical responsibility infers we ‘should’. Taking ethics out of the decision making makes the process more rational and objective
- This proposal could advance the creation of a multinational nuclear disposal industry supported by multinational funding
- Australia has a long-standing culture of safety and exceeds many international standards, allowing us to contribute in the research & development of best practice in advanced nuclear waste management

Evidence

“There have been several proposals for regional and international repositories for disposal of high-level nuclear wastes, and in 2003 the concept received strong endorsement from the head of IAEA” - IAEA Regulations allow for further discussions into regional geological facilities. - ‘Radioactive Waste Storage, Disposal and International Concepts - World Nuclear Association, 2016, pp 20, 21, 22

‘For the management of used fuel and intermediate level wastes, South Australia has a unique combination of attributes that offer a safe, long-term capability for the disposal of used fuel in a geological disposal facility’ - p 89, Nuclear Fuel Cycle Royal Commission report 2016

International Best Practice (Trusted International Standards), ARPANSA -

www.arpansa.gov.au/regulation/ibp/index.cfm

Social and community consent is a fundamental requirement

Under current circumstances the jury agrees that we should not pursue the proposal to store and dispose of high-level nuclear waste from other countries.

The jury agrees that social and community consent is a prerequisite before any further progression of this proposal can take place.

Rationale

Firstly, we need to clarify that we (the jurors) agree to the definition of social and community consent, as cited in the Royal Commission.

The definition of social consent is: “the ongoing public support that is necessary for an activity to be undertaken in a society” (p.121 of RC).

and community consent “informed agreement from an affected community the threshold of consent will differ for each community according to its concerns, rights and values.” (p.121 of RC)

The definition of ‘free, prior and informed’ consent has been ‘borrowed’ from the definition outlined in the United Nations Declaration on the Rights of Indigenous Peoples. We have transposed these terms to apply to all affected communities (i.e.: both indigenous and non-indigenous communities)

Consent is required from:

- Local communities directly affected
- Transport corridors, including international shipping routes
- Majority of South Australians
- Australia wide
- Consent from community from country of origin
- Aboriginal Communities (sec. 59 of UN Dec of Indigenous Rights)

Free: (what do we mean by free consent)

- Free implies that there is no manipulation or coercion and that it is self-directed.
- Transparency
- Free from coercion
- Withstand any political changes (state and federal)

Prior: (what do we mean by prior consent)

- “Broad social consent and specific community consent must be obtained for any new nuclear activity to commence in South Australia” (RC, p.121 sec95)
- Nuclear activity includes investigations, changes to legislation, economic analysis, site investigation (including ports and transport routes) and construction.

Informed (what we agree is an informed decision)

- Consent of the wider population needs to be obtained in a socially appropriate manner
- This discussion needs to be fact based and understood
- Discussions need to be in accessible languages (both layman’s terms and in Aboriginal languages)

- All information presented must be accessible, understandable and culturally appropriate for all affected parties (e.g.: visually impaired, illiterate)
- Additionally, information needs to be in several accessible formats, we cannot assume that people in rural communities can access the internet

The jury agrees there is no current community and social consent. This statement is supported by the following quote:

“In our second meeting with [Royal Commissioner Kevin Scarce] we had 27 Native Title Groups from all around South Australia. We had a vote on it. And it was unanimous that the vote said no we don’t want it... Commissioner Scarce said “well maybe I am talking to the wrong people” and we said “well what other people are you going to talk to? We’re Native Title claimants, we’re Native Title Traditional Owners from all over this country...this land...we’ve stuck to our guns and we still totally oppose it.”

(Tauto Sansbury, Chairperson of the Aboriginal Congress of South Australia)

Evidence

See above quotes and references.

Conditions for further spending of public money

Rationale

1. Legislation:

The Jury strongly recommends that there be no further amendment to the Nuclear Waste Storage Facility (Prohibition) Act at this time. The Jury has received advice that with the passing of the Nuclear Waste Storage Facility (Prohibition) (Public Money) Amendment Bill 2016. There is no reason for Government to make any further changes to legislation at this stage. there is currently no impediment to the Government funding further analysis that will better inform the public consultation process. Indeed, some such work already being funded. (evidence: advice from (1) Crown Solicitor, (2) Mark Parnell MLC, (3) Environmental Defenders Office).

2. Public Funds:

However, many in the Jury felt strongly that if the nuclear waste proposal it is to go ahead no further public money should be spent at this time. Any further analysis should be conducted and funded by key players within the industry. There is no impediment for industry not to produce a detailed overall analysis. Publicly funded work (through the Royal Commission's Report & Citizens Jury) effectively provided a scoping brief for industry to detail a proposal that can meet the necessary conditions which can then receive further public consideration.

3. Alternative Use of Public Funds:

Many in the Jury also felt that alternatives should be explored as to how the projected \$600 million upfront outlay (evidence: Jacobs supplementary on notice to Parliamentary inquiry) could be used more effectively.

4. Alternative Approach to Nuclear Waste Management:

Rather than proceeding with the current state proposal, we should await the international initiative from the IAEA for global management of nuclear wastes from countries unable to dispose of their own.

Evidence

(for point 1)

evidence: advice from (1) Crown Solicitor, (2) Mark Parnell MLC, (3) Environmental Defenders Office (4) Hansard 2nd reading speech 22/03/2016

(for point 3)

evidence: Jacobs supplementary on notice to Parliamentary inquiry - **the use of public money**

Aboriginal Consent: Land and Legacy

- Under no circumstances because...

Rationale

Aboriginal people are the custodians of the land. They have a long-standing connection with the land.

We need to consider the traditional owners and current residents of the land; not only of the final location of the nuclear waste facility, but also the lands that the waste is transported through.

Many Aboriginal people have no or little trust in government based on lack of transparency and lack of attempts to fix previous issues. There is a legacy of government implementing processes that are harmful to indigenous people. There is too much unfinished business.

The Aboriginal community has considered for thousands of years that uranium is poison and with their strong connection to country a waste facility will affect every aspect of their lives - not only physical, but spiritual, emotional, and psychological. "Any damage to the environment is equal to damage to spirit and body." (Keith Peters, No Radioactive Waste Dump document.) Aboriginal people want to be able to preserve their culture through custodianship of their land and the song and storylines, and sacred sites contained.

"Our culture is at the heart of everything we do." (Keith Peters, No Radioactive Waste Dump document)

"Indigenous people have the right to keep and strengthen their distinctive relationship with their lands, waters and other resources." (UN)

The South Australian Government has a legacy of:

- a. consulting indigenous people in flawed processes that does not allow Aboriginal people to exercise free, informed, and meaningful consent. Instead, we need systems of engagement.
- b. not receiving free, informed and meaningful consent from indigenous people in the past in all matters, including nuclear.
- c. engaging in practices that lead to the disruption of trust in indigenous people; for example, Maralinga.
- d. engaging in practices that disrupt indigenous people's connection to country, for example the stolen generation and construction of sites like Olympic Dam (p. 128 of the Royal Commission Report). A nuclear waste facility is inherently an imposition on connection to country.

Evidence

United Nations Declaration on The Rights of Indigenous Peoples (Whole Document Relevant)

We Call on the Citizen's Jury to respect the Aboriginal First Nations. Enough is Enough: We say NO! Irati Wanti, Vasinyi / 'The Poison - Leave It' handout

"The royal commission and the SA government have shown ignorance of cultural issues affecting Aboriginal Traditional Owners. Let us remind you about the United Declaration of Rights of Indigenous Peoples, including Article 29.2 about the rights of indigenous people to say no to vasinyi, rate (toxic, poison) waste dumps." **Port Augusta, September 2016 paragraph 9**

"We as the traditional custodians of this land oppose any activity which would seek to undermine the innate cultural connection we have with country. Our past, present and future is connected to country and our ancestral stories connect us to it and all things that reside on country. To interfere with these story lines is to disconnect our people from mother earth and each other." **Combined statement to the royal commission paragraph 1**

"We are not a dump in South Australia, we want to keep it beautiful. They want to bring it where the Anangu are. It might be a desert area but we still go out hunting, we still live off the land, we still take our kids out hunting as well. It's in our artwork that tells a story, they're trying to say it's safe, it's not safe. As soon as money is mentioned, some people change - get interested. But we're Anangu, we're from this country, somewhere else, we're not going to take the worlds rubbish." **Umoona Community Coober Pedy, August 2016**

"We've got to say no to this high level nuclear waste. We got to think about people, we got to think about animals and bush tucker. We've got to think about the country. We need the animals - they are our diet - kangaroos, lizards, wombats, rabbits, bullocks and sheep. We have talked over and over about these things and they are still pina wiya - no ears! They, the government people still don't listen. We say No! Wanti! Leave it! This is our land"

Ceduna August 22nd 2016

No Dump Alliance (Yami Lester)

Quality of Life report for Citizens Jury 2 (Community leaders of the aboriginal human services sector of South Australia, October 2016)

Royal Commission Report Pages 128 & 129 Chapter 6 Land, Heritage and Respecting Rights. Paragraph 106 -107 footnotes 89, 94, 95, 96 & 97.

Dr Jillian K Marsh handout, 27th October 2016

Aboriginal Witnesses 29/10/16 Rose Lester & Karina Lester (Yankunytjatjara), Vivienne McKenzie, Enice Marsh, Terry Coulthard, Vince Coulthard, Dr Jillian Marsh (Adnyamathanha), Dr Jared Thomas (Nukunu?)

Aboriginal Consent
Under no circumstances until...
<p>Rationale</p> <p>Aboriginal engagement and consent is an essential part of this process.</p> <p>The consultation process that indigenous people have been involved with has been problematic. The consultation process has not been transparent, culturally inappropriate, held in inappropriate places with poor access, encountered language and literacy barriers, internet barriers, was directed by non-indigenous people, and did not recognise past wrongs and emotions. These problems were reported by a number of witnesses on the 29th of October, and also is in the “No Radioactive Waste Dump” document distributed by indigenous people.</p> <p>Despite the flaws in this inadequate process, many groups have said “no” to a nuclear waste facility. But because of the consultation process, this response has not been fully informed.</p> <p>What is required is an engagement process that allows indigenous people to reach an informed opinion. If that opinion is “no”, then the project should not receive. A witness said, “No means no” and Jay Weatherill also said that the project would “require essentially the explicit consent of traditional owners” and that “if it did not exist, it wouldn’t happen”. (Q&A ABC September 2016)</p> <p>The UN convention requires that consent is “free”, and that means that the consent is not coerced for financial gain.</p> <p>The jury has heard from a number of indigenous witnesses, but the majority had a response of “no”, but two said that they “don’t know enough” or “need more information”. However, this does not mean that all indigenous people and communities feel this way and so a comprehensive engagement process is vital. This engagement process needs to rectify the flaws that were seen in the consultation process.</p>
<p>Evidence</p> <p>Premier agrees consent is essential. (Q&A Adelaide Session September 2016)</p>

The majority of Aboriginal communities have already said no and the Government needs to respect that.
Under no circumstances because the Indigenous people of South Australia have previously, and continue to, refuse consent for the establishment of a nuclear waste storage facility.
Rationale

Responses from many Indigenous communities to the Royal Commission declare that they do not provide consent (see Evidence section).

The premier has stated that “without Aboriginal consent the proposal will not proceed” (ABC’s Q&A Series 9 Ep 35, 26/09/16). If Mr Weatherill is a “man of justice” as he himself told us on the first day of this jury process (08/10/16) then he must be held to this conviction.

When the Royal Commissioner Kevin Scarce was told that 27 Native Title groups had unanimously voted no, he reportedly replied “well maybe I’m talking to the wrong people”. Tauto Sansbury, Chairperson of the Aboriginal Congress of South Australia then asked “Well what other people are you going to talk to? We’re Native Title claimants, we’re the Native Title Traditional Owners from all over this country... This land... So, who else are you going to pluck out of the air to talk to?... We’ve stuck to our guns and we totally oppose it. That’s every Native Title group in South Australia” (No Dump Alliance, Irati Wanti, Vasinyi document)

The Prohibition Act, to which the objects are, “...to protect the health, safety, & welfare of the people of SA...” prohibits state funding into nuclear waste, and was formed partially to respect the demonstrated wishes of the Indigenous community and the broader SA community at that time. In addition there are human rights violations in storing hazardous materials in Indigenous lands (UN Declaration of the rights of Indigenous Peoples Article 29(2) & 19).

There is also some discussion around the cultural differences in what is considered informed consent. The Western perspective considers providing scientific and economic information enough, whereas the Aboriginal perspective depends on “our ability to learn from the land from our “geologists” and “hydrologists” and from the accumulated wisdom of our Elders.” (Quality of Life document that was handed out to Jurors after the Aboriginal Witness panel)

In the feedback process, some jurors wished to see evidence of the consent being refused. We have since collated some which can be seen in the evidence section of this document).

A few jurors voiced concern that there would be an attempt at “wearing down” of the communities involved by repeated consultation. Some were

concerned over issues involving trust and relationship building due to the Maralinga atomic weapons testing. And a few were not sure of the extent to which the Aboriginal communities have been consulted. However, “further attempts to gauge interest and increase involvement among Aboriginal communities ignores clear and consistent declarations that informed social consent would not be granted” (Page 17. South Australia’s Future: A guide for deliberation by NewDemocracy and The Jefferson Centre)

Evidence

Aboriginal communities who have declared they do not consent include:

1. Kokatha
2. Kokatha-Mirning
3. Arabunna
4. Adnyamathanha
5. Yankunytjatjara-Pitjantjatjara
6. Antikirinja-Yunkunytjatjara
7. Kuyani
8. Aranda
9. Western Aranda
10. Dieri
11. Larrakia
12. Wiradjuri
13. Kurna
14. Nukunu
15. Narungga
16. Njarrindjerri
17. Tanganekald
18. Meintangk Boandik
19. Matu-Tankunytjatjara
20. Barnarla
21. Irrwanyere
22. Nauo
23. Ngadjuri
24. Tjauwara
25. Unmuru
26. Wangkangurru
27. Yarluyandi
28. Yandruwandha
29. Yawarrawarrka
30. Yankunytjatjara
31. Warramungu
32. Warlpiri

Source: ‘No Dump Alliance’: www.anfa.org.au/traditional-owners-statements, Signatory statement from Indigenous community meeting held in Port Augusta 16/05/2015.

The Aboriginal congress of SA “We, as native title representatives of lands and waters of South Australia, stand firmly in opposition to nuclear developments on our country, including all plans to expand uranium mining, and implement nuclear reactors and nuclear waste dumps on our land”

(<http://nuclearrc.sa.gov.au/app/uploads/2016/03/Native-Title-Representative-10-09-2015.pdf> in Submission to the SA Joint select committee on the findings of the Nuclear Fuel Cycle Royal Commission, FoE)

United Nations Declaration on the rights of Indigenous Peoples Article 29 (2) “States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of Indigenous Peoples without their free, prior and informed consent.”

United Nations Declaration on the rights of Indigenous Peoples Article 19 “States shall consult and cooperate in good faith with the Indigenous Peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them.”

Quality of Life: A report for Citizen’s Jury 2 prepared by community leaders of the Aboriginal human services sector in South Australia.

Traditional-owner-statements-SA-dump-oct2016[1].pdf featured in South Australia’s Future Guide for Deliberation published by NewDemocracy and the Jefferson Centre.

We do not have the ethical authority to proceed

Under no circumstances because

Rationale

Ethics is defined as “moral principles that govern a person’s behaviour or the conducting of an activity”. A “yes or maybe” decision would be unethical because:

- Many Aboriginal communities have made it clear they strongly oppose the issue and it is morally wrong to ignore their wishes. We have not come to a majority agreement about whether we have engaged in a genuine reconciliation process in relation to past injustices. We believe this unfinished business is what underpins the certainty in engaging and creating a collaborative and meaningful dialogue with Aboriginal communities. Jay Weatherill said that without the consent of traditional owners of the land “it wouldn’t happen”. It is unethical to backtrack on this statement without losing authenticity in the engagement process.
- The global implications of accepting international high level waste make a statement about Australia’s stance on nuclear energy.

- There is no way to objectively and accurately predict future decisions and impact of these decisions on future generations. We believe this process is insufficient in establishing the moral authority to make a political decision that will have multiple impacts that last far beyond the next 120 years. There is a point of no return in this process for future generations. (See the precautionary principle in the evidence.)
- We do not have enough information to make a decision in SA that may lead to a change in the perception of not only SA's "brand" but affect Australia's image as a whole in a global setting.
- We are concerned that this project is being considered as a purely profitable venture, rather than as a moral responsibility as well. The Royal Commission Report does not give adequate consideration or weighting to the ethics of the decision. We believe advice on how to engage and obtain the consent of the community falls short of the standard of ethics required for a decision of this magnitude and importance.

Evidence

"In our second meeting we had 27 Native Title groups from all around South Australia. We had a vote on it. And it was unanimous that the vote said no we don't want it." Quote from Tauto Sansbury, Chairperson of the Aboriginal Congress of South Australia, quotes given on letter from Yami OAM, Yunkunytjatjara Senior Elder and No Dump Alliance Ambassador, web address: nodumpalliance.org.au Information dated 4th November 2016

p128 Royal Commission Report: "To the extent that any project would be proposed on land in which there are Aboriginal rights and interests, including native title rights and interests, they must be respected."

Q and A 26th September - Jay Weatherill

Information gained from the "speed dialogue", short time jurors had with stakeholder groups talked about the branding concerns.

Trust the science, but perception is the problem - Rob Kerin (Executive chairman, Primary Producers SA).

Andrew Curtis nominated by regional developers and primary producers SA - There could be individual ideological perceptions that might have an impact on purchasing produce from SA and that this would need to be investigated further (market research).

The Precautionary Principle is defined as "when human activities may lead to morally unacceptable harm that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm... Morally unacceptable harm refers to harm to humans or the environment that is threatening, serious and effectively irreversible, inequitable to present or future generations and imposed without adequate consideration of the human rights of those affected." - The Precautionary Principle - www.precautionaryprinciple.eu

There has been a greater depth in the discussion around the ethics of this decision within round 2 of the "Citizen's Jury".

Lonely Planet - Top 5 places to live (image loss)

Google search - ethics definition

Lack of trust in the State Government to manage the process now and in the future across development, implementation, monitoring and remediation.

- Under no circumstances, until the State Government rectifies the perceived lack of trust in managing this process now and into the future. Only then can this progress to further consultation with all stakeholders

Rationale

There is evidence of a lack of trust and a track record of poor performance in the area of managing issues relating to the nuclear industry. The State Government has failed to be transparent in their engagement with the community, to manage large economic issues in the past, and has a perception of not acting in the best interest of the South Australian community around significant economic issues.

Evidence

The State Government has a track record of poor performance in the area of nuclear issue management.

Past examples are Radium Hill and the Port Pirie Uranium Treatment Complex, which were subjects raised in Topic 6 of the Public Witness Sessions (RCR, page 185).

The Radium Hill deposit was first discovered in 1906 and operated until 1961. The mine was operated by the State Government from 1954 to 1961. The Radium Hill mine supplied uranium and rare earths to Port Pirie for processing.

At Radium Hill, there were lax environmental standards, such that after closure, the waste tailings dam dispersed into the surrounding landscape (RCR, pp. 14-15). The Radium Hill mine site is still being monitored for site contamination.

Another example is the Port Pirie Uranium Treatment Complex (PPUTC) that operated in Port Pirie between 1954 and 1962. The complex processed uranium from Radium Hill (south-west of Broken Hill) and Wild Dog Hill (Myponga).

At Port Pirie, the problems consisted of:

- the close proximity of homes to the tailing dams (within 300 metres);
- the lack of fencing, such that the site was used as a playground for children over a number of years; and
- the insufficient height of the tailings walls, which failed during the high tides of 1981.

The outstanding environmental and public health issues at Port Pirie were still active 50 years after the closure of the processing complex.

While the Royal Commission Report recognises these legacy sites have lessons to be learnt (RCR, page xiv), it does not demonstrate a good track record.

A further example of issues that destroy trust was the nuclear waste dumping at Arkaroola in 2008, by mining company Marathon Resources. This waste dumping was not discovered by any contemporary government processes or any monitoring framework, but by local landowners.

Although not directly run by local governments, many issues at Maralinga are still relevant in terms of trust in governments as the impact of nuclear testing in that area is still ongoing, such as monitoring and remediation.

The State Government does not have a good track record in being transparent in their engagement with the community, such as with regional and indigenous communities as evidenced by the following:

- Aboriginal NGO submission contained within the 'Quality of Life' document;
- Hindmarsh Island Royal Commission;
- Deaths in Custody Royal Commission;

The State Government has had a poor track record in managing large economic issues, such as:

- The State Bank of South Australia and its bailout in 1991
- The Motorola affair in 2001
- Ongoing project delivery issues with the new Royal Adelaide Hospital

The State Government does not have a good track record in acting for the best interests of our community, in delivering long-term economic benefits, such as:

- The State Bank of South Australia and its bailout in 1991
- The sale of ETSA in 1998
- The Motorola affair in 2001 (a result of the Clayton Report)

These issues of governance give rise to a lack of trust in the State Government in managing large economic projects and nuclear issues.

It is critical to any future proposal that it include a strong independent and legislated regulatory and monitoring framework that is fully funded and resourced, with adequate policing powers, with oversight by the State Parliament.

References:

Port Pirie Uranium Treatment Complex:

<http://web.archive.org/web/20060624103944/http://www.sea-us.org.au/oldmines/portpirie.html>

http://www.pir.sa.gov.au/minerals/mines_and_developing_projects/former_mines/port_pirie_treatment_plant

McLeary, M., 2004, 'Port Pirie Uranium Treatment Plant Site: Management Plan Phase 1, Preliminary Investigation', PIRSA Report Book 2004/10,

http://www.pir.sa.gov.au/data/assets/pdf_file/0016/32533/rb2004_010_ptpirie_u.pdf

Radium Hill:

www.pir.sa.gov.au/minerals/mines_and_developing_projects/former_mines/radium_hill_mine

Radium Hill Historical Association (information and photos): www.radiumhill.org

<http://web.archive.org/web/20060624103929/>

<http://www.sea-us.org.au/oldmines/radiumhill.html>

State Bank Collapse

<https://www.adelaide.edu.au/news/news372.html>

<https://www.audit.sa.gov.au/Publications/Other-reports/SBSA-1993/SBSA-Index>

The Motorola Affair

<http://www.abc.net.au/pm/stories/s395625.htm>

Trust: Lack of trust in process and ensuring fair process in the future.

- A clear theme emerged that there is a lack of trust in government.

Rationale

1 Procedural Fairness

The process to date has not allowed for full participation by stakeholders and the impacted communities.

There has been a failure to provide educational programs to assist with informing the debate.

There has been insufficient culturally appropriate, funded consultation and communication with Aboriginal communities.

Process did not give communities impacted by the potential waste repository greater representation in the Citizen's Jury process.

Groups most impacted by waste repository have not been provided with the means to present their case effectively (example of Aboriginal elders needing to travel considerable distance to get a submission witnessed by JP).

There has been a failure to provide educational programs to assist with informing the debate.

There has been insufficient culturally appropriate, funded consultation and communication with Aboriginal communities.

Some people are concerned that the Royal Commission activities do not appear to have been open, inclusive and fair to all parties, failing to give those parties an opportunity to have their views heard. There has been some concern about potential bias amongst those developing RC recommendations, therefore calling into question the integrity and legitimacy of the process.

Some jurors felt that information regarding the consultation process (methods, number engagement activities, time spent etc.) should be made more widely available to the community.

Some jurors said the "Know Nuclear" process was pro nuclear biased and uninformed and didn't lay out all options.

2 Transparency

Need clear, transparent, step by step decision making, involving public communication and involvement - this has been lacking.

Trust requires that there is no pre-determined outcome from community consultation process. Some jurors felt there may be a predetermined outcome.

Process should be continually reviewed and improved should the proposal proceed.

3. Social Benefit

Trust that the process will increase the overall social welfare of the state, particularly with respect to employment within the state. There is currently limited confidence in the ability of the project to deliver the expected benefits.

4. Citizen's Jury Process

Some jurors are concerned that the Government may not accept the recommendations of the Jury as binding. Some jurors felt it could have been made clearer where the advice of the Citizens Jury fits in the process.

We have done what we think we could have done in the time but many of us think we need more time to understand, consider and to build trust.

We have been provided examples by witnesses that procedural fairness, transparency and social benefit have not been adequate.

Many in our community have not participated in the citizens' jury process, many in the community think it is irrelevant and this concern has been raised in the media.

There is an implication that the Citizens Jury is the end of the process.

Concerns were raised regarding the witness selection process, particularly regarding transparency and accountability.

5. Process over time

If the proposal proceeds, we are concerned that Government will fail to provide for current and future generations to have meaningful and ongoing engagement in the decision-making process. Government must provide opportunities for feedback on the proposal.

Should the proposal proceed it was raised that it is hard to have trust in a process that is currently unknown and potentially multi-step over a number of years.

General Comment

It should be noted that it is difficult to quantify how many jurors agreed or disagreed with the information presented above due to the method used to collect the information.

Perceived lack of objectivity of Royal Commission Report

- Something else...

Rationale:

The Royal Commission has generally presented a favourable view on SA's increased involvement in the nuclear fuel cycle in relation to storage and disposal of nuclear waste

Concern has been expressed that due to a lack of transparency relating to the evidence omitted (in particular page 181) minority views or perspectives critical of the nuclear fuel cycle may have been dismissed or excluded from the assessment framework and recommendations.

Only through fairly representing the views, values and interests of all interested stakeholders can the integrity of deliberative process be upheld, and decisions justified, and it is the conclusion of some jurors that the RC has failed in its responsibility to provide a fair and balanced assessment of all relevant issues.

The Terms of Reference were limited in scope in that an option to retract SA's involvement in the nuclear fuel cycle was not offered. Some of the jury have felt that the process suggests that the outcome has been predetermined to proceed with the recommendation in Chapter 10 of the Royal Commission Report. The Royal Commission Report in its focus on South Australia also failed to recognise potential impacts on National and International interests.

To maintain public trust, it is critical that any advice received in relation to this issue be independent and balanced. The advice of two contributing authors to the Jacobs MCM economic and safety assessment, who are lobbyists for the organisation "Arius", has called into question the objectivity of elements of the RC report. Given the authoritative nature and optimistic outcome of the economic analysis in particular, concern has been expressed that RC decisions and recommendations may not be free from bias and manipulation. The issue with the inherent bias could have been abrogated by seeking additional independent economic and safety analysis. The jury is not calling into question the impartiality of the Commission but is concerned that advocates for international nuclear waste storage may have influenced RC outcomes and damaged the integrity of the RC process and may not permit an informed decision.

Evidence

Inherent Bias/Conflict of Interest:

Evidence from witness Hon. Mark Parnell suggested bias in the RCR.

Economic witnesses that disagreed with the Jacob's case.

RC media statement on evidence process.

Incomplete/Missing Information:

Page 181: Under evidence based the Royal Commission Report states "Although the commission considered all it received it has not addressed in this report every issue raised in the evidence. Nor has it identified where it expressly accepted or rejected evidence".

Note however, all legally accepted evidence considered by the royal commission is available to the public on the website.

Concerns and Limitations of the Citizens Jury Process

PREAMBLE TO THE CITIZENS JURY REPORT

Rationale

This preamble addresses the limitations of the jury process to help readers understand how we, the Citizens Jury, came to our recommendations.

The Citizens Jury is one part of a larger process as outlined in *South Australia's Future: what Role for Nuclear Waste? A Guide for Deliberation*. However, we would like to emphasize the importance of the Jury's role as representatives of the community.

The Jury recognises that our report has no legal standing and this means that there is no obligation by government to adhere to the Jury's recommendations. Some feel that the term "Citizens Jury" is not entirely accurate and that it may be better described by a more appropriate term.

Within the process there are some reservations that some opinions are over represented and Jurors can't be involved in the writing of all points. Therefore, some feel that the range of opinions may not be accurately reflected in this report.

Many Jurors have expressed concern about potential manipulation of the content of the report by political, industry, community and media interests. We hope the Government respects the integrity of the opinions expressed in this report and responds appropriately.

The science of the deep geological storage of high level nuclear waste (used fuel) is reasonable and we are capable of appropriately managing the risks. Under the following circumstances we could....

- Under the following circumstances we could.
- Under no circumstances because...
- Something else...

Rationale

The jury has been advised that South Australia has stable geology such that there is a high likelihood that a suitable deep geological storage location is able to be identified.

Geological site selection must be undertaken with consideration of all technical and safety factors, ensuring safe disposal of high level waste (used fuel) can be achieved. It is noted that the deep geological disposal concept has been demonstrated to be feasible by other countries. The jury expects that similar rigour would be applied if this activity were to be considered in South Australia.

The jury has been shown that specialised shipping canisters and ships have been developed and are suitable to safely transport high level waste. It is essential that the safest method of transportation must be used. This includes a consideration on the risks involved in the use of 'flag of convenience' shipping.

The jury concurs that transport infrastructure must be in place before first shipment of high level waste. Recommendations from the nuclear fuel cycle royal commission report around the development of dedicated infrastructure must be followed.

Most of the jury consider the short term aboveground storage technically safe, however there are concerns around security of the waste whilst stored above ground. Many members of the jury also expressed concern regarding the duration that canisters will potentially be stored above ground. The project risk that a deep geological storage is never constructed and canisters are left on the surface longer term is of strong concern. The jury has heard varied opinions around the safety of long term low level radiation exposure and the associated risks but do not yet have enough information to have formed an opinion on this.

The jury acknowledges that relationships have already been developed for the sharing of nuclear and radiation safety knowledge amongst countries. It is essential that these relationships are maintained and encouraged internationally. This could be achieved by international support for direct communication, general sharing of scientific knowledge and signatory to governmental, legal and regulatory framework for safety (IAEA GSR Part 1 (Rev 1), Vienna 2010).

The jury believes that it would be essential that a nuclear and radiation safety policy regulatory framework must be developed for a successful deep geological storage facility. This must include regulations, national protocols policy and procedures for high level nuclear waste, including consideration of the potential for human error and worst case scenario events. This framework must be based on accepted international standards using advice from other countries. The framework must adopt best practice and be subject to regular international peer review ensuring future best practice is captured and implemented. Based on the evidence presented to the jury it is acknowledged that there is already a strong global set of regulations and best practice for the safe handling and storage of high level radioactive waste (used fuel).

Most of the jury acknowledge that nuclear technology and best practice is continuing to develop and may change with time. The technical risks associated with deep geological storage of used fuel are considered proportional to the potential size of the project but most of the jury considers these risks are manageable (refer risk analysis table 38). There are however some jurors that have strong dissenting opinions around the safety of deep geological storage.

Transportation and Handling Security

Many of the jurors are comfortable that shipping and handling of nuclear material is safe with minimal risk given current “best practice” standards. There are some security concerns that need to be mitigated.

Evidence

Probability of waste related transport incidents

(ref Royal Commission Report p.310-311 Appendix L)

- Road: One fatal collision per 18.5bn km that 1tn of waste travels
- Rail: One derailment per 1.04million km on private and public rail lines
- Sea: one severe collision on open sea per 20 million voyages

*None of these probabilities imply that radioactive waste containment is compromised

Historically there have been 7000 radioactive international waste shipments and 80,000tn of materials. Since 1971 there have been some transport accidents, but none have resulted in breach of containment. (Royal Commission's Report pg. 153)

Piracy is an issue in areas like Southeast Asia, Indonesia and South Africa. “Piracy and Armed Robbery against Ships 2015”. In 2015, 246 ships were attacked by pirates worldwide, these ships ranged from small vessels to large transport ships. Approximately 520,000 transport voyages are taken per year worldwide (Royal Shipping Council - Ports) This puts the risk of the average transport vessel being attacked by pirates at 0.0473% per year.

We want the shipping to be done through the safest route possible, even if this includes going a long route to avoid potential conflict i.e. do not ship through the South-East Asia and East Africa as “Piracy and Armed Robbery against Ships 2015” report have deemed these routes high risk.

National Flag Ship:

We require that nuclear waste transport ships be registered under NATIONAL FLAG e.g. Registered in Germany, Australia. Flag Ships of Convenience are not to be used where they are registered in countries with lax regulations e.g. Panama, Monrovia. We desire to avoid the BBC Shanghai incidence, which was blacklisted by US authorities.

Handling:

We are satisfied with handling of radioactive material to the extent that best practice is followed and relevant IAEA standards are adhered to i.e. IAEA Safety Standards - Regulations for the Safe Transport of Radioactive Material.

Many have concerns that there is potential for cost-cutting in handling procedures, although we are not sure what IAEA provisions and Australian Safety are provided to mitigate this risk i.e. Hazardous Waste (Regulation of Export and Imports) Act 1989.

Yes: South Australia must consider the geopolitical stability of all impacted regions throughout the life of the process.

- Under the following circumstances we could.
- Under no circumstances because...
- Something else...

Rationale

We recognise that given the timeframe of the proposal, geopolitical stability may be impossible to predict however it may only require consideration until the waste is buried

There are multiple factors to consider:

- stability of client nation
- stability of the route
- stability of the host nation (Australia)

Many feel that it is important to consider the geopolitical stability of the jurisdiction be factored into the economic analysis when forecasting market demand, and thus signing contracts in the future (if this proposal goes ahead). This is on the grounds of ethics, safety, and financial risk.

We need to understand the ethical and financial risk of dealing with politically unstable countries and what impacts this could have on the economic viability and safety of the proposal

It is important to understand the ethical, financial and safety implications of receiving waste from 'unstable' nations because:

Receiving nuclear waste from geopolitically unstable jurisdictions may be considered unethical due to our desire to be responsible global citizens.

Receiving nuclear waste from geopolitically unstable countries may present a risk due to lack of compliance with safety standards (technical and personnel).

There may be a potential risk transporting nuclear waste through international waters close to countries that are geopolitically unstable.

Receiving nuclear waste from geopolitically unstable countries may present a financial risk from contracts not being honoured.

It is important to consider the Australian Constitution regarding this project and where it sits on a national and international framework as some believe there is a disconnect between State and Federal jurisdictions in terms of where this matter sits. An agreed Federal framework is required to be in place to support South Australia for the state to proceed with a nuclear waste facility.

We must also consider how this proposal is affected by international law.

Constant vigilance and governance will be required of consignor nations to ensure confidence in this stability for the reasons mentioned. Measures could be explored further which may seek to mitigate risk in terms of the geopolitical stability over the life of the project and beyond.

Evidence

Nuclear Fuel Cycle Royal Commission Report. Section 5, page 90.
Constitution Framework for Regulation of the Australian Uranium Industry; Carney, Gerard; austlii.edu.au; 2007

The economic risk is too great to proceed

Under no circumstances should we proceed because the economic risk is too great.
82% of the jury can live with it, like it or love this statement.

Rationale

Business and Economic Model

The economic modelling has a number of flaws, including not accounting for negative externalities or opportunity costs, compared to other potential investments and relies on a very optimistic interest rate.

Many of the jury consider that the economic and business model is based on untested assumptions and that more economic information is required. Key assumptions are price of product, size of market, durability of the market, cost of the project, lack of competition and future technologies.

Several independent cost benefit analyses, business models and economic models, including consideration of economic risk and opportunity cost are required to enable comparison to the financial data included in the Royal Commission Report.

The absence of a current market in waste disposal presents great uncertainty of valuing nuclear waste disposal.

There must be the ability to formally talk to prospective client nations in order to form the basis of any potentially accurate independently verifiable economic analysis to ensure that the business case is robust and complete.

There is a lack of information about potential competitors (e.g. Chernobyl proposal) and prospective price and the cost benefit analysis is inadequate.

Some of the jury have also said that they can live with the current economic modelling.

Costing for safety contingencies have not been adequately addressed.

Legislation

Some jurors considered that legislative changes should be made to enable discussion with potential source countries which will help inform the business case.

Many of the jury are uncomfortable with a change in legislation, i.e. the Nuclear Prohibition Act of 2000.

Some of the jurors are of the view that if there is further investigation any change needs to be very specific to Section 13, subsection 2 of the Nuclear Prohibition Act 2000 to enable the government to talk to potential customers to determine quantity, price and intent. This change does not allow any other action.

No Further Investment

Many of the jury have also stated that no further public money is to be spent on further research or investigation.

A few jurors suggested private investment may be considered although others are concerned that checks and balances (i.e. regulation and taxes) are required if this is allowed.

State Wealth Fund

Some jurors indicated that if the project were to proceed, the state wealth fund would need to be maintained independently, with well-defined goals and must not be used to top up State or Federal budgets.

Risk too High

The economic success of this project hinges on the requirement of upfront payments and long term contracts. This presents huge economic risks and uncertainties in an ever-changing global environment.

There is no guarantee that a market exists or that commodity prices will be predictable.

Many of the jury consider that the financial risks are too great to proceed.

Are there alternative investment opportunities for public money with a better cost/benefit for South Australians? *What is the opportunity cost of this proposal?*

- Something else...

Rationale

Many jurors would like a debate / public discussion / enquiry / royal commission on alternative investment opportunities that are currently available and a comparison of how the high level nuclear waste storage proposal fits within this portfolio.

The review should consider:

- Value / investment return to South Australia (\$ and jobs)
- Risk/benefit analysis
- Quicker payback period
- Private investment in emerging industries/markets
- Specific targeted investment in more diverse regions and industries
- Opportunities for greater direct and/or immediate impact on South Australians

A common theme of inquiry is: is this project mutually exclusive or complementary to other opportunities? Meaning, will pursuing this opportunity deny South Australia the ability to pursue other opportunities and their inherent benefits; or, does it provide a means to pursue additional opportunities and achieve multiple benefits?

Evidence

The Jury has not heard evidence on specific alternate investment opportunities, and does not consider providing a recommendation on specific alternatives as within their remit. However, many Jurors believe alternate investment opportunities and their impacts should be investigated and considered.

Limited legislative change to only allow for further economic and financial modelling

- **Something else.**

Rationale

The Act as it currently stands prevents obtaining a clearer economic model, e.g. by doing the following:

- Market testing with other countries, particularly the largest potential client countries;
- Canvassing the ability of potential client countries to pay;
- Having formal conversations on price, timeframe and degree of certainty (commitment);
- Negotiating in principle contracts/agreements;
- Certainty on key financial parameters; and (but not limited to)
- Joint funding costs on concept and feasibility (e.g. geotechnical testing).

Some jurors therefore recommend that s13(1) (**only**) of the Act be changed. However, many jurors are opposed to changing s13(1) of the Act in any way, even if this would prevent obtaining a substantially different economic analysis of the proposal. Adding a sunset clause

if the legislation is changed was also suggested, including penalties to prevent contravention of the Act.

A survey of federal and international laws/commitments [treaties, protocol, etc.?] would be necessary to ascertain whether any other changes would be required to conduct further economic modelling.

Evidence

s13(1) of the Act

Fact checks

Need to change any federal legislation?

Mark Parnell's suggestion that no change to state act needed

Potential Financial Benefit to the State's Economy

- Under the following circumstances we could pursue the opportunity to store and dispose of high level nuclear waste from other countries but some jurors believe it should be approached with caution. There could be potential financial benefits for the State including; employment generation, technological advancement, business generation and regional development opportunity. Many believe that we need more evidence to prove the positive financial benefits to the State.

Rationale

Financial Benefit: The proposal includes the establishment of a State Wealth Fund that would have the potential to benefit the state's economy.

Employment Generation: In the future, the proposed waste facility could generate 4000 short term jobs and 600 long term jobs.

Technological Advancement: This project could enhance technological innovation capabilities in South Australia.

Business Generation: This project has potential flow on benefits to existing South Australian businesses.

Regional Development: As the proposed facility, would be constructed in regional South Australia and requires extensive support infrastructure, there could be a mix of direct and flow on economic benefits.

Evidence

Financial Benefit: Michael McBride from Business SA testified that Japan existing potential customer. Japan has a \$35 billion reserve fund for high grade nuclear waste storage and disposal.

Mike Young from The University of Adelaide testified that there is a potential for a \$257 billion income from the project over 120 years.

Employment Generation: Prof. David Giles testified that the testing and exploration alone would be employment generating.

Business Generation: Mike Young from The University of Adelaide believes that the project has the potential to grow the State Product by 4.7%

The economic and financial modelling is unreliable and requires further analysis

This project should not proceed unless further independent economic and financial modelling proves the project viable.

Rationale

Assumptions and constraints used in the royal commission need to be challenged and expanded:

- Evidence/data provided for why they were chosen to be used in the model (e.g. discount rate, price, cost, market capture %).
- Threat of competition arising has not been considered
- Technology changes overtime and may increase financial risk
- As well, other risks such as project delivery and contract negotiation should be included and made clear in the model.
- Interest rates, social, environmental compensation and other attributes need to be considered and included
- The market is unknown e.g. supporting countries

New economic analysis:

- Should be completed independently of the government.
- Should be comprehensive,
- Use input from wide and diverse sources,
- Remain transparent
- Include opportunity cost
- Be available for peer review and public commentary prior to informed decision making

After further economic modelling completed:

- The government should return for further public consultation (i.e. citizens jury #3)
- Assess the validity, clarity and vigour of the financial and economic modelling

The jury found it hard to identify what the cost “\$300-\$600m” often quoted actually is:

- unsure how much it is
- unsure what it covers
- unsure where it comes from

Evidence

Expert witnesses including report author agree analysis is incomplete.

No existing industry and to gather hard data and information.

Not able to currently discuss with other countries.

The Impact of Nuclear Waste Disposal on the brand of the state of South Australia

South Australia enjoys a positive international reputation for being a clean, safe and sustainable environment, which provides a competitive advantage for local exporters and an appealing destination for inbound tourism. Under no circumstances do we pursue the disposal of nuclear waste because the potential brand damage is too great a risk to the state. The profit from this venture does not outweigh the risk and potential damage to a flourishing industry.

Rationale:

Branding: A brand name instantly informs customers about a company’s reputation, enabling them to trust the quality of each product or service that business offers. The very mention of the brand name conjures all of a customer’s experiences and perceptions of a business - good or bad.

South Australia’s recently ranked the ‘5th Best Regional Centre in the World’ by Lonely Planet for 2017. ‘Lonely Planet is a brand the largest travel guide book publisher in the world’ (2), and is a brand general population of the world know and trust. We need to stay with our brand’s essence. A few jurors are of the opinion that the brand damage can be managed adequately. Others believe more research into an economic cost/benefit analysis is required; however, a majority believe the risks to brand damage are not worth the cost and possible long-term negative outcomes.

Social: we cannot afford to risk our global perception - if we are seen to be disrespectful to both our indigenous and non-indigenous communities and their cultural beliefs, we will be avoided by our neighbours. the UN Declaration on The Rights of Everyone clearly states ‘*shall consult and co-operate in good faith with **everyone** concerned through their own representative institutions in order to obtain their **free, prior and informed consent** before adopting and implementing legislative or administrative measures that may affect them*’. If we are seen to be in breach of this, our brand will receive international attention, and we

can't afford for it to be negative. Even more difficult can be controlling how the media and the press disseminate a country's problem, often creating or perpetuating stereotypes (3).

Economic: the flow-on effect of damage to the brand of South Australia will have a huge effect to the many industries of our state. It is a threat to a \$17.5billion/year (1) income to the state generated from tourism, international students, agriculture, food, wine, seafood, livestock, and this is just the beginning. This is a risk we are not willing to take.

Environmental: South Australia prides itself on its renewable energy sources, and the reputation it inspires. To accept nuclear waste into the environment contradicts the state's current focus on renewable energy sources.

Evidence

REFERENCES:

1. *South Australian Tourism - At a Glance report for Year Ending June 2016* from www.satc.com.au website
2. www.lonelyplanet.com/ (UPDATED 2016)
3. The Journal of Brand Management - Destination Branding- the University of Wales Institute 2002.

FURTHER REFERENCES CAN BE OBTAINED FROM:

PIRSA website

DFAT website

Section 145 of the Royal Commission Report

News release from Mr Stephen Mulligan, 3rd June 2016

The Hon Rob Kerin, Consultant, Executive Chair or Primary Producers SA and Chairman of Regional Development SA

Relocation and compensation are paramount considerations

Something else

Rationale

This is currently a speculative issue. However, concern has been raised over various issues involving the relocation of people and land acquisition.

Should this project go ahead, considerations would need to include:

- The voluntary and/or forced removal based on safety zones relative to the project, including port, transport routes and storage and disposal sites.
- Fair and equitable compensation for property, livestock, and crops.
- Relocation should there be an accident.
- Clarity of exclusion zones required for port, transport routes, storage sites.
- Government regulatory authorities would need to ensure that requirements are in place to determine exclusion zones.

Evidence

Governments would need to consider projects such as mining, and major road building to inform costs and issues in regards to relocations and land acquisition.

Too Risky: *Multi factor risk assessment makes the project too risky for our state*

Under no circumstances because...

Rationale

Combining of multiple risks occurring together creates a cumulative increase of risk that is too large for our state. potential risk issues that combine to add to this uncertainty include:

1. Aboriginal opinion appears almost unanimously against providing consent
2. Economic uncertainties
 - a. Future markets
 - b. Price per ton
- . "Senator Edwards said some countries could be willing to pay up to \$1 million a tonne" (Chang C, 2015) Only *willing* to pay no definites
 - c. Entry of competitors
 - d. Evolution of disruptive and competing technology
 - e. Cost of over-runs (Capital/ operating)
 - f. Insurance/liability
 - g. Business case assumptions
 - h. Wealth distribution
 - i. Opportunity costs
- . Cost of opportunity lost
 - j. Transport cost
 - k. Storing above ground before sufficient funds?
 - l. Place a limit public funding towards project
 - m. Lack of aboriginal consent could pose risk to high court or international challenge
3. Impact of SA Brand/reputation
 - . SA will become waste dump
- . Loss of green and clean status
 4. Impact on social/individual status
 - . Mental effects - self-esteem/psychology
 - a. Risk of dividing the SA community
 - b. Will be forced to consent
5. Safety
 - . Transport
- . Sea Travel
- . Land Travel
- . Rail Travel
 - a. Interim storage
- . Possibility to sit above ground forever
 - b. Long term storage management
 - c. OHSW for workers
 - d. Waste Protection

.Canisters suitability for changing temperatures

e. Distance

.The greater the distance the higher the risk

6. Federal government project takeover or veto

7. Impact on future generations

. Long term monitoring of project

.Communication loss overtime

a. Health impacts on the future generations

8. Site Selection

. Unknown site selected

a. Site for underground storage to be selected after fuel has arrived

9. Environmental risk

. Dr Jim Green (friends of the Earth), report was rejected by Royal Commission

10.Expansion of nuclear industry

. Availability of international nuclear waste facility may contribute to the expansion of the nuclear industry, therefore increase the risk of

.accidents

.contamination

.nuclear weapons proliferation

11.Accidents

. Plutonium spillage

a. Human error

.Material handling issues

12.Project size

. Too large

Evidence

1. Aboriginal witnesses that spoke on behalf of the aboriginal people of SA.
2. *NO DUMP ALLIANCE*
3. Majority of evidence from Royal Commission report
4. Witness statements and submissions

References

Chang, C. (2015). *Aussie state's bold, risky plan*. [online] NewsComAu. Available at: <http://www.news.com.au/finance/economy/is-building-a-nuclear-waste-dump-in-australia-really-the-best-idea/news-story/e9f3a4d0087e3b3ace3c0579270902fc> [Accessed 5 Nov. 2016].

Environmental impacts as a result of construction and operation

Environment

- No, because.

Rationale

Within the jury, there is widespread agreement of the minimal considerations of environmental impacts in Chapter Five of the Royal Commission report (RCA, p. 76, section 61-62). The jury felt it was important for environmental impact studies to include impacts beyond radiation.

However, there was agreement that money spent in the production of the existing report should have produced a more comprehensive and rigorous document and **NO FURTHER PUBLIC MONEY** should be spent by the South Australian taxpayer.

The infrastructure required for the project has not been defined, however it is likely to be large scale and result in environmental impacts. Definition of infrastructure for this purpose: the physical structures and facilities needed for the construction and operation of the project.

The model proposed requires interim storage of nuclear waste above ground (page 300 Royal Commission Report). This increases the likelihood of leakages which would have profoundly negative environmental impacts, in particular if the leak occurred while the material was still very radioactive. The International Panel on Fissile Materials has said there is general agreement that "placing spent nuclear fuel in repositories hundreds of metres below the surface would be safer than indefinite storage of spent fuel on the surface (Feiveson, Mian and Hippel, 2011).

The Indigenous congress in South Australia (August 2015) as native title representatives of land and waters, stand firmly opposed to nuclear developments in our country including plans to develop nuclear storage facilities. Mike Williams of the APY Lands Mimili Community

said “we want the land, the trees, manta, the kuka, the rockholes, kapi; we don’t want that money, you can keep it!”

Aspects of Maralinga are highly relevant as the Indigenous community has noted in consultations with the jury. Lester (2015) said many members of Yankunytjatjara have experienced firsthand the impacts of Nuclear Energy or had family members who have died, become sick, loss of eyesight, cancers or lost a child at birth and other health complications.

Testimony provided by Dr Jim Green B. Med. Sci. (Hons), PhD indicated statements made by Royal Commission personnel were “directly at odds with established scientific knowledge”. Dr Green said the overwhelming weight of scientific evidence holds that even the smallest doses can cause fatal cancers. As the U.N. Scientific Committee on the Effects of Atomic Radiation states, the current balance of available evidence tends to favour a non-threshold response for the mutational component of radiation associated cancer induction at low dose and low dose rates. Recent scientific evidence finds that the radiogenic risks of leukaemia among nuclear workers to be double the risk found in a previous similar study in 2005 (Fairlie, ___)

International human rights law has come to recognise the vital role that the environment plays in ensuring that every individual is able to enjoy the rights of that body of law seeks to protect. In his separate opinion in the Gabcikovo-Nagymaros case before the International Court of Justice, Judge Weeramantry (1991, p. 207) stated that:

“The protection of the environment... is a vital part of contemporary human rights doctrine for it is a *sine qua non* for numerous human rights such as the right to health and the right to life itself. It is scarcely necessary to elaborate on this, as damage to the environment can impair and undermine all the human rights spoken of in the Universal Declaration of Human Rights and other human rights instruments.”

Considerations:

1. The clearing native vegetation surrounding and covering the proposed storage sites and transport corridors
2. Dredging of marine environments and seabeds around port(s).
3. Protection of relevant flora and fauna species - preserving ecological diversity.
4. Consider power/water/waste management when delivering to and from site.
5. Pollution from construction and staff housing/transport (air pollution, dust, water and soil contaminations, noise pollution).

Although many Jurors Commented that these issues would exist for any large development

6. Water supply: Any tunnel drilling machine needs a water supply in a remote area and community the water would need to come from a water table or ground water and there is a risk of contamination of water and land

There is no evidence in the report which Identifies where the water supply will come from there is concerns that the water may be extracted from the Artesian Basin which has implications of existing water supplies

If a proposal of a Desalination Plant similar to what is in existence at Olympic dam this may have further environmental implications for future construction and operations

7. International environmental impacts - does the proposal open the way to expansion and proliferation of the nuclear industry internationally. Further, transportation across seas increases the risk of damage to sea wildlife. The Royal Commission report acknowledges that transported waste lost at sea would not be recovered if a collision occurred in deep waters and that such lost casks containing high level waste would corrode to release radionuclides.

Steps

- Ongoing species and contamination monitoring
- Many jurors felt the need to clarify that an environmental impact evaluation must be undertaken by an independent, reputable expert(s) and would require more than one assessment.
- Identify and examine environmental impact studies

It is hard to discuss and work out the issue with this until a site has been selected and determined.

Evidence - Refer to page 181 of RCR that not all evidence has been included or considered

Feiveson, H., Mian. Z, Ramana, M, 2011, "Managing nuclear spent fuel: Policy lessons from a 10-country study", Bulletin of the Atomic Scientists
Lewis, B, "Human Rights and Environmental Wrongs: Achieving Environmental Justice through Human Rights Law", Queensland University of Technology, Brisbane
ianfairlie.org/news/update-new-powerful-study-shows-radiogenic-risks-of-leukemia-in-workers-more-than-double-the-previous-estimate/

There are significant social costs on the South Australian community.

Under no circumstances should South Australia store and dispose of high level nuclear waste from other countries.

The people of South Australia are the wealth and identity of our State.

The project will have significant social costs. Particularly, through the divisiveness of the issue.

Our values as a State, a Nation and as individuals are to value human rights and egalitarianism.

Perceptions of ourselves and image as South Australians will be irrevocably changed.

Social costs will include:

- Health, mental health and wellbeing of individuals, families and communities. Education can alleviate some anxiety and division, but can lead to further costs and issues. Concerns about the capacity of health and social services to respond
- Regional urban bias - the metropolitan majority make decisions affecting the regional minority
- People living in regional areas already have poorer health status and outcomes (mental health and physical health) and this will add to the health care burden
- There are already social cost concerns of observing World Health Organisations regulations in the regions, for example the lead levels in children in Port Pirie
- There are not large education and employment opportunities
- Fly in/ fly out employment impacts families and communities and limits regional development
- Individuals and families may choose to leave the state if nuclear fuel waste storage does not align with their values
- Disincentive to move to South Australia
- There will be social impacts of living with a nuclear waste repository which will impact on the State's identity as a clean, green tourist destination and producer of wine and food.
- A further social cost could be a disincentive to pursue other options, innovation in other areas.
- Disagreements about the low, intermediate and high level waste storage have been evidenced by the strong feelings of Aboriginal communities, survey results showing relatively equal division of opinion

There has been little to no consideration of social costs and impacts within the Commission Report. Specifically, social costs need to be included in economic modelling which includes both people and the environment (Triple Bottom Line Accounting).

Evidence:

Previous examples of cultural impact and stress on local communities include the Adani coal mine and the Irati Wanti campaign, Kimba and Hawker

Source examples:

Colmar Brunton Quantitative survey round 2, data shows clear division of opposition and support for nuclear waste repository

Quality of life for a citizen jury report p.19

www.abc.net.au/news/2016-02-01/kimba-community-'ripped-apart-by-nuclear-waste-dump-debate'/7131106

www.eyretribune.com.au/story/3749348/community-voices-in-nuclear-waste-debate/

The Importance of Timing

Adequate time needs to be allowed to address all of the relevant issues

Rationale

Many jurors felt there were some fundamental issues that should be addressed before the project could proceed and that, if there was not sufficient time to address those issues, then the project should not proceed.

Some jurors felt that time was money and delays would increase the cost of the project and might allow time for competition to emerge.

Some particular issues which jurors felt would affect timing are as follows:

1. Political support - unknown at both State and Federal Government level;
2. SA State Government funding - timing around the volatility of the current financial position and any investment dollars required.
3. Indigenous communities - the Maralinga experience is still raw emotion and therefore time is required to re-engage with them in their time.
4. Nuclear waste storage - business opportunity exists now.
5. Disruptive technologies (*such as Gen IV reactors, better storage*) - progress may eventually undermine *and/or improve* the business case.

Evidence

The evidence that supports the statements in the rationale:

1. Political support - no evidence was given to the jury about political support at State or Federal Government level.
2. State Government Funding - no evidence was given to the jury about the availability of State Government funding.
3. Indigenous Communities - Evidence was provided on Day 3 by various Aboriginal witnesses
4. Business Opportunity - The Royal Commission found that there was a substantial economic opportunity for waste storage and disposal (page 170). The jury heard evidence to the contrary from various witnesses and there was insufficient information available to the jury to decide which of these competing views was correct. The Royal Commission noted that a detailed market analysis would be required (page 110) and we believe this will obviously take time.
5. Disruptive Technologies - See page 97 of the Royal Commission Report - "It was also suggested that advanced reactor designs, such as fast reactors, might also compete with international used fuel services...".

Other Additional Inputs

Rationale

Site Selection

Many Jurors were concerned that there was not a site which had already been selected and there was no information on the site. Clarification is needed in regards to what size area is required for the storage facility. It was recognised that site selection is an important issue that would happen in the future but it was a concern that the decision will be made before the site has been proposed.

Insurance

It was recognised that this is a venture which South Australia cannot undertake without insurance. There is no clear understanding of where to obtain this insurance and where the jurisdiction starts. It is not clear if South Australia would be liable in the case of an accident and the impact this would have on potential profits.

Environmental Concerns

There was a concern that if this opportunity was not taken, the government may undertake other practices which would damage to the environment. Alternative energy sources are also costly and coal is a problematic fuel source.

Royal Commission Process

There were concerns that the Royal Commission arrived at the decision to pursue the nuclear waste dump without a transparent decision making process. Other alternatives were not adequately pursued before being discounted.

A concern was raised that the report may be biased due to multiple members of the Royal Commission, in particular the Royal Commissioner, being shareholders in BHP.

Minority reports

Change Section 13 (2) of the *Nuclear Waste Storage Act 2000* to allow for further economic modelling

Given consensus that the economics have not been adequately assessed a change to the legislation to allow the limited investigation of the economic model to be made.

Jury selection process has allowed selection bias.

Our concern is that by announcing the question before requesting volunteers the process has allowed for an over representation of opponents to the idea of the storage of nuclear waste. Our concern is that selection bias has led to potential confirmation bias through selection of witnesses.

Community polling in random selection of 4016 people revealed 42.2% ok with further investigation and 36.8% against.

Community polling in a voluntary example of 4329 people revealed 19.7% ok with further investigation and 66% opposing further investigation.

The witness selection process allowed Jurors to decide who they wished to hear from. Selection bias has resulted in a bias in the witnesses presented. This has likely led to confirmation bias, i.e. if you have a position and you request witnesses who share your view, your position will be strengthened.

Reference the 'Economics' session, where Jurors chose to hear from economists who clearly had a negative view of the nuclear industry.

This situation allowed a visible focus group to polarise the Jury.

Indigenous consultation

The suggestion that this Jury can speak for the Indigenous community only perpetuates the disempowerment of that community.

We have been told that the consultation process was either non-existent or insufficient. To suggest that the Indigenous community then has a unanimous position without adequate consultation is incorrect.