South Australia's Future

What role for nuclear waste?

A Guide for Deliberation

About this Issue Guide

This guide has been developed and produced independently of the South Australian government through a collaboration between the newDemocracy Foundation and the Jefferson Center (a US-based nonprofit organisation and originator of the Citizens' Jury process). The goal of the guide is to introduce participants in the Nuclear Citizens Jury #2, as well as the broader public, to the issues under consideration as South Australians explore the state's role in the nuclear fuel cycle, particularly related to whether or not South Australia should store and dispose of high-level nuclear waste from other countries.

It is intended to serve as a starting point for discussion and a tool for dialogue about the issues and concepts you will encounter through the Citizens Jury process. It is not intended as a comprehensive examination of all of the issues at stake, an exhaustive catalogue of every available option or step that might be taken, or a complete breakdown of the details related to researching, siting and developing a used fuel and high-level nuclear waste storage and disposal facility. Instead, it is meant to invite participants into an initial conversation about some of the key values, tensions, and tradeoffs that South Australians will grapple with as they develop an informed opinion about this decision.

Produced by:

newDEMOCRACY

JEFFERSON CENTER

Investigating South Australia's Nuclear Future

Royal Commission Report

The Nuclear Fuel Cycle Royal Commission was established to undertake an independent and comprehensive investigation into the potential for increasing South Australia's participation in four areas of the nuclear fuel cycle:

- Mining
- Further processing and fuel fabrication
- Electricity generation
- Management, storage, and disposal of waste

What happens next?

Upon completion of CARA's Know Nuclear consultation process, the South Australian government will determine whether or not to pursue further research and exploration to expand the state's role in the nuclear fuel cycle, including whether or not to pursue the opportunity to store and dispose of used fuel and intermediate-level waste from overseas countries.

NUCLEAR FUEL CYCLE ROYAL COMMISSION

The Nuclear Consultation Process by the Consultation and Response Agency (CARA)

The goal of this consultation and deliberation process is to encourage everyone to discover the facts and discuss as a community South Australia's role in the nuclear fuel cycle. It aims to provide information, build awareness, seek feedback, and conduct research to support consultation and start the process of determining whether or not there is informed social consent among South Australians to proceed, or not to proceed, with the exploration and development of a used fuel high-level nuclear waste storage and disposal facility.

The engagement strategy consists of three steps. First, there was the initial Citizens' Jury of 52 South Australian residents in June and July of 2016. Second, the CARA consultation team has been visiting over 100 locations across South Australia to talk to the community about the Royal Commission's findings on increasing South Australia's participation in the nuclear fuel cycle and the topics raised by the Citizens' Jury. Third, a second Citizens' Jury of 350 South Australians will be meeting in October (and November) to make their recommendations about whether or not, and under which conditions, South Australia should pursue the development of a high-level nuclear waste storage and disposal facility.

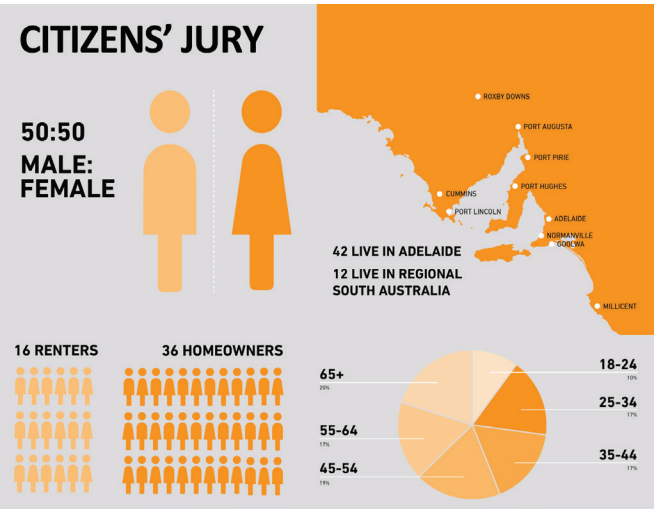
An independent Advisory Board is overseeing all state-wide consultation activities. The board is chaired by John Mansfield OAM, recently retired from his position as a Justice of the Federal Court of Australia. The Board provides high-level strategic advice and assistance to the Premier and CARA with a view to building trust, understanding and confidence in the consultation process and its independence.

Citizens' Jury #1 - Process

The first Citizens' Jury, consisting of 52 South Australians, met for a total of four days over two weekends, on 25/26 June 2016 and 9/10 July 2016, in Adelaide.

The participants were charged with responding to the question:

What are the parts of the Nuclear Fuel Cycle Royal Commission Report that everyone needs to discuss?



"We, the Nuclear Fuel Cycle Citizens' Jury (the Jury), were engaged to review the Nuclear Fuel Cycle Royal Commission's (the Commission's) Report and summarise into an independent guide. Our goal: to help every South Australian understand the opportunities and risks of increasing South Australia's involvement in the nuclear fuel cycle as identified by the Commission."

Citizens' Jury #1 Report

Participants in the initial Citizens' Jury agreed on a set of shared principles they feel are important to consider when discussing South Australia's involvement in the nuclear fuel cycle.

Principles

The Jury considered the principles we believe are important when discussing South Australia's involvement in the Nuclear Fuel Cycle. In our view, these are:

Legitimacy - A legitimate decision must include all people

Inclusivity - There must be continual community consultation

Transparency - All sources of information must be freely available

Consequences - Due consideration must be given to people, our econonmy, and our environment

Accountability - Decision makers are accountable to the community

Consider the future - Further considerations and more debate of other options. We must also consider future generations of South Australians through all stages

Distribution - Potential economic benefits must be shared and accessible to everyone

Ethical - All decisions should be ethically and morally sound - what's good, what's right, what matters

Report from Citizens' Jury #1

A Message from Citizens' Jury #1

"The jury was provided with a copy of the Royal Commission report and access to information and a diverse range of witnesses of our choosing enabling an informed decision. Following the initial education and awareness sessions, we (the jury) spent the majority of our time focused on the main recommendation (from the Nuclear Fuel Cycle Royal Commission report); to pursue the opportunity to establish an international used fuel (high-level waste) storage facility."

Participants in Citizens Jury #1 emphasised the importance for each South Australian resident to develop his or her informed opinion about whether or not the State should move forward to further investigate the development of a high-level nuclear waste storage and disposal facility:

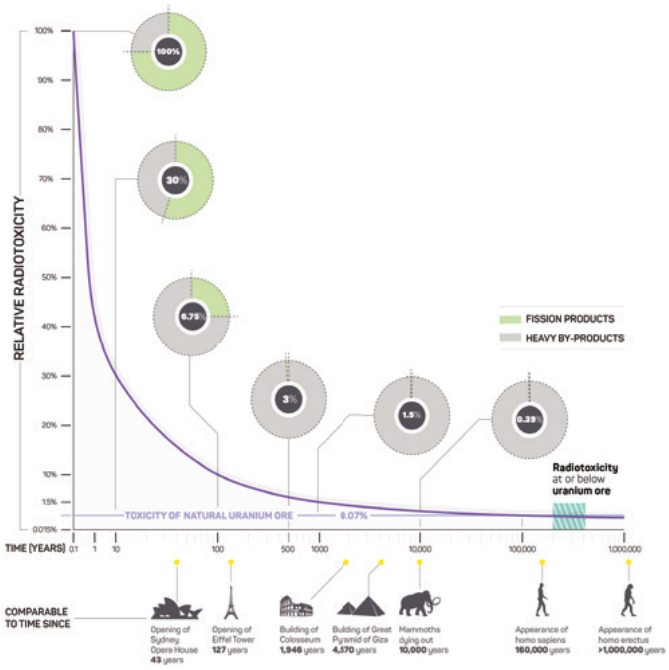
- *"We recognise there are potential **economic benefits**, but there are also **substantial risks** to consider. There is a degree of uncertainty around both the benefits and risks associated with establishing such a facility."*
- *"Significant additional research, economic analysis and public engagement are still required before South Australians will be in a position to make an informed decision if this is in the best interest of the state."*
- *"In coming to your own view on whether we should pursue a storage facility for used fuel you need to consider that moral and ethical responsibilities are central to the ownership and integrity of our decision."*

Key Recommendations Citizens' Jury #1

Participants in Citizens Jury #1 recognised four key issues to consider for further exploration and discussion as South Australians consider our nuclear future.

1. Safety of people and land
2. Informed Community Consent is Valued
3. Trust, Accountability, and Transparency are vital
4. Economics and the benefits/risks to our State

About Nuclear Waste in South Australia

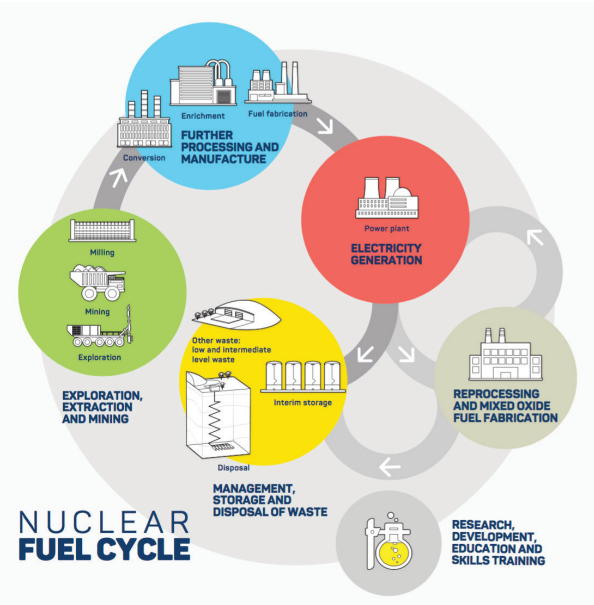


What is nuclear waste?

Radioactive or nuclear waste is a by-product from nuclear reactors, fuel processing plants, hospitals, and research facilities. There are three broad classifications: high, intermediate and low-level waste. High-level waste is primarily waste from nuclear reactors (such as used fuel containing uranium fuel pellets). Intermediate-level waste is primarily produced from metal and other materials from decommissioned and dismantled nuclear reactors and other nuclear facilities. Low-level waste comes from reactor operations and from medical, academic, industrial, and other commercial uses of radioactive materials and includes items such as paper, rags, tools and gloves. Please note, any reference to high-level nuclear waste in this document refers to used fuel and intermediate-level waste from overseas countries.

South Australia's Involvement in the Nuclear Fuel Cycle

South Australia has been involved in numerous components of the nuclear fuel cycle for decades. Current involvement includes activities such as exploration, extraction, and milling of uranium and other minerals containing radioactive materials, processing and manufacture of materials containing radioactive and nuclear substances, and storage of low and intermediate-level nuclear waste generated by the nation's medical, industrial, and commercial activities. South Australia has about 25 per cent of the world's uranium resources, representing 80 per cent of Australia's uranium resource. We also store and manage low and intermediate-level waste at 78 different facilities in South Australia. Australia does not currently use nuclear fuel for the generation of electricity.



What will be our future?

The Nuclear Fuel Cycle Royal Commission report recommends a series of actions aimed at expanding South Australia's involvement in the nuclear fuel cycle.

The key recommendation (Recommendation 11) made by the Royal Commission is that the South Australian Government pursue the opportunity to establish used nuclear fuel (high-level waste) and ILW (intermediate-level waste) storage and disposal facilities in South Australia.

This leaves South Australians with a decision that will potentially impact generations of residents:

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

This guide lays out three options as discussion starters.

Option 1: We should not dispose of nuclear waste from other nations under any circumstances.

Option 2: We should continue research and community engagement activities to further assess whether or not informed social consent exists for pursuing a high-level nuclear storage and disposal facility.

Option 3: We should act to pursue the opportunity to establish a facility to store and dispose of other countries' high and intermediate-level nuclear waste.

CALL TO ACTION

"Everyone's choice...everyone matters"

The Jury, calls on YOU, our fellow South Australians, to join us and be part of the Nuclear conversation.

This is a unique opportunity to be involved in a decision making process to shape the future of South Australia. Any decision about the nuclear industry in our state will involve a long term commitment and have long term consequences. The decision will affect not just us, but future generations. We encourage you to get involved and participate with an open and enquiring mind.

Your voice will shape the future of our State and for our descendants.

Have your say.

Option #1: We should not dispose of nuclear

We do not have any binding moral, ethical, or legal imperative to manage the transport, storage, and eventual disposal of high-level nuclear waste from other nations. There are no guarantees that a high-level nuclear waste storage and disposal facility will be safely managed for 100,000 years or that the economic benefits put forward in the Royal Commission report will materialise.

Australia as a whole, and South Australia in particular, does not rely on nuclear power for the generation of electricity to meet our nation's energy needs. We only produce a small amount of intermediate-level nuclear waste, the type that demands a deep geological storage and disposal facility. The Nuclear Fuel Cycle Royal Commission Report indicates that it is unlikely that nuclear power generation will become a viable, necessary component of South Australia's electricity generation portfolio in the short to medium term given a range of policy, economic, and energy scenarios. Therefore, there is no reason to build a high-level nuclear waste storage and disposal facility since we will not be producing used fuel from domestic energy production.

Many Aboriginal and regional communities have expressed strong opposition to the development of a nuclear waste storage and disposal facility on or near their lands. The legacy of Maralinga and other major projects has reduced our confidence in government to deliver a public benefit and minimise harm. Because of our State's commitment to the Indigenous people of Australia, we must honour these communities' cultural, political, and environmental perspectives and critiques as valid and relevant.

With the adoption of the Nuclear Waste Storage (Prohibition) Act 2000, South Australians firmly declared our unwillingness to store and dispose of nuclear waste in our state. We should respect this declaration and reaffirm our decision to say no to nuclear waste.

We should prioritise the safety, security, and long-term well-being of South Australians by stopping investigations and activities towards establishing a nuclear waste storage and disposal facility.

However:

Building and operating a facility to store and dispose of used fuel and high-level waste from other nations creates an enormous potential for economic development and revenue generation for South Australia. The development of a high-level waste storage and disposal facility takes decades to complete and the viable window for pursuing this opportunity may be limited. Foregoing this possibility today may preclude South Australia from ever pursuing the option and receiving the financial benefits of a waste storage and disposal facility through funds directed annually into a State Wealth Fund. By choosing to stop further steps towards exploration about and development of a nuclear waste storage and disposal facility, our state will simultaneously be stopping the potential for substantially increasing our annual revenues and increasing our economic opportunities for generations of South Australians.

Abandoning all further research pertaining to nuclear storage and disposal preemptively limits our ability as a state to investigate these options in the future. Regardless of whether or a not a high-level waste storage and disposal facility is developed now, stopping all research and strengthening anti-nuclear legislation will severely limit our ability to secure a strong ,future for South Australia.

So, what might be done?

waste from other nations under any circumstances.

No High-Level Nuclear Fuel Waste Facilities

Stop Nuclear Storage and Disposal Research

Because the storage and disposal of high-level nuclear waste is a relatively new endeavour, there are too many uncertainties to guarantee that the safety, environmental, and economic risks are worth the potential benefit that such a venture might provide. Sinking further resources into this venture is a lost cause and we should stop all steps that increase our investment in the nuclear waste storage and disposal industry.

Reaffirm Current Legislation and Regulations

Our Parliament prohibited further inquiries into nuclear waste storage in 2000 with the Nuclear Waste Storage Facility (Prohibition) Act. We should reaffirm current legislation which captures our commitment to non-nuclear ventures for future generations. Legislation will protect our rights to land, safety, and a stable future.

Stay Our Current Path

Maintain Current Involvement in Nuclear Fuel Cycle

We are currently utilising low and intermediate nuclear technologies in South Australia and recognise the utility of these technologies. However, the decision to store and dispose of other countries' high-level waste is beyond what our state currently requires. By continuing our current involvement in the nuclear fuel cycle, we ensure that South Australia reaps the benefits of these technologies but does not take on the additional and unnecessary risks posed by importing and storing high-level waste.

Manage Our Own Waste

The Commonwealth Government should deal with the waste generated by our nation's medical, scientific, and industrial activities through implementation of a low and intermediate-level storage and disposal facility. We should not proceed with the development of a facility for waste produced by other countries as we are not obligated to store and dispose of waste from other countries.

Pursue Other Opportunities

Continue Our Investment in Renewable/Non-Nuclear Energy Options

South Australia has already made a strong, pioneering commitment to forge a path as a world leader in the development and implementation of bold renewable and carbon-neutral energy standards and practices. We do not need to pursue deeper involvement in the nuclear fuel cycle through waste storage and disposal to demonstrate or reaffirm our shared commitment to sound environmental stewardship and energy innovation.

Explore Other Economic Opportunities

We have already invested substantial funds into exploring the costs and benefits of building a high-level nuclear waste storage and disposal facility and should redirect our resources towards exploration of other, non-nuclear opportunities that will strengthen and secure South Australia's long-term economic future. Over the past decade, we have seen growth in employment emerging through industries such as health, food, manufacturing, education, and services which has significantly outweighed the employment declines in the state's traditional manufacturing and mining sectors. We should instead continue to invest in these areas.

Option #2: We should continue research and assess whether or not informed social consent and disposal facility.

The decision of whether or not to build and manage a high-level waste storage and disposal facility will affect the economic, environmental, and personal well-being of generations of South Australians. A decision of this magnitude carries a variety of immediate and long-term risks as well as opportunities for substantial economic benefits for South Australia both now and into the future.

Understanding clearly whether or not there is informed social consent from the South Australian community is critical to enable our government to decide whether or not to pursue this venture. It is essential that all South Australians are afforded the opportunity to learn about the potential risks and benefits, discuss possibilities with their neighbours and communities, and develop an informed decision about whether or not they feel we should continue to deepen our involvement in the nuclear fuel cycle through a high-level nuclear waste storage and disposal facility.

Specific communities would be impacted in different ways should we decide to proceed with the development of a high-level nuclear waste storage and disposal facility. Those communities that may be affected directly through geographic proximity to potential sites as well as Aboriginal communities who have challenging legacies with nuclear activities on or near their ancestral lands have a right to more sustained, in-depth engagement as they develop their opinions.

The *Nuclear Fuel Cycle Royal Commission Report* followed more than a year of research, testimony, public hearings, and information gathering. South Australians deserve and require more time to develop informed opinions about this decision so that we can make clear and thoughtful decisions about whether or not we wish to proceed with this endeavour.

However:

Informed social consent does not require that all variables such as site location, cost, and revenue will be determined at the outset. Building a commercial high-level nuclear waste storage and disposal facility is a decades-long endeavour and unanticipated conditions will demand continual adjustments if we choose to proceed. The Nuclear Fuel Cycle Royal Commission relied upon a range of estimates and the best available information to make their assessment of the economic viability of this proposed activity. Therefore, informed social consent in this decision cannot hinge on knowing what we do not yet know and should instead rely upon the best information that we currently have.

Additionally, informed social consent does not require that all people agree with the determined outcome in its entirety. Instead, we must ensure that the concerns of the vast majority of South Australians have been heard and addressed so that we develop and sustain informed social consent. Informed social consent means that we have established informed agreement and maintain public support from the communities affected by this decision.

Regardless of a timeline, there will always be uncertainty with any complex undertaking. We have weighed the evidence and should make a decision, one way or the other, based on the information currently available.

So, what might be done?

community engagement activities to further exists for pursuing a high-level nuclear storage

More Questions, Answered

Change Legislation to Address Community Questions

Legislation must be changed at the state level so exploration into the potential economic benefits of a high-level nuclear waste storage and disposal facility are no longer legally prohibited. We must ask our representatives to quickly change these laws so we can proceed with gauging the potential financial returns of a facility. Only with a realistic idea about the potential risks and benefits will we be able to fully understand and measure whether or not such a venture is desirable.

Further Research into Costs

Similarly, we must have a clearer picture about the complete capital costs for researching, siting, and building a high-level nuclear waste storage and disposal facility – how much will a detailed proposal cost? The final cost of this opportunity will depend upon where the site is located, how and how far waste will need to be transported, and for the long-term disposal of waste and site decommissioning. We will benefit from realistic and thorough costs when deciding whether or not to move forward with this decision.

Increased Cooperation

SA Government Engagement with Aboriginal and Regional Communities

Any further explorations into a high-level nuclear waste storage and disposal facility must fully engage Aboriginal and regional communities to ensure that our standard for informed social consent includes the voices and perspectives of all South Australians. A comprehensive investment to engage and collaborate with Aboriginal South Australians must go above and beyond basic engagement practices. This includes creating opportunities to submit oral testimonies, distributing literature in multiple languages, providing translation services, and purposefully involving Aboriginal communities throughout every stage of the decision-making process.

Collaboration for Site Criteria

Identifying a host site for a high-level nuclear waste storage and disposal facility needs to be a voluntary and collaborative partnership between government and potentially interested communities who opt in. Effective partnerships for high-level nuclear waste facility siting have been successfully modeled in other nations and we should proceed with our efforts to build from these frameworks to allow interested South Australian communities to explore the possibility of hosting a site.

Increased Public Knowledge & Deliberation

Expand Public Education and Awareness Efforts

The decision whether or not to pursue a high-level nuclear waste storage and disposal facility has potentially wide-reaching effects. Because we recognise that informed social consent is key, we should deliberately work to engage as many South Australians in this decision as possible. To do so, literature, resources, and opportunities to participate in this decision should be made accessible to a wide range of South Australians. The community must continue to be effectively engaged at every step.

Public Education K-12

Because the decision to build the world's first commercial high-level nuclear waste storage and disposal facility could affect future generations of South Australians and our environment for 100,000 years, our children should be knowledgeable about nuclear technologies. Whether or not we decide to proceed with this venture, educating our children about nuclear technologies will ensure that they are equipped for the future.

Option #3: We should act to pursue the and dispose of other countries' high and

We must act now to take advantage of a ready and growing global market for storage and disposal of high-level waste to strengthen our state's economic prospects. The economic rewards for taking a bold, entrepreneurial step through deepened involvement in the nuclear fuel cycle will create new opportunities for South Australia and set us apart as a leader in geological disposal research and development. We have adequate knowledge about the potential risks and benefits of such a facility.

The *Nuclear Fuel Cycle Royal Commission Report* found the potential for a substantial economic benefit for South Australians through the implementation of a high-level waste storage and disposal facility, and that the environmental and security risks associated with this venture can be managed safely. South Australia's unique geographic, seismic and climatic conditions position us with an incomparable opportunity to secure the economic future of our state and its residents. Pursuing this innovative project will result in increased employment, educational, and economic opportunities for generations of South Australians. Pursuing this opportunity will allow South Australia to develop a positive reputation as a responsible global citizen.

Other developed nations such as Finland, Sweden, and Switzerland are currently pursuing high-level waste disposal projects for their domestic waste after decades of research. In addition to our extensive research these initiatives provide us with ample evidence to draw upon as we plan to implement and manage a facility for financial profit.

South Australia has undertaken a considerable investigation and public consultation process related to this decision. We have had the opportunity to develop a sufficiently informed opinion on this venture. We currently have the necessary information to make an informed decision and should secure our economic future through the development of a commercial high-level waste storage and disposal facility.

However:

South Australia is confronted with numerous economic challenges and our economy is grappling with changes at a rapid pace that are urgent and, at times, unpredictable. Additionally, it is difficult to discuss how to allocate profits from a project that has not yet materialised as the assessment of costs and revenue is an estimate. Making financial commitments to particular communities now, that we may be unable to fulfil in the future, presents a risk we are unwilling to take at this point.

With a constrained state budget, securing significant funding for the work necessary before any client countries enter into revenue-generating contracts will be challenging.

The development of a high-level nuclear waste storage and disposal facility is a long, complicated process. Making decisions of this magnitude should not be hurried as such a facility would potentially impact South Australia for 100,000 years. This is a multi-generational decision that should include all residents as well as our youth. Continuing the community engagement process beyond the initial timeframe will allow South Australians to benefit from deeper engagement with the information as we make a key decision affecting future generations.

We must also recognise the challenge all governments face in delivering major public projects, on time and on budget, and accurate predictions have proven difficult.

For example, it is difficult to discuss how to wisely allocate money we do not yet have as the assessments of costs and revenue are estimates; accurate predictions can be elusive. We also do not know what our state will need in the future in terms of economic resourcing (what our health, education, social needs might be). Making financial commitments to particular communities that we may be unable to fulfill presents a risk we should not take.

So, what might be done?

opportunity to establish a facility to store intermediate-level nuclear waste.

Work Together

Establish Legislation and Regulation to Pursue Facility

Under current law, the South Australian government is unable to make inquiries into how much other nations are willing to pay to store and dispose of their high-level fuel waste. We should revise our laws so that price inquiries and contract negotiations with potential customer countries are legally permissible and so we can determine whether public or private entities are allowed to conduct these inquiries. Changes to these laws will ensure that once a country agrees to send their waste to South Australia, we have a one-time, upfront payment to fund the construction of the high-level waste storage and disposal facility and generate revenue.

Work to Identify Potential Sites

We should collaborate to immediately locate a suitable set of potential sites so that the final location of the high-level waste storage and disposal facility may be established. By cooperating with Aboriginal and regional communities, we can guarantee that long-term strategies for incorporating their perspectives and responding to local community needs and desires are incorporated early to ensure long-term community support and success of the endeavour.

Develop Clear Implementation Strategy

Compose Detailed Proposal and Concept

The proposal development process is intensive and will serve as the framework which guides ongoing community deliberation throughout future steps of the facility development and implementation process. After the development of an initial concept outlining the geological, engineering, commercial, legal, and regulatory features of a proposed site, communities will be able to determine where the site should be located and how best to proceed.

Work with International Atomic Energy Agency and Other Trusted Nuclear Regulatory Agencies

The South Australian government should take all necessary precautions to ensure safe development and consistent management of a high-level nuclear waste storage and disposal facility site. We should work with experts from the IAEA and other trusted national and international nuclear agencies and regulators to develop the necessary safety, safeguards, and security standards in Australia. This is to ensure that such an independent regulator is able to competently oversee the many stages of project development and implementation so that measures are taken to ensure the project adheres to internationally accepted industry standards and best practices.

Secure Our Economic Future

Invest in Specialised Training and Research

The return on investment for a high-level nuclear waste storage and disposal facility is substantial, both regarding job creation and revenue. We should begin training South Australians to fill these positions. Cultivating our expertise in this industry will provide new opportunities for South Australian workers in fields such as nuclear technologies and affiliated sectors (such as transportation, construction, infrastructure and other related industries). Additionally, we should capitalise on this opportunity by creating a “Centre of Excellence” with South Australian Universities to build upon our reputation as a leader in nuclear storage and waste technologies.

Cooperatively Decide How Profits Will Benefit South Australians

Since the decision to store and dispose of high-level nuclear waste from other nations will generate sizeable revenue for our state, it is essential that we collectively determine how profits from this endeavour are distributed. We should proceed with developing a plan for allowing residents to decide how and when funds are utilised for public projects to maximise benefits to South Australians.

Option #1: We should not dispose of nuclear waste

Main Arguments in Favour of this Option

High-level nuclear waste storage carries a considerable degree of uncertainty and poses a variety of potential risks related to the economic, environmental, public health, and public safety concerns of South Australians. Waste imported from other nations poses potential environmental and security risks for South Australians during transport and prior to deep geological disposal; we have no moral or ethical obligation to take on the additional risks or responsibilities created through other nation's use of nuclear energy.

While the Nuclear Fuel Cycle Royal Commission Report does grapple with technical uncertainties, it does not fully address non-economic or non-scientific concerns such as community resilience, emotional sense of safety, and peoples' relationship with the land and natural environment.

Given cultural values and the history with Maralinga, many Aboriginal communities are adamant that they do not support the development of a high-level nuclear waste storage and disposal facility on or near their ancestral lands.

Examples of What Might Be Done

Halt all investigative research into establishing a commercial high-level nuclear waste storage and disposal facility.

Maintain current involvement with the nuclear fuel cycle; any further involvement is an unnecessary risk to our economic, cultural, and environmental stability.

The Commonwealth Government should deal with Australia's waste only through the implementation of a low and intermediate-level storage and disposal facility; all steps to establish a high-level waste facility should be ceased immediately.

Shift exploration and public investment resources towards other, non-nuclear, economic development opportunities for South Australia.

Private enterprise, communities, and home/property owners should continue to pursue non-nuclear and renewable energy options to decrease South Australia's dependence on fossil fuels through incentives such as the Large-scale Renewable Energy Target.

Reaffirm current legislation prohibiting the exploration into and development of a high-level nuclear waste storage and disposal facility in South Australia.

from other nations under any circumstances.

Some Consequences and Tradeoffs to Consider

The development of a high-level waste storage and disposal facility takes decades to complete and the viable window for pursuing this opportunity may be limited; foregoing this possibility today may preclude South Australia from ever pursuing the option and receiving the benefits of a waste storage and disposal facility.

The Royal Commission Report identifies the possibility of a State Wealth Fund that could generate up to $445 billion during the lifespan of the storage and disposal facility (this could provide up to $6 billion a year in revenue to South Australia). By choosing to forego a high-level nuclear waste storage and disposal facility, we are simultaneously bypassing an opportunity to drastically increase our State's income and a strong economic future.

Accepting the Commonwealth's low and intermediate-level waste facility could create a pathway to accepting high level waste in the future, and will not provide the financial benefits of a state wealth fund as funds will primarily benefit the host community.

Recent public investments in economic endeavours have not shown as great a return as the potential demonstrated through a high-level waste storage and disposal facility.

Prioritizing investments in renewable energy could lead to lower investments in other public services.

Legislation halts any future inquiries we might make into expanding our role in the nuclear fuel cycle, and we will remain unable to take advantage of any opportunities that emerge in the future.

Option #2: We should continue research and assess whether or not informed social consent and disposal facility.

Main Arguments in Favour of this Option

We must have a clearer sense of the risks and benefits posed by a high-level waste storage and disposal facility in order to assess whether or not informed social consent exists as to whether or not we pursue this opportunity.

The South Australian public does not currently have enough knowledge about either the potential risks (including environmental, safety, and public health) or the possible public benefits (such as economic benefits or improved labour and employment possibilities) to make an informed decision about whether or not we should pursue a commercial high-level nuclear waste storage and disposal facility.

Further public education and awareness building, public consultation and community engagement (particularly among Aboriginal and regional communities), research, and debate are required to explore the risks and benefits. Only then can we know whether or not South Australians will grant informed social consent on this decision.

Examples of What Might Be Done

South Australians should ask their representatives to ensure legislation is changed so that discussions regarding potential risks and benefits of implementing a facility and inquiries into international fuel storage and disposal pricing can occur.

Further research must be conducted by the South Australian government about economic costs and benefits of a high-level nuclear waste storage and disposal facility. Specifically, research must clearly determine the economic and financial viability of the facility, especially given recent volatility in global markets.

The government, local communities, and interested landowners should collaboratively establish the criteria for a set of potential site locations, site-specific cost estimates, and potential local impacts before determining whether or not we should proceed with the development of a high-level nuclear waste storage and disposal facility.

The state should undertake a more comprehensive public awareness campaign wherein South Australians are educated about the potential impacts of a high-level nuclear waste storage and disposal facility. Publications and events must provide opportunities for those who are non-English speakers, as well as those who live in regional/remote areas to participate fully so that all residents have an equal opportunity to create an informed decision.

The South Australian government should invest in sustained dialogue and collaboration with Aboriginal communities to ensure equal involvement by all South Australians.

South Australian schools should establish educational initiatives for our youth addressing the nuclear fuel cycle and possible impact on their future given our state's unique role.

community engagement activities to further exists for pursuing a high-level nuclear storage

Some Consequences and Tradeoffs to Consider

While laws must be changed in order to further investigate the potential for a high-level nuclear waste storage and disposal facility, South Australia is still undecided and too uninformed to make a clear collective decision about our nuclear future. Enacting legislation at this point would move us ahead too quickly without clarity from residents about our desires.

By continuing explorations into the market for international nuclear fuel storage and disposal, we may lose the opportunity to get ahead in providing these services; other nations may pursue this opportunity simultaneously.

Without clearly establishing local social consent first at potential community sites for a high-level nuclear waste storage and disposal facility, the project will likely be stalled indefinitely and may ultimately fail. If consent is not established those likely to be affected by the decision may feel the decision is imposed upon them, particularly Aboriginal and/or regional communities.

South Australians have already been deeply involved in conversations about the potential for a storage and waste site. Those interested in the decision have had ample opportunity to learn more and participate; those who have not done so are unlikely to become involved if more information is made available.

Many Aboriginal communities are already adamant that they do not want any part of the nuclear fuel cycle; further attempts to gauge interest and increase involvement among Aboriginal communities ignores clear and consistent declarations that informed social consent would not be granted.

This is a multi-generational decision, and while youth education is important, it does not provide clarity as to what South Australians currently want or need.

Option #3: We should act to pursue the dispose of other countries' high and

Main Arguments in Favour of this Option

We must immediately act upon the Royal Commission's Nuclear Fuel Cycle Report's recommendation of pursuing and establishing a high-level nuclear waste storage and disposal facility for international used waste.

South Australia currently has the opportunity to capitalise on a commercial opportunity by creating the first high-level nuclear waste storage and disposal facility, and we are ensured profitable rewards for our innovation.

South Australia is uniquely positioned for such a venture based on our particular geographic, seismic, and climate conditions along with our stable social, political and economic structure. The management and storage of low and intermediate-level nuclear waste has been done safely for years; other countries including Finland, Sweden, and Switzerland have undertaken extensive investigations about the viability, safety, and economic costs of nuclear waste disposal and begun developing and constructing facilities to dispose of domestic used waste.

Therefore, we have a wealth of knowledge to draw upon as we proceed with such a facility in South Australia. Technological advances, improvements in training, and both domestic and international regulations ensure that risk to the health and safety of South Australians and our environment is miniscule and the potential for broad public benefit is high.

Examples of What Might Be Done

Seek the support and cooperation of the Australian government to enact the necessary legislation and regulations so that South Australia can pursue the development of a high-level nuclear waste storage and disposal facility (ie securing contracts with international producers of used fuel, transportation vendors, etc.).

The South Australian government should develop and distribute a detailed proposal and concept which outlines the geological, engineering, commercial, legal, and regulatory analyses related to establishing a high-level nuclear waste storage and disposal facility in the state.

The South Australian government should work with the International Atomic Energy Agency (IAEA) and other trusted nuclear regulator agencies to develop a regulatory framework and oversight mechanisms to oversee and monitor safety and security aspects of the high-level nuclear waste storage and disposal facility concept.

Work with South Australian communities, including Aboriginal and regional communities, to develop initial siting criteria for the location of the proposed facility.

South Australians should cooperatively decide how the profits of a high-level nuclear waste storage and disposal facility should be spent for the public good, meeting both short-term needs and long-term goals.

Accelerate investments in South Australians' technical skills through the establishment of a nuclear research Centre of Excellence at South Australian universities and increase our investment in employee recruitment and specialised training so that residents may benefit from the jobs created through this venture.

opportunity to establish a facility to store and intermediate-level nuclear waste.

Some Consequences and Tradeoffs to Consider

Social consent must be granted for this process to occur; once it begins, it will be difficult to halt should South Australians decide they no longer wish to pursue this path. Furthermore, changes to South Australia's *Nuclear Waste Storage Facility (Prohibition) Act 2000* will likely alienate many South Australians who still support the prohibition of inquiries into high-level nuclear waste storage and disposal.

Detailed information is required before providing informed social consent and therefore should be prepared and distributed before any implementation activities can occur.

Relying on international nuclear agencies could lead to a singularly pro-nuclear perspective and we cannot rely solely on their oversight to effectively ensure that the regulatory process will be fair, impartial, and satisfactory for South Australia.

For some communities, particularly those who have been negatively affected by nuclear weapons testing and mining projects (such as some Aboriginal and regional communities), this process needs to hinge on purposeful and sustained engagement. Because of this, clear timelines and project deadlines may be halted or changed.

Until we know where a site will be located, where transportation infrastructure and interim facilities will be placed, and which communities/regions are most likely to be affected by a high-level nuclear waste storage and disposal facility, we cannot make an accurate appraisal of how benefits should be distributed as risks and local concerns will not be clearly established.

A global research centre requires an upfront investment; such a facility will cease to benefit our state if social consent is not continuously given by South Australians for continued development. Furthermore, while long-term expectations for job growth and opportunities are optimistic, we will not experience substantial job growth for at least another 10-15 years, doing little to solve our current unemployment challenges.