

# DISER's Involvement in the Nuclear-Powered Submarine Program

DISER – for release under the FOI Act

FOI 73901 Doc 1 - 1

## Background

- On 16 September 2021, the Government announced a new trilateral security partnership between Australia, the United Kingdom and the United States—AUKUS.
- The first major initiative under AUKUS is a trilateral program to support Australia in acquiring at least eight nuclear-powered submarines for operation by the Royal Australian Navy.

## DISER's Engagement to Date

- Since the announcement, DISER has been actively engaged in regular communication with Defence and the Nuclear-Powered Submarine Taskforce, including at SES level (20 October 2021).
- This includes involvement in meetings hosted by the Taskforce with other government agencies to ensure we have consistent messaging across government.
- DISER will be providing a secondee to the Taskforce, which will support the department's key strategic engagement objectives.

## DISER's Key Interests in Naval Shipbuilding

- Defence procurement is the Government's single biggest lever for industry development, and the significant investment in the National Naval Shipbuilding Enterprise will grow Australian industry capability, provide ongoing work and support the sustainability of Australia's shipbuilding industry.
- The department's key interest in naval shipbuilding and sustainment is building industrial capability that can support Australian Defence Force objectives and be competitive on cost and schedule requirements.

### Key Contacts

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[s22@industry.gov.au](mailto:s22@industry.gov.au), s22  
 Industry Capability and Participation Branch  
[s22@industry.gov.au](mailto:s22@industry.gov.au), s22

## DISER's Role Going Forward

The department (**Industry Growth Division (IGD)**) works closely with Defence to support industry development and maximise opportunities for Australian industry in Defence acquisition and sustainment projects. IGD will lead the department's engagement and continue to work closely with the Nuclear-Powered Submarine Taskforce on industry engagement in areas such as:

nuclear energy technology

industry capability  
development and sustainment

workforce

radioactive waste disposal

**Australian Radioactive Waste Agency (ARWA)** is Australia's radioactive waste management organisation and will work with Defence-led Nuclear-Powered Submarine Taskforce to understand the radioactive waste implications of the nuclear submarine program, and ensure they are managed appropriately.

**International Climate and Technology Division** can provide advice on small modular reactors (SMRs) and nuclear technology as they relate to potential for global emissions reduction.

The **Australian Nuclear Science and Technology Organisation (ANSTO)** have the capabilities to work with the Nuclear-Powered Submarine Taskforce in a range of areas including nuclear safety, regulation, nuclear technology and workforce developments to help determine the optimal pathway for delivery of this program to Australia.

## Industry and Jobs

### To be built in South Australia

It is the Government's intention to build these submarines in South Australia, and advance Australia's economy. The program will create thousands of jobs in Australia over the coming decades.

### Australian Industry Involvement

The Government is committed to maximising local industry involvement in the construction of a nuclear-powered submarine capability for Australia.

### Attack Class Workforce

The Government is committed to finding a role for every skilled shipbuilding worker impacted by this announcement. The Attack class submarine workforce are prime candidates for the unprecedented work that needs to be performed across the Naval Shipbuilding Enterprise over the coming decades.

## Next Steps

- The department will support Defence in mapping Australian industry capability required for the nuclear-powered submarine program.
- Over the next 18 months, Australia, the UK, and the US, through the AUKUS trilateral effort on conventionally-armed nuclear-powered submarines, will intensively examine the full suite of requirements that underpin nuclear stewardship, with a specific focus on: safety, design, construction, operation, maintenance, disposal, regulation, training, environmental protection, installations and infrastructure, industrial base capacity and workforce.

## Statement of Capability

### in support of the AUKUS Security Partnership and the Nuclear-Powered Submarine Task Force

#### Key Points:

- As the home of Australia’s nuclear science, technology, and engineering capabilities, ANSTO is well positioned to support Australia’s role in the AUKUS partnership, with specific emphasis on the focus and activities of the Nuclear-Powered Submarine Task Force (‘the Task Force’)
- ANSTO has been Australia’s nuclear centre of excellence for almost 70 years. In that time, the Organisation has developed nationally distinctive and highly specialised skills and infrastructure that will be essential to the development of a nuclear-powered submarine capability.

#### Summary of ANSTO’s expertise as relevant to the activities of the Task Force:

CAPABILITY AREA	CURRENT APPLICATION	APPLICABILITY TO AUKUS AND THE TASK FORCE
<b>Engineering and Capital Project Management</b>	ANSTO is the only entity in Australia with detailed experience in the design and delivery of large-scale nuclear infrastructure projects, including liaison and negotiation with nuclear infrastructure vendors throughout the full life-cycle of nuclear projects, as well as in the management of the necessary legal and regulatory approvals.	ANSTO’s expertise would position Australia as an intelligent customer for the nuclear elements of the submarine acquisition and could advance planning for the nuclear infrastructure required to support the submarine program.
<b>Public Outreach</b>	ANSTO has a highly effective public communications and education program that provides authoritative, fact-based information on complex (and, often, emotive) matters in the nuclear fuel cycle. For example, ANSTO developed and implemented multi-year engagement plans for the National Radioactive Waste Management Facility site selection program. Similarly, we have managed multiple successful public engagement processes for spent (used) fuel and radioactive waste shipments that have led to high levels of public acceptance of such operations, reducing operational risks.	ANSTO’s public engagement experience would inform communications with the Australian public on the complex and sensitive nuclear elements of the submarine acquisition program.
<b>Education and Training</b>	As the national centre of Australia’s nuclear operational expertise, ANSTO has sophisticated accredited training programs for reactor operations and other nuclear activities. In addition, through the Lucas Heights-based	ANSTO’s experience, programs, and linkages to universities could be leveraged to assist in developing and assessing a curriculum on the operation of facilities associated with the submarine program and to develop the large-scale nuclear science and engineering

CAPABILITY AREA	CURRENT APPLICATION	APPLICABILITY TO AUKUS AND THE TASK FORCE
	<p>Australian Institute of Nuclear Science and Engineering (AINSE) and its 41 member universities, ANSTO has well established links with all Australian universities and relevant New Zealand universities.</p>	<p>training programs that will be required to ensure Australia has a nuclear-ready workforce.</p>
<p><b>Environmental Monitoring</b></p>	<p>ANSTO has extensive experience in developing and operating monitoring and detection systems for radioactive discharges through air, water, and waste streams. We also have proprietary technology that can assist in the detection of radiation and environmental releases.</p>	<p>Stringent monitoring of any radioactive discharges is essential for managing the public perception of the submarine program. ANSTO's experts and technologies could be deployed in the design of the program (and subsequently in monitoring and reporting) and public engagement activities.</p>
<p><b>Government and International Affairs</b></p>	<p>ANSTO has significant networks and expertise in dealing with all levels of government on nuclear matters. These relationships are multi-faceted, and include engagement with funding, policy, technology, and regulatory-based departments and agencies. ANSTO also has extensive linkages into international and multilateral nuclear organisations and counterpart organisations globally. ANSTO is Australia's home of technical engagement with the International Atomic Energy Agency (IAEA) and the OECD Nuclear Energy Agency (NEA).</p>	<p>s33</p>
<p><b>Management of Radioactive Waste and Contamination</b></p>	<p>ANSTO has undertaken extensive research and development of current and future radioactive waste management practices and techniques, including the safe storage and pre-disposal management of used nuclear fuel. The Organisation routinely provides expert advisory services to commercial and non-commercial clients.</p> <p>ANSTO also has significant experience in the safe application of major inter-agency radioactive waste transport operations, including through undertaking multiple international shipments of spent fuel and waste residues from the operation of the MOATA, HIFAR, and OPAL reactors.</p>	<p>ANSTO is best placed to provide expert advice on the management, transport, and reprocessing of spent fuel, in addition to the long-term storage and/or disposal of resultant waste streams. In addition, ANSTO's international connections and standing, for example, through the positions that ANSTO senior officers hold in esteemed waste management forums and communities of practice, can be leveraged by Government to provide confidence to the Australian community that appropriate stewardship arrangements will be established to manage the waste streams arising from the submarine program.</p>



CAPABILITY AREA	CURRENT APPLICATION	APPLICABILITY TO AUKUS AND THE TASK FORCE
<p><b>Nuclear Forensics</b></p>	<p>s33</p>	<p>s33</p>
<p><b>Nuclear Law</b></p>	<p>Through ANSTO, Australia has developed significant capability in the development and maintenance of nuclear liability regimes and other international nuclear law and conventions.</p>	<p>ANSTO has extensive experience putting in place effective legal arrangements to manage the international transport of nuclear fuel across both land and sea. The Organisation also has strong awareness of the international legal requirements that Australia will need to meet as it develops new nuclear capability, and has strong relationships with international nuclear law experts on whom Government may wish to draw in the development of additional frameworks and legislative instruments to support the operation of the submarine program.</p>
<p><b>Nuclear Fuel Cycle Facility Operation (full life-cycle)</b></p>	<p>ANSTO has expertise in the acquisition, design, construction, commissioning, operation, and decommissioning of nuclear reactors and other fuel cycle technologies and facilities.</p>	<p>ANSTO’s expertise will ensure that Australia can be an ‘intelligent customer’ of new nuclear technology and the Organisation can provide insights into the nuclear technologies being offered, optimising the technology outcomes of the acquisition process.</p>
<p><b>Nuclear Fuel Cycle Expertise</b></p>	<p>ANSTO has nationally distinctive expertise in the understanding of the entire nuclear fuel cycle and undertakes research into areas including:</p> <ul style="list-style-type: none"> <li>▪ the development of advanced reactor designs and associated improved fuels;</li> <li>▪ investigation of materials for use in nuclear systems, structures, and components, and of the effects of irradiation, corrosion, and high temperatures on the structural properties of materials; and</li> <li>▪ advancing the understanding of the management of used fuel and associated waste forms.</li> </ul>	<p>s33</p>

CAPABILITY AREA	CURRENT APPLICATION	APPLICABILITY TO AUKUS AND THE TASK FORCE
	<p>This research takes advantage of ANSTO’s unique capabilities, including specific expertise in waste forms, the capacity to undertake scientific predictions of fuel properties, and expertise in modelling advanced material properties under extreme conditions.</p>	
<p><b>Radiation Protection and Health Physics</b></p>	<p>s33</p> <p>In addition, ANSTO has existing operational radiation protection capabilities that would be expected of a nuclear laboratory, including dosimetry, engineering, modelling, and operational training.</p>	<p>s33</p>
<p><b>Safety, Security, and Safeguards</b></p>	<p>ANSTO’s protocols protect people, assets, information, and nuclear and radiological material and facilities in accordance with domestic and international security and non-proliferation requirements. ANSTO also has capability in the technical support of IAEA safeguards through our membership of the IAEA Network of Analytical Laboratories (NWAL). This capability is based in our Centre for Accelerator Science (CAS), which analyses samples taken by IAEA inspectors from facilities around the world to confirm compliance with safeguards requirements. ANSTO is a significant stakeholder in supporting the operational interface of domestic and international safeguards inspections.</p>	<p>s33</p>
<p><b>Nuclear Cyber Security</b></p>	<p>ANSTO is recognised for its world-leading expertise in nuclear cyber security risk management. ANSTO maintains a comprehensive nuclear cyber security risk management program across its complex and diverse portfolio of information technology (IT) and operational technology (OT) infrastructure, integrating contemporary guidance from the IAEA and Australian Government</p>	<p>Nuclear cyber security expertise and experience will be essential throughout both the nuclear-powered submarine acquisition program and the operating life of the assets. Experience has demonstrated the need to ensure appropriate nuclear cyber security risk management and control throughout nuclear projects, and the need to include “secure by design” principles in the design, build, and ongoing operation of nuclear assets.</p>

CAPABILITY AREA	CURRENT APPLICATION	APPLICABILITY TO AUKUS AND THE TASK FORCE
	regulatory requirements. ANSTO maintains strong connections with the IAEA and our international peers through the ongoing development and implementation of nuclear cyber security guidance, training, and evaluation.	



## Our organisation and people

### Nuclear Science and Technology

475

35%

### Nuclear Operations and Nuclear Medicine

400

23%

### Asset Management and Engineering

179

13%

### Chief Operating Officer

131

9%

### Chief Executive Officer

64

5%

### Information Technology

62

5%

### Commercial Products and Services

41

3%

### TOTAL

1,352

Average Staffing Level (ASL) as at 30 June 2021

<p>70 YEARS</p> <p>We have been operating for nearly 70 years</p>	<p>We manage over one billion dollars' worth of landmark infrastructure and scientific assets, including some of Australia's most sophisticated research infrastructure</p>	<p>We have two main campuses: one in Lucas Heights (NSW) and the other in Clayton (Vic)</p>	<p>We host approximately 6,500 visits by researchers annually from Australian and international universities, institutions and industry</p>	<p>We are connected to approximately 40 Australian universities through the Australian Institute of Nuclear Science and Engineering (AINSE)</p>
<p>About 80 per cent of nuclear medicine isotopes used in Australia come from ANSTO's Lucas Heights Campus in Sydney</p>	<p>On average, ANSTO facilitates more than 12,000 nuclear medicine procedures that benefit Australians each week</p>	<p>Every Australian is likely to benefit from nuclear medicine, and on average will have at least two nuclear medicine procedures in their lifetime</p>	<p>We work with over 500 businesses each year from the aerospace, advanced manufacturing, energy, defence, health and environmental sectors</p>	<p>We host 15,500 visitors annually</p>

## Worldwide connections










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POWERED SUBMARINE s22

: AUKUS s22

NUCLEAR-

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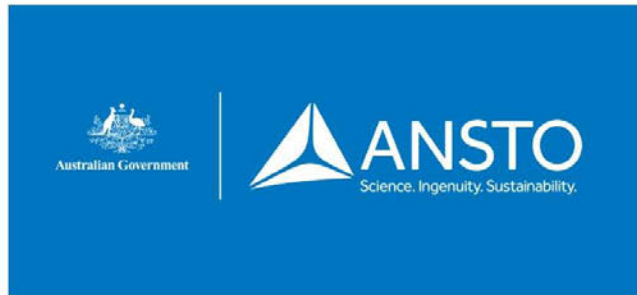
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### TOTAL

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Average Staffing Level (ASL) as at 30 June 2021



## Worldwide connections



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Attachment A s22

AUKUS & Nuclear-Powered Submarine s22

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**DEPARTMENT OF INDUSTRY, SCIENCE AND RESOURCES**

MS23-000511

**To:** Minister for Industry and Science (For Information only)**CC:** Minister for Resources

CC: Assistant Minister for Manufacturing

**AUKUS – UPDATE ON NUCLEAR-POWERED SUBMARINES AND DEPARTMENT OF INDUSTRY, SCIENCE AND RESOURCES EQUITIES****Timing:** Routine

<b>Recommendation:</b>			
1. That you <b>note</b> the recent AUKUS Nuclear-Powered Submarine announcement, and the related opportunities to deliver on priorities within the Industry portfolio.			
			<b>Noted / Please Discuss</b>
<b>Minister:</b>			Date:
<b>Comments:</b>			
<b>Clearing Officer:</b>	John Krbaleski	General Manager Industry Participation & Major Projects Facilitation	Ph: s22 Mob: s22
Contact Officer:	s22	A/Manager, Business Capability	Mob: s22
<b>For Parliamentary Services' use only.</b>			XX XX 2023
Date Submitted to the Minister's office in PDMS:			

**Key Points:**

1. On 14 March 2023, the Prime Minister announced the optimal pathway for Australia's acquisition of nuclear-powered submarines alongside his AUKUS counterparts. The optimal pathway will:
  - a. deliver Australia a conventionally-armed, nuclear-powered submarines capability in the early 2030s;
  - b. elevate all three nations' industrial capacity to produce and sustain advanced and interoperable nuclear-powered submarines for decades to come; and
  - c. expand our individual and collective undersea presence in the Indo-Pacific and contribute to global security and stability in the region.



*Job opportunities for Australian industry*

*Other portfolio linkages and implications:*

11. The Department maintains a close working relationship with Defence by contributing to the development and delivery of major policy initiatives and industry support programs.
  - a. This relationship is supported by a number of secondments into relevant areas of Defence; such as a senior staff member in *Industry Policy Division*, and team members from the Australian Nuclear Science and Technology Organisation (ANTSO) and Australian Radioactive Waste Agency (ARWA) embedded directly in the Nuclear Powered Submarines Taskforce.
  - b. The Department is also supporting the development of the *Defence Industry Development Strategy* and AUKUS Submarine Workforce and Industry Strategy, to foster alignment with broader government policy and initiatives, such as the National Reconstruction Fund and Buy Australian Plan.

Specific workstreams to support AUKUS Pillar I (nuclear powered submarines)

s34(3)

13. ARWA has also been working closely with the Nuclear Powered Submarines Taskforce including participation in senior-level inter-departmental committee meetings and regular engagement to share knowledge and expertise.
  - a. ARWA will continue to work with the Defence on the waste implications of the nuclear-powered submarine program, to ensure any radioactive waste is managed appropriately.

s34(3)

**PROTECTED: CABINET**

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14. s33

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DISR – for release under the FOI Act

## DEPARTMENT OF INDUSTRY, SCIENCE AND RESOURCES

MS23-000766

To: Minister for Industry and Science (For Information only)

**AUKUS – UPDATE ON NUCLEAR-POWERED SUBMARINES AND DEPARTMENT OF INDUSTRY, SCIENCE AND RESOURCES EQUITIES**

Timing: Routine

<b>Recommendation:</b>			
1. That you <b>note</b> the recent AUKUS Nuclear-Powered Submarine developments and release of the Defence Strategic Review, and the related opportunities to deliver on priorities within the industry portfolio.			
			<b>Noted / Please Discuss</b>
<b>Minister:</b>		Date:	
<b>Comments:</b>			
<b>Clearing Officer:</b>	John Krbaleski	General Manager Industry Participation & Major Projects Facilitation	Ph: s22 Mob: s22
Contact Officer:	s22	A/Manager, Business Capability	Mob: s22
<b>For Parliamentary Services' use only.</b> Date Submitted to the Minister's office in PDMS:			22/05 2023

**Key Points:**

1. s.47C, this brief provides an overview of the AUKUS Nuclear-Powered Submarine announcements and the associated opportunities to deliver on priorities within the industry portfolio.
  - a. This includes job opportunities for Australian industry, portfolio linkages and implications, and current workstreams to support AUKUS initiatives (Pillars I and II).

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Job opportunities for Australian industry

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Other portfolio linkages and implications:

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8. s.47C contributing to the development and delivery of major policy initiatives and industry support programs.
  - a. This relationship is supported by a number of secondments into relevant areas of Defence; such as a senior staff member in *Defence Industry Policy Division*, and members from the Australian Nuclear Science and Technology Organisation (ANTSO) and Australian Radioactive Waste Agency (ARWA) resources embedded in the Nuclear-Powered Submarine Taskforce.

- b. The Department is also supporting the development of the *Defence Industry Development Strategy* and AUKUS Submarine Workforce and Industry Strategy, to foster alignment with broader government policy and initiatives, such as the National Reconstruction Fund and Buy Australian Plan.
9. Additional information on specific workstreams to support AUKUS initiatives is included at Attachment A.

**Sensitivities and Handling:**

10. Nil

**Data referenced:**

11. Productivity Commission 2023, *Advancing Prosperity*, viewed 28 February 2023.
12. Prime Minister of Australia 2023, *Joint Leaders Statement on AUKUS*, viewed 28 February 2023.
13. ICN Gateway 2023, *Nuclear Powered Submarine Program – Industry Portal*, viewed 8 March 2023.
14. The Strategist (ASPI) 2023, *Making the most of AUKUS's second pillar*, viewed 8 March 2023.
15. Department of Defence 2023, *Investing in Australia's national defence*, viewed 11 May, 2023.

**Consultation: YES**

16. Minerals and Resourcing (Radioactive Waste Policy), Manufacturing (NRF), National Security and Engagement, ANSTO, Science Agencies-CSIRO and Research Infrastructure.

**ATTACHMENTS:**

**A:** Specific Workstreams to Support AUKUS Initiatives

~~OFFICIAL: Sensitive~~**Attachment A**

1. On 14 March 2023, the Prime Minister announced the optimal pathway for Australia's acquisition of nuclear-powered submarines alongside his AUKUS counterparts. The optimal pathway will:
  - a. deliver Australia a conventionally-armed, nuclear-powered submarine capability in the early 2030s;
  - b. elevate all three nations' industrial capacity to produce and sustain advanced and interoperable nuclear-powered submarines for decades to come; and
  - c. expand our individual and collective undersea presence in the Indo-Pacific and contribute to global security and stability in the region.
2. This pathway, and more broadly the nuclear-powered submarines program, presents significant opportunities for Australia's industry and research sector, for new jobs, industries, and expertise in science, technology, and cyber.

*Specific workstreams to support AUKUS Pillar I (nuclear-powered submarines)*

4. ARWA has also been working closely with the Nuclear-Powered Submarine Taskforce including participation in senior-level inter-departmental committee meetings and regular engagement to share knowledge and expertise.
  - a. ARWA will continue to work with the Defence on the waste implications of the nuclear-powered submarine program, to ensure any radioactive waste is managed appropriately.

5. <sup>s.33</sup>

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**Minister:**

**Comments**

s47C

<b>Clearing Officer:</b>	John Krbaleski	General Manager Industry Participation & Major Projects Facilitation	Ph: <span style="color: red;">s22</span> Mol
Contact Officer:	<span style="color: red;">s22</span>	A/Manager, Business Capability	Mob: <span style="color: red;">s22</span>
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Job opportunities for Australian industry

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*Other portfolio linkages and implications:*

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8. <sup>s.47C</sup> contributing to the development and delivery of major policy initiatives and industry support programs.

- a. This relationship is supported by a number of secondments into relevant areas of Defence; such as a senior staff member in *Defence Industry Policy Division*, and members from the Australian Nuclear Science and Technology Organisation (ANTSO) and Australian Radioactive Waste Agency (ARWA) resources embedded in the Nuclear-Powered Submarine Taskforce

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- b. The Department is also supporting the development of the *Defence Industry Development Strategy* and AUKUS Submarine Workforce and Industry Strategy, to foster alignment with broader government policy and initiatives, such as the National Reconstruction Fund and Buy Australian Plan.
9. Additional information on specific workstreams to support AUKUS initiatives is included at Attachment A.

**Sensitivities and Handling:**

10. Nil

**Data referenced:**

11. Productivity Commission 2023, *Advancing Prosperity*, viewed 28 February 2023.
12. Prime Minister of Australia 2023, *Joint Leaders Statement on AUKUS*, viewed 28 February 2023.
13. ICN Gateway 2023, *Nuclear Powered Submarine Program – Industry Portal*, viewed 8 March 2023.
14. *The Strategist (ASPI) 2023, Making the most of AUKUS's second pillar*, viewed 8 March 2023.
15. Department of Defence 2023, *Investing in Australia's national defence*, viewed 11 May, 2023.

**Consultation: YES**

16. Minerals and Resourcing (Radioactive Waste Policy), Manufacturing (NRF), National Security and Engagement, ANSTO, Science Agencies-CSIRO and Research Infrastructure.

**ATTACHMENTS:**

**A:** Specific Workstreams to Support AUKUS Initiatives

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~~OFFICIAL: Sensitive~~**Attachment A**

1. On 14 March 2023, the Prime Minister announced the optimal pathway for Australia's acquisition of nuclear-powered submarines alongside his AUKUS counterparts. The optimal pathway will:
  - a. deliver Australia a conventionally-armed, nuclear-powered submarine capability in the early 2030s;
  - b. elevate all three nations' industrial capacity to produce and sustain advanced and interoperable nuclear-powered submarines for decades to come; and
  - c. expand our individual and collective undersea presence in the Indo-Pacific and contribute to global security and stability in the region.
2. This pathway, and more broadly the nuclear-powered submarines program, presents significant opportunities for Australia's industry and research sector, for new jobs, industries, and expertise in science, technology, and cyber.

*Specific workstreams to support AUKUS Pillar I (nuclear-powered submarines)*

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4. ARWA has also been working closely with the Nuclear-Powered Submarine Taskforce including participation in senior-level inter-departmental committee meetings and regular engagement to share knowledge and expertise.
  - a. ARWA will continue to work with the Defence on the waste implications of the nuclear-powered submarine program, to ensure any radioactive waste is managed appropriately.

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2023–24 Budget:

## Measure: **Nuclear-Powered Submarine Program – Initial Implementation**

Responsible Ministers: **Minister for Defence, Minister for Resources**

### Key message

- This measure supports the Department of Defence to implement an optimal pathway for Australia to acquire conventionally-armed, nuclear-powered submarines.

### Talking points

- The Australian Radioactive Waste Agency (ARWA) plays an important role in supporting the Department of Defence's (Defence) delivery of conventionally-armed, nuclear-powered submarines as part of the AUKUS partnership.
- ARWA will receive \$5.2 million over 2023–24 and 2024–25 to support Defence to develop appropriate technical solutions and plans to manage and dispose of radioactive waste from nuclear-powered submarines.
  - Defueling of Australia's nuclear-powered submarines is not expected to occur for decades.
  - High-level radioactive waste generated from the nuclear-powered submarine program will pose an entirely new challenge for Australia – currently Australia only generates intermediate and low-level radioactive waste.

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## Q&As

### **Q1. Will waste from the nuclear submarine program be going to the National Radioactive Waste Management Facility (NRWMF)?**

- The *National Radioactive Waste Management Act 2012* specifies that the NRWMF will not hold high-level waste, either for storage or disposal from any source.
- Nuclear Powered Submarine program will produce a range of radioactive waste including radioactive waste with higher levels of radioactivity, including spent fuel, which is produced when submarines are decommissioned at the end of their service life.
- No decision has been made about disposal pathways for radioactive waste from nuclear-powered submarines.
- Operational radioactive waste from nuclear-powered submarines will be stored at Defence sites in Australia.

### **Q2. How does this measure interact with other ARWA and ANSTO measures?**

- ARWA and ANSTO funding in this measure are separate to the ARWA-related measure, Safely Managing Australia's Radioactive Waste and the ANSTO-related measure,



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## Securing a Responsive Nuclear Medicine and Science Capability for Australia.

### Department contacts (for Media team and MO to contact on/after Budget night)

#### *Measure overall & ANSTO funding*

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Division:	International, Trade and National Security	

#### *ARWA funding*

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Head of Division:	Sam Usher (ARWA) Anthea Long (M&R)	
Division:	ARWA and Minerals and Resources	