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Australian Government
Australian Submarine Agency

Australian Submarine Agency Additional Estimates February 2024

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Additional Estimates: February 2024
Last updated: 11 January 2024
Australian Submarine Agency: Capability Overview
Key witness: RADM Matthew Buckley

PDR No: SB23-001201

Australian Submarine Agency: Capability Overview

Handling Note: Vice Admiral Jonathan Mead to lead on Capability Overview.

Key Messages

- . In the context of the deteriorating strategic circumstances in the Indo-Pacific region, we must act decisively to ensure the security and stability of the region.
- . Australia's sovereign capability development under AUKUS is a necessary and prudent response to the changes we are seeing in the region.
- . In boosting our nation's defence capability, Australia seeks to deter any state that would wish to use coercion or aggression to pursue its national interests in the Indo-Pacific region.
- . Submarines are an essential part of Australia's naval capability, providing a strategic advantage in terms of surveillance and protection of our maritime approaches.

Talking Points

- . The future security environment of the Indo-Pacific region means that over time the ability of diesel-powered submarines to meet Australia's capability needs will diminish.
- . Only conventionally-armed nuclear-powered submarines will meet Australia's defence requirements in the decades ahead.
- . No other platform matches the stealth, endurance, mobility and mix of capabilities, which a nuclear-powered submarine provides.
- . This deterrence effect is consistent with Australia's National Defence approach outlined in the Defence Strategic Review.
- . Australia's conventionally-armed nuclear-powered submarine capability will enable AUKUS partners, in collaboration with likeminded countries, to better contribute to a sovereign and resilient Indo-Pacific and to deter aggression more effectively.
- . For a maritime nation like Australia, just like the United Kingdom and United States, maintaining a submarine capability advantage over potential adversaries is vital.
 - Closing or blocking sea lanes would have a critical impact on Australia's economy and security; and that of partners in South East Asia, the Pacific, and globally.
 - By investing in these high-end capabilities Australia is contributing to a free and open Indo-Pacific region, unimpeded sea lanes, and supporting the conditions for a more stable region.

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- . The AUKUS partnership will strengthen our individual and collective capabilities through the most challenging times of this century.
- . AUKUS is about ensuring we have capabilities that contribute to deterring the types of behaviour that threatens peace and security in the Indo-Pacific.
- . Submarines are an essential part of Australia’s naval capability, providing a strategic advantage in terms of surveillance and protection of our extensive maritime approaches.
- . Australia’s submarines will be equipped for intelligence, surveillance, undersea warfare and strike missions.
- . It is important to remember we are a maritime nation.
 - We rely on international trade for our economic prosperity and on multiple seabed cables to connect us to the global trading system.
 - The closing or blocking of sea lanes would have a critical impact on our economy and security, disrupting our ability to receive essential goods such as fuel and medicines and our ability to export to international markets.
- . No other platform matches the stealth, endurance, mobility and mix of capabilities a nuclear-powered submarine provides.
 - They offer virtually unlimited range and increased stealth because they do not need to regularly rise to the surface to recharge the batteries.
- . The range and endurance of SSNs will keep maritime threats farther away from Australia’s territory and people.
- . Nuclear-powered submarines can deter a potential aggressor by holding their ships and submarines at risk at distance from Australia, for extended periods creating uncertainty in the mind of adversaries and creating decision-making space for leaders.

Questions on Notice

None

Freedom of Information (FOI) Requests

None

Recent Ministerial Comments

. TBC

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Relevant Media Reporting

TBC

Division: Nuclear Submarine Capability	
PDR No: SB23-001201	
Contact: RADM Matthew Buckley Head Nuclear Submarine Capability Mob: s47E(d) Ph: s47E(d) Date: 10 January 2024	Cleared by: Mr David Hallinan Acting Director-General Australian Submarine Agency Mob: s47E(d) Ph: s47E(d) Date: January 2024

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Budget Estimates: February 2024
Last updated: 10 January 2024
Australian Submarine Agency: Western Australia
Key witness: RADM Matthew Buckley

PDR No: SB23-001208

Australian Submarine Agency: Western Australia

Handling Note: Rear Admiral Matthew Buckley to lead on Western Australia.

Key Messages

- Western Australia will be at the forefront of the Optimal Pathway for Australia's acquisition of a conventionally armed nuclear-powered submarine capability, continuing its proud tradition as the home of Australian submarines.
 - Beginning in 2023, United States nuclear-powered submarines are expected to increase port visits to Western Australia with Australian sailors joining United States crews for training and development. The United Kingdom will increase visits from 2026 providing similar opportunities for our Australian sailors.
 - From as early as 2027, United Kingdom and United States nuclear-powered submarines will begin a rotational presence. This initiative, known as 'Submarine Rotational Force-West', will develop Australia's ability to operate, maintain and safely steward our future SSNs by deploying our Navy personnel on visiting United Kingdom and United States submarines where they will gain at-sea experience with naval nuclear propulsion.
 - Then from the early 2030s, HMAS *Stirling* will house Australia's first sovereign SSN capability – the United States Virginia class submarines.
- The Australian Government will invest up to \$8 billion over the next decade to expand HMAS *Stirling*, supporting around 3,000 direct jobs, and in turn the local economy.
- The Australian Government has established a nuclear powered submarine program steering group with the Government of Western Australia to harmonise delivery of the pathway in Western Australia, including for SRF-W and Sovereign Virginia Class.

Talking Points

- The Federal and Western Australian governments have established the Nuclear Powered Submarine Program Steering Group to ensure the Australian and Western Australian governments remain aligned and collaborate to successfully deliver a sovereign nuclear-powered submarine capability for Australia.

Western Australia Nuclear Powered Submarine Program Steering Group

- A Commonwealth, Western Australia Government Nuclear Powered Submarine Program Steering Group has been established as a sub-group of the existing Joint Henderson Taskforce to provide a structured forum for coordination on issues relation to the implementation of the Optimal Pathway.

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- The inaugural steering group meeting was held on 22 August 2023.
- The Steering Group is initially focusing on infrastructure, workforce, safety, security and social licence.
- Community engagement and social licence is an area of immediate focus.
- Following a United States delegation visit in mid-September, this working group is undertaking detailed discussions on US family support requirements associated with Submarine Rotational Force-West, including housing arrangements.
- Workforce is also a key focus of the Steering Group. Western Australia's education institutions will also play a key role in developing skilling programs to support workforce growth.

Social licence in Western Australia

- Developing and maintaining a social licence for Australian conventionally-armed nuclear-powered submarines will underpin the success of the program.
- While this is a whole-of-nation undertaking, considered and ongoing engagement with Western Australia and South Australia is critical given the role each of these states play in the Australian nuclear-powered submarine program.
- We (ASA representatives) meet regularly with the responsible Western Australian Minister (Papalia) mayors and local government officials to understand their priorities, address any issues and ensure an aligned and collaborative approach to guarantee the success of this program.

What is happening in Western Australia?

- Increased United States SSN port visits to HMAS *Stirling* in Western Australia began in 2023 with several more scheduled this year, enabling Australia to develop critical experience with nuclear powered submarines at sea and in port.
 - The United Kingdom will increase SSN port visits to HMAS *Stirling* from 2026, providing similar experience for Australian sailors on United Kingdom submarines.
- Around \$8 billion of investment is required in HMAS *Stirling* over the next 15 years, with \$1.5bn in priority works approved over the next four years to support the initial implementation of SRF-West.
- This investment, including wharf upgrades, operational maintenance, and other supporting infrastructure, will be critical in supporting this increase in port visits, as well as the rotational presence of United Kingdom and United States submarines for SRF-West and Australia's fleet of SSN-AUKUS.

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If pressed: What level of community engagement has taken place in Western Australia?

- The Australian Submarine Agency has been engaging with local councils in Western Australia to learn about their priorities and concerns and ensure the work to deliver our nuclear-powered submarines is mindful of and benefits their local communities.
- The Australian Submarine Agency has met with the Cities of Rockingham, Cockburn, Kwinana and Fremantle.
- These meetings have been productive, with all councils thus far expressing excitement about the opportunities that lie ahead with this endeavour
- Defence plans to undertake a social and economic impact assessment to ensure the local community is equipped to manage any potential impacts of SRF-West.
- The Perth Southwest Metropolitan Alliance is specifically referenced in the Terms of Reference for the West Australian Nuclear-Powered Submarine Program Steering Group as a source of expertise.

Depot Level Maintenance

- Depot Level Maintenance of an SSN is a complex, and lengthy activity that will place a significant demand on Australian Industry.
- Developing a DLM capability will involve a significant uplift in workforce numbers, facilities and infrastructure, and the material/supply chain that will be put in place for the Intermediate Level Maintenance for US and UK rotational SSNs under SRF-W.
- The first significant DLM milestone is the availability of a contingent dry docking capability from 2032 to enable emergent out-of-water maintenance. By the late 2030's Australia will need to have a full dry docking capability for the first planned DLM availability for an AUS Virginia Class SSN.
- The location of SSN Depot Level Maintenance is yet to be decided by government.

Henderson

- The ASA is considering the requirements for the sustainment of SRF-W and sovereign Australian SSN vessels at HMAS *Stirling* and *Henderson*, noting that sustaining SRF-W and sovereign Australian SSNs in Western Australia would require an increased footprint in the Henderson precinct.
- We are considering the HMAS *Stirling/ Henderson* precinct as a potential site to conduct sustainment for SRF-W and sovereign Australian SSN vessels.
- As part of our consideration of options, we are looking at the feasibility to undertake deep level maintenance activities in the HMAS *Stirling/ Henderson* precinct, including a nuclear-certified docking capability at *Henderson*.

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If pressed: What role are Australian Naval Infrastructure currently playing in developing the Henderson Maritime Precinct?

- The Henderson Maritime Precinct is one of Australia's two principal shipbuilding hubs. As such, the Western Australian defence industry will play a critical role in the future maintenance, operating and basing requirements for Australia's future fleet of nuclear-powered submarines.
- Australian Naval Infrastructure is working with the Department of Defence and the Western Australian Government to progress planning for the delivery of Large Vessel Infrastructure at *Henderson*.

Questions on Notice

Budget Estimates: May 2023

- **QoN 18, Key Streams for AUKUS**, Senator the Hon Linda Reynolds (Liberal, Western Australia) asked for information on infrastructure at *Stirling* and Henderson, workforce and the nuclear regulatory system.
- **QoN 92, AUKUS readiness**, Senator the Hon Linda Reynolds (Liberal, Western Australia) asked a list of questions relating to WA infrastructure, WA Government and community engagement, workforce, health and safety, security, and timings.

Freedom of Information (FOI) Requests

- None

Recent Ministerial Comments

- TBC

Relevant Media Reporting

- **On 18 December 2023**, ABC News [reported](#) AUKUS documents reveal that WA will have a low-level radioactive waste management system in place as well as receiving an influx of more than 700 Americans to work on the project.
- **On 19 December 2023**, The West Australian [reported](#) a lack of housing and skilled tradies in WA threatens to put support for Australia's landmark nuclear submarines program at risk, according to never-before-seen documents.
- **On 19 December 2023** ABC News [reported](#) Perth nuclear waste storage facility planned for AUKUS submarines at HMAS Stirling on Garden Island. Low-level radioactive waste generated by nuclear-powered submarines stationed in Perth could be stored elsewhere, WA's Premier says, despite new documents revealing plans for a local waste facility.

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Additional Estimates February 2024
Last updated: 11 January 2024
Australian Submarine Agency: Costs
Key witnesses: VADM Jonathan Mead, Megan Lees

PDR No: SB23-001202

Australian Submarine Agency: Costs

Handling Note:

- Director-General Australian Submarine Agency, Vice Admiral Jonathan Mead to lead on nuclear-powered submarine funding and cost estimate questions.

Key Messages

- The Nuclear-Powered Submarine Program is a significant investment in Australia's future. The program will deliver a major boost to Australian industry, jobs, infrastructure and most importantly defence capability to keep our nation safe.
- This will be the single biggest capability acquisition in our history. A complex endeavour that will span decades—a multi-generational undertaking.
- The Australian Government currently estimates spending of around 0.15 per cent of GDP per year, averaged over the program.
 - This will contribute to the Government's commitment to lift Defence spending to over 2 per cent of GDP per year.
- Over the Forward Estimates, Defence expects to invest \$9.5 billion and over the decade (2032-33), we currently estimate funding for this program to be in the rough order of \$52-60 billion as at MYEFO 2023-24 Price Basis.
 - The change in estimates for the program reflects the movements in foreign currency rates since the 2023-24 Budget.
 - Funding includes support to the industrial base, Australian workforce, infrastructure, rotational presence of the United Kingdom and United States, and procuring the U.S Virginia Class Submarine to ensure Australia has no capability gap.
- A range of complex variables will effect costs over the life of the program.
 - Over a 30-year period, there is considerable economic uncertainty in predicting key cost drivers, such as the cost of labour and raw materials, inflation etc.
 - Cost estimates for the program will continue to be refined through the process of selecting sovereign submarine partners who will support delivery of the program, including but not limited to the Australian shipbuilder and sustainment partners.

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Talking Points

If pressed: How much will it cost to acquire a nuclear-powered submarine capability?

- This will be the single biggest capability acquisition in Australia's history. This is a complex endeavour spanning decades—a multi-generational undertaking.
- The Government currently estimates spending to around 0.15 per cent of GDP per year, averaged over the program.
- Over the Forward Estimates, it is estimated that Defence will invest \$9.5 billion, and over the decade approximately \$52-60 billion in the program as at MYEFO 2023-24 Price Basis.
- The change in estimates for the program reflects the movements in foreign currency rates since the 2023-24 Budget.

If pressed: Was value for money considered as part of the Optimal Pathway assessment and will it be considered in the future?

- The decision for Australia to acquire a conventionally-armed nuclear-powered submarine capability was a result of the assessment of the strategic capability requirements for Australia's security.
- We are now working to develop the necessary procurement arrangements to deliver this enduring capability, including through the selection of sovereign submarine partners for Australia's build and sustainment programs.
- The requirement to achieve value for money is a fundamental principle of all government procurement processes. It has been considered for each procurement entered into by the Australian Submarine Agency to date and will be a core consideration of each procurement moving forward as we establish the necessary commercial and inter-governmental arrangements needed to deliver the Optimal Pathway over the decades to come.
- Value for money is and will continue to be considered through our procurements with industry and our procurements with AUKUS partners. Price is not the sole factor when assessing value for money. When conducting a procurement, an official must also consider the relevant financial and non-financial costs and benefits of each submission.

If pressed: What does the project actually include?

- The AUKUS commitment was to deliver at least eight conventionally-armed nuclear-powered submarines for Australia. As advised in the Optimal Pathway Report, to ensure there is no capability gap the United States intends to sell Australia three Virginia class SSNs, with SSN-AUKUS rolling out in the early 2040s.
 - The cost of the program reflects not just the acquisition of SSN-AUKUS, but also a range of measures to ensure we are ready and capable of building, operating, sustaining and regulating this platform.

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- Investment in the program will support industry, workforce, infrastructure and other critical components, which contribute to the delivery of this capability.

If pressed: How much will each Virginia/SSN-AUKUS cost?

- . The Department have estimated and provisioned funding of \$9.5 billion over the Forward Estimates, then approximately \$52-60 billion over the decade to 2032-33 (MYEFO 2023-24 Price Basis).
- . Currently, U.S Virginia Class Submarines and SSN-AUKUS costs, per boat, are unable to be disclosed due to the following:
 - The *National Defense Authorization Act for Fiscal Year 2024* authorising the transfer of three Virginia class submarines to Australia has been passed by the US Congress. Further discussion needs to be undertaken between Australian and the United States concerning the details of Virginia Class Submarines transfer and purchase price as specific discussions have not yet commenced with the United States.
 - Submarine specific cost information remains sensitive and release of the information would possess a high risk in trust of our International Partner in Australia.
 - The annual profile of the current cost estimate of the program is commercially sensitive. The disclosure of this information would undermine the Government in its negotiation position in procurement or commercial arrangements for the acquisition, build and sustainment of the future SSN-AUKUS and Virginia Class submarines.
- . Given this is a complex program, the current cost estimates will continue to be updated and refined as the program continues to mature.

If pressed: How much will Government spend in Australia?

- . This is the biggest investment in Australia's defence capability, with significant investment into the Australian economy.
- . Over the Forward Estimates, \$6 billion is estimated to be invested in Australian industry and workforce. Comprising:
 - \$1.5 billion for: Industrial Workforce Initiatives (\$0.3 billion), Supply Chain Vendor uplift activities (\$0.2 billion), West Coast Base Infrastructure (\$1 billion). This includes the Defence Industry Pathways Program and Bissaloy Steels Australian Steel qualification contract that was announced in 2023.
 - : The Supply Chain Vendor uplift activity and West Coast Base Infrastructure elements are included in the \$9.5 billion funding provision across the Forward Estimates within the NPS Program in the Defence Integrated Investment Program.

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Last updated: 11 January 2024

Australian Submarine Agency: Costs

Key witnesses: VADM Jonathan Mead, Megan Lees

- : The initial \$0.3 billion investment in Industrial Workforce initiatives across the Forward Estimates is primarily funded through the Sovereign Shipbuilding Talent Pool (SSTP).
- \$2.2 billion for the Australian Submarine Agency, Australian Nuclear-Powered Submarine Safety Regulator and other government agencies.
 - : This is included in the \$9.5 billion program estimate across the Forward Estimates, with funding transferred to other government agencies through the 2023-24 Budget.
- \$2 billion for the Submarine Construction Yard at Osborne South Australia by Australian Naval Infrastructure.
 - : This investment is NOT included in the \$9.5 billion program estimate across the Forward Estimates as it is funded through an equity injection to Australian Naval Infrastructure.
- . The Government estimates \$30 billion will be invested into Australia’s industrial base from now until 2055.

If pressed: Why are we investing in the United States and United Kingdom?

- . Australia’s investment to the United States industrial base will contribute to the required increase in submarine maintenance and production capacity.
- . An investment to the United States industrial base will secure early delivery of Virginias for Australia and mitigate a capability gap.
- . SSN-AUKUS is a complex undertaking and with a number of factors to be taken into account including design and trilateral industrial base development. In the longer-term, these investments will significantly bolster industrial capacity and resilience for all AUKUS partners – getting more AUKUS submarines in the water quicker.

If pressed: How much is Australia investing in the United States and United Kingdom industrial bases?

- . It will be a fair and proportionate investment to the United States and United Kingdom to assist in expanding production and maintenance capacity to meet critical phases of the Pathway.
- . Australia will invest approximately USD \$3 billion in the United States industrial base to support increased production and maintenance capacity to ensure there is no capability gap for Australia in acquiring conventionally-armed nuclear-powered submarines.
- . Investments in our collective and domestic industrial bases will also boost the resilience of submarine supply chains for all AUKUS partners.

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- This investment is part of the price of ensuring there is no capability gap for Australia and that we will have an operational conventionally-armed nuclear-powered submarine capability in the 2030s.
- The contribution to the United Kingdom will be a targeted investment to critical supply chains and industry as we partner with the United Kingdom in the production of SSN-AUKUS. Details of this investment remains subject to commercial negotiations.

If pressed: What is driving the increase in the estimates for 2025-26 in the nuclear submarine?

- The estimates for 2025-26 include a number of elements, including:
 - Upskilling Australian workforce and industry;
 - Supporting Submarine Rotational Force (SRF-West);
 - Establishing a non-proliferation and safeguards program;
 - West Coast Base upgrades;
 - Procurement of long lead items; and
 - United States and United Kingdom industrial uplift and the trilateral program office.
 - : A proportion of the estimated USD \$3 billion, to be invested in the United States industrial base to support increased production and ensure there is no capability gap for Australia in acquiring conventionally-armed nuclear-powered submarines.
 - : While we have made provision for investment in the United Kingdom, details of this investment in our partner nation remain subject to commercial negotiations.

If pressed: The Parliamentary Budget Office (PBO) report in April 2023 revealed a separate \$123 billion or 50 per cent contingency has been provisioned by Defence for the NPS program. Why so much contingency? Does this represent significant risk in the program?

- There are a range of complex variables that will affect costs over the life of the program.
- There is considerable economic uncertainty in predicting key cost drivers over a 30-year period, including inflation, cost of labour and raw materials.
- At this stage of implementation it is prudent to include an estimate of the commensurate risk and uncertainty of the Nuclear-Powered Submarine Program.
- Cost estimates were developed with the assistance of AUKUS partners applying the best information available.

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- Australia will continue to leverage expertise from the United Kingdom and the United States to ensure we acquire a capability that enhances our sovereignty and provide an unmatched strategic advantage.
- Cost estimates will continue to be refined through the process of selecting sovereign submarine partners who will support delivery of the program, including but not limited to the Australian shipbuilder and sustainment partners.
- It is important to note that the contingency component falls within the cost estimate of 0.15 per cent of GDP, and is not in addition to it.
- It is also important to note that the costs of the program reflect not just the acquisition of Virginia Class Submarines and SSN-AUKUS, but also a range of measures to ensure we are ready and capable of building, operating sustaining and regulating conventionally-armed nuclear-powered submarines.
- Investment in the program will support industry, workforce, infrastructure and other critical components, which contribute to the delivery of this capability.

If pressed: What does Contingency in Defence usually cover?

- The contingency estimate for Defence projects should be commensurate with the risk level associated with the project's cost, schedule and scope.

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Key witnesses: VADM Jonathan Mead, Megan Lees

PDR No: SB23-001202

Questions on Notice

None

Freedom of Information (FOI) Requests

None

Recent Ministerial Comments

None

Relevant Media Reporting

None

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Consultation: Nil	

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Additional Estimates February 2024
Last updated: Wednesday 31 January 2024
Australian Submarine Agency: Workforce and Skilling
Key witnesses: Ms Megan Lees, Chief Operating Officer

PDR No: SB23-001209

Australian Submarine Agency: Workforce and Skilling

Handling Note:

- Ms Megan Lees, Chief Operating Officer, Australian Submarine Agency to lead on topic.
- Ms Kate van Hilst and Dr Todd Mansell to support on vocational and tertiary skilling.

Key Messages

- The ASA is working closely with the education sector as well as key stakeholders to take a whole of nation approach to education policy design and implementation.
- Establishing the Skills and Training Academy campus with the South Australian Government is a prime example of this. This campus will provide a central focal point for delivery of training to support the uplift of the industrial base in South Australia.
- Another example is the establishment of an Early Careers Program in South Australia and Western Australia where ASC Pty Ltd will employ more apprentices, graduates and undergraduates to give them hands-on experience in designing, building and maintaining the nation's submarines.
- We have been working with the United Kingdom, United States and Australian governments to model and build the system to attract, recruit, develop, qualify and retain the workforce.
- As part of this engagement, we sent our first industrial workforce cohorts to United Kingdom and United States facilities in August and September 2023.

Talking Points

- Australia's Nuclear-Powered Submarine Program presents an unparalleled opportunity for our nation and will create around 20,000 direct jobs over the next 30 years across industry, the ADF and the APS.
- 4,000 to 5,500 direct jobs are expected to support the build of conventionally-armed nuclear-powered submarines in South Australia when the program reaches its peak in the late 2030s and early 2040s.
 - This is almost double the workforce forecast for the Attack class submarine program.
- Australia will begin work to build SSN-AUKUS submarines at the Osborne Naval Shipyard in South Australia before the end of this decade.
- At its peak, up to 4,000 workers will be employed to design and build the infrastructure for the Submarine Construction Yard in Osborne.

Contact:

Name: Megan Lees
Position: Chief Operating Officer
Phone: s47E(d)

Cleared By:

Name: Mr David Hallinan
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Last updated: Wednesday 31 January 2024
Australian Submarine Agency: Workforce and Skilling
Key witnesses: Ms Megan Lees, Chief Operating Officer

PDR No: SB23-001209

- Enabling works for the construction of the shipyard at Osborne commenced in 2023.
- In Western Australia, the expansion of HMAS *Stirling* to support the infrastructure required for conventionally-armed nuclear-powered submarines is expected to support approximately 3,000 direct jobs over the decade.
- An additional 500 direct jobs are expected to support the sustainment of the Submarine Rotational Force-West (SRF-West) over the period 2027-2032.
- In addition to the work underway domestically, Australia is already working with our AUKUS partners on initiatives to build the nuclear skills of our Enterprise workforce across industry, the ADF and the APS to support SRF-West and start the build of our SSN-AUKUS this decade, including through:
 - industrial workforce exchanges to United Kingdom and United States shipyards;
 - world-class training opportunities for industry, Navy and public service personnel at United Kingdom and United States naval nuclear schools;
 - an ongoing program enabling placement of ASA technical employees within the Submarine Delivery Agency in the United Kingdom, and similar ongoing arrangements being established with Naval Reactors in the United States; and
 - personnel exchanges that enable Australian submariners to train on United Kingdom and United States nuclear-powered submarines.
- This is not just about building brand new skills—the Australian Government recognises the exceptional skill and experience of our existing sovereign submarine industrial workforce.
- We are continuing to leverage this existing talent through our ongoing support of the Sovereign Shipbuilding Talent Pool.
- ASC, as the custodians of the Sovereign Shipbuilding Talent Pool, will continue to have responsibility for the growth and upskilling of the existing submarine industry workforce and to equip them for the transition between conventional submarines and nuclear-powered submarines.
- On 1 September 2022, the Deputy Prime Minister announced that as part of the AUKUS partnership, Royal Australian Navy submariners will train alongside Royal Navy crews aboard Astute class nuclear-powered submarines.
- This is an important step allowing us to further strengthen our defence ties and provide opportunities for Australian submariners to gain experience stewarding the nuclear technology on board these boats.

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- Our first two cohorts (3 each) of Royal Australian Navy officers have graduated from the United States Nuclear Propulsion School and our first sailors have commenced their training.
- Eight sailors are currently enrolled at United States Nuclear Propulsion School. This first cohort of sailors, similar to their officer counterparts, will complete Nuclear Power School and nuclear prototype training before being assigned to a Virginia-class submarine.
- There were more than 15 Royal Australian Navy officers and sailors enrolled in nuclear training in the US by the end of 2023.
- Australians are currently on United States and United Kingdom international placements in shipyards and education and training facilities.
- Recently returned, an Advanced Verification Team saw industry subject matter experts deploy alongside Royal Australian Navy and APS personnel to the United States and United Kingdom to review and advise on workforce requirements in support of SRF-West.
- From August 2023, a further cohort of Australians commenced studies at the Bettis Reactor Engineering School.

If pressed: What is being done to grow the STEM skills needed to support the Australian Submarine Agency?

- The ASA has begun working across the Government and with the Australian university sector to increase the STEM pipeline into Australia's nuclear-powered submarine workforce.
- As part of the 2023-24 Budget, the Albanese Government provided \$128.5 million over four years to establish the Nuclear-Powered Submarine Student Pathways Program; a targeted national competitive program providing an additional 4,001 Commonwealth Supported Places in STEM related courses.
- The additional 4,001 Commonwealth Supported Places will grow the skilled workforce required to meet the future demands of the nuclear-powered submarine enterprise.
- Universities were invited to apply in September 2023 and a locations were announced on 29 November 2023.
- The Minister for Education decided the allocation of places in consultation with the Deputy Prime Minister. The ASA and the Department of Education provided advice to support the decision, following a joint assessment of applications.
- 4,001 Commonwealth Supported Places have been allocated over 2024 to 2027 across 16 universities nationally.

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PDR No: SB23-001209

- It is important to recognise that these additional Commonwealth Supported Place allocations are only the starting point from which a range of initiatives will be pursued by ASA with the Australian university sector.
- The Australian Government is working closely with the education sector as well as key stakeholders to take a whole of nation approach to education policy design and implementation.

If pressed: Which STEM fields of study are being targeted by the 4,001 additional Commonwealth Supported Places?

- The STEM fields of interest to ASA and to be supported through the 4,001 Commonwealth Supported Places include:
 - Physics, chemistry, material science, nuclear science, naval architecture, mechanical engineering, electrical engineering, chemical engineering, nuclear engineering and mathematics.
- Support for tertiary studies in psychology, computer science and management fields is specific to the South Australian Cooperation Agreement.

If pressed: Why did some universities not receive additional Commonwealth Supported Places under the Nuclear-Powered Submarine Student Pathways Program?

- There was significant interest in the program, with applications for a total of 12,100 Commonwealth Supported Places received from eligible universities.
- Applications were assessed against the following criteria:
 - STEM discipline, and how proposed courses will meet our workforce priorities;
 - Planned investments to engage quality teachers to inspire students to succeed;
 - Defence Industry Security Program – membership and adherence to Defence Industry Security Program;
 - Expected levels of unmet demand from students; and plans to support expansion of current enrolment levels; and
 - Existing and future initiatives to increase participation of students from underrepresented backgrounds.
- It is important to recognise that these additional Commonwealth Supported Places allocations are only the starting point from which a range of initiatives will be pursued by ASA with the Australian university sector.
- The Australian Government is working closely with the education sector as well as key stakeholders to take a whole of nation approach to education policy design and implementation.

Contact:

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If pressed: What else is being done to attract students into the Nuclear-Powered Submarine Enterprise?

- . Over the course of 2024, the ASA will enhance engagement with key tertiary education and research providers to inform future efforts to attract STEM talent into the nuclear-powered submarine enterprise.
- . Education and skilling offerings are being developed to build Australia's future workforce, through a range of initiatives including:
 - Defence STEM Cadetship Program;
 - Support for postgraduate studies for both ADF and APS personnel; and
 - Defence Graduate programs.

If pressed: How is Australia going to grow the required skilled workforce?

- . Our Nuclear-Powered Submarine Program is expected to support around 20,000 direct jobs over the next 30 years across industry.
- . This nation-defining program will see Australian workers and industry contributing to the enormous AUKUS submarine enterprise, and commencing the build of conventionally-armed nuclear-powered submarines for Australia at Osborne Naval Shipyard, in Adelaide, South Australia by the end of this decade.
- . The scale of work required will be unlike any previous shipbuilding program in Australia's history. Our engineering, scientific and technical workforce will be integral and this program will grow STEM jobs in Australia for future generations.
- . The Nuclear Powered Submarine Enterprise has already commenced initiatives to build the skilled workforce needed, including through the Cooperation Agreement signed between the Commonwealth and the South Australian Government to support the construction of Australia's conventionally-armed nuclear-powered submarines in Adelaide. The agreement includes:
 - The establishment of a Skills and Training Academy campus;
 - An exchange of land to facilitate development of the new Submarine Construction Yard and the Skills and Training Academy;
 - An increase of 200 Commonwealth Supported Places per year over 4 years dedicated to South Australian universities focused on STEM disciplines; and
 - This is included in the 1,030 places allocated to South Australian universities under the Nuclear-Powered Submarine Student Pathways Program.

Contact:

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- Investment in research capability and infrastructure to generate a workforce close to the Submarine Construction Yard.

Skills and Training Academy

- . The Skills and Training Academy is being co-designed by the Commonwealth and South Australian Government as a key workforce enabler under the South Australian Defence Industry Workforce and Skills Taskforce Report.
- . The Academy is being designed to deliver tailored education, training and skilling for Australia's submarine and naval shipbuilding workforce, including:
 - career training programs to bring new people into the workforce, such as apprentices, undergraduates and graduate apprentices;
 - lifting the skills of the existing naval shipbuilding workforce; and
 - transition programs to bring in people from adjacent industries in the defence, manufacturing and technology sectors.
- . The Skills and Training Academy commenced initial operating capability in August 2023, delivering Nuclear Mindset Training to Sovereign Shipbuilding Talent Pool personnel considered for international placements, and a cohort within the Defence Industry Pathways Program in Western Australia.
- . Build of the Skills and Training Academy primary campus in South Australia is expected to commence in Quarter 4 2024.
- . Until the primary campus is built, the Skills and Training Academy will continue to leverage and tailor existing facilities and training programs to support initial growth and development under its interim operating capability, including:
 - creating a safety and security conscious nuclear community,
 - supporting existing Commonwealth-led programs for workforce growth,
 - building training provider and trainer capabilities and awareness of nuclear training requirements, including through participation in overseas programs, and
 - exploring opportunities to utilise the Sovereign Shipbuilding Talent Pool to deliver supporting initiatives.
- . Through the Skills and Training Academy, the Commonwealth and South Australian Governments are expanding the Defence Industry Pathways Program to South Australia.
 - The Program is expected to have a pilot cohort in 2024 and train 50 people a year.

Contact:

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Last updated: Wednesday 31 January 2024
Australian Submarine Agency: Workforce and Skilling
Key witnesses: Ms Megan Lees, Chief Operating Officer

PDR No: SB23-001209

Supporting Information

Questions on Notice

- No QoNs asked

Freedom of Information (FOI) Requests

- No FOIs requested

Recent Ministerial Comments

- No recent comments

Relevant Media Reporting

- None identified

Division:	Chief Operating Officer
PDR No:	SB23-001209
Contact: Megan Lees Chief Operating Officer Australian Submarine Agency Mob: s47E(d) Ph s47E(d) Date: 19 January 2024	Cleared by: David Hallinan Acting Director-General Australian Submarine Agency Mob: s47E(d) Ph: s47E(d) Date: January 2024
Consultation: Brian Hanlon – Acting First Assistant Secretary Technical Kate van Hilst – First Assistant Secretary SSN Construction	

Contact:
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Additional Estimates February 2024

PDR No: SB23-001217

Last updated: 18 December 2023

Australian Naval Nuclear Power Safety Legislation

Key witnesses: Mr Matt Yannopoulos PSM, Associate Secretary, Department of Defence.

Australian Naval Nuclear Power Safety Legislation

Handling Note:

- Associate Secretary (Department of Defence), to lead on questions relating to the Australian Naval Nuclear Power Safety Bill 2023 and the establishment of the Australian Naval Nuclear Power Safety Regulator.
- RADM Katherine Richards to support questions relating to the development of the Regulator and regulations.
- Mr John Reid to support questions on the passage of the primary legislation.
- *[Defence will update this brief to reflect relevant developments in the Senate's current inquiry into this legislation.]*

Key Messages

- The Government has announced its intention to establish a new independent statutory regulator, the Australian Naval Nuclear Power Safety Regulator.
- On 16 November, the Government introduced a Bill that outlines the framework for nuclear safety within the nuclear-powered submarine enterprise and enables the establishment of the new Regulator.
- The Bill contains provisions necessary for the Regulator to discharge its functions, including issuing licences to authorise regulated activities, with an initial focus on supporting the development of facilities associated with the nuclear-powered submarine enterprise.
- The Senate referred the Bill to the Senate Foreign Affairs, Defence and Trade Committee for inquiry and report by 26 April 2024.

Talking Points

If raised: Legislation to establish Australia's Naval Nuclear Power Safety regulatory framework

- [Handling Note: Refer question to the Associate Secretary Group, Defence]
- On 16 November 2023, the Government introduced legislation to establish a regulatory framework for nuclear safety within the nuclear-powered submarine enterprise.
- The Associate Secretary Group is leading the development of this legislation and the establishment of the new independent statutory regulator.

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Division: Defence secondee, Australian Submarine Agency

Phone: s47E(d)

Cleared By:

Name: John Reid

Position: First Assistant Secretary Enterprise Transformation and Governance

Group/Service: Associate Secretary Group

Phone: s47E(d)

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Additional Estimates February 2024

PDR No: SB23-001217

Last updated: 18 December 2023

Australian Naval Nuclear Power Safety Legislation

Key witnesses: Mr Matt Yannopoulos PSM, Associate Secretary, Department of Defence.

Supporting Information

Questions on Notice

- No QoNs requested.

Freedom of Information (FOI) Requests

- On 17 November 2023, an individual made a request seeking access to policy documents and reports generated since 13 March 2023 that go to nuclear regulatory models and entities. **Defence identified documents for release in December 2023.** [To be updated following release]

Recent Ministerial Comments

- The Deputy Prime Minister [introduced the Australian Naval Nuclear Power Safety Bill 2023 to Parliament](#) on 16 November 2023.

Relevant Media Reporting

- On 17 December 2023, *The Sydney Morning Herald* published an article by Lisa Visentin titled [Marles rejects Greens' nuclear waste claims](#), on the Australian Naval Nuclear Power Safety Bill and the Deputy Prime Minister's comments that Australia will not take nuclear waste from other countries.
- On 16 November 2023, *The Australian Financial Review* published an article by Andrew Tillett titled [\\$31m fines, 25 years jail for nuclear submarine safety breaches](#), on the criminal and civil penalties under the Australian Naval Nuclear Power Safety Bill as introduced to the Parliament.

Division: Enterprise Transformation and Governance, Defence	
PDR No: SB23-001217	
Prepared by: s47E(d) Director Domestic Policy Domestic Policy and Legal Reform Mob: s47E(d) Ph: s47E(d) Date: 18 December 2023	Cleared by Division Head: John Reid, First Assistant Secretary Enterprise Transformation and Governance Mob: s47E(d) Ph: s47E(d) Date: 18 December 2023
Consultation: Nil	

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Group/Service: Associate Secretary Group
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Additional Estimates February 2024
Last updated: 10 January 2024
Australian Submarine Agency: Program Security
Key witnesses: FADG Stewardship & Security, Ms Michele Miller

PDR No: SB23-001204

Australian Submarine Agency: Program Security

Handling Note:

- First Assistant Director-General Stewardship and Security Division, Ms Michele Miller, to lead on topic.

Key Messages

- Australia's commitment to safely and securely stewarding nuclear propulsion technology is unwavering.
- Acquiring conventionally-armed nuclear-powered submarines means that Australia will have access to extremely sensitive and classified technologies that foreign powers will work hard to compromise—for commercial or military advantage.
- Australia's threat environment is complex, challenging and changing.
- Australia is investing in the security of systems, technology, processes, people, facilities, information, and platforms to ensure these are tailored for the nuclear-powered submarine enterprise specific requirements.
- Australia is working closely with domestic and international security and intelligence partners to develop a threat-informed, risk-led approach to understand the security requirements to protect the naval nuclear propulsion technology made available to us through AUKUS.

Talking Points

The security threat environment

- Acquiring nuclear-powered submarines (SSNs) means that Australia will have access to extremely sensitive and classified technologies that foreign powers will work hard to compromise—for commercial or military advantage.
- The threat of espionage and foreign interference has now supplanted terrorism as Australia's primary national security concern.
 - These primary security concerns (espionage and foreign interference) pose the principal threat to AUKUS capabilities, including conventionally-armed nuclear-powered submarines.
 - Foreign powers and their proxies—including foreign intelligence services—are aggressively seeking information about Australia's strategic capabilities, defence technologies, policy priorities and world-class research and development.
- We remain clear-eyed over the growing threat espionage poses to Australian defence technologies, including specifically to AUKUS decision making and capabilities.

Contact:

Name: Mr Patrick Ryan
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Division: Stewardship & Security
Phone: s47E(d)

Cleared By:

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PDR No: SB23-001204

Last updated: 10 January 2024

Australian Submarine Agency: Program Security

Key witnesses: FADG Stewardship & Security, Ms Michele Miller

- Specific questions on the nature of current threats should be directed to the Australian Security Intelligence Organisation (ASIO).

Australian Submarine Agency approach to protective security

- The Australian Submarine Agency (ASA) works closely with Australian, United Kingdom and United States security and intelligence partners—including ASIO and the Australian Cyber Security Centre—to develop a threat-informed, risk-led approach to security. This includes its application to defence industry and the academic sector.
- Australian businesses participating in the nuclear-powered submarine program are required to be members of the Defence Industry Security Program, which obligates members comply with the Defence Security Principles Framework.
 - There will be enhanced security requirements for those businesses seeking to contract to the nuclear-powered submarine program
- We are working with our AUKUS partners to harmonise defence industry security requirements with the goal that meeting Australia's requirements will also satisfy those of the United States and United Kingdom. This will allow Australian industry to more effectively enter the United States and United Kingdom SSN supply chain.
 - Defence is also working to further streamline established processes for the recognition of United States and United Kingdom clearances to support industry workforce growth in Australia.

Naval Nuclear Propulsion Information (NNPI) Access

- The nuclear propulsion technology used in United States and United Kingdom nuclear-powered submarines has been protected for over 70 years. Australia must maintain the security of this information.
 - Any compromise of nuclear propulsion information will impact our ability to ensure the uncompromised delivery of a nuclear-powered submarine capability.
- Where industry requires access to naval nuclear propulsion information, additional security requirements will be applied to ensure the appropriate security settings are achieved.

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Division: Stewardship & Security

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Last updated: 10 January 2024
Australian Submarine Agency: Program Security
Key witnesses: FADG Stewardship & Security, Ms Michele Miller

PDR No: SB23-001204

If pressed: What protections will be in place to ensure Australia will protect the United States' and United Kingdom's nuclear-powered submarines in port?

- Australia has a long history of robustly protecting sensitive military capabilities and information, and the nuclear-powered submarine capability is no different.
- Security and safety has always been a key focus during visits of United States and United Kingdom nuclear-powered submarines. However, the increasing number and duration of visits to Submarine Rotational Force – West means a more robust security regime will need to be implemented and embedded.
 - Improvements will be implemented in a range of protective security areas, including physical security, cyber resilience, and armed protection by the Australian Federal Police.
 - As a matter of good security practice, we do not comment on the specific security protections we have in place or are implementing.

Supporting Information

Questions on Notice

- No QoNs asked.

Freedom of Information (FOI) Requests

- No FOIs requested.

Recent Ministerial Comments

- No recent comments.

Relevant Media Reporting

- On 15 November 2023, *The Australian* published an article by Ben Packham titled [AUKUS deal a 'target' for hackers: spy agency](#), discussing the annual ASD Cyber Threat Report released 15 November 2023.

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Additional Estimates February 2024
Last updated: 10 January 2024
Australian Submarine Agency: Program Security
Key witnesses: FADG Stewardship & Security, Ms Michele Miller

PDR No: SB23-001204

Division: Stewardship & Security	
PDR No: SB23-001204	
Contact: Mr Patrick Ryan Acting Assistant Director-General, Threats & Workforce Protection Mob: s47E(d) Ph: s47E(d) Date: 14 December 2023	Cleared by: Ms Michele Miller First Assistant Director-General, Stewardship & Security Mob: s47E(d) Ph: s47E(d) Date: 20 December 2023
Consultation: Nil	

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Additional Estimates February 2024

PDR No: SB23-001203

Last updated: 12 February 2024

Australian Submarine Agency: Radioactive Waste & Spent Nuclear Fuel

Key witnesses: FADG Policy, Strategy and Engagement, Alexandra Kelton; FADG Security and Stewardship, Michele Miller

Australian Submarine Agency: Radioactive Waste & Spent Nuclear Fuel

Handling Note:

- Director General ASA, Vice Admiral Mead, to lead on topic.
- First Assistant Director General, Security and Stewardship, Michele Miller, to support on topic.

Key Messages

- As a responsible nuclear steward, Australia will manage all radioactive waste from its conventionally-armed nuclear-powered submarines.
 - Operational waste will be stored at Defence sites in Australia.
 - Intermediate and high-level waste, including spent nuclear fuel, will be stored and disposed on the current or future Defence estate.
- Defence has decades of experience in safely and securely managing radioactive waste in Australia.
- Managing low-level operational waste from United Kingdom and United States nuclear-powered submarines that are rotating at *HMAS Stirling* will be an important part of building Australia's stewardship capability to maintain its own conventionally-armed nuclear-powered submarines.
- No decision has been made on the location within Australia to store or dispose of intermediate and high-level radioactive waste, including spent nuclear fuel, once Australia's submarines reach the end of their service life.
 - As the Deputy Prime Minister has stated, "that is a big decision that will need to be made... the good news in relation to that is that we've got time. It's probably not until the 2050s that we will actually need to dispose of the first of the nuclear reactors" [12 December 2023, 5AA - Mornings, interview transcript].

Talking Points

Storage of operational radioactive waste and HMAS Stirling

- Expertise to manage low-level operational waste arising from nuclear-powered submarine operations and sustainment will be an important part of Australia building the necessary stewardship capability to operate and maintain its own submarines.

Contact:

Name: s47E(d)

Position: Director, Radioactive Waste

Division: Policy, Strategy and Engagement

Phone: s47E(d)

Cleared By:

Name: Alexandra Kelton / Michele Miller

Position: First Assistant Director General

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Assistant Director General Security and Stewardship

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Additional Estimates February 2024

PDR No: SB23-001203

Last updated: 12 February 2024

Australian Submarine Agency: Radioactive Waste & Spent Nuclear Fuel

Key witnesses: FADG Policy, Strategy and Engagement, Alexandra Kelton; FADG Security and Stewardship, Michele Miller

- This involves building the infrastructure to receive this waste and learning how to safely and securely manage operational low-level radioactive waste from normal nuclear-powered submarine operations and sustainment.
- The rotational presence of United Kingdom and United States SSNs in Western Australia as part of Submarine Rotational Force – West (SRF-West) will provide an opportunity to learn how these vessels operate, including the management of low-level radioactive waste from routine sustainment.
- An operational waste storage facility for low-level radioactive waste management is being planned as part of the infrastructure works proposed for *HMAS Stirling* to support SRF-West.
- Operational low-level waste will be managed at the storage facility, before being transferred to existing storage locations on the Defence Estate.
- Australia, including Defence, has managed similar types of low-level radioactive waste for decades.

If pressed: Will Australia take radioactive waste from the United Kingdom and the United States?

- The rotational presence of United Kingdom and United States SSNs in Western Australia as part of Submarine Rotational Force – West (SRF-West) will provide an opportunity to learn how these vessels operate, including managing low-level radioactive waste from routine sustainment.
 - This waste will be managed at *HMAS Stirling* in a secure and safe facility.
 - Australia, including Defence, has managed similar types of low-level radioactive waste for decades.
- Australia will not be disposing of spent nuclear fuel or other high-level radioactive waste from the United Kingdom, the United States, or other countries.

Managing high-level radioactive waste, including spent nuclear fuel, when submarines retire

- Australia will not be disposing of spent nuclear fuel or other high-level radioactive waste from the United Kingdom, the United States, or other countries.
- Australia's management of spent fuel from Australia's conventionally-armed nuclear-powered submarines is a reflection of best practice stewardship principles that waste should be managed by the country which benefits from it.

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Position: First Assistant Director General

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Additional Estimates February 2024

Last updated: 12 February 2024

Australian Submarine Agency: Radioactive Waste & Spent Nuclear Fuel

Key witnesses: FADG Policy, Strategy and Engagement, Alexandra Kelton; FADG Security and Stewardship, Michele Miller

- . Australia will not have to dispose of the first reactor from Australia's conventionally-armed nuclear-powered submarines until the 2050s.
 - As the Deputy Prime Minister has said, "we have got time to get it right" [22 March 2023, statement to the House of Representatives].
- . Determining suitable locations and methods will take time and requires community consultation and detailed consideration of technical requirements.
- . In 2023 the Australian Submarine Agency and Defence conducted a review, working with relevant agencies including the Australian Radioactive Waste Agency, to inform the decision-making process to identify locations in the current or future Defence estate suitable for the storage and disposal of intermediate and high-level radioactive waste, including spent fuel, from Australia's nuclear-powered submarines.
 - The review was led by Mr Steven Grzeskowiak, who has an extensive experience on issues related to the Defence estate, as the former Deputy Secretary of the then-Estate and Infrastructure Group.
 - The ASA is now working through next steps to inform future advice to the Government.
 - As the Deputy Prime Minister has said, "there will be appropriate public consultation, particularly with First Nations communities to respect and protect cultural heritage" [22 March 2023, Ministerial statement to the House of Representatives, Canberra].
- . All radioactive waste will be managed in line with international best practice and in accordance with Australia's international and domestic legal obligations and commitments, including the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and the South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga).

If pressed: Who will regulate the safety of spent fuel and radioactive waste from the nuclear-powered submarine program?

- . No decision has been made on who will regulate the safety of spent fuel and radioactive waste from the nuclear-powered submarine program.
- . The system of regulation that we develop will be calibrated to the unique hazards and risks associated with nuclear-powered submarines, including the management of radioactive waste.

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PDR No: SB23-001203

Last updated: 12 February 2024

Australian Submarine Agency: Radioactive Waste & Spent Nuclear Fuel

Key witnesses: FADG Policy, Strategy and Engagement, Alexandra Kelton; FADG Security and Stewardship, Michele Miller

Background

- Once operational, Australia's nuclear-powered submarines will produce small amounts of low-level radioactive waste every year, annually much less than the annual amount from Australia's nuclear science and research at ANSTO's Lucas Heights reactors.
 - This amounts to roughly two cubic metres (2m³) each year per submarine, consisting of items such as disposable gloves, wipes, reactor coolant and used Personal Protective Equipment.
- Through scientific, medical and industrial pathways, Australia has around 5000 cubic metres of legacy low-level waste and expects to generate another 5000 cubic metres by 2070 (excluding nuclear-powered submarine-waste).

Questions on Notice

Supplementary Budget Estimates: October 2023

QoN No. 80, Reviews - Current, Senator the Hon Jane Hume (Liberal, Victoria) requested a list of the number of reviews that the department/agency is currently conducting, including:

- a. the name of the review;
- b. the purpose of the review;
- c. the name or names of the reviewer(s);
- d. the remuneration for each of the reviewer(s);
- e. the budgeted cost of the review;
- f. the amount spent to date; and
- g. the date the review is due to be completed.

QoN No. 109, Nuclear Waste, Senator the Hon Ralph Babet (United Australia, Victoria) asked: There is currently a prohibition on nuclear energy in Australia, however with the purchase of the AUKUS nuclear submarines we now have to deal with managing nuclear waste in this country. How will this waste be managed and where will it be stored?

Freedom of Information (FOI) Requests

- On 19 July 2023, an individual made a request (ASA FOI 001/23/24) seeking access to any report, advice, minute or other relevant document created since March 14 2023, on potential sites for a high-level nuclear waste storage facility associated with the AUKUS plan. **Documents were released on 14 December 2023.**
- On 11 October 2023, an individual made a request (ASA FOI 009/23/24) seeking access to documents relevant to nuclear waste. **Documents were released on 16 December 2023.**

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Additional Estimates February 2024

PDR No: SB23-001203

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Recent Ministerial Comments

- The Deputy Prime Minister stated, “that is a big decision that will need to be made... the good news in relation to that is that we’ve got time. It’s probably not until the 2050s that we will actually need to dispose of the first of the nuclear reactors” discussing the location of storage and disposal facilities for radioactive waste in an interview on 12 December 2023.
- The Deputy Prime Minister outlined Australia’s commitment to manage its own nuclear waste and highlighted an extensive process to determine sites has begun at a [joint press conference with UK Secretary of State of Defence, Grant Shapps](#), on 4 November 2023.
- The Deputy Prime Minister outlined that work was progressing on the process of determining a location for waste and that it would be stored the current or future Defence Estate at the [Submarine Institute of Australia Conference](#) on 19 September 2023.
- The Deputy Prime Minister said “we have got time to get it right” while addressing the House of Representatives on 22 March 2023.
- The Deputy Prime Minister said “there will be appropriate public consultation, particularly with First Nations communities to respect and protect cultural heritage” while addressing the House of Representatives on 22 March 2023.

Relevant Media Reporting

- On 18 December 2023, ABC News published an article by Rebecca Trigger and Isabel Moussalli titled [Perth nuclear waste storage facility planned for AUKUS submarines at HMAS Stirling on Garden Island](#), discussing the planned storage locations for low-level radioactive waste at HMAS Stirling.
- On 17 December 2023, Michael West Media published an article by Rex Patrick titled [Marles is wrong – Australia is taking US and UK nuclear waste!](#), suggesting Defence has been inconsistent on waste storage messaging.
- On 2 December 2023, The Observer published an article by Karen Barlow titled [Marles gives update on AUKUS east coast submarine base plans](#), highlighting Deputy Prime Minister’s comments that a decision on an east coast submarine base will not be made until the end of the decade.
- On 7 November 2023, The Australian published an article by Kym Bergmann titled [Must we become nuke sub dumping ground?](#), criticising radioactive waste disposal in Australia and draws comparisons with the UK.

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Key witnesses: FADG Policy, Strategy and Engagement, Alexandra Kelton; FADG Security and Stewardship, Michele Miller

Division: Policy, Strategy and Engagement	
PDR No: SB23-001203	
Contact: s47E(d) Director, Radioactive Waste Safeguards and Non-Proliferation Mob: s47E(d) Ph: s47E(d) Date: 19 December 2023	Cleared by Division Head: Alexandra Kelton First Assistant Director General Policy, Strategy and Engagement Mob: s47E(d) Ph: s47E(d) Date: 23 January 2024

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Key witnesses FADG SSN Construction, Kate van Hilst.

PDR No: SB23-001210

Australian Submarine Agency: Industry

Handling Note:

- First Assistant Director-General SSN Construction, Kate van Hilst to lead on Industry.

Key Messages

- Australia continues to work with AUKUS partners to progress industrial uplift in support of trilateral nuclear-powered submarine programs.
- With our AUKUS partners, we are developing vendor and product qualification processes to enable Australian industry participation in United States and United Kingdom industrial bases.
- In collaboration with the Office of Defence Industry Support, the Australian Submarine Agency has held a number of industry engagement activities and briefings across the country, since announcement of the Optimal Pathway in March 2023.
- Participants at industry engagement forums have been encouraged to register their interest in the program through the Industry Capability Network Gateway Portal.

Talking Points

Industrial Uplift

- The Australian Submarine Agency is mapping our current Australian vendor base capability to known SSN supply chain demand in order to prioritise vendor qualification activities.
 - As a first step, existing analysis has been validated and tested, identifying early supply chain opportunities for components that are both useful for our partners and already being produced by Australian companies.
- We are working closely with the United Kingdom and United States to identify specific opportunities and vendor qualification pathways for participation in their supply chains.
- This year, we commenced our first Defence Industry Vendor Qualification pilot, targeting 50 Australian suppliers to participate in a qualification process to remove barriers for entry into the United States supply chain.
 - The pilot will explore optimal processes to test our ability to reduce the time it takes for Australian suppliers to achieve United States qualification.

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- On 9 December 2023, the Minister for Defence Industry announced the contract between the Australian Submarine Agency and Bisalloy Steels, with BlueScope as its subcontractor, for the qualification of two SSN-AUKUS hull steels.
 - The contract will see the steel qualified to both United Kingdom and United States standards in Quarter 1 2025 for use in the construction of Australian SSN-AUKUS submarines, while also providing options for the United Kingdom and United States for their submarine programs.
- We will continually assess the capability of Australian industry, and work with our AUKUS partners to ensure the best possible investments are made to support the trilateral submarine industrial base.
- The Agency has paved the way for Australian industry partners to be embedded in United States and United Kingdom shipyards.
 - A total of 64 ASC Pty Ltd personnel have undertaken international placements to date this financial year (2023-24).
 - These are significant milestones for this trilateral program.

Industrial Engagement

- Since announcement of the Optimal Pathway in March 2023, over 2,200 people have attended interactive industry engagement events the Government and the Australian Submarine Agency have hosted across the country.
- Responses have been positive, with much interest in:
 - trilateral programs;
 - workforce growth and development initiatives;
 - infrastructure upgrades and East Coast naval basing;
 - manufacturing, research and development opportunities; and
 - certification and security requirements to participate.
- The combined Commonwealth and State Government Skills and Training Academy team has engaged with industry partners, unions, and education providers over the course of the last year, to connect with representatives and input feedback into the design and development of future programs to build and uplift workforce capability.
 - The Skills and Training Academy has also delivered pilot courses domestically in skilling for nuclear environments and arranged for international train-the-trainer courses in the United States.
- We will also take opportunities at international engagement events to connect with representatives from our international partners, industry thought leaders and supply chains.

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Supporting Information

Questions on Notice

Budget Estimates: 30 & 31 May 2023

- **QoN 18, Key Streams for AUKUS**, Senator the Hon Linda Reynolds (Liberal, Western Australia) asked for information on infrastructure at Stirling and Henderson, workforce and the nuclear regulatory system.
- **QoN 92, AUKUS readiness (enclosed)**, Senator the Hon Linda Reynolds (Liberal, Western Australia) asked a list of questions relating to WA infrastructure, WA Government and community engagement, workforce, health and safety, security, and timings.

Senate: 3 March 2023

- **QoN 65, Workforce demand and skill requirements**, Senator the Hon Linda Reynolds (Liberal, Western Australia) asked for details regarding the department's plans for acquiring the skilled workforce needed to support the program.

Freedom of Information (FOI) Requests

- None

Recent Ministerial Comments

- Nil

Relevant Media Reporting

Workforce

- On 28 August 2023 in *The West Australian*, in an article titled [No closed shop for AUKUS](#), Katina Curtis reports that the Prime Minister has indicated people working on Australia's new nuclear-powered submarine program will not be required to join a union.

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PDR No: SB23-001210

Division: SSN Construction	
PDR No: SB23-001210	
Contact: Ms Kate van Hilst First Assistant Director-General, SSN Construction Mob: s47E(d) Ph: s47E(d) Date: 8 January 2024	Cleared by: David Hallinan Acting Director-General Australian Submarine Agency Mob: s47E(d) Ph: s47E(d) Date: January 2024

Questions on notice referred to within the brief:

Budget Estimates 30 and 31 May 2023

Senator Linda Reynolds

Question Number: 18

Date question was tabled: 17 July 2023

Question

Senator REYNOLDS: Thank you; that was a very comprehensive answer. I think you could describe this as a very high-risk critical path project, and you're saying there are three key areas that you are now reviewing to prepare for 2027. Is that early on late 2027?

Vice Adm. Mead: Exact details of when the first submarine will arrive in 2027 are yet to be fleshed out, but we are in very deep discussions with INDOPACOM, Pacific Fleet and Washington as well working out the aspects of that, as we are with the UK.

Senator REYNOLDS: There are three areas. Can you take on notice for me a bit more information on those three areas you say you are working on: the infrastructure at Stirling and Henderson, workforce and also the nuclear regulatory system? Are those the three key streams you're working on at the moment?

Vice Adm. Mead: There are multiple streams, but they are the three that we have clumped together. For instance, on the infrastructure we need to look at what we need to do with our wharf upgrades, supporting infrastructure, the sheds, the maintenance, and, of course, fitting that into the Henderson precinct as well. But I will take that question on notice.

Answer

Infrastructure at Stirling

HMAS Stirling will be progressively upgraded over the next decade to provide a safe and secure facility for conventionally-armed, nuclear-powered submarines. The upgrades will be undertaken to initially support the rotational presence of United States and United Kingdom nuclear-powered submarines as part of the Submarine Rotational Force-West (SRF-West)

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from as early as 2027, and then an operating base for Australia's first sovereign Virginia Class nuclear-powered submarines from the early 2030s.

Workforce – maintenance

A significant area of focus is establishing the workforce required to maintain the rotational presence of United States and United Kingdom conventionally-armed, nuclear-powered submarines. This effort provides Australians the opportunity to gain qualifications and experience in the maintenance of Virginia class submarines so we are sovereign ready to maintain our own Virginia class submarines from the early 2030s. The maintenance workforce will consist of both industry and uniformed personnel who will be trained in United States and United Kingdom shipyards in the lead up to the first continuous maintenance activity.

Nuclear Regulatory System

The Defence Legislation Amendment (Naval Nuclear Propulsion) Bill 2023 was the first legislative step in support of Australia's acquisition of conventionally-armed, nuclear-powered submarines. This amended provisions of the *Australian Radiation Protection and Nuclear Safety Act 1998* and the *Environment Protection and Biodiversity Conservation Act 1999*.

A new independent statutory regulator, the Australian Nuclear-Powered Submarine Safety Regulator will also be established. The Regulator will be independent of the Australian Defence Force chain of command and directions from the Department of Defence.

The new Regulator will have the functions and powers necessary to regulate the unique circumstances associated with nuclear safety and radiological protection across the life cycle of Australia's nuclear-powered submarine enterprise. This includes associated infrastructure and facilities. The Regulator will work with existing Australian regulators to support the safety of our submariners, Australian and international communities, and the environment.

Budget Estimates 30 and 31 May 2023

Senator Linda Reynolds

Question Number: 92

Date question was tabled: 14 July 2023

Question

1. What is the status of the initial implementation of the Nuclear-Powered Submarine Program in Western Australia, particularly in terms of:
 - (a) The role of the Henderson Shipbuilding yard?
 - (b) The establishment of infrastructure at the HMAS Stirling naval base?
2. Are there any discussions with the WA Government or plans to build the Garden Island Highway to bypass the current traffic "rat run" through suburban Rockingham?
3. Are there any discussions with the WA Government or plans to duplicate or build a second bridge on and off the Garden Island?

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4. Can you provide an update on the timeline for the initial implementation of the Nuclear-Powered Submarine Program in Western Australia, including key milestones and expected completion dates for different phases of the program?
5. What measures have been taken to ensure that the Western Australian shipbuilding industry has the necessary capabilities and resources to effectively participate in the nuclear-powered submarines program under the AUKUS partnership?
6. Precisely in what ways is the Department of Defence collaborating with the WA Government to address any regulatory or logistical challenges related to the implementation of the Nuclear-Powered Submarine Program in Western Australia?
7. What role does the Government see for the WA Government in ensuring AUKUS readiness, and what support is being provided to facilitate their involvement?
8. What specific steps is the Government taking to ensure that the AUKUS partnership progresses as planned and that WA can seize this opportunity for economic growth and success?
9. Can you provide an update on the progress made by the WA Government in preparing for the AUKUS submarine deal, particularly in terms of workforce readiness, housing, emergency and hospital facilities, traffic management, and infrastructure?
10. What measures are being taken to address the housing challenges for deployed staff and their families and also additional overseas contractors working in both HMAS Stirling and the Henderson Shipbuilding yard?
11. When are the first United States personnel and their families expected to arrive in Western Australia? How many personnel will there be?
12. Can you provide details on the workforce development plans and initiatives that have been put in place to meet the demands of the Nuclear-Powered Submarine Program in Western Australia, including the training and recruitment of skilled personnel?
13. What steps have been taken to ensure the safety and security of the personnel involved in the construction and operation of the nuclear-powered submarines, as well as the surrounding communities in Western Australia particularly in the event of a nuclear incident?
14. What contingency plans are in place to ensure the health and safety of the community in case of a nuclear incident, and how is the federal government working with the state government to address the urgent need for local emergency and hospital facilities?
15. What training and regulatory framework will be put in place for Small to Medium Enterprises who will be handling nuclear waste and what is the timeframe for that being implemented?
16. What steps are being taken to address traffic management concerns and improve the condition of local roads on and off HMAS Stirling, particularly in light of the anticipated increase in traffic flow due to the AUKUS partnership?
17. What actions are being taken to address the issue of a stable power supply to the jetty on HMAS Stirling, considering the concerns about reliability?

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18. How is the Department planning to address potential security concerns and increase security measures at HMAS Stirling and the Henderson shipbuilding yard in light of the AUKUS partnership?

19. How is the Department of Defence addressing any potential social and cultural impacts on the communities surrounding the Henderson Shipbuilding yard and the HMAS Stirling naval base, considering the significant influx of personnel and increased activities associated with the Nuclear-Powered Submarine Program?

20. Can you provide an overview of the technology transfer and knowledge sharing initiatives that are being implemented to enhance the local capabilities and expertise in nuclear-powered submarine construction and operation in Western Australia?

21. What plans are in place to maximise the economic benefits and job opportunities for Western Australia arising from the implementation of the Nuclear-Powered Submarine Program, particularly in terms of local procurement, subcontracting, and supply chain integration?

22. How is the Department of Defence engaging with local communities, industry representatives, and relevant stakeholders in Western Australia to ensure their meaningful participation and input in the Nuclear-Powered Submarine Program?

23. Are there any additional challenges or areas of concern related to AUKUS readiness in Western Australia that the Department of Defence has identified, and how are they being addressed?

24. I refer to the response to Question on Notice 54: Can you provide an update on the progress of the studies undertaken within the Integrated Infrastructure Program, specifically the Integrated Transport Program study, Maritime and Advanced Collaboration and Technology Hub study, Alternative Energies study, Southern Breakwaters Condition study, and the Northern Harbour Demand study?

25. Can you table a copy of each of these reports?

26. How will the findings and recommendations from these studies be utilized to inform the future development of Henderson and the Australian Marine Complex (AMC) ?

27. What is the timeframe for the implementation of the findings?

28. What specific naval shipbuilding and sustainment needs at Henderson have been identified through the consultation process with the Western Australian Government, and how are these needs being addressed?

47. I refer to the response to my QON No 65 asked on 03 March 2023. Can you provide an update on the progress of the Nuclear-Powered Submarine Taskforce in developing the workforce demand and skill requirements for the nuclear-powered submarine program?

48. What specific actions and initiatives have been undertaken thus far?

49. How is the Department of Defence collaborating with the AUKUS partners to identify and address the workforce growth required for the nuclear-powered submarine program?

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50. What mechanisms or processes are in place to facilitate this collaboration and exchange of Expertise?
51. What education and skilling pathways are being identified and created to support the acquisition and sustainment of nuclear-powered submarines?
52. How are these pathways being tailored to meet the specific skill requirements of the program?
53. How will the workforce growth and skill requirements for the nuclear-powered submarine program be integrated into industry and government practices?
54. What strategies are being implemented to ensure a seamless transition and alignment between workforce needs and available resources?
55. Can you provide more details on how skilled and technically expert personnel from our AUKUS partner nations will be integrated into the workforce growth plans? What roles and areas of expertise are being prioritised for their involvement?
56. What measures are being taken to ensure a sufficient pool of skilled workers domestically to support the workforce growth required for the nuclear-powered submarine program? Are there plans to attract and train individuals within Australia to meet the skill demands?
57. How is the Department of Defence coordinating with relevant educational institutions and training providers to align their programs with the skill requirements of the nuclear-powered submarine program?
58. Are there any partnerships or initiatives in place to enhance the availability of specialized training programs?
59. What steps are being taken to promote the trades and technical professions as viable and rewarding career options in support of the nuclear-powered submarine program? How are perceptions of these professions being improved to attract more individuals into these fields?
60. How will the workforce development efforts for the nuclear-powered submarine program contribute to broader skills and capabilities within the Australian defence industry? Are there plans to leverage these developments for other defence projects or initiatives?
61. How is the Department of Defence monitoring and assessing the effectiveness of the workforce development initiatives for the nuclear-powered submarine program?
62. Are there mechanisms in place to make adjustments or improvements based on feedback and evaluation?
63. What is the timeframe of the Nuclear-Powered Submarine Taskforce that is being developed with our AUKUS partners?

Answer

Henderson

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The Henderson Maritime Precinct is one of Australia's two principal shipbuilding hubs. The Western Australian (WA) defence industry will play a critical role in the future maintenance, operating and basing requirements for Australia's future fleet of conventionally-armed nuclear-powered submarines. Australian Naval Infrastructure (ANI) is working with Defence and the WA Government to progress planning for the delivery of a Large Vessel Infrastructure at Henderson.

Engagement

Commonwealth/WA Government – The Nuclear Powered Submarine Program Steering Group is being established as a sub-group of the existing Joint Henderson Taskforce to provide a structured forum for coordination on issues in relation to the implementation of the Optimal Pathway. The Steering Group is expected to focus on workforce, skilling, infrastructure, safety, security matters and social license.

Local Governments – The Nuclear Powered Submarine Taskforce maintains a close working relationship with the WA local Governments that are proximate to HMAS Stirling and Henderson to ensure appropriate levels of community engagement occurs and information that is important to communities, in relation to the safe and secure operation of nuclear-powered submarines, is shared.

Workforce

In WA the expansion of HMAS Stirling to support the infrastructure required for nuclear-powered submarines is expected to support approximately 3,000 direct jobs over the decade. An additional 500 direct jobs are expected to support the sustainment of SRF-West.

Defence is already taking steps to develop the workforce. The first cohorts of Australian submariners have undertaken training in the UK and US. New Australian workers are being accepted into shipbuilding training programs through the Sovereign Shipbuilding Talent Pool (SSTP) and Defence is working to extend the opportunity to work in the UK and US nuclear-powered submarine programs to the Australian industrial workforce. The Government is expanding graduate numbers in engineering and science fields through a targeted competitive grant program providing 4,000 Commonwealth Supported Places over four years to eligible institutions that deliver STEM qualifications required by the Australian Submarine Agency. In addition the Defence Industry Pathways Program will be extended to continue the pipeline of skills and talent into the Defence shipbuilding industry in WA.

Health and Safety

A sophisticated safety architecture will surround Australia's Nuclear Powered Submarine program, building on our 70-year unblemished track record of operating nuclear facilities and conducting nuclear science activities. Informed by the UK and US expertise, Australia will develop a comprehensive safety management system to support the safe operation of Australia's nuclear-powered submarine enterprise. This will be underpinned by a system of regulation calibrated to the unique needs of Australia's nuclear-powered submarine capability. Regulatory oversight will occur across the nuclear aspects of the submarine platform, supporting facilities and infrastructure, leveraging the work of existing nuclear regulators.

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The Government already works closely with State Governments through the Visiting Ships Panel arrangements to ensure Australian communities are safe when nuclear-powered vessels visit our country. Since 1960 Australia has hosted over 285 visits by UK and US nuclear-powered vessels with over 1,800 days in port. These arrangements between Federal and State Governments will continue and strengthen with the increased number of visits from our AUKUS partners this decade, and for the acquisition of our Australian nuclear-powered submarine fleet.

Security

The Nuclear Powered Submarine Taskforce has worked closely with Australian, UK and US security and intelligence partners – including ASIO and the Australian Cyber Security Centre – to develop a threat-informed, risk-led approach to security understanding and requirements. Defence intends to leverage the established Defence Security Principles Framework (DSPF) and the Defence Industry Security Program (DISP) that defence industry is already participating in. This also includes use of the Australian Cyber Security Centre's (ACSC) 'Essential 8' cybersecurity controls. These frameworks and programs will be complemented by increased audit and assurance activities to ensure all program partners are consistently meeting the required standards for personnel, physical, information, and cyber security, with effective governance.

Senate Question 3 March 2023

Senator Linda Reynolds

Question Number: 65

Date question was tabled: 17 May 2023

Question

Does the Department of Defence believe there are sufficient qualified, skilled and experienced workers in the Australian labor market to support the Nuclear Powered Submarine program development and maintenance without relying on increased skilled migration? If so, why?

Has the Department undertaken any modelling on the labor force requirements for AUKUS submarines and what proportion of that labor force might need to come from overseas in the first instance to provide the experience with nuclear powered submarines and their associated ecosystems?

A) If so, when will this be released to industry to include SME to understand the scale of the gap and where they might access this labor force and what steps the government is taking to ensure access to these people?

B) If not, how does the department believe it will ensure access to appropriately qualified, skilled and experienced people to provide the breadth of industrial capabilities around the NPS ecosystem?

Has the Capability and Acquisition Sustainment Group updated relevant industry panels to integrate new skillsets, like nuclear power qualified expertise required for the NPS ecosystem?

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Does the government believe that the NPS ecosystem labor force will have enhanced mobility across the AUKUS partners to avoid the “zero sum” risk of protectionism and/or “poaching” between nations?

A) If so, what steps have been agreed between the partners to allow this mobility to service all the AUKUS partners NPS ecosystems?

B) If not has agreement been reached on how Australia will access these knowledge Skills and experience without affecting partners NPS plans?

Has the department developed a faster system to provide appropriate visas to AUKUS partners working on the NPS? If not, have the current excessive delays in processing skilled visas been factored into the planning for how long it will be before Australia can build a NPS?

Answer

Workforce demand and skill requirements for the nuclear-powered submarine program are being developed by the Nuclear Powered Submarine Taskforce in collaboration with our AUKUS partners. Education and skilling pathways are also being identified and created to support the acquisition and sustainment of nuclear-powered submarines, and the greater Australian nuclear enterprise across industry, Navy and government. We are working closely with our AUKUS partners to identify where skilled and technically expert personnel from our partner nations can best support the workforce growth required. Administrative arrangements to support the workforce requirements will be developed across government.

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Additional Estimates February 2024
Last updated: 31 January 2024
Australian Submarine Agency: South Australia
Key witnesses: FADG SSN Construction Kate van Hilst

PDR No: SB23-001205

Australian Submarine Agency: South Australia

Handling Note:

- First Assistant Director-General SSN Construction, Kate van Hilst to lead on South Australia.

Key Messages

- Australia's SSN-AUKUS submarines will be built in Osborne, South Australia, with the build of Australia's first SSN-AUKUS to begin by the end of this decade.
- 4,000 to 5,500 direct jobs are expected to support the build of conventionally-armed nuclear-powered submarines in South Australia when the program reaches its peak in 20-30 years.
- We continue to work with the South Australian Government to support the construction of Australia's conventionally-armed nuclear-powered submarines, the development of our industrial workforce and the delivery of the Submarine Construction Yard.
- The Australian Government has signed a cooperation agreement with the South Australian Government to support the construction of Australia's conventionally-armed nuclear-powered submarines. The agreement includes:
 - establishing a Skills and Training Academy campus;
 - an exchange of land to facilitate development of the new Submarine Construction Yard and the Skills and Training Academy;
 - increasing Commonwealth supported places to South Australia Universities focused on Science, Technology, Engineering, and Maths (STEM) disciplines; and
 - investing in research capability and infrastructure to generate a workforce close to the Submarine Construction Yard.
- In late 2023, preliminary enabling works commenced on schedule at the preferred site for the conventionally-armed nuclear-powered Submarine Construction Yard in Osborne, South Australia.

Talking Points

South Australian Government Engagement

- The Australian Submarine Agency continues to work closely with the South Australian Government to progress key priorities for the Submarine Construction Yard and Skills and Training Academy as part of the Nuclear-Powered Submarine Program.

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- . The Commonwealth and South Australian Governments executed a Project Agreement on 10 November 2023 that has enabled the transfer of land for the Submarine Construction Yard and Skills and Training Academy at Osborne to progress.
- . With execution of the Project Agreement, the Australian Submarine Agency has commenced initial discussions with the South Australian Government and Port Adelaide Enfield council to progress master-planning activities for the Lefevre Peninsula.
- . Workforce development has already started, including the expansion of the Sovereign Shipbuilding Talent Pool to include an Early Careers Program of apprentices, undergraduates and graduates.
- . The Skills and Training Academy is being co-designed by the Commonwealth and South Australian Government as a key workforce enabling initiative under the South Australian Defence Industry Workforce and Skills Taskforce Report, released on 10 November 2023.
- . The South Australian Headquarters of the Australian Submarine Agency has been established in Port Adelaide with over 80 Defence and Industry personnel already undertaking foundational planning for the future delivery of SSN-AUKUS.

If pressed: What does the cooperation arrangement with South Australia involve? Are you pursuing similar arrangements with other states?

- . The Cooperative Agreement, co-signed by the Premier for South Australia and Deputy Prime Minister on 15 March 2023, seeks to guide the negotiation and realisation of activities related to Australia's acquisition of conventionally-armed nuclear-powered submarines.
- . Under this agreement, the Commonwealth and South Australian Government are progressing an exchange of land to facilitate the development of a new Skills and Training Academy and the Submarine Construction Yard at the preferred site.
- . This agreement will see increasing Commonwealth supported places to South Australia Universities focused on STEM disciplines and investment in research capability and infrastructure to generate a workforce close to the Submarine Construction Yard.

Submarine Construction Yard

- . The Australian Submarine Agency is working closely with Australian Naval Infrastructure (ANI), the Government's appointed design and delivery partner, to progress early design activities for the Submarine Construction Yard at Osborne.
- . Enabling works at the preferred site for the Submarine Construction Yard commenced on 19 December 2023 with site mobilisation and early works for the new carpark, following environmental approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

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- Other enabling works to be progressed include construction of a pedestrian bridge and grade-separated road followed by above and in-ground utility relocation.

. At the program's peak, up to 4,000 workers will be employed to design and build the infrastructure for the Submarine Construction Yard in Osborne.

If pressed: How much will the future Submarine Construction Yard cost?

- . The Government will invest at least \$2 billion in South Australian infrastructure over the forward estimates period.
- . The Government has provided ANI with an initial equity injection over five years from 2023–24 to commence early construction and design works for the Submarine Construction Yard and Skills and Training Academy.
- . Any additional queries about equity to be provided to ANI may be addressed to the Department of Finance.

If pressed: What environmental approvals are required for the Submarine Construction Yard?

- . The Australian Submarine Agency is working closely with the Department of Climate Change, Energy, the Environment and Water (DCCEEW) to progress environmental approval and compliance for the Submarine Construction Yard under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
 - The Minister for the Environment and Water considered a standard referral under the EPBC Act for preliminary enabling works, specifically the carpark, pedestrian bridge and grade-separated road. A decision was issued stating that the action was not controlled if undertaken in a particular manner. This has now been published on the DCCEEW EPBC portal.
 - A separate referral under the EPBC Act for utility relocation works will progress throughout 2024.
 - Work is also progressing on a strategic assessment for the broader construction and operation of the Submarine Construction Yard under the EPBC Act, with the draft Terms of Reference outlining the conditions of the assessment released on 4 December 2023 for public comment. Public comment closed 28 January 2024.

Skills and Training Academy

- . The Skills and Training Academy is being co-designed by the Commonwealth and South Australian Government as a key workforce enabler under the South Australian Defence Industry Workforce and Skills Taskforce Report.
- . The Academy is being designed to deliver tailored education, training and skilling for Australia's submarine and naval shipbuilding workforce, including:
 - career training programs to bring new people into the workforce, such as apprentices, undergraduates and graduate apprentices;

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- lifting the skills of the existing naval shipbuilding workforce; and
- transition programs to bring in people from adjacent industries in the defence, manufacturing and technology sectors.
- The Skills and Training Academy commenced initial operating capability in August 2023, delivering Nuclear Mindset Training to Sovereign Shipbuilding Talent Pool personnel considered for international placements, and a cohort within the Defence Industry Pathways Program in Western Australia.
- The build of the Skills and Training Academy primary campus in South Australia is expected to commence in Quarter 4 2024.
- Until the primary campus is built, the Skills and Training Academy will continue to leverage and tailor existing facilities and training programs to support initial growth and development under its interim operating capability
- Through the Skills and Training Academy, the Commonwealth and South Australian Governments are expanding the Defence Industry Pathways Program to South Australia.

If pressed: How will we grow the submarine and naval shipbuilding workforces?

- The Australian Federal and South Australian governments are working together to ensure Defence projects in South Australia will have a highly-skilled workforce to draw on.
- The South Australian Defence Industry Workforce and Skills Taskforce released its report on 10 November 2023, bringing key stakeholders across State and Territory governments together with unions, universities, training providers, business and industry to deliver solutions for challenges in growing the required workforce.
- The Skills and Training Academy will continue to grow and expand its offering, targeting key skillsets to ensure the workforce is available and able to meet the demand of the Nuclear-Powered Submarine Program.

Supporting Information

Questions on Notice

Senate: 16 June

- **QoN 89, AUKUS legislation**, Senator the Hon Simon Birmingham (Liberal, South Australia) asked for information on ship transfer legislation in the US Congress and Australia's acquisition of Virginia-class submarines.

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PDR No: SB23-001205

Freedom of Information (FOI) Requests

- Nil

Recent Ministerial Comments

- Nil

Relevant Media Reporting

- On 29 November 2023 in *The Canberra Times*, in an article titled [Thousands of STEM spots to be funded in AUKUS push](#), Kat Wong reported that thousands of scientifically-inclined students will have their university courses financially covered as the government attempts to nurture the workforce needed to build the long-awaited AUKUS nuclear submarine fleet.

Division:	SSN Construction
PDR No:	SB23-001205
Contact: Mr Gavin Boyd Assistant Director-General, Sovereign Submarine Program Delivery Mob: s47E(d) Ph: s47E(d) Date: 15 December 2023	Cleared by: Ms Kate van Hilst First Assistant Director-General SSN Construction Mob: s47E(d) Ph: s47E(d) Date: 8 January 2024

Questions on notice referred to within the brief:

Supplementary Question 16 June 2023
Senator Simon Birmingham
Question Number: 89
Date question was tabled: 1 September 2023

Question

Defence Industry Minister Pat Conroy has said that the next crucial piece of AUKUS legislation by Congress is “ship transfer legislation authorising the US Navy to transfer two in-service Virginia class submarines to Australia as our interim capability”.

1. When does Defence expect Congress to pass this legislation?
2. Has Australia made representations to the US on the timeline for this legislation?

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3. Does Australia need to change domestic legislation to receive the vessels?
4. Why is the legislation from Congress only for two-in service vessels when Australia is expected to receive up to five?
5. Has the mix of in-service and off the production line vessels Australia could receive been determined for all five potential Virginias or just the first three?

Answer

1. This is a decision for the United States Congress.
2. Australia has conveyed our strong support for passage as soon as possible.
3. No, Australia does not need to change domestic legislation to receive the vessels.
4. Congressional approval is required for in-service vessels. Congress is considering draft legislation. The Australian Government has announced the acquisition of Virginia Class submarines will comprise a combination of in-service and off-the-production line vessels. New vessels can be procured through the Foreign Military Sales case process.
5. See answer to question 4.

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Australian Submarine Agency: SSN-AUKUS
Key witnesses: FADG SSN Construction Kate van Hilst

PDR No: SB23-001206

Australian Submarine Agency: SSN-AUKUS

Handling Note: First Assistant Director-General SSN Construction, Kate van Hilst to lead on SSN-AUKUS.

Key Messages

- Australia's SSN-AUKUS submarines will be built in Osborne, South Australia.
- SSN-AUKUS will be a trilaterally-developed submarine based on the United Kingdom's next-generation design.
- A decision on who will build SSN-AUKUS in Australia is the focus of further consideration by the Australian Submarine Agency and the Australian Government, with support from our international partners and industry.
- The Submarine Construction Yard will be almost 3 times larger than the yard forecast for the Attack class program.
- The Australian Submarine Agency has entered into a contract with Australian steel manufacturer, Bisalloy Steels, for the qualification of Australian steel for use on Australia's future SSN-AUKUS submarines.

Talking Points

If pressed: How much of SSN AUKUS will be built in Australia?

- SSN-AUKUS remains in its design phase.
- The Agency will work with the Australian shipbuilder to define the build strategy following their appointment, noting our intent is to maximise opportunities for Australian industry.
- We will continually assess the capability of Australian industry, and work with our AUKUS partners to ensure the best possible investments are made to support the trilateral submarine industrial base.

If pressed: How many SSN-AUKUS will Australia build?

- We will operate a conventionally-armed nuclear-powered submarine fleet of eight boats.
 - The acquisition of Virginia class submarines will provide Australia with a sovereign conventionally-armed nuclear-powered submarine capability as soon as possible and ensure there is no capability gap.

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- Once the Submarine Construction Yard at the Osborne Naval Shipyard is built, Australia will have capacity to build conventionally-armed nuclear-powered submarines into the future, beyond the initial commitment.

If pressed: Who is going to build SSN-AUKUS in Australia? Will ASC / BAE / General Dynamics Electric Boat / Huntington Ingalls Industries be involved?

- As the Deputy Prime Minister said at the time of the announcement of the Optimal Pathway, a decision on this matter would be taken within 12 months.

If pressed: What will be the Australian industry content for the build?

- Understanding the needs of the enterprise across the duration of a conventionally-armed nuclear-powered submarine build and sustainment program allows us to make informed choices from the outset about construction and sustainment.
- There will be significant opportunities for Australian industry throughout all stages of Australia's nuclear-powered submarine program – from the delivery of the submarine construction yard to the build of the submarines, their operation, sustainment and eventual disposal.
- The opportunities for Australian industry extend beyond the Australian build and sustainment program.
- There will also be opportunities for involvement in the supply chains of our AUKUS partners by contributing to the maintenance of their submarines and manufacturing components for their production lines.

If pressed: Does the awarding by the United Kingdom of the SSN-AUKUS design and infrastructure contract to BAE Systems mean Australian industry will be frozen out of SSN-AUKUS?

- The United Kingdom's announcement relates to a long-term commitment of the United Kingdom, which we will be engaged through AUKUS arrangements.
- SSN-AUKUS will be a trilaterally-developed submarine based on the United Kingdom's next-generation design.
- The design of SSN-AUKUS was always going to be led by the United Kingdom.
- There will be significant opportunities for Australian industry throughout all stages of Australia's nuclear-powered submarine program – from the delivery of the Submarine Construction Yard to the build of the submarines, their operation, sustainment and eventual disposal.
- The opportunities for Australian industry extend beyond the Australian build and sustainment program, encompassing opportunities for involvement in the supply

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PDR No: SB23-001206

chains of our AUKUS partners by contributing to the maintenance of their submarines and manufacturing components for their production lines.

If pressed: How can it take so long to build the SSN-AUKUS submarines in Australia? Has the build start date been brought forward only for political reasons?

- This is the first time that Australia has transitioned from a conventional submarine capability to a conventionally-armed nuclear-powered submarine capability.
- This is the most technologically complex defence program in Australian history.
 - Conventionally-armed nuclear-powered submarines are much larger than conventional submarines with hundreds of thousands of components. The qualification of products for use on a submarine platform take time and we are starting that now.
 - We are focusing on developing the skills required for Australia to become sovereign ready.

Australian Hull Steel for Australian SSN-AUKUS

- The Australian Submarine Agency has entered into a contract with Australian steel manufacturer, Bisalloy Steels, for the qualification of Australian steel for the use on Australia's future SSN-AUKUS submarines.
- The AUKUS partnership presents one of the biggest uplifts in Australia's industrial and defence capability in our history.
- The signing of this contract is a clear demonstration of the progress being made on, and the Government's commitment to, the construction of conventionally-armed nuclear-powered submarines in Australia and support for future Australian jobs.
 - The \$15 million contract will put Australian products at the forefront of our submarine construction.
 - We are committed to supporting Australian industry in the AUKUS trilateral supply chain, including through the qualification of the steel to both the United Kingdom and United States standards.

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PDR No: SB23-001206

Supporting Information

Questions on Notice

Budget Estimates: 30 & 31 May

- **QoN 18, Key Streams for AUKUS**, Senator the Hon Linda Reynolds (Liberal, Western Australia) asked for information on infrastructure at Stirling and Henderson, workforce and the nuclear regulatory system.
- **QoN 92, AUKUS readiness**, Senator the Hon Linda Reynolds (Liberal, Western Australia) asked a list of questions relating to WA infrastructure, WA Government and community engagement, workforce, health and safety, security, and timings.

Senate: 3 March 2023

QoN 65, Workforce demand and skill requirements, Senator the Hon Linda Reynolds (Liberal, Western Australia) asked for details regarding the department's plans for acquiring the skilled workforce needed to support the program.

Freedom of Information (FOI) Requests

None

Recent Ministerial Comments

Nil

Relevant Media Reporting

Australian Steel Qualification

On 9 December 2023 in *The Mirage News*, in an article titled [Australia to Supply Hull Steel for AUKUS Nuclear Subs](#), reported, the Australian Submarine Agency has entered into a contract with Australian steel manufacturer, Bisalloy Steels, for the qualification of Australian steel for use on Australia's future SSN-AUKUS submarines.

Workforce

- On 28 August 2023 in *The West Australian*, in an article titled [No closed shop for AUKUS](#), Katina Curtis reports that the Prime Minister has indicated people working on Australia's new nuclear-powered submarine program will not be required to join a union.

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Australian Submarine Agency: SSN-AUKUS
Key witnesses: FADG SSN Construction Kate van Hilst

PDR No: SB23-001206

Division:	SSN Construction		
PDR No:	SB23-0001206		
Contact:	Cleared by:		
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Date: 8 January 2024	Date: January 2024		

Questions on notice referred to within the brief:

Budget Estimates 30 and 31 May 2023

Senator Linda Reynolds

Question Number: 18

Date question was tabled: 17 July 2023

Question

Senator REYNOLDS: Thank you; that was a very comprehensive answer. I think you could describe this as a very high-risk critical path project, and you're saying there are three key areas that you are now reviewing to prepare for 2027. Is that early on late 2027?

Vice Adm. Mead: Exact details of when the first submarine will arrive in 2027 are yet to be fleshed out, but we are in very deep discussions with INDOPACOM, Pacific Fleet and Washington as well working out the aspects of that, as we are with the UK.

Senator REYNOLDS: There are three areas. Can you take on notice for me a bit more information on those three areas you say you are working on: the infrastructure at Stirling and Henderson, workforce and also the nuclear regulatory system? Are those the three key streams you're working on at the moment?

Vice Adm. Mead: There are multiple streams, but they are the three that we have clumped together. For instance, on the infrastructure we need to look at what we need to do with our wharf upgrades, supporting infrastructure, the sheds, the maintenance, and, of course, fitting that into the Henderson precinct as well. But I will take that question on notice.

Answer

Infrastructure at Stirling

HMAS Stirling will be progressively upgraded over the next decade to provide a safe and secure facility for conventionally-armed nuclear-powered submarines. The upgrades will be undertaken to initially support the rotational presence of United States and United Kingdom nuclear-powered submarines as part of the Submarine Rotational Force-West (SRF-West)

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from as early as 2027, and then an operating base for Australia's first sovereign Virginia Class nuclear-powered submarines from the early 2030s.

Workforce – maintenance

A significant area of focus is establishing the workforce required to maintain the rotational presence of United States and United Kingdom conventionally-armed nuclear-powered submarines. This effort provides Australians the opportunity to gain qualifications and experience in the maintenance of Virginia class submarines so we are sovereign ready to maintain our own Virginia class submarines from the early 2030s. The maintenance workforce will consist of both industry and uniformed personnel who will be trained in United States and United Kingdom shipyards in the lead up to the first continuous maintenance activity.

Nuclear Regulatory System

The Defence Legislation Amendment (Naval Nuclear Propulsion) Bill 2023 was the first legislative step in support of Australia's acquisition of conventionally-armed nuclear-powered submarines. This amended provisions of the *Australian Radiation Protection and Nuclear Safety Act 1998* and the *Environment Protection and Biodiversity Conservation Act 1999*.

A new independent statutory regulator, the Australian Nuclear-Powered Submarine Safety Regulator will also be established. The Regulator will be independent of the Australian Defence Force chain of command and directions from the Department of Defence.

The new Regulator will have the functions and powers necessary to regulate the unique circumstances associated with nuclear safety and radiological protection across the life cycle of Australia's nuclear-powered submarine enterprise. This includes associated infrastructure and facilities. The Regulator will work with existing Australian regulators to support the safety of our submariners, Australian and international communities, and the environment.

Budget Estimates 30 and 31 May 2023

Senator Linda Reynolds

Question Number: 92

Date question was tabled: 14 July 2023

Question

1. What is the status of the initial implementation of the Nuclear-Powered Submarine Program in Western Australia, particularly in terms of:
 - (a) The role of the Henderson Shipbuilding yard?
 - (b) The establishment of infrastructure at the HMAS Stirling naval base?
2. Are there any discussions with the WA Government or plans to build the Garden Island Highway to bypass the current traffic "rat run" through suburban Rockingham?
3. Are there any discussions with the WA Government or plans to duplicate or build a second bridge on and off the Garden Island?

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4. Can you provide an update on the timeline for the initial implementation of the Nuclear-Powered Submarine Program in Western Australia, including key milestones and expected completion dates for different phases of the program?
5. What measures have been taken to ensure that the Western Australian shipbuilding industry has the necessary capabilities and resources to effectively participate in the nuclear-powered submarines program under the AUKUS partnership?
6. Precisely in what ways is the Department of Defence collaborating with the WA Government to address any regulatory or logistical challenges related to the implementation of the Nuclear-Powered Submarine Program in Western Australia?
7. What role does the Government see for the WA Government in ensuring AUKUS readiness, and what support is being provided to facilitate their involvement?
8. What specific steps is the Government taking to ensure that the AUKUS partnership progresses as planned and that WA can seize this opportunity for economic growth and success?
9. Can you provide an update on the progress made by the WA Government in preparing for the AUKUS submarine deal, particularly in terms of workforce readiness, housing, emergency and hospital facilities, traffic management, and infrastructure?
10. What measures are being taken to address the housing challenges for deployed staff and their families and also additional overseas contractors working in both HMAS Stirling and the Henderson Shipbuilding yard?
11. When are the first United States personnel and their families expected to arrive in Western Australia? How many personnel will there be?
12. Can you provide details on the workforce development plans and initiatives that have been put in place to meet the demands of the Nuclear-Powered Submarine Program in Western Australia, including the training and recruitment of skilled personnel?
13. What steps have been taken to ensure the safety and security of the personnel involved in the construction and operation of the nuclear-powered submarines, as well as the surrounding communities in Western Australia particularly in the event of a nuclear incident?
14. What contingency plans are in place to ensure the health and safety of the community in case of a nuclear incident, and how is the federal government working with the state government to address the urgent need for local emergency and hospital facilities?
15. What training and regulatory framework will be put in place for Small to Medium Enterprises who will be handling nuclear waste and what is the timeframe for that being implemented?
16. What steps are being taken to address traffic management concerns and improve the condition of local roads on and off HMAS Stirling, particularly in light of the anticipated increase in traffic flow due to the AUKUS partnership?
17. What actions are being taken to address the issue of a stable power supply to the jety on HMAS Stirling, considering the concerns about reliability?

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18. How is the Department planning to address potential security concerns and increase security measures at HMAS Stirling and the Henderson shipbuilding yard in light of the AUKUS partnership?

19. How is the Department of Defence addressing any potential social and cultural impacts on the communities surrounding the Henderson Shipbuilding yard and the HMAS Stirling naval base, considering the significant influx of personnel and increased activities associated with the Nuclear-Powered Submarine Program?

20. Can you provide an overview of the technology transfer and knowledge sharing initiatives that are being implemented to enhance the local capabilities and expertise in nuclear-powered submarine construction and operation in Western Australia?

21. What plans are in place to maximise the economic benefits and job opportunities for Western Australia arising from the implementation of the Nuclear-Powered Submarine Program, particularly in terms of local procurement, subcontracting, and supply chain integration?

22. How is the Department of Defence engaging with local communities, industry representatives, and relevant stakeholders in Western Australia to ensure their meaningful participation and input in the Nuclear-Powered Submarine Program?

23. Are there any additional challenges or areas of concern related to AUKUS readiness in Western Australia that the Department of Defence has identified, and how are they being addressed?

24. I refer to the response to Question on Notice 54: Can you provide an update on the progress of the studies undertaken within the Integrated Infrastructure Program, specifically the Integrated Transport Program study, Maritime and Advanced Collaboration and Technology Hub study, Alternative Energies study, Southern Breakwaters Condition study, and the Northern Harbour Demand study?

25. Can you table a copy of each of these reports?

26. How will the findings and recommendations from these studies be utilized to inform the future development of Henderson and the Australian Marine Complex (AMC) ?

27. What is the timeframe for the implementation of the findings?

28. What specific naval shipbuilding and sustainment needs at Henderson have been identified through the consultation process with the Western Australian Government, and how are these needs being addressed?

47. I refer to the response to my QON No 65 asked on 03 March 2023. Can you provide an update on the progress of the Nuclear-Powered Submarine Taskforce in developing the workforce demand and skill requirements for the nuclear-powered submarine program?

48. What specific actions and initiatives have been undertaken thus far?

49. How is the Department of Defence collaborating with the AUKUS partners to identify and address the workforce growth required for the nuclear-powered submarine program?

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Key witnesses: FADG SSN Construction Kate van Hilst

PDR No: SB23-001206

50. What mechanisms or processes are in place to facilitate this collaboration and exchange of Expertise?

51. What education and skilling pathways are being identified and created to support the acquisition and sustainment of nuclear-powered submarines?

52. How are these pathways being tailored to meet the specific skill requirements of the program?

53. How will the workforce growth and skill requirements for the nuclear-powered submarine program be integrated into industry and government practices?

54. What strategies are being implemented to ensure a seamless transition and alignment between workforce needs and available resources?

55. Can you provide more details on how skilled and technically expert personnel from our AUKUS partner nations will be integrated into the workforce growth plans? What roles and areas of expertise are being prioritised for their involvement?

56. What measures are being taken to ensure a sufficient pool of skilled workers domestically to support the workforce growth required for the nuclear-powered submarine program? Are there plans to attract and train individuals within Australia to meet the skill demands?

57. How is the Department of Defence coordinating with relevant educational institutions and training providers to align their programs with the skill requirements of the nuclear-powered submarine program?

58. Are there any partnerships or initiatives in place to enhance the availability of specialized training programs?

59. What steps are being taken to promote the trades and technical professions as viable and rewarding career options in support of the nuclear-powered submarine program? How are perceptions of these professions being improved to attract more individuals into these fields?

60. How will the workforce development efforts for the nuclear-powered submarine program contribute to broader skills and capabilities within the Australian defence industry? Are there plans to leverage these developments for other defence projects or initiatives?

61. How is the Department of Defence monitoring and assessing the effectiveness of the workforce development initiatives for the nuclear-powered submarine program?

62. Are there mechanisms in place to make adjustments or improvements based on feedback and evaluation?

63. What is the timeframe of the Nuclear-Powered Submarine Taskforce that is being developed with our AUKUS partners?

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Answer

Henderson

The Henderson Maritime Precinct is one of Australia's two principal shipbuilding hubs. The Western Australian (WA) defence industry will play a critical role in the future maintenance, operating and basing requirements for Australia's future fleet of conventionally-armed nuclear-powered submarines. Australian Naval Infrastructure (ANI) is working with Defence and the WA Government to progress planning for the delivery of a Large Vessel Infrastructure at Henderson.

Engagement

Commonwealth/WA Government – The Nuclear Powered Submarine Program Steering Group is being established as a sub-group of the existing Joint Henderson Taskforce to provide a structured forum for coordination on issues in relation to the implementation of the Optimal Pathway. The Steering Group is expected to focus on workforce, skilling, infrastructure, safety, security matters and social license.

Local Governments – The Nuclear Powered Submarine Taskforce maintains a close working relationship with the WA local Governments that are proximate to HMAS Stirling and Henderson to ensure appropriate levels of community engagement occurs and information that is important to communities, in relation to the safe and secure operation of nuclear-powered submarines, is shared.

Workforce

In WA the expansion of HMAS Stirling to support the infrastructure required for nuclear-powered submarines is expected to support approximately 3,000 direct jobs over the decade. An additional 500 direct jobs are expected to support the sustainment of SRF-West.

Defence is already taking steps to develop the workforce. The first cohorts of Australian submariners have undertaken training in the UK and US. New Australian workers are being accepted into shipbuilding training programs through the Sovereign Shipbuilding Talent Pool (SSTP) and Defence is working to extend the opportunity to work in the UK and US nuclear-powered submarine programs to the Australian industrial workforce. The Government is expanding graduate numbers in engineering and science fields through a targeted competitive grant program providing 4,000 Commonwealth Supported Places over four years to eligible institutions that deliver STEM qualifications required by the Australian Submarine Agency. In addition the Defence Industry Pathways Program will be extended to continue the pipeline of skills and talent into the Defence shipbuilding industry in WA.

Health and Safety

A sophisticated safety architecture will surround Australia's Nuclear Powered Submarine program, building on our 70-year unblemished track record of operating nuclear facilities and conducting nuclear science activities. Informed by the UK and US expertise, Australia will develop a comprehensive safety management system to support the safe operation of Australia's nuclear-powered submarine enterprise. This will be underpinned by a system of regulation calibrated to the unique needs of Australia's nuclear-powered submarine

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capability. Regulatory oversight will occur across the nuclear aspects of the submarine platform, supporting facilities and infrastructure, leveraging the work of existing nuclear regulators.

The Government already works closely with State Governments through the Visiting Ships Panel arrangements to ensure Australian communities are safe when nuclear-powered vessels visit our country. Since 1960 Australia has hosted over 285 visits by UK and US nuclear-powered vessels with over 1,800 days in port. These arrangements between Federal and State Governments will continue and strengthen with the increased number of visits from our AUKUS partners this decade, and for the acquisition of our Australian nuclear-powered submarine fleet.

Security

The Nuclear Powered Submarine Taskforce has worked closely with Australian, UK and US security and intelligence partners – including ASIO and the Australian Cyber Security Centre – to develop a threat-informed, risk-led approach to security understanding and requirements. Defence intends to leverage the established Defence Security Principles Framework (DSPF) and the Defence Industry Security Program (DISP) that defence industry is already participating in. This also includes use of the Australian Cyber Security Centre's (ACSC) 'Essential 8' cybersecurity controls. These frameworks and programs will be complemented by increased audit and assurance activities to ensure all program partners are consistently meeting the required standards for personnel, physical, information, and cyber security, with effective governance.

Senate Question 3 March 2023

Senator Linda Reynolds

Question Number: 65

Date question was tabled: 17 May 2023

Question

Does the Department of Defence believe there are sufficient qualified, skilled and experienced workers in the Australian labor market to support the Nuclear Powered Submarine program development and maintenance without relying on increased skilled migration? If so, why?

Has the Department undertaken any modelling on the labor force requirements for AUKUS submarines and what proportion of that labor force might need to come from overseas in the first instance to provide the experience with nuclear powered submarines and their associated ecosystems?

A) If so, when will this be released to industry to include SME to understand the scale of the gap and where they might access this labor force and what steps the government is taking to ensure access to these people?

B) If not, how does the department believe it will ensure access to appropriately qualified, skilled and experienced people to provide the breadth of industrial capabilities around the NPS ecosystem?

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Has the Capability and Acquisition Sustainment Group updated relevant industry panels to integrate new skillsets, like nuclear power qualified expertise required for the NPS ecosystem?

Does the government believe that the NPS ecosystem labor force will have enhanced mobility across the AUKUS partners to avoid the “zero sum” risk of protectionism and/or “poaching” between nations?

A) If so, what steps have been agreed between the partners to allow this mobility to service all the AUKUS partners NPS ecosystems?

B) If not has agreement been reached on how Australia will access these knowledge Skills and experience without affecting partners NPS plans?

Has the department developed a faster system to provide appropriate visas to AUKUS partners working on the NPS? If not, have the current excessive delays in processing skilled visas been factored into the planning for how long it will be before Australia can build a NPS?

Answer

Workforce demand and skill requirements for the nuclear-powered submarine program are being developed by the Nuclear Powered Submarine Taskforce in collaboration with our AUKUS partners. Education and skilling pathways are also being identified and created to support the acquisition and sustainment of nuclear-powered submarines, and the greater Australian nuclear enterprise across industry, Navy and government. We are working closely with our AUKUS partners to identify where skilled and technically expert personnel from our partner nations can best support the workforce growth required. Administrative arrangements to support the workforce requirements will be developed across government.

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