Reducing Costs and Risks to Australia's SSN AUKUS Program

Peter Briggs' Background

- Early advocate for consideration of the nuclear transition, (2012-13 Study & Report to Defence).
- Oberon Squadron Command, with supply chain and manpower challenges.
- Senior policy Director RAN submarines during development of Collins project.
- Led Collins get well program 1999-2001, delivering two fast track submarines.

The Current Situation

- Reflects the political and intellectual effort to achieve US/USN agreement to release the technology, not a logical, practical process, based on Australia's requirements.
- Starting the transition with 850 submarine personnel and 6 ageing Collins exacerbates the risk of a failed transition and loss of submarine capability.
- As set out in our Brief (Attachment 1), current plan is impractical and flawed:
    - Achieving an operational capability with 2 Block IV, 1 Virginia Block VII and 5 SSN AUKUS with design, supply chain and regulatory differences is unlikely.
    - The sale of Virginias is unlikely given US shortages of SSNs and ongoing construction and repair difficulties.
    - For the UK, SSN AUKUS is a 3rd priority, behind commissioning 4 new construction Dreadnought class submarines and the final 2 Astutes.
    - Risks are exacerbated by the parlous state of the UK's national submarine capability and Defence budget (Attachment 2).
    - The timely UK completion of the design, build and debugging of SSN AUKUS, to support Australia's construction is unlikely.
    - If it were to succeed, against the odds, it hands the UK a major role in the sustainment of the capability – which constitutes 70% of the project costs!
    - The compounding impact of these risks, demands urgent political direction to avoid likelihood of a failed transition and loss of our submarine capability.
- Any transition is highly dependent on the USN for training and sustaining an Australian operational SM capability.
- The primary strategic attraction for the USN is obtaining an SSN capable base in HMAS STIRLING, with dry docking capabilities in Henderson and Adelaide.
    - Important that Australia recognises and utilises the leverage offered.
    - Future controversy over foreign bases should be anticipated/mitigated.

Avoiding Failure

- My most recent ASPI Strategist post, (Attachment 3) sets out the key elements:
    - Australian led SSN AUKUS project, centred on privatised ASC, minimising dependence on the UK.
    - BAES the designer, as a sub-contractor, under ASC direction and control.
    - Significant GD-EB support to achieve a timely design focussed on Australia's capability to build, operate and sustain capability.
    - Expedite the program, complete the design and build the first in Adelaide, delivered by 2038 as first Collins retires, ensuring maximum Australian based supply chain and avoiding need for Virginia stop gap.
- This may be what is intended and in train, if not, firm political direction is now urgently required.

Attachments:

1. *AUKUS Submarines: Improving the Pathway*, Jon Stanford, 14Mar24.
2. *The sad state of Royal Navy submarine capability – and implications for Australia*, Peter Briggs, Strategist, 30Jan24.
3. *To control our destiny, we must learn from our past for the AUKUS SSN*, Peter Briggs, Strategist 12Mar24.

AUKUS Submarines: Improving the Pathway

Ongoing progress in the AUKUS agreement

In March 2024, a major development occurred in the Optimal Pathway to deliver the AUKUS nuclear-powered submarines to the RAN. It was agreed that BAES will design SSN AUKUS in collaboration with Australia and with American support and that the Australian version of the platform will be built in Osborne in a joint venture between BAES Australia and ASC.

This decision highlights two major risks to the overall program.

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Proposed Virginia-class acquisition

The US has agreed to sell Australia between three and five Virginia-class submarines. Yet with the US Navy needing to increase its number of attack submarines from the current level of 49 to 66 and new construction falling well behind schedule, this will be highly problematic:

- Although Congress has approved the Australian acquisition in principle, the enabling legislation understandably contains escape clauses.
- The US Navy has also specified three conditions that Australia must satisfy if the acquisition is to go ahead – these will be very difficult to achieve in the timeframe.

There must be a strong possibility the acquisition will not go ahead.

UK challenges in developing SSN AUKUS

The UK is faced with substantial potential problems in delivering SSN AUKUS, the replacement SSN for Astute, with limited design and construction capacity and major budgetary challenges.

The current state of the UK's defence investment program adds to this risk. With the 10-year nuclear plan's cost increasing by 62 per cent to £99.5bn just in the last year, the Royal Navy will bear the brunt of the overspend by making cuts elsewhere in the investment program.

Two Astutes remain under construction and four 17,000-tonne Dreadnought nuclear deterrent submarines (SSBNs) are in the early stages of construction. While all these are ahead of SSN AUKUS, the SSBNs are the UK's highest priority and are quarantined from spending cuts.

The SSN AUKUS submarine will need to be larger than the Astute-class it is replacing in the Royal Navy so as to accommodate a new, larger reactor, substantially designed in the US. It will be a predominantly new and unproven submarine design. Critically, production of the new PWR-3 reactor for the Dreadnought SSBNs and SSN AUKUS has been subject to considerable delays.

It seems inevitable SSN AUKUS will be delayed. Yet the current plan is for construction of SSN AUKUS to begin in Britain before Osborne. At best, under the current schedule the RAN will not see the first SSN AUKUS until the early 2040s. Taking account of all these other risks, further, possibly substantial delays to the delivery of Australian SSNs seem inevitable.

Implications

Both the major elements in the Pathway, the acquisition of Virginias from US resources and the UK-origin SSN AUKUS, are therefore highly problematic. If either of them falter, not only is Australia's acquisition of SSNs likely to experience major delay at best, but with the additional factor of the retirement of the Collins-class it is almost inevitable that the RAN's submarine force itself would be under existential threat.

Towards a better outcome

We must consider an alternative approach that substantially de-risks SSN AUKUS.

Even if the current Pathway proceeds as planned, its success in delivering a viable Australian sovereign SSN capability presents enormous challenges. The prospect of the RAN achieving an operational capability with two small classes of SSN from two quite different designs, one from the US and the other from the UK, with different regulatory and operational design philosophies and supply chains, is unrealistic. It would dramatically increase costs and could well fail.

This implies that even in the unlikely event that we were able substantially to reduce the risk in both the major elements in the Pathway – the acquisition of Virginias from US resources and the timely delivery of a British design built in Australia – we would still be left with a solution that is deeply impractical and would likely be unworkable.

Instead, the logic suggests we should abandon one or both of these elements in favour of a new, singular way forward and focus AUKUS resources on that solution to ensure it delivers.

Our preferred option, proposed recently in several articles by RADM Peter Briggs, was to change the Pathway radically by adopting the Virginia platform as SSN AUKUS and building it in Australia on an accelerated schedule. If the first submarine could be delivered by the mid-2030s this would imply we could decline the American offer to provide three to five Virginias from American resources while also not needing to proceed with a British design.

This option has effectively been ruled out by the recent agreement signed with our AUKUS partners. Our alternative proposal, therefore, is to accelerate the British design and start building SSN AUKUS in Australia as early as possible. Ideally, we would look for delivery of the prototype SSN AUKUS submarine in Osborne in around 2036.

In return for not taking up the offer of Virginia-class submarines, we would seek assistance in:

- Committing major American resources to the design of the British-based SSN AUKUS, which, like the PWR-3 reactor, could be partially based on the mature Virginia design.
- Maximising the rotation of USN submarines through Fleet Base West to support greater training opportunities for RAN submariners.
- Securing regular deployments of Royal Navy SSNs to Australia to provide advanced training of RAN submariners on a British-sourced platform.

Should this be achieved, there are advantages in adopting a design based on a British platform that, as has been agreed, would incorporate critical US elements including command, control, communication and intelligence (C3I) systems and weapons. The British boat is likely to require a smaller crew – Astute has a complement of 98 as against 135 for Virginia. In addition, with Australia being the 'first mover' in constructing the submarines, we should have a greater ability to develop a substantial supply chain with local industry.

Finally, we need to take control of our own destiny. We need to assert a greater agency for Australia in this nation-building endeavour to which we are committing vast resources. Both of our AUKUS partners face substantial challenges in their own submarine programs and cannot be expected to prioritise Australia's SSN acquisition program. Since we need to be the lead nation in constructing SSN AUKUS, the Australian Submarine Agency should take responsibility for the final design of SSN AUKUS, working in very close collaboration with the UK and US.

In terms of construction, both BAES and ASC face challenges. BAES required significant US assistance in delivering Astute. With the best will in the world, its priorities lie with the UK program which will absorb its best resources. ASC has not built a submarine for over 20 years. There are strong arguments for privatising ASC, with a preference for Australian majority ownership by companies with strong engineering and project management capability. It will also be of critical importance to involve General Dynamics-Electric Boat, which already has a relationship with ASC and could be invited to take a shareholding in the privatised company.