



**The Hon Kevin Andrews MP
Minister for Defence**

Reference: MA15-000629

Senator Chris Back
Chair
Senate Standing Committee on
Foreign Affairs Defence and Trade
Legislation Committee
Parliament House
CANBERRA ACT 2600


Dear Senator Back

I write to correct the answer provided in response to Question on Notice No 171 – Future Submarine Project, from the 22 October 2014 Senate Standing Committee on Foreign Affairs, Defence and Trade (SSCFADT) Supplementary Budget Estimates hearing as asked in writing by Senator Xenophon.

During the 25 February 2015 SSCFADT Additional Budget Estimates, it came to the Department of Defence's attention that an incorrect response had been provided to Senator Xenophon from the 22 October 2014 Supplementary Budget Estimates hearing concerning the use of United States (US) weapons on German designed submarines.

The tabled response stated that Defence was not aware of any German designed submarines that carry US weapons. However, Defence can confirm that German designed and exported submarines have been fitted with US weapons, including variants of the Harpoon missile, the Mk 48 Mod 6 AT torpedo (an earlier variant of the Mk 48 Mod 7 torpedo jointly developed by Australia and the US), and earlier US torpedo variants. The corrected response to Question on Notice No 171 – Future Submarine Program is enclosed for tabling in place of the previously provided response.

Of note, the suggestion that assumptions about which submarines could be fitted with US weapons could be a factor in the selection of the Future Submarine is incorrect. The ability to incorporate the combat system and weapons we currently share with the US Navy into submarine designs proposed by potential international partners will be examined as part of the competitive evaluation process. Moreover, such an assessment will not be predicated on what weapons current designs do or do not carry.

Notwithstanding, I take very seriously the provision of information to the Parliament and I have asked the Secretary of the Department of Defence to reinforce with all concerned the requirement for accuracy.

Yours sincerely



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KEVIN ANDREWS MP
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21 APR 2015

Department of Defence

Supplementary Budget Estimates Hearing - 22 October 2014

Question on Notice No. 171 - Future Submarine Program

Senator Xenophon provided in writing:

In relation to the future submarine program:

- (1) How much money has been spent on the future submarine program since it was first mentioned at National Security Committee in 2008?
- (2) How much of this future submarine program money has been spent from the commencement of the current term of government to date?
- (3) With respect to the Submarine Propulsion Energy Support and Integration Facility (SPESIFy) project?
 - (a) Noting the Minister's statement re: Option three and four being "fantasy", what is the status of this program?
 - (b) How much money has been spent on this program to date?
- (4) Please provide the forward estimates for the future submarine program.
- (5) How much (internal to Defence and external to Defence) was spent on the development of that "Future submarine industry skills plan"?
- (6) Why has it taken 6 years for Defence to articulate its future submarine requirements (noting requirements are solution neutral)?
- (7) Noting the Minister's statement to the Senate on 27th August 2014 suggesting the most obvious contenders for supplying our future submarines (and a further explanation provided at Estimates).
 - (a) With respect to interoperability:
 - (i) Do French Navy submarines exercise with US submarines?
 - (ii) Do French Navy submarines exercise with the US Navy Surface Fleet and/or US Air Force?
 - (iii) Do German Navy submarines exercise with US submarines?
 - (iv) Do German Navy submarines exercise with the US Navy Surface Fleet and/or US Air Force?
 - (v) Do Japanese Navy submarines exercise with US submarines?
 - (vi) Do Japanese Navy submarines exercise with the US Navy Surface Fleet and/or US Air Force?
 - (vii) Do the users of French designed submarines exercise with US submarines? viii. Do the users of French designed submarines exercise with the US Navy Surface Fleet and/or US Air Force?
 - (ix) Do the users of German designed submarines exercise with US submarines?
 - (x) Do the users of German designed submarines exercise with the US Navy Surface Fleet and/or US Air Force?
 - (b) What, if anything, is likely to restrict the installation of a US combat system on:
 - (i) A French design of submarine
 - (ii) A German design of submarine?
 - (iii) A Japanese design of submarine?

- (c) Noting Defence's experience with the Collins Replacement Combat System program, what cost, schedule and performance risk does it see in putting a US Combat System on a French, German or Japanese submarine?
- (d) With respect to weapon fits:
 - (i) Do Japanese Navy submarines carry US weapons (e.g. Mk 48s torpedoes [any variant] or Harpoon missiles)?
 - (ii) Do any French designed submarines carry US weapons (e.g. Mk 48s torpedoes [any variant] or Harpoon missiles)?
 - (iii) Do any German designed submarines carry US weapons (e.g. Mk 48s torpedoes [any variant] or Harpoon missiles)?
- (e) With respect to export experience:
 - (i) How many submarines has France exported since the end of World War II?
 - (ii) How many submarines has Germany exported since the end of World War II?
 - (iii) How many submarines has Japan exported since the end of World War II?
- (f) Please provide details of when Australian submariners have sea ridden on:
 - (i) A French design of submarine?
 - (ii) A German design of submarine?
 - (iii) A Japanese design of submarine?
- (8) Would the RAN seek to have a common hardware baseline with the USN for a US Combat System installation on our future submarine?
- (9) The Defence Minister implied at Estimates that Option three and four are a fantasy "Senator, you and I both know that those two options are fantasy". Mr King advised the Senate on 30 September that Defence was still working on Options three and four. Why is Defence working on options that are "fantasy"?
- (10) How much money has been paid to the Swedish Government/TKMS for Collins Intellectual Property needed to progress Option 3? If money has been paid, who authorised the public expenditure?
- (11) Noting submarine capability gap concerns that have been raised by the Minister, has the Department given consideration to an interim solution on the way to a final solution? For example:
 - (a) Scorpene to Conventional Barracuda
 - (b) Type 214/218SG/Dolphin II to Type 216
 - (c) Soryu to next iteration Japanese submarine design
- (12) In relation to Mr King's September 2014 trip to Japan
 - (a) What was the position/role of the staffer from the Department of Prime Minister and Cabinet that travelled with Mr King?
 - (b) Was the Prime Minister and Cabinet staffer invited by Defence, and if so, for what purpose? If not, why did he/she travel with Mr King?
- (13) What agreements have been entered into between Australia and Japan in relation to future submarines, and what are the details of these agreements?
- (14) What formal agreements are in place in relation to the exchange of classified information between Australia and Japan?
- (15) With respect to Air Independent Propulsion submarine solutions and a solely lithium ion battery submarine solution (and assuming a comparison has been

made under option three and four funding), in broad terms, how do these approaches compare with respect to:

- (a) Indiscretion ratio during high speed transit (e.g. 8 to 12 knots)
- (b) Indiscretion ratio during an opposed transit (e.g. nominally 4 knots)
- (c) Indiscretion ratio at nominal surveillance speed (e.g. nominally 4 knots)
- (d) Total submerged time in area (e.g. nominally 4 knots)
- (16) How many people were employed by ASC on submarine construction during the height of the Collins build?
- (17) What is Defence's estimate of the number of Australian's employed on submarine construction during the height of the Collins build?
- (18) Of the total Collins procurement budget, what percentage of the total price was spent in Australia?
- (19) Noting Mr King stated of the future submarine program (in answers to question from Senator Fawcett), "The economic benefit does not normally form part of my area—that is a Treasury function":
 - (a) On what basis did DMO fund Macroeconomic to fund a study (DMOCIP RFT 0315/2012) into the economic benefit of the SEA 1000 project?
 - (b) What weighting does DMO place on Australian Industry Involvement in its procurements?
 - (c) What weighting does DMO place on Australian suppliers getting traction in a submarine designer's global supply chain (say, compared to the F-35)?

Response:

- (1) \$90.520 million has been expended as of 31 October 2014.
- (2) Since 12 November 2013, \$51.730 million has been spent.
- (3) (a) The SPESIFy program is being refined in line with the Future Submarine capability options currently under consideration.
- (b) \$4.833 million has been spent on SPESIFy as of 31 October 2014.
- (4) The Program Forward Estimates are as follows and will continue to be refined subject to decisions made by Government (Price Basis FY 14/15):

14/15	15/16	16/17	17/18	Contingency
\$97.383m	\$41.039m	\$7.121m	\$6.577m	\$41.478m

- (5) The budget for the development of the Future Submarine Industry Skills Plan was \$800,000. The total spend was below that figure.
- (6) Requirements for the Future Submarine are drawn from the Strategic Guidance which is guided by the policy in Defence White Papers. Capability goals for the Future Submarine in the 2009 Defence White Paper were moderated in the 2013 Defence White Paper, which necessitated changes to some requirements for the Future Submarine. The detailed requirements for all Defence capabilities are also

continually refined throughout the capability development process, informed by studies and analysis.

(7) Interoperability is a broad term that refers to 'the ability of systems, units or forces to provide services to, and accept services from, other systems, units or forces and to use the services so exchanged to enable them to operate effectively together'. In a naval context, use of the term interoperability can cover a range of abilities from being able to berth at another country's ports to an ability to seamlessly exchange secure data and operate in complete harmony with another nation's forces.

- (a) (i-x) Defence cannot comment authoritatively on the extent of exercises with US forces involving French, German, and Japanese submarines, including those operated by other nations. The nature of any such exercises would be the subject of bilateral arrangements between those countries and the US, and dependent on the actual level of interoperability permitted by equipment fits.
- (b) (i-iii) Installation of the US combat system on submarine designs from any nation would be dependant on weight, space, power, and cooling allowances to accommodate the system; arrangements to protect classified US technology; and export control considerations.
- (c) Cost, schedule, and performance risks would depend on weight, space, power, and cooling allowances in the submarine design; the thoroughness of integration activities conducted in shore-based facilities; and arrangements for sharing interface data with the designer.
- (d) To the extent that such information can be shared publicly:
 - (i) Japanese submarines carry Japanese torpedoes and the Harpoon missile.
 - (ii) Defence is not aware of any French designed submarines that carry US weapons.
 - (iii) Defence understands that there are a number of German designed submarines that carry variants of the Harpoon missile (Block 1C, 1G, and 2), the Mk 48 Mod 6 AT torpedo (an earlier variant of the Mk 48 Mod 7 torpedo operated by the US and Australia). Mk 14/Mk 23, Mk 37 Mod 2/Mod 3, and NT37 torpedoes, which all pre-date the Mk 48, have also been incorporated into German designed submarines.
- (e) (i) Defence understands that France has exported approximately 20 submarines either as whole boats or designs since the end of WW II.
 - (ii) Defence understands that Germany has exported in the order of 150 submarines as whole boats, kits for assembly overseas, or as designs since the end of WW II.
 - (iii) Japan has not exported any submarines since the end of WW II.
- (f) (i) Australian submariners have not sea ridden French designed submarines since 2001 during *FNS Perle's* visit to Australia.

(ii) Australian submariners have sea ridden German designed submarines on a number of occasions, most recently in a Type 212 in August/September of 2014.

(iii) Australian submariners have conducted a number of visits to Japanese submarines but have not conducted any sea rides.

(8) As is currently the case in the Collins class, as much as possible, Australia would seek to maintain a common baseline in the tactical and weapon control system (known as AN/BYG-1). The torpedo baseline (Mk 48 Mod 7) would be the same.

(9) Since 30 September, Defence has concluded its work on Option 3 – Evolved Collins. Option 4 was originally conceived as a new design conducted in Australia, which has been assessed as not feasible. The option of pursuing a new design from overseas is still being investigated.

(10) \$5 million dollars has been paid to the Kingdom of Sweden for improved access and rights to Collins class submarine intellectual property. This expenditure was authorised under the Implementing Arrangement to the Memorandum of Understanding between the Kingdom of Sweden and the Commonwealth of Australia on capability development and defence materiel cooperation, as signed by CEO DMO in June 2013 along with Director General of the Swedish Defence Materiel Administration.

(11) (a to c) The capabilities of the suggested interim submarines would be less than those of Collins in key areas. As such, their acquisition as an interim solution would not avoid a capability gap and is also likely to increase program costs and complexity given the need to manage several classes of submarine concurrently.

(12) (a) A Senior Advisor (Executive Level 2) from the Department of Prime Minister and Cabinet participated in the most recent visit to Japan over the period 24-25 September 2014. No representatives from the offices of the Prime Minister or Minister for Defence attended.

(b) Representation of the Department of the Prime Minister and Cabinet at submarine discussions with Japan is at the mutual agreement of Defence and the Department of the Prime Minister and Cabinet, and reflects the nature of the engagement.

(13) In relation to submarine cooperation between Australia and Japan, no formal agreements have been entered into.

(14) The Governments of Australia and Japan signed an updated agreement on the security of information on 17 May 2012 that entered into force on 22 March 2013

(Australian Treaty Series [2013] ATS15). This agreement provides for reciprocal protection of classified material exchanged between Australia and Japan.

(15) (a-d) A range of analyses have been conducted; however, results are classified given their specificity in relation to the operating profile of Australian submarines.

(16) Questions relating to ASC employment data (past and present) should be directed to the Department of Finance.

(17) Defence is not aware what percentage of the declared ASC construction workforce were Australian citizens.

(18) Of the Collins procurement budget, including the prime build contract, infrastructure and facilities, and rectification projects, 68 percent was spent on Australian Industry content.

(19) (a) Macroeconomics was contracted to provide expert assistance in data gathering, collation and processing for the development of a Computable General Equilibrium (CGE) economic model.

(b - c) Involvement of Australian industry in DMO procurements is supported through the Australian Industry Capability Program, which aims to:

- provide opportunities for Australian companies to compete on their merits for Defence work within Australia and overseas;
- influence foreign Prime Contractors and Original Equipment Manufacturers (OEM), including Australian subsidiaries, to deliver cost-effective support;
- facilitate transfer of technology and access to appropriate Intellectual Property (IP) rights; and
- encourage investment in Australian industry.

The AIC program is not percentage-based but rather aims to create opportunities for Australian companies to compete on their merits for Defence work on a value-for-money basis.