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INQUIRY INTO NAVAL SHIPBUILDING IN AUSTRALIA

A Submission to the Senate Foreign Affairs, Defence and Trade Committee

Australia would benefit greatly from a domestic naval shipbuilding industry due to the –

- **defence capability this would bring**
- **contribution such a facility would make to skills development and maintenance at all levels, with spill-over benefits to other sectors**
- **support it would give to high technology suppliers of goods and services which would benefit other Australian industries**
- **stimulus it would provide for research in advanced materials, electronics, communications and related fields**
- **favourable impact, direct and indirect, it would have on the present unfavourable trade balance in elaborately transformed manufactures.**

To underpin a viable industry consideration needs to be given to changing the approach to naval vessel procurement, to aim at a continuous-build program rather than intermittent orders. This might need a change in approach to policy by the Australian Government, selling ships after about a 20-year service life rather than the present approach of planning a major mid-life refit and scrapping them after 30-40 years.

The Australian Academy of Technological Sciences and Engineering (ATSE) has more than 700 elected Fellows, consisting of the leading applied scientists and engineers in the country. While having limited specific direct involvement in naval shipbuilding, the Academy has a major interest in the outcomes of this Inquiry, as a positive outcome in support of the industry is entirely consistent with its primary objective of seeking to advance the application of science and technology to the future benefit of Australia.

ATSE believes a viable naval shipbuilding industry is possible in Australia based on past performance (ASC, Tenix etc.) and potential future demand. **[a]** It is one of the types of high-technology, high-skill high-value industries that the country needs to foster. Industries such as this provide flow-on effects to the community at large,

Note – Letters in square brackets **[ ]** refer to the relevant Term of Reference, included on Page 4

through fostering skills acquisition and sophisticated suppliers that are able to be employed beneficially in other areas of the economy.

Ensuring industry viability

The key requirement for a viable industry is to ensure a consistent long-term base workload. No industry can survive on a stop/start order book and while exports can fill in gaps, a base load of reasonably predictable local demand can provide the platform on which a competitive export industry can be developed.

In present circumstances it is difficult to see local (possibly including New Zealand) demand for naval ships with conventional service lives being sufficient to provide a steady workload for (ideally, at least two) shipbuilders. They would either need to become dual-purpose operations, building ships for commercial use, or become so reliant on export that they would be financially very vulnerable without subsidies. Commercial shipbuilding is an extremely competitive business and not particularly sophisticated, so unless a particular niche market can be identified, a shipowner would always look to low-cost, large-scale providers of new ships of which there are many in the Asian region.

The solution to this problem would seem to be a change in policy by the Department of Defence in relation to buying ships. Rather than ordering a new ship for a 30-year life (more likely to be extended to around 40 before scrapping) with an assumption that it would have an expensive mid-life refit costing around half the original cost, ships could be built for (say) a 20-year life and sold before a refit. The total cost to the Government would be similar as there could be a demand for the high quality, well-maintained second hand ships available from Australia. The advantage for the Australian Defence Forces would be a much younger, more efficient average fleet and more up-to-date embodied design and technology than under current policy.

ATSE has not undertaken any independent assessment of the likely future demand or export opportunities for naval ships and has thus not reached a view as to whether more than one shipyard could be viable but sees it essential that there be at least one world-class Australian facility, with a series of secondary, smaller yards able to undertake maintenance and build modules on a competitive basis. It is understood that in Scandinavia the type of continuous-build program advocated here has succeeded in maintaining the skill base and has allowed design and construction capability to continue to evolve.

Cost competitiveness

The Academy notes that, like the production of all major capital items, the cost curve rapidly flattens as volumes increase. Costs cannot be divorced from the demand question and a steady flow of orders to naval shipbuilding yards will spread the establishment overheads, avoid recurring design or manufacturing errors, provide greater negotiation leverage over suppliers, amortise the training costs and reduce labour mobility. It would be particularly helpful if ship-procurement programs could be adjusted to ensure the timing of the order for the first in any class of ships allowed

a sufficient interval before the rest were required, to allow full validation of design, construction and operating features, so avoiding costly later modifications.

Should a steady stream of work be available the Academy has every reason to believe Australian costs and productivity would match the European, American and Japanese yards who would be the alternative suppliers. **[b]**

Even if the first cost paid by the Department of Defence was close to a marginally costed ship from an overseas yard, the availability of the appropriate facilities and skills within Australia would certainly reduce the costs of routine maintenance, repairs and overhauls, meaning the lifetime cost to the ship's owner would be lower. **[c]**. Further spreading of the cost load would be possible if the shipbuilding facility was prepared to form close alliances with countries in the region likely to purchase second-hand ships so that they could undertake the majority of the work modifying them for their new owners.

Spin-off benefits

From ATSE's viewpoint a viable ongoing naval shipbuilding industry in Australia would have a range of ongoing indirect benefits for the economy. **[d]**

- The specialist skills at all levels required for naval shipbuilding would be applicable in a broad range of other industries. The training supplied to support ventures such as this would have a spill-over effect to other high-technology industries with the normal labour turnover providing skilled people.
- The encouragement provided to local component and service suppliers would allow them to seek other markets for their products/services.
- Hopefully the need for proprietary technology not encumbered by restrictive licensing agreements would stimulate research and development efforts in a broad range of electronics, materials, communications etc. fields, contributing to the badly needed expansion of the privately funded applied-research base in Australia.
- Fostering a naval shipbuilding industry in Australia would contribute to a reduction in the major balance of trade deficit for elaborately transformed manufactures, both directly, in the potential export rather than import of ships, but also indirectly, in other goods and services which may be able to be provided viably locally rather than imported.

Conclusion

The Senate Foreign Affairs, Defence and Trade Committee is urged to take a broad view of the question of supporting naval shipbuilding in Australia. All the signs are that a viable industry is possible if steps are taken to manage a consistent flow of work to avoid costly stops and starts during which time skills and other capacity is lost.

Terms of Reference

That the Committee inquire into and report upon the scope and opportunity for naval shipbuilding in Australia and in particular:

a. The capacity of the Australian industrial base to construct large Naval vessels over the long term and on a sustainable basis;

b. The comparative economic productivity of the Australian shipbuilding industrial base and associated activity with other shipbuilding nations;

c. The comparative economic costs of maintaining, repairing and refitting large naval vessels throughout their useful lives when constructed in Australia vice overseas;

d. The broader economic development and associated benefits accrued from undertaking the construction of large naval vessels