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Australia's nuclear-powered submarine option

Tom Lewis²

If Australia is to acquire new submarines, the nuclear-powered, off-the-shelf option would be our best buy. It also may help solve the crewing problem. Here are eight reasons why.

Cost: The United States Navy's Virginia-class submarines are about \$2.4 billion each and are in production now. If we bought six, that would cost \$14.4 billion. For 12, the cost would be \$29 billion – \$11 billion less than the \$40 billion budgeted by Defence for another diesel-electric variant. Some nuclear safety training and bigger bases would be needed, but this may only require a few extra billion dollars.

Proven design: If we bought a nuclear boat off the rack, we would be buying something already in service and it would come with a warranty. The odds are against building another 'one-off' design here and making it work – submarines are extremely complicated pieces of military technology.

Endurance: Nuclear submarines never need refuelling, so can operate at immense distances from port and remain on patrol for months. A diesel-electric's range is limited by needing refuelling and patrol duration is usually measured in weeks.

Undetectability: Upon leaving port, the nuclear boat submerges and remains submerged, helping it to avoid detection. Diesel submarines have to come to periscope depth to take in air to run their diesels and recharge their batteries, increasing their vulnerability to detection.

Speed: Nuclear submarines are capable of immense speed underwater – much faster than surface ships such as destroyers. They can chase enemy vessels, or make high speed runs to position themselves favourably in their path. Diesel submarines cannot do this.

Crew: If we bought boats from America, we might also be able to attract some United States Navy submariners to a new life in Australia, giving us some ready-trained people to blend with our submariners.

Safety: Nuclear-powered submarines just have nuclear engines. They are not nuclear-armed. The nuclear engine is a sealed unit, like a torch battery. America, France, Britain, China, Russia, and India, with Pakistan following soon, all have nuclear submarines. Their engines have been accident-free for decades.

Deterrence: Nuclear submarines are a great deterrent to any enemy wishing to mount a credible invasion of Australia. Once at sea, the submarine can go deep, and stay quiet. The enemy would have to guard against an unseen enemy who could be anywhere. We must retain the idea of having submarines – and we should have the most capable.

Conclusion

To argue against such immense advantages, merely to keep a small submarine-building industry going, is not logical. We would retain a submarine-servicing capability anyway – the nuclear boats would have servicing needs apart from their engines which could be provided here.

We do not need to spend \$200 million on a study to analyse which option to choose. For \$15 billion, and maybe another billion or two for facility modification – a lot less money than presently planned, we could potentially have the most potent strike force in the Southern Hemisphere.

²Dr Tom Lewis, OAM, was a naval officer for 18 years. He is now the Director of the Darwin Military Museum and a military historian – author of 10 books.