

Economics Legislation Committee
ANSWERS TO QUESTIONS ON NOTICE
Industry and Science Portfolio
Budget Estimates Hearing 2015-16
3 and 4 June 2015

AGENCY/DEPARTMENT: AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION (ANSTO)

TOPIC: ANSTO Defence White Paper - Submarines

REFERENCE: Question on Notice (Hansard, 3 June 2014, page 75)

QUESTION No.: BI-2

Senator LEYONHJELM: ANSTO made a submission to the Defence white paper earlier this year. It said that it is part of a team that 'would be well placed to support both the manufacture and maintenance of any submarine built and/or substantially maintained in Australia.' Would ANSTO be well placed to support the manufacture and maintenance of any submarine, which includes a nuclear powered submarine?

Senator Ronaldson: We are lurching towards the hypothetical.

Senator LEYONHJELM: We are not to hypothetical yet.

Dr Paterson: My understanding—and we will take the balance of the question on notice—is that the reference was to conventional submarines and was the use of nuclear techniques to understand stresses in welds. For example, in the neutron scattering environment we have the Kowari-Strain scanner, which is used to understand residual stresses in welds. I imagine it would be issues like radiography and related matters that would allow us to support the development of a national capability to support submarine manufacture.

Senator LEYONHJELM: Okay.

Dr Paterson: We will take the balance of the question on notice.

Senator LEYONHJELM: Good. In that light, I remind you. What I am wondering is whether there is a difference between what you said in that white paper and how you answered a question I previously asked in estimates about whether Australia has the expertise to maintain nuclear powered submarines. You said ANSTO currently does not have expertise in the design and maintenance of reactors on nuclear powered submarines. It would seem to me that, based on your background and the backgrounds of the other gentlemen I referred to, we would go a fairly long way to having that expertise.

Senator Ronaldson: I really think you are now expressing an opinion. Dr Paterson has taken it on notice, but he did frame it around those particular aspects of a construction, not the construction itself, if I understood what he was saying.

Senator LEYONHJELM: I would like to hear Dr Paterson's answer please.

Dr Paterson: I think that what ANSTO seeks to maintain on behalf of Australia is an intelligent observer status rather than a direct engineering capability. Typically a nuclear project like the pebble bed modular reactor turns from being what I would call essentially a scoping and paper exercise when one has about 200 engineers deployed on the project. We certainly do not have that scale of activity. I believe it is absolutely essential—and I have regularly repeated this as something that is important—to understanding the global setting to have people who have experience of the international dimensions of nuclear projects globally. We seek to maintain on behalf of government the ability to assess what is happening globally, but I think that is distinctively different from directly contributing to a substantial engineering project. I want to make that distinction clear.

Senator LEYONHJELM: Thank you for that.

ANSWER

As indicated in the response to question AI-53 and by Dr Paterson in the hearing, ANSTO does not have sufficient expertise in the design and maintenance of reactors on nuclear-powered submarines to provide the engineering capability which would be necessary for their manufacture and maintenance. The full quote from the ANSTO submission to the Defence White Paper process which is referred to confirms Dr Paterson's statement that the reference was to submarines in general: This quote can be found at www.defence.gov.au/Whitepaper/docs/147-AustralianNuclearScience&TechnologyOrganisation.pdf.

The same [ANSTO] team houses capability in the design, manufacturing assessment and structural integrity analysis of large welded pressure vessels, and so would be well placed to support both the manufacture and maintenance of any submarine built and/or substantially maintained in Australia.