

**Senate Standing Committee on Environment and Communications
Legislation Committee**

Answers to questions on notice
Environment and Energy portfolio

Question No: 154
Hearing: Budget Estimates
Outcome: Outcome 3
Program: Australian Antarctic Division (AAD)
Topic: Level of scrutiny
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Senator Xenophon asked:

Dr de Brouwer: Can I just follow up Dr Gales's response with two elements. The discussion around the design, build, operate and maintain model was also premised on the experience with the Aurora Australis, where the design and build is separate from the operate and maintain. The attraction of a unified DBOM model is that it is incentive compatible with the design and build elements with the operate and maintain. That is, the people who design and build do not pass off some of the risks to the operate and maintain elements of the contract. So there was a very strong attraction to the DBOM model. That was also subject to very extensive scrutiny from the Department of Finance and from central agencies.

Senator XENOPHON: Can you provide on notice what that level of scrutiny was and what those benchmarks were?

Dr de Brouwer: Yes, I will. There were also extensive cabinet processes built around that with the evaluation from the central agencies and Finance.

Answer:

Scrutiny

The procurement process was subject to the capital funding approval process established by Australian Government, through which the Department has made multiple submissions to two Governments under this process. Central agencies have reviewed the process at each submission, and the Department of Finance has provided an extensive level of scrutiny on multiple occasions during the procurement process. Through this process, the decision to adopt a design, build, operate and maintain procurement model was subject to scrutiny over an extended period of time.

In 2012, Government considered a 'first pass' submission for the research supply icebreaker, which formed part of a broader submission by the Department in relation to Antarctic logistics. The Department's preference for design, build, operate and maintain model formed part of the initial business case. This 'first-pass' was scrutinised by the Department of Finance as part of the submission process to Government.

Department of Finance also provided further scrutiny during the finalisation of the non-binding request for proposal prior to it being issued to the open market in January 2013.

In July 2013, after the Department had completed the request for proposal evaluation process, the Department's second submission to Government, seeking approval to progress to a pre-qualified request for tender on the basis of a design, build, operate and maintain procurement model, was scrutinised by Department of Finance and reviewed by other central agencies.

In early 2014, the Department's submission to the new Government, which effectively replicated the previous second submission in July 2013, was scrutinised by the Department of Finance, and reviewed by other central agencies.

Department of Finance also reviewed the request for tender documentation prior to it being issued in July 2014.

In late 2014, when one of the two tenderers indicated that it was withdrawing from the process, the Department consulted with Department of Finance with regards to the Department's proposed approach to evaluation of a single tenderer.

In 2015, after the Department had completed the tender evaluation process, the outcomes and the tendered costs were scrutinised by Department of Finance as part of the Department's submission to Government seeking a final investment decision.

In 2016, after the Department had completed the contract negotiations, the outcomes of the contract negotiations were reviewed by the Department of Finance, as part of the Government's validation process.

The project is also subject to the scrutiny of the Australian Government assurance review process for major projects (commonly known as Gateway), which is managed by the Department of Finance. The Gateway review process was established to strengthen governance and assurance practices and to assist non-corporate Commonwealth entities to successfully deliver major projects. The process involves a series of defined 'gateway' reviews conducted by an independent review team using an established review methodology with established criteria to assess the performance of major projects at key milestones throughout the life of a project.

To date, the Research Supply Icebreaker Project has been subject to: Gateway 0 - Business need review (completed in 2011), Gateway 1- Business case review (completed in 2013), Gateway 2 - Delivery strategy review (completed in 2014), Gateway 3 - Investment decision review (completed in 2015), and a supplementary Gateway review (conducted in 2016).

The Department has met the objectives and criteria of each Gateway review to date, and the Department has requested that further supplementary Gateway reviews be undertaken prior to the formal Gateway 4 – Readiness for service review which is to be conducted in early 2020.

Benchmarks

In early 2012, the Department commissioned global maritime consultancy BMT Technology & Design Pty Ltd to develop a capability development document, including a preliminary operational concept document, a preliminary functional and performance specification, and subsequently to develop a parametric life-cycle cost estimate model.

BMT Technology and Design are a leading marine engineering consultancy who have provided similar services to the Department of Defence. Based in Australia, they have access to the broader global BMT group. They used methods and techniques in line with cost estimating guidelines and practices endorsed by the US Naval Sea Systems Command (NAVSEA), the NATO Research and Technology Operation, and the UK Ministry of Defence.

Their parametric cost estimate model used an extensive database of over 200 vessels, including ice class vessels and research vessels with similar characteristics to the Department's requirements, to develop a cost estimate tool. The methodology reflected the complexity required to develop an initial cost estimate for a multi-purpose icebreaker and incorporated various scoping options that the Department was considering at that time.

As a result of this modelling process, and using the Department of Finance budgeting parameters, the Department determined its initial cost estimate of \$609 million (\$459.5 million plus a contingency of \$149.5 million), for the acquisition a single ship under a *Government funded/ Industry built/ Industry operated model*. The whole of life cost was estimated to be around AUD\$2.56 billion for a single Research Supply Icebreaker that could meet the current and future needs of the Australian Antarctic Program for a period of 30 years.

The Department (supported by BMT) completed further analysis prior to, and following the completion of, the Request for Proposal process conducted in 2013.

In July 2013, informed by the outcomes of the Request for Proposal process, the Department was able to finalise the key functional requirements and reduce the cost estimate benchmark down to AUD\$400.5 million in total. The whole of life cost estimate was also reduced from AUD\$2.56 billion to around AUD \$1.83 billion.

In April 2014, the new Government approved that the procurement process should continue based upon the design, build, operate and maintain procurement model and the same key technical specifications. By this time the estimate of AUD\$400.5 million had been revised to AUD \$467.2 million (as noted in the ANAO Report), and the overall benchmark for project's whole of life cost was revised to around \$1.98 billion. These variances were due to movements in foreign currency parameters during the timeframe between the submission to the previous Government in July 2013 and the new Government in April 2014. This was all done in consultation with Department of Finance.

In March 2015, DMS Maritime Pty Ltd tendered a price of \$454.3m for the design and build of the new Research Supply Icebreaker, comprised of a fixed-price amount of AUD\$74.6 million, plus a fixed-price amount of €261.3 million. The tendered price to operate and maintain the research supply icebreaker was an average price of AUD\$29.3 million per annum, exclusive of fuel and insurances.

In 2015, to support the single tender evaluation process, the Department requested KPMG to prepare an independent cost estimate benchmark for the new research supply icebreaker. KPMG developed a data base of 56 ships and from this selected a subset of 28 ships of which 70% had icebreaking functionality and the balance were research vessels. This extensive process produced a price range of between \$304.2m and \$454.5m to design and build the new research supply icebreaker, and an average price of \$27.5 million per annum to operate and maintain the research supply icebreaker, exclusive of fuel and insurances.

The Department has full confidence in the capability of KPMG to undertake an independent cost estimate benchmarking process, and refers to the strong response that KPMG submitted to ANAO in relation to potential misunderstandings around the KPMG benchmarking process.

Design and Build outcome

The tendered price of \$454.3m to design and build the new Research Supply Icebreaker was:

- \$154.7 million lower than the initial cost estimate benchmark of \$609m (this being \$459.5 million plus AUD\$149.5 million contingency), which the Department had established in 2012 from the initial BMT Technology & Design cost-modelling.
- \$12.9 million lower than the Department's 2014 cost estimate benchmark of \$467.2 million, provided to Government in 2014 prior to the request for tender being issued.

- within the independent cost estimate benchmark range of \$304.2 million to AUD\$454.5 million established by KPMG for the Department.

Through subsequent contract negotiations, the tendered price was reduced by AUD\$14.7 million, primarily due to \$14.3 million negotiated savings in the DMS Maritime Pty Ltd project management fees. This saving was used towards funding the negotiated cost increase of €15.1 million which was due to design improvements sought by the Department; a range of other contractual benefits successfully negotiated; and design & build subcontractor's cost of time due to extended negotiations. The project contingency was purposely applied to incorporate these design improvements into the fixed-price contract to avoid costly modifications and delays in the design phase.

The contract price to design and build the new research supply icebreaker comprises of the fixed-price of \$59.9 million plus the fixed amount of €276.43 million. At the time of contract signature this equated to \$488 million, but actual milestone payments in euros will be subject to foreign currency exchange rate variation.

It should be noted that since the initial cost estimate benchmark was established in 2012, foreign currency exchange rate variations have had a material effect at various times on the prices. Reporting on actual total amounts in Australian dollars only can be misleading over extended periods of time due to foreign currency exchange rate variations. For example, the \$488 million at the time of contract as stated in the ANAO Report would equate to approximately \$447.5 million on the date the ANAO Report was issued.

Operate and Maintain outcome

The tendered price to operate and maintain the research supply icebreaker was an average price of \$29.3 million per annum, exclusive of fuel and insurances. This was \$1.8 million above the KPMG benchmark average of \$27.5 million per annum.

The request for tender had sought to incorporate an enhanced level of satellite broadband communications for scientific research purposes to be inclusive in the contract costs. The tendered price for these enhanced satellite broadband communication services was assessed as not being value for money and that simply by removing the enhanced satellite broadband communications from the contract and continuing with the current arrangements, comparatively, the Department would save approximately \$2.1 million per annum.

This reduced the average annual price to operate and maintain the research supply icebreaker from \$29.3 million per annum down to \$27.2 million, exclusive of fuel and insurances, which is less than the KPMG benchmark average of AUD\$27.5 million per annum.

Through contract negotiations, the Department also secured further savings. The contracted price to operate and maintain the research supply icebreaker is an average of AUD\$26.7 million per annum, exclusive of fuel and insurances. This is \$2.6 million per annum lower than the tendered price and is also \$0.8 million per annum lower than the KPMG benchmark.