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JOINT STRIKE FIGHTER PROGRAM COSTING DATA ***AN ANALYSIS BASED ON SUBMISSIONS TO THE JSCFADT INQUIRY*** ***INTO AUSTRALIAN AIR SUPERIORITY***

The inaugural Defence Capability Plan (DCP 2001-11), one of the first initiatives in a long line of reforms in Defence capability development and acquisition since the Defence 2000 White Paper, listed the Project Air 6000 - New Air Combat Capability (NACC) budget at between A\$11,500 million and A\$15,500 million. The latest capability plan (DCP 2006-16) lists the NACC budget to be the same – between A\$11,500 million and A\$15,500 million. In either case, the ‘pedigree’ of the dollars is not stated. The reader is left to wonder whether these budget figures represent an estimate of the monies that will be required at the time of purchase, known as ‘current year’ or ‘then year’ dollars, or are expressed in the dollar value applicable at the time when the budget was calculated. The latter are called ‘base year’ dollars.

Since the figures have not changed since 2001 and considerable time, resources and monies have been expended in the due diligence of this project, one could reasonably presume these figures to be estimates of the monies required at the time of purchase, that is ‘current year’ or ‘then year’ dollars. If correct, such an observation would certainly be in keeping with the notion of prudent fiscal planning that is underpinned by Commonwealth Procurement Guidelines, the Financial Management Act of 1997 and Treasury Regulations.

However, any such observation does not appear to be supported by either the facts or the advice from Defence to the Joint Standing Committee on Foreign Affairs, Defence and Trade (JSCFADT).

In their Submission No 27 tabled on 31 March 2006, Defence advised the JSCFADT inquiry into Australian air superiority:

“The F-35 AUPC (Average Unit Procurement Cost) is made up as follows:

- *The total procurement budget for the F-35 is US\$154.3B (2002 prices).*
- *This is for 2,458 aircraft.*
- *The AUPC for the US program is therefore US\$63m per aircraft (2002 prices).*
- *This is approximately US\$67.3m per aircraft in 2005 prices.*

Note: This is the average cost for all 3 variants; the Australian preferred CTOL is the least expensive variant.”

In Submission No 27, Defence also advises that:

“AUPC refers to the average cost of aircraft plus ancillary equipment, logistics support, training equipment and spares. It does not include development or facilities costs.

It is based on the US production schedule and does not include Australian specific project requirements such as weapon costs, contingency allowance etc. Hence this is not an Australian unit project cost but is indicative of the relative cost of the system versus other systems.”

In responses to Defence since 2002, in keeping with the requests from senior Defence officials for Industry to provide feedback, and submissions to the JSCFADT in 2004 and more recently to this inquiry, the costing information provided by Defence has been challenged. Such challenges have been mounted on the basis of rigorous analysis and the application of standard due diligence processes. The founders of Air Power Australia have always maintained that the costs of the Joint Strike Fighter will be significantly more than the “US\$45 million per aircraft” recited by senior Defence officials whenever asked how much the JSF will cost by various parliamentary committees and members of the Parliament.



On page 66 of its submission to this inquiry dated 15 May 2006, Air Power Australia states -

“If one wishes to refer to the term ‘price’, then the more correct figure to use would be in ‘current year’ dollars. Therefore, the Average Unit Procurement Cost (AUPC), based on the figures provided in the SAR of December 2005, would be around US\$94.08 million.”

and

“The unit procurement cost for LRIP Phase 4 Block 1/2 aircraft is currently estimated, from US DoD budgetary figures, to be somewhere between \$US114.1 million and \$US136.8 million.”

Current Defence plans have Australia buying JSF aircraft quite early in the program from Stage 4 of the Low Rate Initial Production (LRIP) in 2012. There is a MEDIUM HIGH probability that LRIP Stage 4 production will slip to the right by at least one year due to Congressional budgetary constraints on such program activities as funding for the procurement of long lead time items.

In a recently released update of the Congressional Research Services (CRS) report to the US Congress, dated 02 June 2006, the following statement in relation to JSF costings is made:

“The average procurement cost (APUC) (which does not include R&D or other ‘sunk’ costs) is estimated at \$94.8 million per aircraft in then-year dollars.

The December 2005 SAR also notes that the JSF program has breached a ‘Nunn-McCurdy’ cost growth limit: unit cost growth over 30% of the original Acquisition Program Baseline. The latest PUAC (*Editor’s Note: Program Unit Acquisition Cost which includes R&D and other ‘sunk’ costs*) and APUC cost estimates are, respectively, 32.8% and 31.3% higher than cost estimates made in October 2001.”

This [CRS Report is attached as Enclosure 1](#) to this analysis. Other extracts from this CRS report to Congress that are relevant to this analysis include -

Page CRS-4:

“All JSF planes will be single-engine, single-seat aircraft with supersonic dash capability and some degree of stealth (low observability to radar and other sensors).”

Page CRS-10:

“Both House and Senate authorisers objected to DOD’s plan to eliminate the F136 Alternate Engine and added JSF R&D funds to continue the program. Similarly, both House and Senate authorisers expressed concern about the overlap between JSF testing and JSF development, and reduced procurement funds accordingly.”

Page CRS-16:

“Noting the JSF’s projected cost as well as past experience with new aircraft programs, Congressional Budget Office (CBO) analysts have suggested options that would either cancel development of the JSF, reduce procurement of the aircraft, or alter the types developed and their distribution among the services. CBO analysts have identified a number of alternatives to developing, procuring, and using JSF aircraft as currently proposed. These alternative options include reliance on modification of current fighter/attack planes already in operation or expected to be in service soon, such as the Navy F/A-18E/F and the Air Force F-22A, as well as procuring fewer JSFs than proposed or none of these aircraft, with their place being taken by F-16s, AV-8Bs, and F/A-18E/Fs.”

Page CRS-17:

“Lockheed Martin has initiated a study, and has briefed initial results to Air Force officials, of a radically modified version of the Raptor called the FB-22 (Fighter/Bomber). The purpose of this variant would be to significantly increase the F-22A’s air-to-ground capabilities; primarily through a redesign that would double the aircraft’s range, and significantly increase the aircraft’s internal payload. These improvements would likely result in some performance trade-offs, such as reduced acceleration and manoeuvrability. ... How this multi-role aircraft would compete with - or conversely compliment <sic> - the JSF has not yet been determined.”



The combination of the positive outcomes achieved through the study referred to in this latter extract combined with the plan in the recently completed [Quadrennial Defence Review \(QDR\) Report for a long range strike capability by 2018](#) is seen to present significant risk to the JSF Program which, in turn, is seen by many to be 'neither fish nor fowl' in terms of meeting future capability needs.

Finally, returning to the issue of JSF costs and the significance of the term Average Unit Procurement Cost. Aircraft bought late in the production program should be able to be procured for less than the AUPC. Aircraft bought early in the production program will cost more than the AUPC. Aircraft bought quite early in the production program, during the LRIP, will cost significantly more than the AUPC and will carry the additional cost burden of needing upgrades to meet the final production configuration and incorporate changes resulting from the flight test program.

If Australia were able to buy the JSF at the currently estimated Average Unit Procurement Cost of US\$94.8 million per aircraft, then the planned 100 aircraft systems would cost about US\$9,800 million. At a risk hedged exchange rate of 0.7000, this would equate to some A\$14,000 million. To obtain the overall project cost for Air 6000 (NACC), Defence advice is that the 'Australian specific project requirements' which include infrastructure, weaponry and project management costs need to be added on to the cost of the aircraft. A conservative estimate of A\$2,000 million for these 'Australian specific project requirements' puts an estimate of the overall project cost for Air 6000 (NACC) at A\$16,000 million, exceeding the top budget figure by half a billion dollars – no small amount of tax payer dollars. Such a figure is predicated on Australia being able to buy the JSF at the currently estimated Average Unit Procurement Cost.

A more prudent approach would be to use the Unit Procurement Cost that would apply at the time Defence plans to buy the JSF. However, Defence has not provided this information to the Committee. Therefore, using the average of the costs based on GAO Report No 06-356 of 15 March 2006 and US Congressional budgetary data, a more realistic estimate of the unit procurement cost, supported by independent analysis, would be US\$125.45 million and 100 aircraft systems would cost US\$12,545 million. At a risk hedged exchange rate of 0.7000, this would equate to some A\$17,791 million, putting an estimate of the overall project cost for Air 6000 (NACC) at over A\$19,700 million. Such a figure does not make any allowance for further cost increases or schedule delays in the JSF Program which, given where the program is in terms of the 'development risk curve', are inevitable.

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10 June 2006

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“Air Power Australia – Defining the Future”

Enclosure 1:



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