



Lockheed Martin Flickr site.

An F-35A on a night mission over Edwards Air Force Base, California, 25 April 2013.

PROCUREMENT AND THE PERFECT STORM

Martin Shadwick

It is a depressing but reasonable assumption that the myriad controversies associated with defence procurement in relatively-recent years (i.e., EH101, *Cyclone* and F-35, AOPS [Arctic Offshore Patrol Ship] and the *Victoria*-class submarine, and the CCV [Close Combat Vehicle] and assorted truck programs) have convinced an increasingly skeptical, if not cynical, public that it is virtually impossible to bring major—and many not so major—defence procurement projects in on time, on budget, and on specification. Concurrent and often messy, but clearly necessary debates over the perceived usefulness and cost-effectiveness of proposed (or aborted) acquisitions, competitive tendering versus sole-sourcing, the appropriate level of Canadian industrial benefits, and the place of defence procurement in a broader Canadian industrial strategy, the politicization of defence procurement, the utility and veracity of life-cycle costing that extends out multiple decades, and how best to reform what is clearly a dysfunctional defence procurement system must further stoke public unease. The only real certainty in this unsettling environment is that the analysis of defence procurement should continue to provide continuity of employment for the Office

of the Auditor General, the Office of the Parliamentary Budget Officer, and assorted ‘think tanks,’ journalists, and pundits.

This is not to suggest that fireworks over defence procurement are something new to the Canadian political and military experience. Indeed, controversies and scandals over defence procurement are as old as the country itself. Nor is it to deny that one can find procurement success stories mixed in with the flotsam and jetsam of failed or blighted procurements. The Diefenbaker government’s handling of the *Arrow* cancellation was breathtakingly clumsy, but the same government did make the eminently sensible and cost-effective decisions to acquire the *Hercules* and the *Sea King*. The Trudeau government parked brand new CF-5s, flirted with the diminutive *Scorpion* direct-fire support vehicle, and encountered some decidedly awkward moments during the Long-Range Patrol Aircraft (LRPA) program, but did better with the Canadian Patrol Frigate, and, in particular, the CF-18 *Hornet*. Success stories during the Mulroney era arguably included the *Coyote* reconnaissance vehicle and ADATS, but it miscalculated on SSNs, and was ultimately forced, on financial grounds, to scupper almost all the procurement initiatives outlined in its barely one-year-old white paper. The financially strapped government of Jean Chretien

controversially (and expensively) ‘axed’ the EH101 helicopter inherited from the Tories, but its performance on the procurement four-pack outlined in its 1994 white paper (ultimately the LAV III light armoured vehicle, the *Cormorant* search and rescue helicopter, the *Victoria*-class submarine and a new replacement for the *Sea King*) ranged from very good, to poor, to thoroughly embarrassing in the case of the *Sea King* replacement. The latter was, in essence, passed to the Martin government, but the resulting *Cyclone* has itself come down with a nasty, perhaps even fatal, case of the maritime helicopter blues (a global malady not confined to helicopters selected by Canada). The Harper government had successes with the C-17A, the C-130J and the *Leopard 2*, but has fared less well on other projects (i.e., AOPS, JSS, CCV and FWSAR [Fixed-Wing Search and Rescue]). Some of the latter, in fairness, were projects inherited in imperfect form from previous Liberal governments.

Nor is this to suggest that Canada has some form of perverse monopoly on ill-conceived, over-budget, much-delayed, unduly politicized, or poorly managed defence procurement programs. We may have a special gift for turning defence procurement gaffes—or perceived defence procurement gaffes—into some form of spectator sport, but even the most cursory survey reveals that we have lots of international company when it comes to less-than-stellar defence procurement choices. Any nation state that has purchased so much as an automatic rifle has procurement horror stories. For every successful defence procurement program, there are any number of F-111Bs, *Sergeant Yorks*, or airborne early warning *Nimrods*.

It is to suggest, however, that if Canadians have fundamentally lost faith in the defence procurement process—and, more broadly, in the equipment choices being made for Canada’s armed forces—then the timing could not be much worse, given the need for the phased recapitalization of virtually the entire Royal Canadian Navy, very significant components of the Royal Canadian Air Force, and substantial elements of the Canadian Army. The challenges to the survival of a multi-purpose, combat-capable, tri-service defence establishment multiply when one takes note of the lack of a broad national consensus over future Canadian defence priorities. What, indeed, are Canada’s armed forces to do at a time when traditional pillars—such as our links to NATO and the United Nations—have been significantly eroded, or, in the case of such long-standing quasi-military and non-military roles as fisheries surveillance and search and rescue, been lost to privatization or semi-privatization? Will an economy that *may* or *may not* be inherently strong be able to underwrite the cost of a multi-purpose, combat-capable, tri-service defence establishment, or will we inevitably be confronted with some exceptionally painful military and defence policy trade-offs? The ‘New Zealandization’ of national defence, or some Canadian variation of New Zealandization, is not necessarily off the table. Loss of faith in a dysfunctional defence procurement system, heightened levels of sticker shock, uncertainty or a lack of consensus on broader national defence priorities, and reduced fiscal resources in a weakened economy, each spell trouble for the

defence of Canada. Combined, in a perfect storm-style package, they constitute an even more serious challenge.

In the meantime, there has at least been some meaningful progress on a number of procurement fronts. In June 2013, Ottawa announced the selection of a Canadianized variant of ThyssenKrupp Marine System’s *Berlin*-class support ship to replace the aging Auxiliary Oiler Replenishment (AOR) ships *Protecteur* and *Preserver*. In the Joint Support Ship (JSS) competition, the well-proved and comparatively low-risk *Berlin*-class—*Berlin* and *Frankfurt am Main*, commissioned, in 2001 and 2002 respectively, and the substantially newer *Bonn*, commissioned in 2013—prevailed over a new design from BMT Fleet Technology. The *Bonn* incorporates lessons learned from a decade of experience with its sister ships, including a different power plant, and it forms the basis for the Canadian variant. Published design drawings of the Canadian variant show a variety of alterations, including fore and aft *Phalanx* close-in weapon systems, but intriguingly, do not show one of the distinguishing characteristics of the *Berlin*-class: a second heavy crane and removable, multi-purpose (i.e., hospital) modules immediately forward of the bridge. Their omission presumably reflects the lack of a stated Canadian requirement (and/or funding), but it would seem inordinately prudent to install, or, at the very least, make ‘fitted-for-but-not-with’ provision for the utilities (i.e., HVAC, plumbing, and electrical) necessary to support removable medical or other (i.e., joint communications) modules. This clearly would not make them genuine Joint Support Ships—that designation remains a misnomer—but it would give them a stronger claim to AOR+, as opposed to straight AOR status. There has, it must be noted, been some criticism that the *Berlin*-class ships, by comparison with the *Protecteur*-class, offer only two RAS (replenishment at sea) masts, reduced helicopter capacity (two rather than three medium helicopters), and less fuel for replenishment. Ottawa’s official response to the latter is that the amount of offload able fuel is “similar,” since the *Protecteur*-class cannot “discharge its full payload without creating stability challenges.”



Wasserbild Canada JSS submission by Thyssen Canada.

The belated decision to move forward with the two *Berlin*-class vessels is welcome (a third such vessel is theoretically possible, but at this point unlikely), but two points should be stressed. First, the passage of time between the first glimmers of the ALSC and JSS programs in the early-1990s, and the delivery of the second Canadian ship from Vancouver Shipyards means that we will have taken almost 30 years to replace two AORs with two AORs. The

mind boggles at the amount of wasted time, energy, and money. Second, by acquiring what are still essentially AORs, and failing to supplement them with a vessel or vessels better-suited to sea-lift and multiple forms of credible support to joint forces ashore, Canada will continue to be markedly and dangerously out of step with long-established trends in foreign navies.

Contract definition on the proposed fleet of Arctic Offshore Patrol Ships (AOPS) is moving forward, albeit accompanied by increasing media and *other* attention to what are characterized as unduly high costs for comparatively modest vessels. This observer has long been wary of the complex tradeoffs inherent in a hybrid design, such as the AOPS, but has remained cautiously supportive on the grounds that a two-ocean navy is frankly ludicrous in a three-ocean country. Each capability ‘walkback’ in the AOPS design, whether for financial or other reasons, has eroded that support. One is hard-pressed to disagree with Ken Hansen’s recent lament over the progressive loss of volumetric space and fuel capacity in the AOPS. Writing in Vol 9, No 1 (2013) of the *Canadian Naval Review*, Hansen acknowledges, “...it is understandable that naval force planners would seek to maximize the number of [Arctic Offshore Patrol Ships] derived from the fixed funding envelope by reducing capabilities in the design. Numbers provide the most flexibility for scheduling operations and reduce the risk of not having an asset available when unexpected tasks arise. However, the austerity and severity of the northern maritime environment places a premium on size, capacity and self-contained support capabilities unlike anything the navy has experienced since [HMCS *Labrador*] left the fleet [in 1957]. It is evident that the lessons of that era have not been translated and internalized into doctrine by the current generation of naval leaders.” In his candid and thoughtful analysis, Hansen concludes, “...that the navy views its role in the Arctic as a sideshow that threatens to drain away resources from traditional capabilities.”

One is sorely tempted to suggest starting afresh on AOPS, perhaps by separating the Arctic and offshore requirements into two classes, but this would unleash any number of political, industrial, operational, and financial ramifications. Prioritizing *quality* over *quantity* by capping AOPS procurement at four hulls would address some issues but generate others, particularly on the offshore requirement. A naval abandonment of the Arctic would please some, both inside and outside of the Royal Canadian Navy, but would be painfully shortsighted, would not automatically free up funding for other naval priorities, and clearly would not endear the RCN to the Harper government. There are, perhaps, only two certainties: First, that the current AOPS approach is flawed in various respects, and second, that there is no quick and pain free fix to those flaws.

The air force side of the procurement ledger has been relatively quiescent of late, in part, perhaps, because of a certain amount of media battle fatigue on the F-35 file—just keeping up-to-date

on global F-35 developments is now a full-time occupation—but primarily because the Harper government’s decision to examine additional fighter replacement options has, at least temporarily, blunted criticism of the F-35. Ever increasing controversy over the National Shipbuilding Procurement Strategy (NSPS) has also diverted media and other attention from fighter procurement. The original issues that surrounded the proposed acquisition of the F-35—the need or perceived lack of need for such an aircraft, its unit cost, and its life-cycle cost (inevitably a weighty consideration in stealthy designs)—have most assuredly not gone away, however. There is no question that the CF-18 must, in due course, be replaced, but it is difficult to shake the conviction that the Americans would have done themselves, and their allies, a substantial operational and financial favour if they had not attempted to develop disparate USAF, USN and USMC variants from one common platform. At the very least, the specialized needs of the USMC should have been addressed by a different aircraft. Canada and other nations are now confronted with an awkward choice between the fifth-generation F-35—an aircraft with pricing issues and a single engine, but very intriguing ISR and other capabilities—and less stealthy and less ‘future-proof,’ but still very potent generation 4.5 candidates, such as advanced versions of the F/A-18E/F *Super Hornet*. This observer suspects that the F-35 will ultimately prevail in Canada, but at a reduced fleet size that could render it something of a pyrrhic victory for its proponents.



A Canadian Armed Forces CH-147F *Chinook*.

DND photo FA2013-2001-01

On other fronts, CH-147F *Chinooks* continue to flow into 450 Squadron, thereby restoring a capability that should not have been lost in the first place, while multiple reports suggest that additional *Auroras*, perhaps four, will be upgraded and life-extended. This most welcome development would extend the service life of the maritime patrol/ISR fleet, and thereby remove the need for an early decision on a replacement (or replacements, since UAVs will no doubt factor in to some degree). Many will see the P-8 *Poseidon* as the obvious choice, but one suspects that an *Aurora* replacement competition could well resemble the LRPA contest of the 1970s, when there were questions about how much (if any) ASW capability to include and pressures to pursue made-in-Canada

options. Cue Bombardier's Q- and C- Series. Urgently required is visible and quantifiable progress on the FWSAR successor to the *Buffalo* and *Hercules*—primarily to restore some measure of credibility to Canada's SAR system, but also to help restore a modicum of credibility to defence procurement in Canada. To a far greater degree, the restoring of a modicum of credibility also demands prompt and definitive action on the *Cyclone* maritime helicopter. If the *Cyclone*'s issues can be satisfactorily rectified in an acceptable time frame, fine, but if a third *Sea King* replacement program is required, credibility with respect to procurement strategy will be seriously undermined.

Canadian Army procurement tends to generate far less attention than RCAF and RCN programs, partly because of the generally lower cost of army materiel, partly because army materiel is seen to lack the inherent cachet of aircraft and ships, partly because some army equipment is, by definition, so multi-purpose that it is required regardless of whether one seeks a combat-capable army or a constabulary/peacekeeping army (trucks, for example), and partly because the army has been able to quietly and competently manage such projects as the M777 howitzer (procurement of which straddled the Martin and Harper eras). The conclusion of Canada's combat role in Afghanistan also reduced media attention in this area. This is not to suggest, however, a shortage of contentious, tortured, and much-delayed army procurement programs. The repeated delays in acquiring standard military pattern logistics trucks, an important element of the Harper government's mobility package of 2006, beggars belief.

Delays and other controversies also have dogged the more recent Close Combat Vehicle. Publicly unveiled in 2009, the CCV

program seeks to provide Canada's land forces with "a medium-weight armoured vehicle that is both highly protected and tactically mobile. The CCV will bridge the gap between the current light (5-25 tonnes) and heavy armoured (45 tonnes +) vehicle fleets, therefore providing the Canadian Army with an operational capability that can operate in intimate support of the Main Battle Tank or independently within a high-intensity environment." In a September 2013 report for the Canadian Centre for Policy Alternatives and the Rideau Institute, authors Michael Byers and Stephen Webb urged that the CCV be cancelled because it "...is based on outdated Cold War tank doctrine," and "...would duplicate a capability Canada already possess as a result of the recent LAV III upgrades." The savings, approximately \$2 billion, would be used to mitigate the effects of budget cuts on training. Although the rationales for cancellation are not necessarily identical—some of the technical and tactical conclusions of the report could certainly be challenged—cancellation of the CCV has also been recommended by some retired officers, and, reportedly, by the army itself. The Harper government may well resist such advice on the grounds, as journalist David Pugliese has observed, that cancellation "...would give it yet another military procurement black-eye." Perhaps, but the savings from cancellation—or from deferral of the CCV—could arguably be put to better use.

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DND photo LX2013-002-050 by Master Corporal Dan Pop

The Department of National Defence receives its first modernized LAV III in London, Ontario, 24 January 2013.