



# ***The Canadian Defence Policy Review***

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## Could Trump Close the Door on Canada and BMD?

***For Canadians keen on joining the American strategic-range ballistic missile defence system, the Administration of Barack Obama seemed to present the perfect opportunity. Under a president much-admired by Canadians, opposition to signing on to a huge, expensive, and highly controversial Pentagon program would arguably have been considerably muted. Added to that, North Korea's apparently inexorable progress towards mating a credible intercontinental ballistic missile with a nuclear warhead might have been expected to spark more intense Canadian interest in protection efforts. But there has never been a groundswell of public support for Canadian involvement in ballistic missile defence, so the issue only got as far as the new Liberal Government asking Canadians, in the context of the Defence Policy Review, whether this might be the time for Canada to pursue a direct role in North American missile defence. And Canadians seem to have responded with continuing ambivalence, an ambivalence likely to turn into outright rejection with Donald Trump's arrival at the White House. And if that is not enough to close the door on Canada and BMD, last year's report by the American Union of Concerned Scientists on the still unproven strategic missile defence system should do it.***

In 2005 the Government of Paul Martin<sup>1</sup> declined to become a partner in the US strategic ballistic missile defence system (BMD)<sup>2</sup> – the core of that system being 30 interceptors (four in California and 26 in Alaska<sup>3</sup>), with another 14 to be added in Alaska, designed to launch non-explosive warheads (kill vehicles) into space to collide with and destroy attacking nuclear warheads headed for the United States. In 2014 a Committee of the Canadian Senate recommended that Canada become a partner in the system,<sup>4</sup> and in 2015 the Government of Stephen Harper indicated some openness to revisiting the 2005 decision.<sup>5</sup> In part, the interest in re-opening the BMD question for Canada was linked to the recognition that the North Warning System, a string of radars across the American and especially the Canadian Arctic to detect incoming aircraft (notably Soviet nuclear bombers during the Cold War), was coming due for replacement and possible upgrading to include ballistic missile detection and tracking. Also in 2015, a University of Ottawa paper by academics and some former officials and politicians urged Canada to join the BMD operation and to try to persuade the US to shift the system's command and control to NORAD, the North American Aerospace Defence Agreement.<sup>6</sup> Thus, the public consultation background for the Defence Policy Review asks whether the 2005 decision should be revisited “given changing technologies and threats,” whether BMD participation would “offer an avenue for greater continental cooperation,” or whether there might be “more effective” ways to “protect the North American continent?”<sup>7</sup>

The Government's summary of defence review roundtable discussions points to ongoing ambivalence. There is said to be "general agreement that Canada must play a role in mitigating any nuclear threat," but also differing views on how that might be done. Some Canadians do think BMD should be part of that effort, but others doubt that BMD would offer significant protection and fear that it could trigger "a renewed arms race."<sup>8</sup> Some think renewal of the North Warning System and engagement in ballistic missile defence would offer significant development opportunities for the Arctic. At the same time, others see BMD as both costly and unproven.<sup>9</sup>

Notwithstanding the Trump Administration's full-throated enthusiasm for "a state-of-the-art missile defense system" that "protects" America in the face of Iranian and North Korean missile attacks,<sup>10</sup> doubts about BMD continue to abound. And last year's comprehensive assessment and report by the American Union of Concerned Scientists (UCS) should add to them. The UCS has a long history, rooted in the Massachusetts Institute of Technology, of careful, and critical, science-based analysis of American environmental and nuclear weapons policies and programs, and brings that same evidence-based critique to the American strategic missile defence program in the study, *Shielded from Oversight: The Disastrous US Approach to Strategic Missile Defence*.<sup>11</sup>

The 1999 National Missile Defense Act committed the United States to "deploy[ing] as soon as is *technologically possible an effective* National Missile Defense system capable of defending the territory of the United States against limited ballistic missile attack (whether accidental, unauthorized, or deliberate)"<sup>12</sup> (emphasis added). It was a commitment in principle to deploy, but only on condition that it actually be proven to work – a condition, one would have thought, that would be axiomatic for any new military system.

But the definition of what works, or what is meant by "technologically possible" and "effective," has essentially been changed for BMD purposes. The strategic ground-based system with its 30 interceptors has thus been deployed, not because it has been shown to work, but because political Washington wanted something in place and Pentagon planners seriously hope it will one day work. So, deployments to date have gone ahead because the George W. Bush Administration, responding to the anxieties provoked by 9/11, waived the normal requirement that major defence programs meet Pentagon-defined performance and capability standards before deployment. Defense Secretary Donald Rumsfeld exempted missile defence programs "from the obligation to satisfy standard acquisitions milestones and complete operational testing before deployment" (p. 10), and decided initial operational deployment could use "prototype and test" equipment (p. 10) – in other words, it would deploy experimental equipment, rather than tested and tried equipment that had been shaped and approved through extensive testing. The deployed mid-course interceptors are still experimental – used in experiments that have failed more tests than they have passed. And the tests that were successful were found not to have been conducted under "real world conditions." So the UCS concludes that the "system's test record has been notably poor with just eight successful intercepts out of 17 tries, despite the fact that the tests are heavily scripted for success" (p. 11).

The Bush Administration invented the process of deploying the system at the same time that it was being designed and tested. The political objective was to have something deployed as early as 2004, which meant deploying uncertain, insufficiently tested and revised, technology – but it was a post-9/11 "emergency" environment that justified the operational deployment of "test assets." Hence the

UCS further concludes that “the rush to deploy the GMD system to meet a politically driven timetable is now widely acknowledged even by proponents to be a primary source of the problems still plaguing the system nearly 15 years later” (p. 15). The report quotes the February 25, 2014 admission of Under Secretary of Defense for Acquisition, Technology, and Logistics Frank Kendall:

“We recognize the problems we have had with all the currently fielded interceptors. . . . The root cause was a desire to field these things very quickly and really cheaply. The detailed engineering that should have been applied to these early designs wasn’t there” (p. 15).

UCS also quotes a memo by the chief of naval operations and the US Army chief of staff who in November 2014 urged the secretary of defense to “take a fresh look” and asked the Pentagon to “develop a ‘more sustainable and cost effective’ long-term approach to both strategic and regional missile defenses.” They questioned the basic approach – a “strategy that emphasizes ‘shooting a rocket down with a rocket.’” And they insisted that “the United States will always be on the ‘wrong side of the cost-curve’ — meaning that shooting down ballistic missiles with high-tech interceptors will always be more expensive to the defender than the attacker.” UCS points to five high-ranking US military officers who have warned that “US missile defenses are unsustainable and cost-ineffective” (p. 11). Indeed, in early 2017 there have been media reports of the Director of Operational Test and Evaluation of the Pentagon saying “the US military’s system of intercepting ballistic missiles in the ‘mid-course’ phase can’t be relied on.”<sup>13</sup> The 2016 annual test and evaluation report says the system has only “a limited capability to defend the US...from small numbers of simple intermediate-range or intercontinental ballistic missiles...launched from North Korea or Iran.”<sup>14</sup>

The UCS study looks in detail at the test schedule and success rates for the ground-based interceptors and their kill-vehicle “war-heads.”

First, it notes that the equipment tested has been part of a constantly changing system. So there have not been repeated tests of a prototype using the same components, meaning there is no clear understanding of how well it works: “Until the system converges on a fixed design, it will be difficult to use tests to determine the GMD system’s effectiveness and reliability.” Under normal circumstances operational testing is to be done when the design of the production version is established (p. 28).

Second, there have been far too few tests. The scientists point out that any complex system is susceptible to many problems with low probabilities and that these can be detected only through multiple tests. A single successful test says little about a likely rate of failure in the future, “yet the current plan is for the RKV [redesigned kill vehicle] to proceed into initial production after a single intercept test” (p. 29). The norm is to conduct many more tests before a judgement on reliability can be made. In the case of the Trident II submarine-launched ballistic missile, for example, there were more than 150 successful tests before the completion of the design in 1989 – and as the UCS report points out, the BMD system is much more complex. Each test costs about \$200 million, so the missile defense agency is oriented to using its funding for deployment rather than testing. The UCS report quotes the director of operational test and evaluation as saying in 2015: “in order to meet fielding obligations of 44 interceptors by the end of 2017, all current interceptor production resources are

devoted to manufacturing operational interceptors, leaving no resources for building interceptors that could be used for more tests” (p. 29).

Third, the tests are not operationally realistic. More than 12 years after the system was declared operational, it has still not been tested in realistic conditions: “in all of the successful intercept tests, the timing was chosen so the target would be illuminated by the sun and would appear brightly lit against a dark background,” and that the “interceptors have yet to be tested against an ICBM-range target or with a long time of flight between interceptor launch and interception” (p. 30). Furthermore, the current system is incapable of reliably discriminating between warheads and decoys (p. 32).

Hence, the UCS concludes: “Despite more than a decade of development and a bill of \$40 billion, the GMD system is simply unable to protect the US public, and it is not on a credible path to be able to do so” (p. 33).

Then there is the separate problem that even a minimally effective system, let alone a substantially effective one, that is deployed in a competitive strategic environment is destabilizing. It creates powerful incentives to expand hostile missile arsenals on the obvious calculation that a country’s offensive firepower will always be kept superior to an adversary’s defence system. So the UCS, in a key recommendation, urges the US to “work with China and Russia to ensure that development of a strategic missile defense system does not interfere with progress on strategic issues important to all three countries.” The continued unilateral development of an American BMD system is having and will increasingly have debilitating effects on the strategic environment and on nuclear arms control and disarmament efforts. The only possible circumstance under which continued missile defence research and development could be justified from a strategic perspective would be if it were done cooperatively with Russia and China and other technologically advanced states with the objective of bringing protection to any population threatened by isolated or “rogue” nuclear tipped ballistic missiles – that is, from states other than those with established nuclear arsenals. But both strategic and cost considerations suggest that the more effective approach would be to expend more cooperative diplomatic energy on disarming North Korea. One can even dare to hope that cooperation at that level would help create a security environment conducive to further talks and reductions in the arsenals of the major nuclear powers.

If Canada has any thoughts of entering this very expensive but largely fruitless exercise, an absolute condition of involvement should be cooperation with Russia and China. It’s hardly a new idea, having come up in the context of the New START treaty. Cooperation depends on a range of specific measures and the Brookings Institution in Washington identifies a range of such measures identified during New START talks and subsequent Track II discussions with the Russians.

Transparency – the willingness to share technical information related to defensive and offensive capabilities as well as political information regarding programmatic developments and future planning – is key and could involve the exchange of observers during tests and joint exercises that “would allow the militaries to gain familiarity with the equipment, doctrine and tactics of the other side.” Monitoring missile launches worldwide is important on its own, and a jointly managed NATO-Russia BMD centre for that purpose has at least been discussed. It would receive data from the

satellites and radar installations of both and thus create a “common operational picture” of relevant missile launches, with data then flowing to any agreed nationally operated interception installations. A joint planning and operations centre could develop transparency processes, share and update threat assessments (even though each side would retain control over decisions whether and when to launch interceptors), and work out issues of overlapping coverage. Jointly built and managed surveillance and tracking facilities, such as radar, would significantly expand the range of cooperation, and all sides should jointly explore and define self-restraint measures to limit the numbers of interceptors deployed to reinforce the focus on rogue launches and away from each side’s deterrent forces.

Now in 2017 with a new American Administration, the Brookings Institution’s Steven Pifer notes that it remains important to find a way to defuse the US-Russian dispute over missile defence – “that would not only remove a problem issue from the US-Russian agenda, but it well may be a requirement if the next US administration wishes to pursue further nuclear arms reduction with Moscow.”<sup>15</sup> In other words, a future agreement on further strategic reductions will likely have to include an agreement on missile defence.

In 2014, according to the New York Times, the Obama Administration opted for increased cyber attacks on North Korea’s missile program, after concluding that “the \$300 billion spent since the Eisenhower era on traditional antimissile systems...had failed the core purpose of protecting the continental United States.” There is obviously no reason why Canada should still contemplate joining that costly failure.<sup>16</sup>

## Notes

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<sup>1</sup> 24 February 2005.

<sup>2</sup> Discussed in *Disarming Arctic Security* briefings in June 2013, “Missile Defence and the Arctic,” and December 2015, “The ‘Rogue’ Missile Threat: Getting from BMD to NPT.” <http://www.thesimonsfoundation.ca/projects/disarming-arctic-security-briefing-papers>

<sup>3</sup> At Vandenberg Air Force and Fort Greely, respectively.

<sup>4</sup> “Canada and Ballistic Missile Defence: Responding to the evolving threat,” Standing Senate Committee on National Security and Defence, The Hon. Daniel Lang, Chair, The Hon. Romeo A. Dallaire, Deputy Chair. June 2014. <http://www.parl.gc.ca/Content/SEN/Committee/412/secd/rms/01jun14/home-e.htm>

<sup>5</sup> “Harper Leaves Door Open For Canada To Join Ballistic Missile Defence Program,” The Huffington Post, The Canadian Press, 08 August 2015, The Huffington Post.

<sup>6</sup> Rob McRae, James R. Mitchell, Stuart A. Beare, Stefanie von Hlatky, and Elinor Sloan, “Canada’s International Security and Defence Policy, Centre for International Policy Studies, University of Ottawa, November 2015. [Cepi-cips@uottawa.ca](mailto:Cepi-cips@uottawa.ca)

<sup>7</sup> Department of National Defence, Defence Policy Review: Public Consultation Paper, 2016. <http://dgpaapp.forces.gc.ca/en/defence-policy-review/index.asp>

<sup>8</sup> Department of National Defence, Defence Policy Review: Summary of Roundtable Consultations, 24 October 2016. <http://dgpaapp.forces.gc.ca/en/defence-policy-review/index.asp>

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<sup>9</sup> Department of National Defence, Defence Policy Review: Public Consultation Paper (Appendix C), 2016. <http://dgpaapp.forces.gc.ca/en/defence-policy-review/index.asp>

<sup>10</sup> <https://www.whitehouse.gov/making-our-military-strong-again>

<sup>11</sup> *Shielded from Oversight: The Disastrous US Approach to Strategic Missile Defence*, Union of Concerned Scientists, July 2016. [WWW.ucsusa.org/ShieldedFromOversight](http://WWW.ucsusa.org/ShieldedFromOversight). References to this document are shown by the page number in brackets in the text.

<sup>12</sup> Greg Thielman, "The National Missile Defense Act of 1999," Arms Control Association, accessed 08 January 2017. [https://www.armscontrol.org/act/2009\\_07-08/lookingback](https://www.armscontrol.org/act/2009_07-08/lookingback).

<sup>13</sup> Jeff Martin, "Pentagon office calls into question reliability of missile defense system," WAAY TV, 10 January 2017. <http://www.waaytv.com>.

<sup>14</sup> Director, Operational Test and Evaluation, FY 2016 Annual Report. <http://www.dote.osd.mil/pub/reports/FY2016/>

<sup>15</sup> Steven Pifer, "Nuclear Arms Control Choices for the Next Administration," Brookings Institution, Arms Control and Non-Proliferation Series, Paper 13, October 2016. <https://www.brookings.edu/>

<sup>16</sup> David E. Sanger and William J. Broad, "Trump Inherits a Secret Cyberwar Against North Korean Missiles," New York Times, 04 March 2017.