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Introduction

Funding the budget to cover the cost of replacing Britain's current Trident submarines was always going to be a contentious issue for the British government as it approached the 'Main Gate' stage in the Successor programme, the point at which contracts for constructing the new submarines will be in place and annual costs would increase dramatically. It is projected to be easily the most expensive defence procurement project for the decade from 2015/6, sucking the finances out of other major projects. Assurances made in 2006/7 by the previous government that the replacement programme would not impact upon conventional capabilities were always likely to prove unrealistic, even before the recession and the subsequent decision to slash public spending. The announcement on July 29 by Chancellor George Osborne that the Ministry of Defence (MoD) will have to fund the capital costs of replacing the current Trident system from its own core budget rather than have it provided through the Treasury reserve has forced MoD to face the reality of the costs of replacement, and has reignited a public debate about whether the country needs and can afford a like-for-like replacement of the current system.

Musical chairs: who holds the budget?

The cost of procuring nuclear weapon systems has in the past come from the MoD budget following

negotiations with the Treasury to supplement the budget to partially offset the additional cost. When decisions were made to procure the current system in 1982, for example, Defence Secretary John Nott stated that "I have not been given any extra money for Trident. I have negotiated a 3 per cent real growth up until 1985/86".¹ In 2006 Prime Minister Tony Blair stated explicitly that the Trident replacement programme would "not be at the expense of the conventional capabilities that our armed forces need".² The cost of initial development work on the Successor programme for the period 2007-08 to 2010-11 was explicitly reflected in the 2007 Comprehensive Spending Review budget settlement, but came from the MoD budget. In line with the Conservative government's approach in 1982, the Review stated that it was increasing the MoD budget by "1.5 per cent average annual real growth over the three years to 2010-11. This increase in funding, together with value for money reforms generating annual net cash-releasing savings of £2.7 billion by 2010-11, enables the MoD to... fund the renewal of Britain's nuclear deterrent while ensuring that this does not come at the expense of the conventional capability our Armed Forces need..."³ If specific allocations to Trident and improving armed forces accommodation are excluded from the budget settlement, the MoD actually suffered a reduced budget in real terms. Expenditure on the Successor

¹ *Strategic Nuclear Weapons Policy*, House of Commons Defence Committee, HC 266 (London: HMSO, March 1982), para. 70.

² House of Commons, *Official Report*, December 4, 2006, Column 23.

³ *Pre-Budget Report and Comprehensive Spending Review*, CM 7227 (London: HMOS, October 2007), p. 231.

programme has amounted to £1 billion over this period.⁴

This time the Trident programme *cannot* be supported by an increase in the defence budget since the budgets of those major departments that have not been protected from cuts (this includes MoD) are set to reduce in real terms by 20% over the course of the current parliament.⁵ Of course it is still possible that MoD through special pleading will have a smaller budget cut than it would otherwise have received, though this would likely attract significant opposition from Treasury and other ministers as it would require other departments to accept higher cuts.

A choice between cuts to conventional programmes and a review?

Perhaps more significantly, it would be much harder to claim that conventional capabilities were not suffering when the overall defence budget was experiencing cut-backs *and* having to cover the

⁴ 200 million in 2008-09, £400 million in 2009-10, and £400 million in 2010-11, Response by Bob Ainsworth, Minister of State for the Armed Forces, to a written question. House of Commons, *Official Report*, October 9, 2007, Column 505W; House of Commons, *Official Report*, April 28, 2009, Column 1160W; *The United Kingdom's Future Nuclear Deterrent Capability*, National Audit Office, p. 18.

⁵ Osborne declared in his budget statement in June 2010 that "We have inherited from the previous Government spending plans to cut departmental budgets by £44 billion a year by 2014-15. This implies an average real reduction for unprotected departments of 20 per cent...Because the structural deficit is worse than we were told, my Budget today implies further reductions in departmental spending of £17 billion by 2014-15." Budget statement by the Chancellor of the Exchequer, the Rt Hon George Osborne MP, June 22, 2010. Available at <http://www.hm-treasury.gov.uk/junebudget_speech.htm>.

costs of the Successor programme; this at a time when the defence procurement budget is set to experience a bow-wave of major procurement commitments over the coming decade. The National Audit Office reported in 2009 that, "if the Defence budget remained constant in real terms, and using the Department's forecast for defence inflation of 2.7 per cent, the gap [between estimated funding and the cost of the Defence budget] would now be £6 billion over the ten years. If, as is possible given the general economic position, there was no increase in the defence budget in cash terms over the same ten year period, the gap would rise to £36 billion".⁶

The announcement by Osborne suggests a number of possible conclusions:

- 1) The Coalition leadership may not place as rigid a priority on retaining the current plans for like-for-like replacement as previously thought. MoD could therefore be forced both to explore a much cheaper alternative *and* to extend the life of the current Trident system.
- 2) The original commitment from 2006 that Trident replacement will not affect conventional capabilities cannot be realised. MoD will have to weigh up the relative priorities of different military capabilities vis-à-vis the options around a continuing nuclear capability – underlining the need to include Trident replacement in the Strategic Defence and Security Review.
- 3) A further delay in the Initial Gate decision on building the Successor submarines

⁶ *Ministry of Defence: The Major Projects Report 2009*, National Audit Office, HC 85-1 (London: HMSO, December 2009), p. 4.

originally scheduled for September 2009 can be expected.

- 4) We can expect *either* further rhetoric on the essential importance and wide-ranging utility of Trident to justify the expense and opportunity cost of proceeding with a like-for-like replacement; *or* the emergence of a new rhetoric that highlights changed circumstances and limits utility to current and prospective nuclear-armed 'rogue' states to justify a smaller nuclear force leading to significant change in declaratory policy and nuclear targeting plans and assumptions.
- 5) The government may also decide to scale back the expensive recapitalisation programme at the Atomic Weapons Establishment (AWE) Aldermaston.

Costs of the system

MoD's current budget is approximately £38.5 billion, when reported under the government's standard accounting policy called 'resource accounting and budgeting' or RAB.⁷ A 10-20% cut over the 4-5 years of the current parliament will require £3.8-7.6 billion in savings against current spending plans. The in-service 'cash' costs of operating the United Kingdom's current Trident system, including the associated costs of running AWE Aldermaston, consumes around 5-6% of the 'near cash' budget figure, which in 2007/8 was

⁷ RAB is an accruals basis of accounting that attempts to include notional figures for the use of non-financial resources, such as crown land. It is NOT the same as the actual cash spend by the department. The RAB figure for MoD does not include costs of war pensions and benefits and military operations and peacekeeping missions, which takes the total to £42 billion.

£29.4 billion.⁸ This gives a range of £1.5-£1.8 billion split almost 50:50 between the annual capital and running costs for AWE Aldermaston and the annual capital and running costs for the four-boat *Vanguard* fleet and Trident missiles.⁹ The 2006 White Paper assumed that the new system would have similar features.¹⁰

MoD currently has a special investment programme operating at AWE Aldermaston to ensure continued support to the Trident warhead and to build a replacement if needed, called the Nuclear Weapons Capability Sustainment (or Warhead Assurance) Programme. Spending on this rose from £350 million per year between 2006/7 and 2008/9 to £1 billion *per year* between 2009/10 and 2012/3.¹¹ It is almost certain that these recapitalisation costs are excluded from the annual AWE capital and running costs. If so, then **the cost of maintaining the current nuclear capability and investment in AWE is already approaching £3 billion per year.** Even if current levels of capital investment in AWE fall by half, total costs will remain around £2.5 billion.

To this we can add the annual costs of the ten-year partnering contract between MoD and Rolls Royce signed in May 2007 to fund development of a new

⁸ See:

<www.mod.uk/DefenceInternet/AboutDefence/Organisation/KeyFactsAboutDefence/DefenceSpending.htm>. MOD says it refers to near cash budget in MOD supplementary memorandum to *The Future of the UK's Strategic Nuclear Deterrent: the White Paper*, House of Commons Defence Committee HC 22 (London: HMSO, 2007), Ev 206.

⁹ House of Commons, *Official Report*, January 31, 2008, Column 526W.

¹⁰ House of Commons, *Official Report*, December 3, 2007, Column 845W.

¹¹ House of Commons, *Official Report*, March 11, 2005, Column 1257W; & September 9, 2009, Column 136WS.

nuclear reactor plant for the Successor submarine fleet worth up to £1 billion;¹² plus the cost of the existing programme to extend the life of the current *Vanguard* submarines that will cost at least hundreds of millions of pounds.¹³

The capital cost of the Trident replacement programme over the next 10-15 years (not including running costs) is likely to be between £15 and £28 billion.¹⁴ The government has stated that most of the expenditure will occur over the period 2015-2025. An optimistic total based on the lower end of the government's estimates provided in its 2006 White Paper on Trident replacement is £15 billion: £11 billion for four new submarines; £2 billion for a new warhead; and £2 billion for infrastructure. A more realistic figure based on the original cost of building the current four *Vanguard* submarines plus 3% defence inflation,¹⁵ together with the higher end of the government's figures is £28 billion: £22 billion for four new submarines; £3 billion for a new warhead; and £3 billion for infrastructure.

Capital spending programme (£bn)		
	Lower end	Upper end
Submarines	£11	£22
Infrastructure	£2	£3
Warheads	£2	£3
Total	£15	£28

In November 2008 MoD's Permanent Undersecretary Sir Bill Jeffrey warned that the government's 2006 figures were only "ballpark estimates".¹⁶ They are likely to go up. MoD is due to provide an updated view of overall costs in the Autumn in order to inform the Initial Gate Business Case for the Successor programme. Its cost modelling work has continued over 2010 in parallel with the Value for Money Review.¹⁷

Figure 1 shows the spread of total capital expenditure on the initial Trident programme, including submarines, warheads, missiles and infrastructure, based on figures provided to the House of Commons Defence Committee by MoD and parliamentary questions over the course of the programme.

¹² House of Commons, *Official Report*, July 25, 2007, Column WS89; *The United Kingdom's Future Nuclear Deterrent Capability*, p. 15.

¹³ *The Future of the UK's Strategic Nuclear Deterrent: the White Paper*, House of Commons Defence Committee HC 22, (London: HMSO, 2007), p. Ev 59.

¹⁴ In 2010 values. The figures in this briefing generally quote such expenditures in 2010 values.

¹⁵ See Malcolm Chalmers, "The Myth of Defence Inflation", *RUSI Defence Systems*, June 2009, pp. 12-16, and Nick Ritchie, *Continuity/Change: Rethinking Options for Trident Replacement*, University of Bradford, June 2010.

¹⁶ Uncorrected transcript of oral evidence to the Committee of Public Accounts hearing on *The United Kingdom's Future Nuclear Deterrent Capability*, November 19, 2008.

¹⁷ Ministry of Defence, *Consolidated Departmental Resource Accounts 2009-10*, HC 258 (London: HMSO, July 2010), p. 129.

Figure 1: Annual percentage of total Trident programme expenditure, 1983-2002

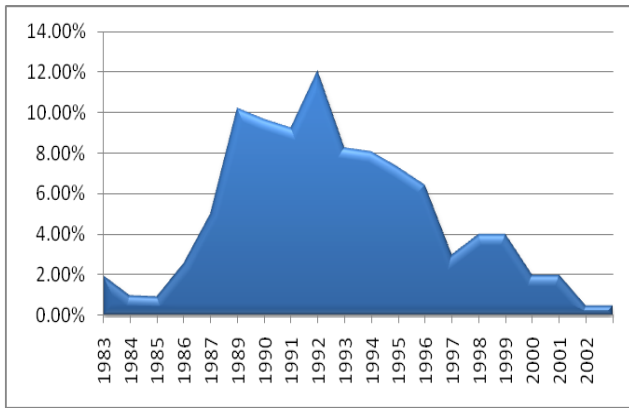
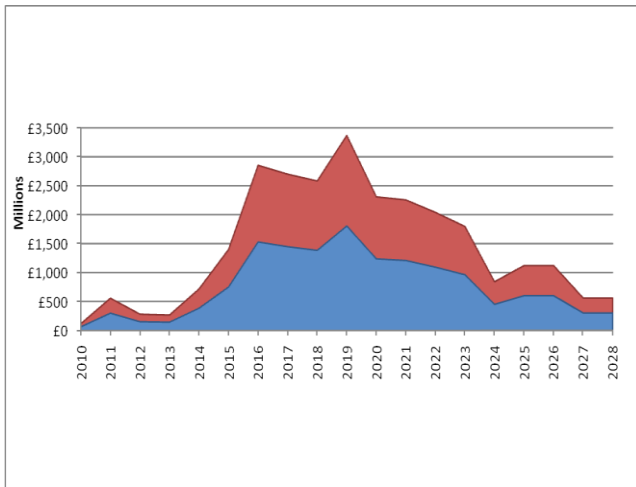


Figure 2 illustrates the annual cost of planned capital spending on new submarines, warheads and infrastructure based on a £15 billion (blue) and £28 billion (red line) programme over the next twenty years using the same spread of expenditure and assuming significant expenditure begins with an Initial Gate decision in 2010.

Figure 2: Illustrative annual capital expenditure on the explicit Trident replacement programme, 2010-2027



On this illustrative projection, MoD faces an average capital cost for the Successor programme after Main Gate between 2016 to 2023 of £1.4-£2.6 billion/year based upon extrapolating the

spread of expenditure of the original Trident programme.¹⁸ In a worst-case scenario for MoD, if its current budget is cut in real terms by 20% over the next 4-5 years of this parliament, running costs and AWE recapitalisation remain the same at £3 billion/year and Trident replacement costs average £2.6 billion/year, then MoD could be spending £5.6 billion of the £26.9 billion budget,¹⁹ or over **20% of the overall defence budget on its nuclear capability over the eight years from main gate.**

On an optimistic set of figures, a defence budget cut of 10%, average Trident replacement costs of £1.5 billion/year, and running costs and AWE recapitalisation of £2.5 billion/year mean MoD will be spending £3.5 billion of a £30.3 billion budget, or almost 12% of the defence budget per year.

Can the costs be carried?

If the government judges that retaining a sophisticated nuclear capability at current levels is essential to UK security, it could justify spending on this level, albeit unprecedented since the end of the Cold War. Advocates of such a judgement insist that decisions on the country's nuclear future be based upon the need for a high strategic capability to counter possible security threats to the survival of the nation in an uncertain future, even if the probability of such threats is low. Others believe that such a position runs counter to the government's policy of promoting global nuclear

¹⁸ Figures are quoted in (real) 2010 values, and in any case are by their nature estimates. Actual cash values are likely to be higher with inflation. This does not affect the proportional estimate that concludes the paragraph.
¹⁹ Eighty percent of the £33,628 current (2010/11)'near cash' defence budget, published by MoD at <<http://www.mod.uk/DefenceInternet/AboutDefence/Organisation/KeyFactsAboutDefence/DefenceSpending.htm>>.

disarmament and non-proliferation. Even if the government deems it too early to make a commitment to complete disarmament by default, there are other options that could preserve a nuclear option at lower capability.

George Osborne's announcement indicates Treasury's desire to ensure MoD takes full responsibility to control costs, and possibly to scale back ambitions for the planned Successor system. The nuclear capability will now be judged squarely against other military capabilities, both for its strategic necessity and value-for-money. To the undoubted displeasure of nuclear advocates, MoD must now ask itself not what sort of 'Rolls Royce' nuclear weapon system could provide a 'minimum deterrent' in all possible scenarios however unlikely they may be, but rather how much it can afford to spend, what capability options that could provide, and how that affects understandings of UK nuclear deterrent posture. In short, spending on the nuclear deterrent has to be weighed up directly against other essential defence spending.

However, any decision to scale back or abandon its nuclear capability transparently on the grounds of cost alone would represent a gross missed opportunity to engage internationally in nuclear diplomacy. It would simply send the signal that Britain could no longer afford to remain within the nuclear club, leaving membership open to others with the resources and determination to stay the course at whatever political, economic and social cost. With a positive international diplomatic context in which the desire to move quickly towards a world free of nuclear weapons has

gathered global political support, public spending budgets under severe, continuing high profile and expensive defence commitments elsewhere, and the Successor project still very much in its early stages, now is the ideal time to take a step back and reassess the options on the basis of strategic and budgetary need and the international context.

Cover photo: *HMS Vanguard (SSBN-50) accompanied by civilian tugboats*, U.S. Department of Defense, OS2 John Bouvia.

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