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Robust Nuclear Earth Penetrator Budget Request and Plan, FY2005-FY2009

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Summary

The FY2005 budget document for the National Nuclear Security Administration (NNSA) shows funding for the Robust Nuclear Earth Penetrator (RNEP) increasing sharply after FY2005 as the weapon proceeds beyond the study phase. NNSA states that these developments are shown for budgeting purposes and do not represent an actual plan. It further states that the out-year figures are already out of date, but that no new figures are available. A feasibility and cost study of RNEP currently under way was projected to cost $45 million between FY2003 and FY2005, but is now projected to cost $71 million between FY2003 and FY2006. This report explains the budget request and plan, and will be updated as needed. CRS Report RL32130, *Nuclear Weapon Initiatives: Low-Yield R&D, Advanced Concepts, Earth Penetrators, Test Readiness,* by Jonathan Medalia, has further information.

Background

Nuclear earth penetrator weapons burrow into the ground some tens of feet before detonating, greatly increasing their ability to destroy hardened underground targets. RNEP is at present a study, begun in May 2003, of modifications to convert existing B61 or B83 nuclear bombs to an earth penetrator configuration. While the Air Force is leading the study, NNSA – a semiautonomous agency in the Department of Energy responsible for nuclear warheads – is in charge of studying modifications of specific warheads.

RNEP is controversial. Supporters argue that it is needed to attack hard and deeply buried targets (such as leadership bunkers or WMD production facilities) in countries of concern, thereby deterring or defeating such nations; critics reply that RNEP would lower the threshold for use of nuclear weapons and prompt other nations to develop nuclear weapons to deter U.S. attack. Secretary of Defense Donald Rumsfeld said in May 2003 that RNEP "is a study. It is nothing more and nothing less."[1] The plan was that the

[1] U.S. Department of Defense. "DoD News Briefing – Secretary Rumsfeld and Gen. Myers." (continued...)

RNEP study would cost $15 million a year for FY2003-FY2005. While Congress appropriated the FY2003 request of $15.0 million, the FY2004 request met much criticism. The House rejected an amendment by Representative Tauscher to transfer funds from RNEP to conventional means of attacking buried targets. The Senate tabled an amendment by Senator Dorgan and another by Senator Feinstein to bar funds for RNEP, and adopted an amendment by Senator Nelson (FL), and a similar amendment by Senator Reed, to require congressional authorization to start development engineering (discussed below) or later phases of RNEP. (The Nelson amendment became Section 3117 of P.L. 108-136, the FY2004 National Defense Authorization Act.) The appropriation was cut to $7.5 million.

The RNEP Budget and Plan, and NNSA's Explanation

Beginning with the FY2005 budget cycle, NNSA presented a detailed four-year projection along with the current request; for RNEP, the figures are: FY2005, $27.6 million; FY2006, $95.0 million; FY2007, $145.4 million; FY2008, $128.4 million; and FY2009, $88.4 million, for a five-year total of $484.7 million.[2]

The FY2005 request document seems to cast serious doubt on assertions that RNEP is only a study. The Departments of Defense and Energy agreed years ago to a formal set of phases by which new and modified nuclear weapons move through research, development, production, deployment, and retirement. The key phases for RNEP are: Phase 6.2, feasibility study and option down select; Phase 6.2A, design definition and cost study; Phase 6.3, development engineering, in which the nuclear weapons laboratories produce a completed warhead design; and Phase 6.4, production engineering, in which the design is adapted for production and a system to manufacture the weapon is created. NNSA states the performance targets for RNEP are as follows:

- FY2005: "Complete 56% of scheduled RNEP Phase 6.2/6.2A activity." Further, "In FY2005, subsystem tests and a full system test of the proposed design will be completed."
- FY2006: "Complete 100% of scheduled RNEP Phase 6.2/6.2A activity."
- FY2007: "Report results of RNEP Phase 6.2/6.2A to Nuclear Weapons Council [a joint DOD-DOE agency that coordinates nuclear weapon requirements, production schedules, etc.] Obtain, if applicable, RNEP Phase 6.3 appropriate authorization. Complete initial 25% of scheduled RNEP Phase 6.3 activity (if authorized)."
- FY2008: "Complete 65% of RNEP Phase 6.3 activity (if appropriately authorized)."

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[1] (...continued)
May 20, 2003. At [http://www.defenselink.mil/transcripts/2003/tr20030520-secdef0207.html].

[2] U.S. Department of Energy. Office of Management, Budget, and Administration/CFO. *FY 2005 Congressional Budget Request.* volume 1, National Nuclear Security Administration. DOE/ME-0032, February 2004, p. 63. The RNEP budget is available under "Directed Stockpile Work" at [http://www.mbe.doe.gov/budget/05budget/index.htm].

- FY2009: "Complete 100% of scheduled RNEP Phase 6.3 activity (if authorized). Complete 15% of scheduled RNEP Phase 6.4 activity (if appropriately authorized)."[3]

An NNSA manager responsible for the program maintained that the budget increase beyond FY2005 is an artifact of the budget process. He stated that the money was inserted in the out years as a "placeholder" to protect the option of proceeding with RNEP. Were this not done, it is argued that NNSA would face two choices that it deems unsatisfactory: (1) By the time the budget for one fiscal year is submitted, the budget for the next fiscal year is largely fixed; without the placeholder, a decision to proceed with RNEP could not be implemented until the second fiscal year. (2) Alternatively, without the placeholder, a decision to proceed with RNEP could be implemented promptly only by taking the needed funds out of other programs. Similarly, the move to Phases 6.3 and 6.4 reflects how the program might be expected to advance if it proceeds. The official, however, indicated that no decision has been made on whether or not to proceed with RNEP pending completion of the study.[4]

The RNEP study was initially projected to cost $45 million – $15 million a year for FY2003-FY2005. The numbers, however, have changed for each year. For FY2003, delay in submission of a DOD study required by the FY2003 National Defense Authorization Act (P.L. 107-314, Sec. 3146) delayed the start of NNSA's RNEP study; as a result, $6.0 million was spent of the $15.0 million appropriated. For FY2004, Congress cut the RNEP appropriation to $7.5 million. For FY2005, the request is $27.6 million, vs. the $15.0 million originally planned. Finally, FY2006, not FY2005, will be the last year of the RNEP study; NNSA estimates the FY2006 request at $30 million. The four-year total is about $71 million. Owing to the uncertainties of the program, NNSA could not, as of early March 2004, project an RNEP budget for FY2007-FY2009.

According to NNSA, the study's cost has grown for a number of reasons. The $45 million did not take into account participation in the study by Y-12 Plant, which would make components of RNEP, or of Pantex Plant, which would convert existing weapons into RNEPs; their participation adds some $2 million. DOE has imposed additional project management requirements that add $2 million. The rest of the increase comes from a better definition of the requirements of the study, refinement of cost estimates, and an increase in surety (safety, security, and use control) of the proposed weapon. On the latter point, DOE requires that any modifications of a nuclear weapon look for ways to increase its surety.[5] NNSA says it has found ways to increase RNEP surety, and plans to do so.

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[3] Department of Energy, *FY 2005 Congressional Budget Request*, volume 1, p. 69, 70, 76.

[4] Telephone interview, February 10, 2004.

[5] U.S. Department of Energy. Order DOE O 452.1B, "Nuclear Explosive and Weapon Surety Program," approved August 6, 2001, Section 4(f).