Current status

As of 1 September 2013, the United States deployed 1688 warheads on 809 strategic delivery vehicles and 1015 deployed and non-deployed launchers.106 By adding the numbers of warheads not covered by New START, the United States possesses around 7400 warheads, around 2700 of which are “retired,” awaiting dismantlement or possible reactivation. The US is estimated to have 450 Minuteman III ICRMs carrying 470 warheads with the capacity for additional warheads to be uploaded, 14 Trident missile submarines each with 24 launch tubes for the Trident D5 submarine launched ballistic missile with 1152 warheads deployed, and 113 nuclear capable strategic bombers, 20 B2s and 93 B52Hs. Of these, 60 bombers (44 B-52Hs and 16 B-2s) have been assigned nuclear roles. Independent estimates indicate the US stores more than 15,000 plutonium pits from dismantled nuclear weapons, thousands of which could be re-used.108 The US has produced or acquired approximately 850 metric tons (MT) of highly-enriched uranium (HEU) and 112 MT of weapon-grade plutonium, of which 609 MT and 95 MT remain, respectively (current HEU stock is exclusive of HEU in spent naval reactor fuel).107

Modernization

The US government is officially committed to modernizing its nuclear bombs and warheads; the submarines, missiles, and aircraft that carry them; and the laboratories and plants that design, maintain, and manufacture nuclear weapons. US policy and budget documents all manifest an intent to keep some thousands of nuclear weapons in service for the foreseeable future, together with the capability to bring stored weapons back into service and to design and manufacture new weapons should they be desired.

The US also has been engaged for more than a decade in efforts aimed at taking advantage of improvements in the accuracy of long range missiles and re-entry vehicles to develop the means to deliver non-nuclear weapons anywhere on earth in short order. Early last year, an Air Force solicitation for next-generation land-based nuclear missiles, for example, called for nuclear missile concepts that could share components with non-nuclear “prompt global strike” systems, asked contractors to explore new baring modes including mobile missiles, and stated that proposed replacement systems should “provide or enable new capabilities.”108 Since then, the aspiration to field a new ICBM prior to 2030, as opposed to incrementally upgrading Minuteman III systems, appears to be an early casualty of budget shortfalls. However, there is a great difference between modernization aspirations on the one hand and practical accomplishment on the other. Over the past two years, virtually all the warhead and infrastructure modernization projects in the Department of Energy (DOE) have experienced serious cost overruns and schedule delays that have eroded congressional and military support and caused the DOE to downscale or indefinitely defer several projects in question.

Economics

The DOE budget request for fiscal year 2015 includes $8.315 billion for nuclear weapons activities, not including $293 million in related administrative costs. This is a 7% increase from 2014 and is higher (in constant dollars) than the last surge in nuclear weapons spending under President Reagan in 1985. An additional $504 million in potential warhead spending is also being requested over and above limits for the 2015 fiscal year that Congress established in a late 2013 budget deal.109

Over the past years many reports and studies on the cost of the US nuclear programme and possible options for savings have been published.110 In December 2013 the Congressional Budget Office (CBO) published a report assessing the projected costs of the US nuclear forces for the 2014–2023 timeframe, utilizing long-term cost databases maintained by CBO and with full access to Department of Defense data.111 CBO’s estimates are thus the most authoritative to date. According to CBO, current US stockpile plans will cost $355 billion over the decade, including about $76 billion for modernization. Since most modernisations efforts are still in the initial phase, annual costs are expected to increase over the decade and continue to increase afterward.112 CBO’s estimate is broadly consistent with the January 2014 independent study from the James Martin Center, which concluded that the 30-year cost of the U.S. stockpile would fall in the range of $1 trillion dollars.113

In July 2012 increased costs for the B61 life extension project were announced. The project consolidates the existing B61-3, B61-4, B61-7, and B61-10 to one upgraded model of the B61-4, the B61-12. About 400 B61-12s are planned, resulting in $28 million per bomb including the cost of tail kit, one of the costliest elements of the modernisation of the B61 and intended to increase accuracy of the new B61.114 These financial commitments in light of budgetary difficulties face more and more doubts from all sides.115 Other US nuclear warheads are also undergoing modernisation and so-called life extension programmes. They are set to be replaced by new warheads and bombs as part of the so-called “3+2” stockpile plan, although the future of this ambitious plan is now in severe doubt.116 Estimates based on the latest Stockpile Stewardship and
Management Plan of 2014 put the cost for this enterprise at $275 billion over the next 25 years.\textsuperscript{118} Regardless of programme re Rencontres, this year’s budget request continues to reflect these spending goals.

Delivery system costs are also increasing. Costs for developing the Joint Strike Fighter have continued to spiral upward. With estimated total present and future acquisition costs approaching $400 billion and life-cycle costs of $1.5 trillion or more, the F-35 is the costliest weapons system ever.\textsuperscript{119} Costs of the B61 modernization programme have also grown far beyond original estimates, from $4 billion to $11 billion, with production delayed until at least 2020.\textsuperscript{119} In its 2012 Deterrent and Defense Posture Review (DDPR) NATO declared that “Allies concerned will ensure that all components of NATO’s nuclear deterrent remain safe, secure and effective,”\textsuperscript{120} which in this context is seen as a “green light” for the modernisation of the B61s currently also deployed in Europe.\textsuperscript{121} In January 2014, US Air Force Chief of Staff, General Norton Schwartz, confirmed that the modernized B61 will have improved military capabilities to attack targets with greater accuracy and less radioactive fallout. Since the 2010 NPR pledged that nuclear weapon life extension programmes “will not support new military missions or provide for new military capabilities,” this confirmation violates the NPR pledge and contradicts US and NATO goals of reducing the role of nuclear weapons.\textsuperscript{121}

The main obstacle to US nuclear weapons modernization plans may be the erosion of the ability of the US military-industrial complex to complete ever-more complex manufacturing and industrial projects. Work on a major plutonium facility on which more than $600 million already had been spent was postponed for at least five years after costs ballooned to more than ten times or more original estimates, and the project appears unlikely to be resumed. A total of eight different plans to replace and modernize production of plutonium pits in the US have failed over the past 25 years.\textsuperscript{122} Construction of a new Uranium Processing Facility (UPF) has been delayed more than a decade and its costs too have increased more than tenfold. UPF is now being down-scope and final plans are currently in limbo.\textsuperscript{124}

International law and doctrine

More than four decades after the United States signed and ratified the NPT, it retains a nuclear arsenal large enough to end civilization in short order. None of its recent bilateral reduction agreements with Russia fundamentally change the character of nuclear weapon deployments. The US has signed but not ratified the CTBT; ratification was rejected by the US Senate in 1999 even after a bargain was made to modernize its nuclear weapons infrastructure in exchange for ratification. The Obama administration has stated that CTBT ratification “remains a top priority for the United States.”\textsuperscript{122} If the past is any guide, an attempt to obtain consent for ratification from the Senate is likely to be accompanied by new programmatic and funding commitments to the nuclear weapons establishment. At the conclusion of the 2000 NPT Review Conference, the US agreed that a no-backtracking “principle of irreversibility” applies to nuclear disarmament. Yet endless modernization of the research laboratories and factories necessary to design and produce nuclear weapons is inherently incompatible with any “principle of irreversibility” in regard to disarmament. Doing so with the express intention of being able to re-arm, to permanently hold open the potential to reconstitute large nuclear arsenals throughout the course of disarmament, also is inconsistent with an “unequivocal undertaking” to eliminate nuclear arsenals. The US announced its withdrawal from the Anti-Ballistic Missile Treaty in 2001; continuing US development and deployment of ballistic missile defence systems is a serious impediment to further disarmament progress.

The US 2010 Nuclear Posture Review (NPR) states that the US will keep relying on its nuclear weapons as an important part of its national security and will also do this for the foreseeable future.\textsuperscript{126} On 19 June 2013 President Obama announced in Berlin that his administration would, together with its NATO allies, seek “bold reductions in US and Russian tactical nuclear weapons in Europe.”\textsuperscript{127} On the same day, however, the US administration published a report on President Obama’s new guidance on the employment of nuclear weapons.\textsuperscript{124} Among other things, the report reaffirmed that “as long as nuclear weapons exist,” the United States will maintain a “safe, secure and effective arsenal for its protection and that of its allies.”\textsuperscript{129}

Public discourse and multilateral engagement

In the broader populace, there is little debate about US nuclear weapons policies or spending. The absence of a disarmament movement has made progress on an ambitious abolition agenda unlikely. What public discussion there is about US nuclear weapons policy is dominated by specialists and is skewed towards drumming up fear of nuclear weapons coming into the possession of non-nuclear weapon states or non-state actors rather than pointing to the very real dangers posed by nuclear weapons held as central elements of national security policies in the hands of the world’s most powerful states. In the United States, disarmament remains an abstract aspiration; the pursuit of global military dominance backed by constantly modernized nuclear weapons remains the concrete reality.

The US government has not attended either of the conferences on the humanitarian impact of nuclear weapons in Norway or Mexico, nor did it participate in the open-ended working group on nuclear disarmament in 2013. It has issued joint statements with France and United Kingdom disparaging both initiatives as well as the high-level meeting on nuclear disarmament hosted by the UN on 26 September 2013 as “distractions” from “ongoing” work on nuclear arms control.\textsuperscript{120}