Drop the B83 Nuclear Gravity Bomb

With a yield of 1.2 megatons—making it roughly 80 times more destructive than the bomb dropped on Hiroshima in 1945 which killed more than 70,000 people—the B83 gravity bomb is by far the highest yield weapon in the US nuclear arsenal. The Obama administration planned to retire the bomb after the new B61-12 entered service in the early 2020s, but the Trump administration reversed course, deciding to keep the B83 “until a suitable replacement is identified.” Although President Biden was part of the Obama administration when it decided to retire the B83 due to its unnecessarily high yield and redundancy, Biden’s FY22 budget did not return to this plan. Instead, it tripled funding for the program to extend the bomb’s life.

While the Biden administration has argued that Congress should allow the administration to complete its Nuclear Posture Review before making any stockpile changes, there are good reasons for Congress to retire the B83 now.

The B83 is unneeded

The B83 was developed in the late 1970s and first deployed in 1983. Its yield is variable, from the low kiloton range to 1.2 megatons. (A megaton is 1,000 kilotons.) This massive yield became one of the major reasons to retire the bomb, as it was seen as unnecessary overkill and strategically undesirable for the military. In 2013 then-assistant secretary of defense for global strategic affairs Madelyn Creedon called the bomb a “relic of the Cold War,” and Air Force General Robert Kehler, at the time commander of US Strategic Command, cited its high yield as one of the B83’s “shortcomings.” General Kehler argued that the B83’s high yield made it less flexible than the B61, with less ability to match its yield to various targets. It therefore could not minimize so-called “collateral effects,” meaning unintentional damage and casualties. For one, the radioactive fallout from such an enormous explosion would be tremendous, particularly if it were used as a “bunker buster,” which has sometimes been proposed. As this simulation developed by UCS shows, up to three million people could be killed by dropping a single one-megaton bomb on a nuclear facility in Iran.

Changing Plans

In 2013, Energy Secretary Ernest Moniz and Defense Secretary Chuck Hagel wrote a letter to Sen. Dianne Feinstein, pledging to “pursue retirement” of the B83 once the B61-12 entered the stockpile. In 2016, the Nuclear Weapons Council—a joint Department of Defense and Department of Energy group that oversees the US nuclear weapons stockpile—sharply cut surveillance programs for the B83, indicating that it did not plan to retain the bomb long-term, and the FY2018 stockpile plan confirmed the plan to retire the B83 once the B61-12 became available.

The FY22 House Energy and Water Development Act eliminated all funding for extending the life of the B83, declaring such funding “premature” pending the outcome of the Nuclear Posture Review. The House version of the National Defense Authorization Act (NDAA) did the same.

In 2018, the Trump administration’s Nuclear Posture Review offered conflicting statements, saying the B83 would be retained “at least” until confidence was achieved in the B61-12, but also stating it would be kept “until a suitable replacement is identified.” However, the FY2019 nuclear stockpile plan dropped the tie to the B61-12 and only repeated the “until a suitable replacement is identified” policy, implying a longer-term desire to keep the B83.

In 2019, acting NNSA administrator Charles Verdon said that maintenance and surveillance measures were sufficient to keep the B83 in the active stockpile for 5-7 years, but that if it were kept around any longer, the bomb would require a full life extension program. Life extension
programs generally aim to extend the life of the weapon in question by 20-30 years. In June 2020, the Nuclear Weapons Council—a joint Department of Defense and Department of Energy group that oversees the US nuclear weapons stockpile—reportedly decided to undertake such an extension.

Then, in May 2021, the Biden administration’s FY22 budget request included nearly $100 million to begin carrying out activities associated with a life extension program for the B83. This is more than triple the FY21 appropriation of $31 million. The money is to begin replacing limited-life components such as neutron generators and tritium reservoirs, which deteriorate on a predictable schedule, as well as to develop a Joint DOD/NNSA Test Assembly program. If the Biden administration were to retire the B83, these costs could be avoided.

**Congress Skeptical**

The FY22 House Energy and Water Development Act eliminated all funding for extending the life of the B83, declaring such funding “premature” pending the outcome of the Nuclear Posture Review. The House version of the National Defense Authorization Act (NDAA) did the same. The current version of the Senate NDAA does not mention the B83, but includes the full $98.55 million from the FY22 budget request as part of a larger funding line. The Senate Energy and Water Development Act follows suit, but adds the request that the administration “certify to the committees on appropriations that there are operational requirements justifying” extending the life of the bomb.

**Drop the B83**

Congress should retire the B83 now. The implications of using this massively destructive weapon and the enormous fallout that would result if it were used as a bunker buster are sufficient reason to do so. If that isn’t feasible, Congress should follow the House’s lead and cut all funding to extend the life of the bomb, and the Biden administration should immediately retire the B83 as a part of its Nuclear Posture Review.