

Executive Summary

Current news reports suggest renewed life in the global nuclear arms race. In the United States, the Trump Administration has expanded plans to upgrade the nation's nuclear weapons arsenal.¹ Over the next ten years, the Congressional Budget Office estimates U.S. taxpayers will pay nearly \$500 billion to maintain and modernize their country's nuclear weapons arsenal, or almost \$100,000 per minute.² A separate estimate brings the total over the next 30 years to an estimated \$1.7 trillion.³ In a July 2019 report, National Nuclear Security Administrator Lisa Gordon-Haggerty wrote, "The nuclear security enterprise is at its busiest since the demands of the Cold War era."⁴

In addition to large amounts of funding, enacting these upgrades requires significant amounts of scientific, technical and human capital. To a large extent, the U.S. government and its contractors have turned to the nation's universities to provide this capital.

At the same time, the United States is shirking its previous commitments to nuclear arms control and reducing nuclear risks despite its obligation under Article VI of the Nuclear Non-Proliferation Treaty to pursue good-faith measures towards nuclear disarmament. In August 2019, the United States officially withdrew from the landmark 1987 Intermediate-Range Nuclear Forces Treaty, testing a treaty-prohibited missile shortly thereafter.⁵ The Trump Administration's 2018 Nuclear Posture Review expands the circumstances under which the United States would consider the first use of nuclear weapons and calls for the development of two new sea-based low-yield nuclear weapon systems.⁶

Internationally, many member states of the United Nations recently recognized the devastating humanitarian and environmental impacts of nuclear weapons: debating, adopting and now signing and ratifying the 2017 Treaty on the Prohibition of Nuclear Weapons. Three states and several major cities across the U.S. have affirmed their support for this treaty.⁷

Despite these debates, U.S. universities have continued to build connections to the U.S. nuclear weapons complex. Although students and faculty have opposed university participation in nuclear weapons research and development at various points in the last 70 years, such participation continues.

Universities involve themselves in the nuclear weapons complex through the four channels listed below. In return for this engagement, universities receive funding, access to research facilities, and specific career opportunities for students.

1) Direct Management

A handful of universities directly manage nuclear weapons related activities on behalf of the federal government, retaining contracts worth billions of dollars per year collectively. These include the University of California, Texas A&M University, Johns Hopkins University, the Massachusetts Institute of Technology, and the University of Rochester.

2) Institutional Partnerships

Many of the National Nuclear Security Administration's (NNSA) sites advertise collaborative agreements with local and national universities. These formal agreements allow the

institutions to cooperate on research and share personnel and expertise. They can also provide university researchers access to funding and advanced facilities in the NNSA laboratories. The report highlights more than 30 such agreements with schools in 18 states.

3) Research Programs and Partnerships

In addition to formal institutional partnerships, numerous connections exist between universities and the nuclear weapons complex at the research project level. In a report delivered to Congress in July 2019, the NNSA highlights that more than \$65 million in grants were delivered to academic institutions in the last year to support stockpile stewardship.⁸ When including grants and subcontracts from the NNSA labs as well, the total amount of funding to universities for research may be higher than \$150 million per year.

4) Workforce Development Programs

Department of Energy Secretary Rick Perry has written that finding “the next generation workforce of world-class scientists, engineers and technicians is a major priority.”⁹ Through university partnerships, vocational training programs and research fellowships, the NNSA creates employment pipelines for the development of its future workforce.

A primary goal of this report is to facilitate a shared understanding of university connections to nuclear weapons research and development. A common factual basis will help communities of university faculty, students and administrations engage in robust internal

debates and take action. Universities would not willingly participate today in the production of chemical and biological weapons; for the same humanitarian reasons, no university should seek an association with the other category of weapons of mass destruction: nuclear weapons.

While American universities have played a key role in the development and continuation of nuclear weapons, they can now join U.S. cities and states that have rejected U.S. nuclear weapons and called on the federal government to support nuclear reductions and the Treaty on the Prohibition of Nuclear Weapons. In light of the research presented, this report offers the following recommendations to universities:

Recommendations

- Provide greater transparency into connections with the nuclear weapons complex;
- Stop directly managing nuclear weapons production sites and dissolve research contracts solely related to nuclear weapons production;
- For contracts with dual-purpose research applications, demand greater transparency and create specific processes for ethical review of this research;
- Advocate for reinvestment of weapons activities funding to non-proliferation and environmental remediation efforts; and
- Join cities and state legislatures in urging the federal government to support the 2017 Treaty on the Prohibition of Nuclear Weapons and reverse course on nuclear arms control backsliding.

US plans to spend \$100,000 per minute over next 10 years for nuclear weapons



In addition to large amounts of funding, enacting nuclear weapons upgrades requires significant amounts of scientific, technical and human capital. That is provided by universities across the country.



These universities support the nuclear weapons complex in various ways



1 Direct Management



2 Institutional Partnerships



3 Research Programs and Partnerships



4 Workforce Development Programs

To move campus communities away from supporting nuclear weapons, the report offers the following recommendations:



1 Transparency



2 Stop Direct Management



3 Ethical Review



4 Reinvestment



5 Support Disarmament Policies

Including the Treaty on the Prohibition of Nuclear Weapons

● DIRECT MANAGEMENT ● INSTITUTIONAL PARTNERSHIPS ● RESEARCH PROGRAMS AND PARTNERSHIPS ● WORKFORCE DEVELOPMENT

○ ○ ○ ● Aiken Technical College	○ ● ○ ○ University of Arkansas
○ ○ ○ ● Amarillo College	● ○ ○ ○ University of California
○ ○ ○ ● Augusta Technical College	○ ● ○ ○ University of California - Berkeley
○ ○ ○ ● Augusta University	○ ● ○ ○ University of California - Davis
○ ● ○ ○ California Institute of Technology	○ ● ○ ○ University of California - Los Angeles
○ ● ○ ○ Carnegie Mellon University	○ ○ ● ○ University of California - San Diego
○ ● ● ○ Cornell University	○ ● ○ ○ University of Colorado - Boulder
○ ○ ● ○ George Washington University	○ ● ● ○ University of Florida
○ ● ○ ○ Georgetown University	○ ● ● ○ University of Illinois at Urbana-Champaign
○ ● ○ ○ Georgia Institute of Technology	○ ● ○ ○ University of Kansas
● ○ ○ ○ Johns Hopkins University	○ ● ● ○ University of Michigan
○ ● ○ ● Kansas State University	○ ● ○ ○ University of Missouri - Kansas City
● ● ○ ● Massachusetts Institute of Technology	● ○ ○ ○ University of Nebraska
○ ○ ○ ● Metropolitan Community College	○ ● ○ ○ University of Nevada - Las Vegas
○ ● ○ ○ Missouri University	○ ○ ○ ● University of Nevada - Reno
○ ● ○ ○ New Mexico Institute of Mining and Technology	○ ● ○ ○ University of New Mexico
○ ● ○ ○ New Mexico State University	○ ○ ● ○ University of Notre Dame
○ ● ○ ● Northern New Mexico College	● ○ ○ ○ University of Rochester
○ ● ○ ○ Pittsburg State University	○ ○ ○ ● University of South Carolina - Aiken
○ ● ○ ○ Purdue University	○ ○ ○ ● University of South Carolina - Salkehatchie
○ ○ ○ ● Roane State Community College	○ ● ○ ○ University of Tennessee
○ ● ● ○ Stanford University	○ ● ● ○ University of Texas at Austin
● ● ● ○ Texas A&M University	○ ○ ● ○ University of Utah
○ ● ○ ○ Texas Tech University	○ ● ○ ○ University of Wisconsin-Madison
○ ● ○ ○ University of Arizona	