SURGE: 2023 GLOBAL NUCLEAR WEAPONS SPENDING



Surge: 2023 Global nuclear weapons spending

International Campaign to Abolish Nuclear Weapons

REPORT

icanw.org

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Tectonica

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Executive Summary

In 2023, the nine nuclear-armed states spent \$10.8 billion (13.4%) more on their nuclear arsenals than the year before, a total of \$91.4 billion, or \$2,898 per second on nuclear weapons.

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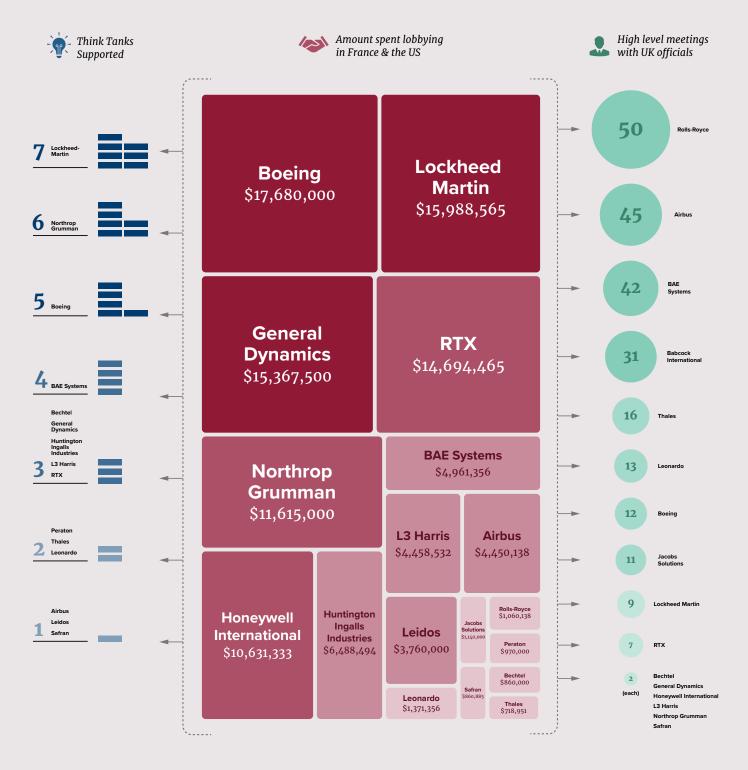
Every country increased the amount it spent on nuclear weapons. The United States had the biggest increase, at nearly 18%. The United States spent more than all of the other nuclear-armed states combined, at \$51.5 billion. China surpassed Russia as the second-highest spender at \$11.9 billion, and Russia came in third, spending \$8.3 billion.

In 2023, twenty companies working on nuclear weapons development and maintenance earned at least \$31 billion for this work. There are at least \$335 billion in outstanding nuclear weapons contracts to these companies, some of which continue for more than a decade. In 2023, at least \$7.9 billion in new nuclear weapon contracts were awarded.

Each company that builds nuclear weapons exerts influence throughout the government, think tanks and financial institutions. These companies spent \$118 million lobbying governments in the US and France, an \$11 million increase from 2022. Several companies held more than a dozen meetings with UK officials in 2023, with two companies meeting UK officials more than 40 times, and five companies meeting with the UK Prime Minister. Companies donated more than \$6 million to the top think tanks researching and writing about nuclear weapons and current and former employees of these companies sit on think tank boards of directors and advisory councils. They also sit on the boards of financial institutions that have significant investments in their companies.

ICAN has published this annual analysis for five years, and in that time, global nuclear spending has increased by 34%. Amidst these massive expenditures to fund weapons of mass destruction by a handful of governments, nearly 100 countries have signed the UN Treaty on the Prohibition of Nuclear Weapons (TPNW). These governments seek to reject nuclear weapons and demonstrate responsible behaviour in an age of catastrophic competition. All countries face a choice: to stand on the side of investment in weapons of mass destruction or to work towards their disarmament by joining the TPNW.

BUYING INFLUENCE (in US Dollars)



The nuclear weapons industry buys influence by financing think tanks, hiring lobbyists and holding high level meetings with officials.

Introduction

The risk of nuclear weapons use, and public attention to this danger, is at an all-time high. Explicit and implicit threats to use nuclear weapons, including in the context of ongoing conflicts in Ukraine and Gaza, combined with the Oppenheimer blockbuster, Fallout TV show (and possible video game reboot), and bestselling book Nuclear War: A-Scenario, mean the world is talking about the bomb.

Global nuclear weapons spending is also at an all-time high, at an estimated \$91.4 billion in 2023, a \$23.2 billion increase over the last five years. The public is less aware of the shadowy industry advocacy that works hard to reinforce the false logic of nuclear deterrence and fuel the nuclear arms race. The companies behind nuclear weapons spent more than \$118 million lobbying governments in 2023: as a result they continue to earn from more than \$335 billion in outstanding contracts.

MONEY OVER TIME

The amount spent by nuclear-armed countries every moment of 2023.



Amidst a challenging global security landscape, what is clear is that nuclear weapons do not ensure peace or provide security. which is why the actors involved in the nuclear weapons industry try to hide their engagement from concerned stakeholders, whether they be citizens or shareholders. Three of these companies (Lockheed Martin, Northrop Grumman and RTX) have had repeated concerns raised at shareholder meetings about their activities, particularly in the context of the egregious human rights violations, and reputational and regulatory risks they face by continuing to engage in the production of weapons prohibited under international law. And several companies have posted disingenuous information on their websites, suggesting that as they are not directly involved in the production of nuclear warheads, that their role in producing the missiles or submarines designed to deliver nuclear weapons doesn't really mean they're involved in nuclear weapon production.

This report shines a spotlight on all those working to maintain these weapons of mass destruction and produce more, in spite of international law prohibiting nuclear weapons development, manufacture and stockpiling. The Treaty on the Prohibition of Nuclear Weapons, adopted at the United Nations in July 2017, counts nearly 100 countries as signatory states. In addition to banning nuclear weapons development, this Treaty is engaging those governments and industry that want to be part of the solution. During the second meeting of states parties to the Treaty, governments recognised the power of the financial sector in helping to put an end to nuclear weapon production, manufacturing and development. More than 111 investors, representing over \$1 trillion in assets, affirmed their commitment to challenging the nuclear weapons industry, and were recognised by governments as a significant stakeholder in putting an end to the age of nuclear weapons.1

In five years, the funds fuelling nuclear annihilation have increased by 34%. ICAN research has unveiled the cycle of influence that keeps the money pouring in to build weapons of mass destruction. The nuclear weapons industry is fallible, the nuclear arms race is expensive, and both are growing harder to defend to a public that saw Oppenheimer's start of the age of nuclear weapons and now have a UN treaty in place to end this dangerous era once and for all.



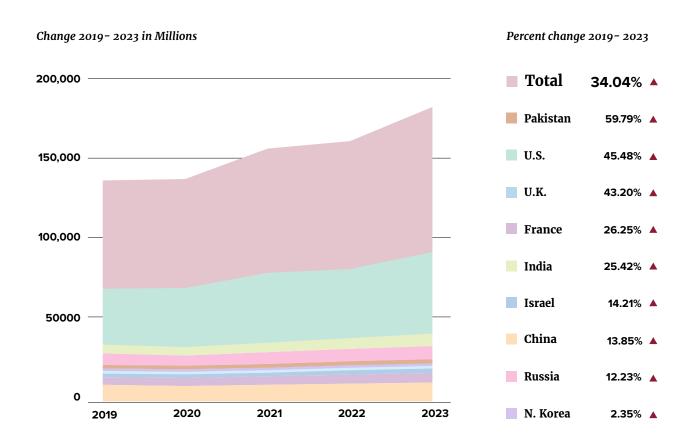
The nose assembly of a mock B61-12, mounted on an aluminum tube to replicate the body of the bomb, sits in a stand awaiting movement to Sandia National Laboratories' Davis gun, which fired the test assembly into a pool in one of a series of impact tests. Photo: US Department of Energy

Five Years of Global Nuclear Weapons Spending

In the five years that this report has been published, annual nuclear weapons spending has increased by \$23.2 billion, or 34%. Globally, countries spent more than \$44,000 more per minute in 2023 than in 2019 on their nuclear weapons arsenals.

A cumulative \$387 billion has been spent to build and maintain nuclear weapons over five years.

5 YEAR CHART OF GLOBAL NUCLEAR WEAPONS SPENDING



By comparison, the World Food Programme Executive Director stated in 2021 that to end world hunger, countries could spend \$40 billion per year through 2030, which is a total of \$360 billion over nine years.² That is \$27 billion less than what these nine countries spent on their nuclear arsenals in just five years.

While every country has increased its nuclear spending per year in the past five years, some have increased at a higher rate than others. The United States is responsible for the biggest financial increase - \$16.1 billion from 2019 to 2023. The United Kingdom had the second highest material increase of \$2.4 billion, followed by China at \$1.4 billion. By percentage, Pakistan increased its nuclear spending the most - with a 60% increase from 2019 to 2023, or \$378 million. The United States came in a close second at 45% and the United Kingdom in third at 43%. North Korea had the smallest increase, in terms of dollars and percentage.

COUNTRIES	TOTAL SPENT OVER 5 YEARS		
United States	\$212.16 billion		
China	\$53.42 billion		
Russia	\$37.32 billion		
United Kingdom	\$32.23 billion		
France	\$27.09 billion		
India	\$11.55 billion		
Israel	\$5.16 billion		
North Korea	\$4.16 billion		
Pakistan	\$3.87 billion		
Total	\$386.9 billion		



Chinese military parade. Photo by Zhiyu Zhao on Flikr.

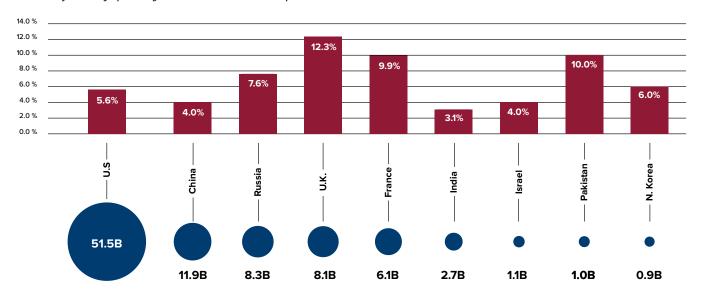
Countries

INTRODUCTION

The International Campaign to Abolish Nuclear Weapons estimates that the nine nuclear-armed countries spent \$91.4 billion on nuclear weapons in 2023. This equals \$173,884 spent in every minute of 2023. All figures are compared to previous years on a constant currency basis. This means countries have increased spending on nuclear weapons by \$10.8 billion, since 2022.

MILITARY SPENDING

Percent of military spending dedicated to nuclear weapons



Total military spending per country (in USD billions)

COUNTRY SPENDING ON NUCLEAR WEAPONS IN 2023

COUNTRIES	ANNUAL TOTAL	CHANGE FROM PREVIOUS YEAR
The United States	\$51.5 billion (1) \$97,983 / minute	17.8 %
*3 China	\$11.9 billion (1) \$22,546 / minute	~ 6.7%
Russia	\$8.3 billion (5) \$15,808 / minute	∼ 6.1%
The United Kingdom	\$8.1 billion (1) \$15,331 / minute	№ 17.1%
France	\$6.1 billion (1) \$11,531 / minute	№ 5.7%
India	\$2.7 billion (1) \$5,057 / minute	№ 2.5%
	\$1.1 billion (1) \$2,075 / minute	~ 2.4%
C Pakistan	\$1 billion (1) \$1,924 / minute	✓ 12.5%
North Korea	\$856 million (*) \$1,629 /minute	4.7 %
2 023 Total	\$91.4 billion (*) \$173,884 per minute	✓ 13.4%





China spent \$22,546 (¥159,511) every minute on nuclear weapons in 2023.



China has 500 nuclear weapons and can launch them from land-based missiles, aircraft, and submarines.³

There is no reliable public information about Chinese nuclear spending. Therefore, ICAN used a percentage of total military spending to calculate China's nuclear expenditure. ICAN estimated China spends 4% of its total military spending on nuclear weapons based on similar estimates in a 2020 Reaching Critical Will report and in a 2011 Global Zero estimate.⁴ The Stockholm International Peace Research Institute (SIPRI) estimated that in 2023 China spent \$296 billion on military expenditures.⁵ 4% of \$296 billion is about \$11.9 billion, or ¥83.8 billion, our estimate for Chinese nuclear spending in 2023. China spent \$22,546 (¥159,511) every minute of 2023 on nuclear weapons. China increased its nuclear weapons spending by \$744 million (¥5.3 billion) in 2023.





France spent \$11,531 (€10,654) on nuclear weapons every minute in 2023.



France \$6.1 billion (€5.6 billion)

France has under 300 nuclear weapons, according to French President Macron.⁶ The Federation of American Scientists estimates that France has 290 nuclear weapons which can be launched from aircraft and submarines.⁷ The 2023 French defence bill allocated €5.6 billion for nuclear weapons (the budget line item "deterrence").⁸ This includes annual costs for nuclear warheads, renewal of nuclear-capable air-launched cruise missiles, submarine-launched missiles, and submarines.

According to a military programming law approved in 2018, the total amount that France will spend on its nuclear weapons programme from 2019-2025 is €37 billion. In April 2023, the new Military Programming Law for the period of 2024-2030 was introduced, including 13%, or €53.69 billion, for nuclear weapons, for the modernisation and renewal of all nuclear forces, demonstrating a plan to increase French spending on nuclear weapons by nearly 50% compared to the previous five years. It was approved by the Parliament on 7 June 2023. It should also be noted that this law launches funding for the third-generation nuclear-powered ballistic missile submarine program. Four submarines will be produced, available between 2035 and 2050 (one every 5 years) and sailing until 2090.

Notably not included in the deterrence budget are costs associated with the Rafale aircraft, which can be used to launch nuclear weapons. Given that these costs are not publicly available, our estimate assumes that the nuclear weapons budget covers the bulk of French nuclear weapons spending and we do not include these aeroplanes. France spent roughly 10% of its total military budget on nuclear weapons in 2023.¹²

France spent \$11,531 (€10,654) on nuclear weapons every minute in 2023. France increased its nuclear weapons spending by \$325 million (€300 million) in 2023.





India spent \$5,057 (417,553 Indian rupees) on nuclear weapons every minute in 2023.



India \$2.7 billion (219.5 billion Indian rupees)

India is estimated to have 170 nuclear weapons and can launch nuclear weapons from land-based missiles, aircraft, and submarines.¹³

While little is officially published about Indian nuclear weapon spending, an October 2016 Stimson Center report looked at parliamentary oversight documents and created a methodology to calculate annual nuclear weapons spending. The 2016 Indian parliamentary report stated that India spent 46% of the Defence Research and Development Organisation (DRDO)'s budget on its nuclear-capable delivery systems. Given that about half of the U.S. nuclear budget goes to nuclear delivery systems, the Stimson Center report assumed that India's total nuclear spending would follow the same pattern. ICAN's research thus follows the Stimson Center's methodology by taking 46% of the 2023-2024 DRDO budget (23,855 crore Indian rupees) to get 10,973.3 crore Indian rupees for delivery systems and then doubling it to reach 21,946.6 crore Indian rupees for the entire nuclear arsenal. A crore is 10 million, so 21,946.6 crore is 219.5 billion Indian rupees. Converted into USD, this total is \$2.7 billion, our estimate for Indian nuclear spending in 2023.

This is roughly 3% of total Indian military spending in 2023. India spent \$5,057 (417,553 Indian rupees) every minute of 2023 on nuclear weapons. India increased its nuclear weapons spending by \$66 million (5.4 billion Indian rupees) in 2023.



Hwasongpho-17 intercontinental ballistic missile test. Public domain.





Israel spent \$2,075 (7,652 shekels) every minute on nuclear weapons in 2023.



Israel \$1.1 billion (4 billion shekels)

Israel is estimated to have 90 nuclear weapons and is believed to be able to launch them from land-based missiles, submarines, and aircraft.¹⁷

There is no reliable public information about Israeli nuclear spending, given that it publicly does not confirm that it possesses nuclear weapons. Therefore, ICAN uses an average percentage of what nuclear-armed countries spend on nuclear weapons out of total military spending (5%) to assess Israel's nuclear spending. In 2014, Israel's Director General of the Defense told journalists that 4.5 billion Israeli shekels of that year's defence budget is allocated for "special means." Is Israeli nuclear expert Avner Cohen explained in an editorial that "special means" is used as a "veiled euphemism" to refer to "large unnamed defense projects," such as nuclear weapons. In 2014, 4.5 billion Israeli shekels was about 7% of total Israeli military expenditure, indicating that 5% is a reasonable estimate.

However, in 2023, Israeli military spending increased significantly, by 24%, "mainly driven by Israel's large-scale offensive in Gaza in response to the attack on southern Israel by Hamas in October 2023", according to SIPRI, which estimated that in 2023, Israel spent 101.4 billion shekels on its military. In the past five years, on average, Israel's military spending increased about 2% annually. It Although there is no information available about how the offensive in Gaza has impacted Israeli spending on nuclear weapons, we can assume that most increased military expenditures in 2023 were not related to the nuclear arsenal, as was the case with Russia's invasion of Ukraine. Therefore, to calculate 2023 Israeli nuclear weapons spending, we adjusted for increased military spending due to the offensive in Gaza by calculating a 2% increase from 2022 military spending and then finding 5% of that adjusted military spending total.

5% of \$21.8 billion (our adjusted military expenditure for 2023) is \$1.1 billion, our estimate for Israeli nuclear spending in 2023.

Israel spent \$2,075 (7,652 shekels) every minute on nuclear weapons in 2023.

Israel increased its nuclear weapons spending by \$25 million (92 million shekels) in 2023.





North Korea spent \$1,629 (1.5 million won) every minute on nuclear weapons in 2023.



North Korea \$856 million (770.7 billion won)

North Korea is estimated to have 50 nuclear weapons.²² It is developing nuclear-capable missiles which can be launched from land and from submarines.

There is very little public information about North Korean nuclear spending or its military spending overall. A military intelligence source told The Chosun Daily in April 2024 that North Korea spent up to 6.8 billion won (\$5 million) on a short-range ballistic missile launch and up to 41 billion won (\$30 million won) for an intercontinental ballistic missile launch.²³

South Korea annually estimates North Korean gross national income, and it placed North Korea's 2022 GNI at 36.7 trillion won.²⁴ North Korean military spending is largely unknown but in 2009 a South Korean think tank estimated North Korea spent \$8.7 billion on its military, which represented about one-third (35%) of GNI at that time.²⁵

Assuming that North Korea continues to spend 35% of its GNI on its military, North Korea would have spent about 12.8 trillion Korean won on its military in 2022. Global Zero estimated that in 2011 North Korea spent about 6% of its military budget on its nuclear programme. Assuming that North Korea still spends 6% of its annual military spending on nuclear weapons, North Korea would have spent about 770.7 billion won on its nuclear program in 2022. When converted to USD, 770.7 billion North Korean won is \$856 million, our estimate for 2023 North Korean nuclear spending.

North Korea spent \$1,629 (1.5 million won) every minute on nuclear weapons in 2023. North Korea increased its nuclear weapons spending by \$39 million (34.9 billion won) in 2023.





Pakistan spent \$1,924 (488,413 Pakistani rupees) every minute on nuclear weapons in 2023.



Pakistan \$1 billion (256.7 billion Pakistani rupees)

Pakistan is estimated to have 170 nuclear weapons that it can launch from land-based missiles and aircraft, and it is developing the ability to launch them from submarines.²⁷

Analysts in the past decade have estimated that Pakistan spends about 10% of its total military spending on its nuclear arsenal, confirmed in a 2016 parliamentary report revealing that Pakistan spent 9.8% of its official military budget on nuclear weapons that year.²⁸ 10% of Pakistan's 2023 military spending (2.567 trillion Pakistani rupees) is 256.7 billion Pakistani rupees which converted into USD is \$1 billion, our estimate for Pakistani nuclear spending in 2023.²⁹

Pakistan spent \$1,924 (488,413 Pakistani rupees) every minute on nuclear weapons in 2023.

Pakistan increased its nuclear weapons spending by \$177 million (44.8 billion rupees) in 2023.





Russia spent \$15,808 (1.4 million roubles) every minute on nuclear weapons in 2023.

Russia \$8.3 billion (710.5 billion roubles)

Russia has 5,580 nuclear weapons which it can launch from land-based missiles, submarines, and aeroplanes.³⁰

A 2018 SIPRI report found that Russian nuclear weapons system spending cost about 13% of total defence expenditures in recent years (2010 and 2016). Therefore, in previous years, this report calculated 13% of total Russian defence spending to provide an estimate of nuclear weapons spending.³¹ However, in 2022 and 2023, Russian military spending increased significantly beyond what was projected due to its invasion of Ukraine. SIPRI estimated Russian military spending at \$109.5 billion in 2023, an increase of 24% from 2022.³² These costs can be assumed to be largely, if not completely, associated with conventional weapons; in 2022, the first year of the invasion, the line item in the Russian budget dedicated to the "nuclear weapons complex" (which is just one component of our calculation of Russian nuclear weapons spending) remained unchanged from what was budgeted in 2022 to what was reported as enacted. Other allocations for conventional forces, for example for the Russian national guard, or for "mobilization and extra forces training" increased significantly.³³

Nuclear weapons spending therefore would have likely been a smaller percentage of total military spending than before the invasion of Ukraine. Therefore, we calculated the increase in the "nuclear weapons complex" line item from 2021 to 2022 (6%) and applied this annual increase to our nuclear weapons spending calculation from 2021. Our estimate of Russian nuclear weapons in 2023 is therefore 710.5 billion roubles or \$8.3 billion, which is about 8% of Russian military spending in 2023.

Russia spent \$15,808 (1.4 million roubles) every minute on nuclear weapons in 2023.

Russia increased its nuclear weapons spending by \$477 million (40.8 billion roubles) in 2023.





The United Kingdom spent \$15,331 (£12,326) every minute on nuclear weapons in 2023.



The United Kingdom \$8.1 billion (£6.5 billion)

The United Kingdom has 225 nuclear weapons which it can launch from submarines.³⁴ It cooperates closely with the United States to produce its Trident II D-5 nuclear-capable missiles, and the submarines which are armed with them.

The UK has changed how it accounts for its nuclear weapons spending, with a ring-fenced budget for the UK Defence Nuclear Enterprise (DNE) accounted for separately starting with the 2023 fiscal year budget.³⁵ The DNE encompasses all UK spending on its nuclear weapons, nuclear-armed submarines, missiles and related infrastructure, but also includes spending on its conventionally-armed attack submarines, known as SSNs. Our figure for 2023 is derived from total DNE spending, with SSN costs subtracted. The UK's continued trend towards an irresponsible lack of transparency means it has not published the DNE figures for 2023, therefore our calculations are based on responses to parliamentary inquiry.

The government has not published a figure for DNE spending in 2022/23, and in response to a parliamentary question, said that the costs were spread across different budgetary areas and could not be reported.³⁶ However, in 2021, they responded to a parliamentary question and stated that DNE spending in 2021/22 amounted to around 14% of the Ministry of Defence (MOD) Budget.³⁷ Using this proportion and the total MOD budget for 2022/23 of £52.9 billion, we estimate the total DNE spending for 2022/23 at £7.4 billion.³⁸

This total includes spending on the Dreadnought submarine programme of £2.5 billion in 2022/23.³⁹ According to the latest MOD figures the programme is forecast to cost £34 billion.⁴⁰ Annual spending on the programme is also expected to rise over the next few years, as the MOD's 2023-2033 Equipment Plan saw substantial rises in nuclear-related costs compared to the previous year's plan, including a 62% increase in forecast equipment spending by the Defence Nuclear Organisation, due to a decision to prioritise reducing delays to the Dreadnought submarines over cost constraints.⁴¹

In response to a parliamentary question asking for various costs that would allow us to estimate the cost of spending on SSBNs in 2022/23, the MOD said that the total cost of support and maintenance programmes for in-service submarines was £594 million. 42 During that time, six of the UK's ten in-service submarines were SSNs and the remaining four were nuclear-armed. Using those proportions to assign 60% of support and maintenance costs to SSNs gives a figure of £356.4 million for SSN support and maintenance costs. In addition, during that year the UK had two projects to build SSNs. The first, the Astute programme, is producing the current generation of UK SSNs. The second, the SSN-AUKUS programme, is in the early stages of designing the planned UK-Australian SSN, which is intended to replace the Astute class when they leave service.

The MOD's 2022/23 Major Projects Data states that £384.48m was spent on the Astute programme that year and £179.81m was spent on the SSN-AUKUS programme. ⁴³ Australian financial participation in the SSN-AUKUS programme does not have any bearing on these figures, as it appears to involve direct contracts with UK companies, and was not yet in place during the 2022/23 financial year. Bringing these costs together, we estimate that the UK spending on SSNs in 2022/23 to have been £921 million.

Subtracting our estimate for SSN spending from our estimate of DNE spending gives a final estimate for UK spending on nuclear weapons in 2022/23 of £6.5 billion, which converted into USD is \$8.1 billion. This amounts to about 12% of the UK's total military spending.

The United Kingdom spent \$15,331 (£12,326) every minute on nuclear weapons in 2023.

The United Kingdom increased its nuclear weapons spending by \$1.2 billion (£1 billion) in 2023.



India's Agni V Ballistic missile successfully launched on 31st of January, 2015. Wikipedia Commons.





The United States spent \$97,983 every minute of 2023 on nuclear weapons.



The United States \$51.5 billion

The United States has 5,044 nuclear weapons which it can launch from land-based missiles, submarines, and aeroplanes.⁴⁴

The Department of Energy's National Nuclear Security Administration (NNSA) and the Department of Defense divide responsibilities for the nation's nuclear weapons. The NNSA is responsible for the research, development, production, testing and dismantlement of the nuclear warheads, while the Department of Defense manages the development of warhead delivery systems, such as missiles, aircraft, and submarines. The Department of Defense also manages the deployment of nuclear weapons once they are produced, and any foreign storage facilities for deployed weapons.

The ICAN spending estimate combines U.S. Department of Defense and NNSA funding.⁴⁵ The U.S. Congress allocated \$17.1 billion for the NNSA in 2023 to spend on weapons activities.⁴⁶ In 2023, the Department of Defense requested \$34.4 billion for "Nuclear Enterprise Modernization," including the Ground Based Strategic Deterrent and Long Range Standoff programs, the B-21 bomber, Columbia-class ballistic missile submarine and Nuclear Command, Control, and Communications.⁴⁷ While the Defense Department doesn't provide more detail on all the programs covered under this category, given the similarity to the Congressional Budget Office total estimate for Department of Defense spending on nuclear weapons systems for 2023, including nuclear delivery systems and nuclear command and control, we can assume it is fairly comprehensive.⁴⁸

Adding \$17.1 billion to \$34.4 billion results in a total of \$51.5 billion spent on nuclear weapons in the United States in 2023. This is roughly 6% of total U.S. military spending in 2023.

The United States spent \$97,983 every minute of 2023 on nuclear weapons. The United States increased its nuclear weapons spending by \$7.8 billion in 2023.

Companies

In 2023, the nuclear weapons industry earned at least \$30 billion for work on developing, manufacturing, sustaining and producing nuclear weapons and their specifically designed key components. The nuclear weapons industry spent more than \$118 million lobbying governments in 2023 and got at least \$7.9 billion in new contracts. Five companies (BAE Systems, Boeing, Lockheed Martin, Northrop Grumman and Peraton) have contracts that continue through 2039, while most other contracts are of a two to five-year duration. The twenty companies listed in this report have at least \$335 billion in contract agreements with nuclear-armed countries.

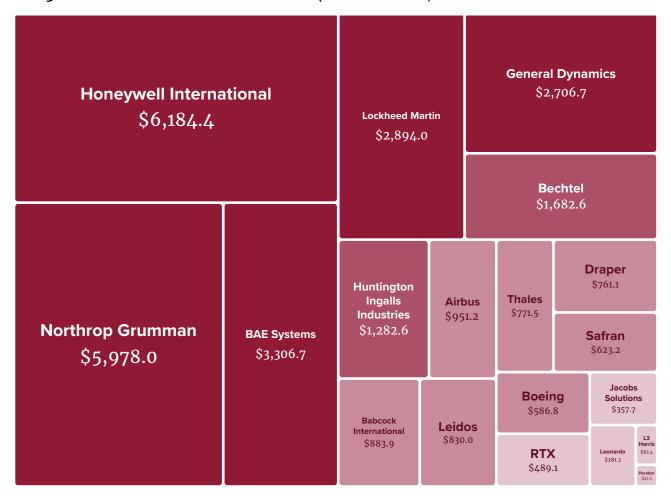
Included in this report are details about the nuclear weapons industry - the companies, contracts and efforts to secure influence over nuclear policy. The information provided is all freely available in the public domain. There

are some changes from previous publications, notably Aerojet Rocketdyne was acquired by L3 Harris and is therefore no longer included as a separate entity in this report. The contracts held by Textron have expired, and not been renewed, so they are no longer included. Babcock International's role in nuclear weapons production has increased, so they are now included. This report does not included details about the nuclear weapons work of Bharat Dynamics Limited (India), China Aerospace Science and Technology Corporation (CASC), or Rostec (Russia) which are known to contribute significantly to their country's nuclear arsenals, details of which can be found in the Don't Bank on the Bomb "Untenable Investments" report. They are excluded from this analysis as they are either state controlled or owned, or their role in purchasing influence is unclear.

How much did each company earn for nuclear weapons work in 2023?

COMPANY	2023 NUCLEAR WEAPONS REVENUE (USD MILLIONS)	% OF TOTAL REVENUE
Airbus	\$951.2	1.53%
Babcock International	\$883.9	24.55%
BAE Systems	\$3,306.7	16.13%
Bechtel	\$1,682.6	unknown
Boeing	\$586.8	2.66%
Draper	\$761.1	unknown
General Dynamics	\$2,706.7	6.40%
Honeywell International	\$6,184.4	16.87%
Huntington Ingalls Industries	\$1,282.6	11.20%
Jacobs Solutions	\$357.7	2.18%
L3 Harris	\$82.4	0.42%
Leidos	\$830.0	5.38%
Leonardo	\$281.2	1.75%
Lockheed Martin	\$2,894.0	4.28%
Northrop Grumman	\$5,978.0	15.21%
Peraton	\$42.3	unknown
Rolls-Royce	unknown	unknown
RTX	\$489.1	0.66%
Safran	\$623.2	2.82%
Thales	\$771.5	4.41%

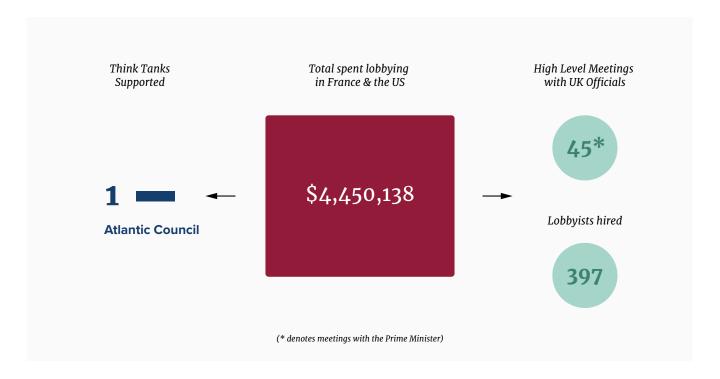
2023 NUCLEAR WEAPONS REVENUE (in USD Millions)

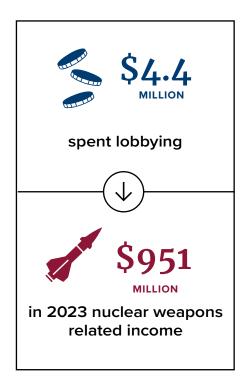


How did these companies buy influence in 2023?

COMPANY	SPENT LOBBYING IN FRANCE & US (2023)	SPENT ON THINK TANKS (LAST YEAR DATA AVAILABLE)	HIGH LEVEL MEETINGS WITH UK OFFICIALS *
Airbus	\$4,450,138	\$ 375,000	45*
Babcock International	\$138	\$0	31
BAE Systems	\$4,961,356	\$250,000	42*
Bechtel	\$ 860,000	\$ 187,500	7
Boeing	\$17,680,000	\$ 398,474	12
Draper	\$0	\$0	0
General Dynamics	\$15,367,500	\$247,499	2
Honeywell International	\$10,631,333	\$0	2
Huntington Ingalls Industries	\$6,488,494	\$359,999	0
Jacobs Solutions	\$1,140,000	\$0	11
L3 Harris	\$4,458,532	\$187,499	2
Leidos	\$3,760,000	\$75,000	0
Leonardo	\$1,371,356	\$500,000	13
Lockheed Martin	\$15,988,565	\$1,358,187	9*
Northrop Grumman	\$11,615,000	\$1,414,999	2*
Peraton	\$970,000	\$125,000	0
Rolls-Royce	\$1,060,138	\$0	50*
RTX	\$14,694,465	\$524,999	7
Safran	\$860,885	\$37,500	2
Thales	\$718,951	\$249,999	16

Airbus





Airbus, best known as a commercial aeroplane manufacturer, is also involved in the French nuclear arsenal. Airbus is partially state-owned by France (10.86%), Germany (10.84%) and Spain (4.09%), with the rest of its shares owned by the public.⁵¹ Airbus is significantly involved in two joint ventures which are contracted to produce key components for the French nuclear arsenal, it owns 37.5% of MBDA⁵² and half of ArianeGroup.⁵³ Airbus CEO, Mr Guillaume Faury, earned over €3.5 million in direct cash compensation for 2023, a 5.3% decrease from 2022.⁵⁴

Airbus notes that the ongoing war in Ukraine continues to result in supply chain disruptions for the company, notably for titanium sourced in Russia. The company closed its Representative Office in Moscow in 2023 and is still in the process of closing out joint ventures, primarily related to space, operating in Russia.⁵⁵

NUCLEAR WEAPONS

French air-launched nuclear missiles, the ASMPA, are produced by MBDA. MBDA is contracted for three lots of missiles to be delivered in 2024. MBDA is also contracted to produce the next generation ASN4G missiles, which have twice the range of the ASMPA. Airbus is one of three companies that owns MBDA, holding 37.5% of the company. ArianeGroup is a 50/50 joint venture between Airbus and Safran. ArianeGroup is the prime contractor for French submarine-launched M51 nuclear-armed missiles. The warheads are produced under the direction of the French government.

CONTRACTS

In 2023, France spent €124 million on the submarine-launched component (M51) of its nuclear arsenal, and €838.12 million on the air-based component (ASMPA).⁶⁰ The exact amounts per contract are not published. However, based on the information provided about payments and the number of companies involved, one can estimate that Airbus earned \$951 million in nuclear weapon related contracts.⁶¹

LOBBY & INFLUENCE

In total, Airbus was connected to more than \$4.4 million in lobby expenditures in France and the United States combined. Airbus spent \$3.8 million lobbying in the US in 2023, of which \$1.1 million was spent hiring external firms. Airbus hired the following firms to lobby on their behalf: Cassidy & Associates, Inc.; Federal Solutions, LLC; Fierce Government Relations; Hogan Lovells US LLP; Invariant LLC; Tiber Creek Group.⁶²

Airbus spent at least €587,500 on lobbying in France, of which at least €250,000 was directly connected to MBDA.⁶³ ArianeGroup did not register any lobbying activity.

In the UK, Airbus was known to have at least 45 meetings with key government officials, including the Prime Minister, of these, no less than seven were with the Ministry of Defence. MBDA was connected to at least five meetings with key representatives of the UK government. Of these, at least two were to discuss weapons developments and exports. 64 Airbus also contributed £9,600 to the UK Labour party in 2023 65

Airbus non-executive board members hold positions connected to the financial industry, including some with institutional investors in Airbus. Victor Chu is Chairman and CEO of First Eastern Investment Group and serves on the board of Nomura Holdings Inc.⁶⁶ While René Obermann is Co-Head of Europe and Managing Director of Warburg Pincus Deutschland GmbH in addition to his role as Chairman of the Board of Directors of Airbus.⁶⁷

Stephan Gemkow, another non-executive Airbus Director currently serves as senior advisor to BNP Paribas.⁶⁸ BNP Paribas has \$498 million in outstanding loans to Airbus.⁶⁹ Another non-executive board member, Amparo Moraleda, also sits on the board of CaixaBank, though they do not currently have significant financing relationships with Airbus.⁷⁰ Airbus CEO, Mr Guillaume Faury, is a member of the board of directors of AXA SA, which holds a small percentage of outstanding Airbus shares.⁷¹

Airbus board member Victor Chu is connected to international institutions including the World Economic Forum and the Royal Institute of International Affairs and sits on the Panel of Senior Advisers at Chatham House.⁷²

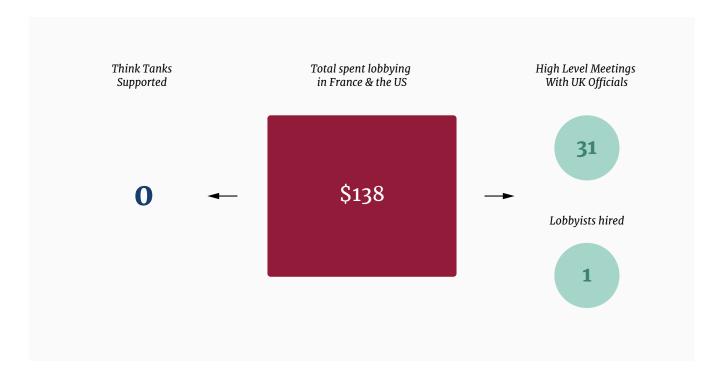
C. Jeffrey Knittel, Chairman and Chief Executive Officer Airbus Americas is a member of the Board and Executive Committee of the Atlantic Council.⁷³ Airbus has also provided between \$250,000 - \$499,999 in financial support to the Atlantic Council in the last year figures were available.⁷⁴

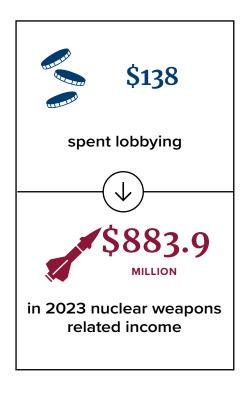
Guillaume Faury, Airbus Chief Executive Officer, is the President of the Groupement des Industries Françaises de l'Aéronautique et du Spatial (GIFAS), the French aerospace industries association (since July 2021). He was appointed President of the Aerospace, Security and Defence Industries Association of Europe (ASD) in June 2023.⁷⁵



Earned by Guillaume Faury, CEO.

Babcock International





Babcock International is significantly involved in the production of UK and US nuclear-armed submarines. It has upgraded facilities to support and maintain the UK "nuclear deterrent capability for decades to come."⁷⁶

CEO David Lockwood received £1.4 million (\$1.7 million) in compensation for 2023, a 50% increase from the previous year. 77

NUCLEAR WEAPONS

In 2023, Babcock International returned the HMS Vanguard, one of the four UK nuclear-armed submarines, back to the British Navy after "essentially a rebuild" of the boat, and began work on the HMS Victorious. Babcock is responsible for naval base operations, including at the HMNB Clyde, where the UK nuclear-armed submarines are stationed, and Devonport where they dock for periodic maintenance. Babcock is also a subcontractor to General Dynamics and supports the production of missile tubes for Trident missiles. Babcock also produces the Weapon Handling and Launch System (WHLS) and Submerged Signal Ejector equipment for the Dreadnought-class submarines, among other support for the project development.



Earned by David Lockwood, CEO.

CONTRACTS

Babcock International has at least six outstanding contracts related to the UK nuclear arsenal, including one for missile tube assemblies that will be used by the US. The contracts have a total outstanding value of at least \$3.9 billion and will continue at least through 2028. Pl n 2023, at least two contracts valued over £100 million were awarded to Babcock to support the development of the UK's future nuclear weapons systems. Plant is a six outstanding to the UK's future nuclear weapons systems.

LOBBY & INFLUENCE

Babcock International did not spend a significant amount lobbying in 2023. It was one of many clients of a French lobby firm, and there were no reported lobbying expenditures in the US.

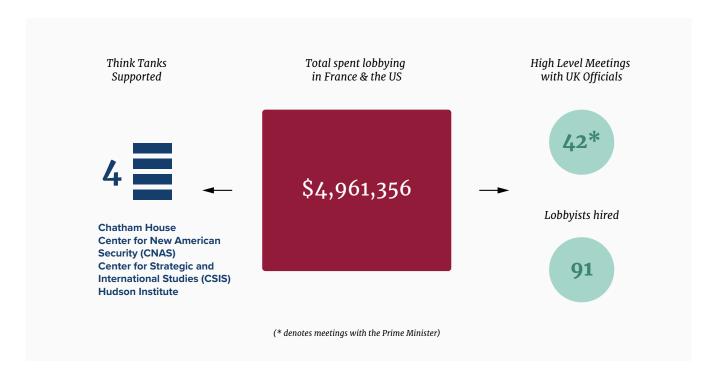
However, in 2023 Babcock International participated in at least 31 meetings with UK officials, including at least six which were with the Ministry of Defence.⁸⁴ One of those meetings was reported to be a consultation on how the defence sector could push back against ESG considerations by investors.⁸⁵

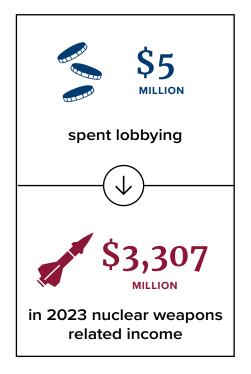
The Right Honourable Lord Parker of Minsmere, GCVO, KCB is a board member of Babcock International and a Distinguished Fellow of Royal United Services Institute (RUSI).⁸⁶



Members of the Global Strike Challenge nuclear/conventional load crew team lift a GBU-31 Joint Direct Attack Munition into position. Photo: U.S. Air Force, Staff Sqt. Chad Warren.

BAE Systems





BAE Systems manufactures key components for nuclear missiles for France and the US as well as nuclear-armed submarines for the US and UK.

In 2023, payments from the UK to BAE Systems for the Dreadnought nuclear-armed submarine system exceeded £2.4 billion.⁸⁷ Neither BAE nor the French government disclose the specific amounts given the company for its part in nuclear missile production (through the MBDA joint venture), but the U.S. government has outstanding contracts with BAE for at least \$14 billion through 2040.

Dr. Charles Woodburn, CEO of BAE Systems PLC earned £13.5 million in 2023, an 11% increase over the previous year.88

NUCLEAR WEAPONS

French air-launched nuclear missiles, the ASMPA, are produced by MBDA. MBDA is contracted for three lots of missiles to be delivered in 2024. 89 MBDA is also contracted to produce the next generation ASN4G missiles, which have twice the range of the ASMPA. 90 BAE Systems is one of three companies that owns MBDA. 91

The UK Dreadnought submarines will involve several companies before they are deployed. BAE Systems is the lead for the whole boat build and secondary propulsion and is the platform technical authority on the Dreadnought programme. BAE Systems also provides supply support and information technology services for the Trident II (D5) Strategic Weapon System.



Earned by Dr. Charles Woodburn, CEO.



Workers from Lawrence Livermore National Laboratory and Nevada Nuclear Security Site lower the cube containing plutonium and chemical explosives for a subcritical nuclear weapons test into the confinement vessel. Photo: U.S. Department of Energy.

BAE Systems is also involved in system engineering, training, technical support and development of the U.S. Minuteman III system.⁹⁴

BAE Systems is working on the U.S. Columbia-class nextgeneration nuclear-armed submarines, manufacturing the propulsors and payload tubes for the new boats.⁹⁵

CONTRACTS

BAE Systems has at least nine outstanding contracts for nuclear weapons work, valued at \$16.3 billion. Most contracts are set to expire in 2026 or 2027, but one, for Minuteman III, will continue through 2040. BAE Systems is part of MBDA, which is contracted for sea-launched nuclear-armed missiles and specific details are not disclosed. However, based on the information provided about payments and the number of companies involved, one can estimate that BAE Systems earned \$421 million in French nuclear weapon related contracts.⁹⁶

In 2023, BAE Systems was awarded two new contracts. A four-year \$15 million contract for work on the U.S. Columbia-class submarines, and a four-year \$105 million contract for work on the Trident system.⁹⁷ The company also received a \$1.9 billion order intake from the UK government for the Dreadnought-class submarines.⁹⁸

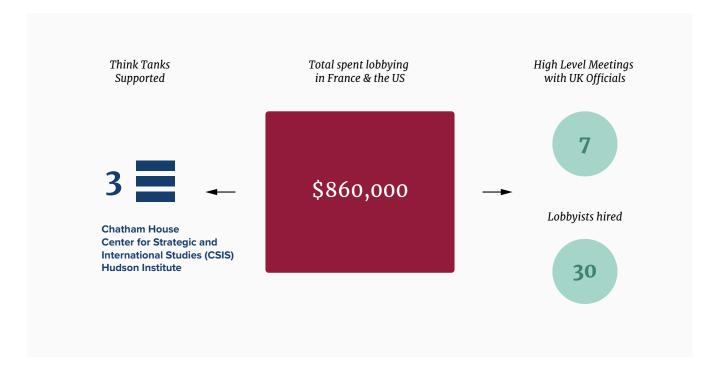
LOBBY & INFLUENCE

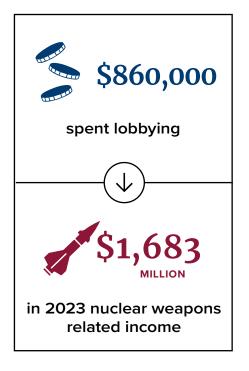
BAE Systems spent \$4.9 million lobbying in the US in 2023, of which \$970,000 was spent hiring external firms. BAE Systems hired the following firms to lobby on their behalf: Bedrock Strategies; Brownstein Hyatt Farber Schreck; Cassidy & Associates; Holly Strategies Incorporated, and; PRASAM.⁹⁹

In the UK, MBDA was connected to at least five meetings with key representatives of the UK government. Of these, at least two were to discuss weapons developments and exports. BAE Systems also met with the Prime Minister's office three times and participated in at least 42 other meetings with key officials.¹⁰⁰ BAE Systems wasn't involved in lobbying themselves in France, but MBDA, of which BAE Systems is part, spent approximately €88,048 (\$81,036) lobbying in 2023.¹⁰¹

BAE Systems provided between \$200,000 - \$300,000 in financial support for several think tanks that work on nuclear weapons issues. These included Chatham House (Major Corporate Member), Center for New American Security (CNAS) (\$50,000-99,999), Center for Strategic and International Studies (CSIS) (\$50,000-99,999), and the Hudson Institute (\$100,000+). Nicole Piasecki sits on the board of directors at both BAE Systems and the Stimson Center.

Bechtel





Bechtel is a family-owned company, not publicly traded. In 2023, the company is estimated to have earned \$1.7 billion for work related to nuclear weapons stockpiling and development.

NUCLEAR WEAPONS

Bechtel is designing and building the launch infrastructure for the new U.S. ICBM system, Sentinel. 104

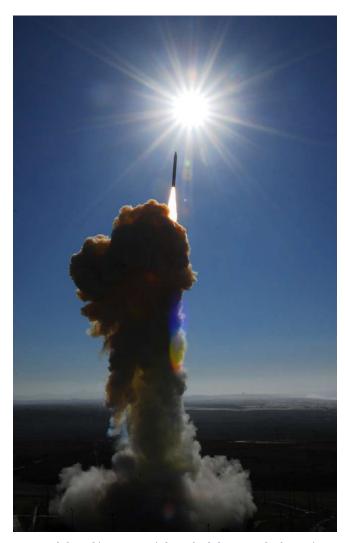
It also manages the Lawrence Livermore U.S. National Laboratory, in which new nuclear warheads are designed. And it leads the consortium, Consolidated Nuclear Security, which supports the manufacturing, evaluation, and testing of nuclear explosives. Two nuclear warheads are being modernised at LLNL, the W80-4 and the W81-7. The lab is also developing the novel explosive LX-21, the first new explosive to be introduced into a nuclear warhead without full-scale underground testing.¹⁰⁵

Bechtel is part of the joint venture "Consolidated Nuclear Security" which operates the Pantex Plant and the Y-12 National Security Complex.¹⁰⁶ The Y-12 National Security Complex is responsible for the remanufacture of components for the B61-12 nuclear gravity bomb and the Pantex Plant is responsible for producing high explosives, requalifying the B61 plutonium pit, and final assembly of the complete B61-12 bomb for delivery to the U.S. Air Force.¹⁰⁷ Pantex is also the facility in which the warheads for SLBMs (the W88 Alt 370) are produced.¹⁰⁸





Brendan Bechtel, Chairman & CEO earned an undisclosed amount.



A ground-based interceptor is launched from Vandenberg Air Force Base, California. Public domain.

CONTRACTS

Bechtel earns at least \$28.8 billion per year for work on sustaining the U.S. nuclear weapons arsenal, not including the work Bechtel does in building new nuclear weapon silos in the US for the Sentinel system, which is subcontracted through Northrop Grumman.

The contract for the Lawrence Livermore National Laboratory was awarded in 2007, and is expected to continue through 2026, with a total estimated value of \$66.1 billion. The total value of this contract increased by \$2 billion in 2023. The consortium comprises Bechtel, the University of California, BWX Technologies and Amentum Services Inc. The ownership division is not known, but if equally divided, it is estimated that Bechtel receives approximately \$852 million per year.¹⁰⁹

Consolidated Nuclear Security LLC includes member companies Bechtel National, Inc.; Leidos; ATK Launch Systems; and SOC LLC, with Booz Allen Hamilton, Inc. as a teaming subcontractor. The consortium holds a 14-year, \$48.9 billion contract for the Y-12 and Pantex sites, with each company earning an estimated \$829 million per year.¹¹⁰

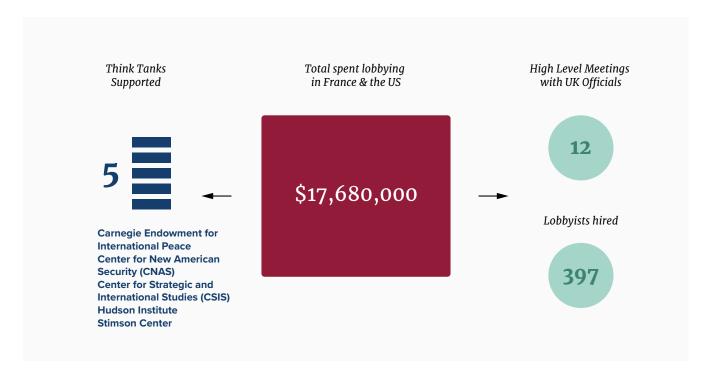
LOBBY & INFLUENCE

Bechtel spent \$860,000 lobbying in the US in 2023, of which \$390,000 was spent hiring external firms. Bechtel hired the following firms to lobby on their behalf: Ernst & Young LLP (Washington Council Ernst & Young) and Miller & Chevalier Chartered.¹¹¹

In the UK, Bechtel was involved in seven meetings with key government officials, several of which were to discuss nuclear technologies.¹¹²

Brendan Bechtel, Chairman and CEO is a trustee of the Center for Strategic and International Studies and a term member at the Council on Foreign Relations.¹¹³ Bechtel provides financial support to Chatham House, CSIS (between \$100,000 - \$250,000) and the Hudson Institute (between \$5,000-20,000), which produce research on nuclear weapons.¹¹⁴

Boeing





Boeing is maintaining the U.S. Minuteman III intercontinental ballistic missiles, as well as building key components for other U.S. nuclear weapons. Although mostly known for commercial aircraft, about 60% of Boeing's annual revenue is related to defence; nuclear weapons related income comprised about 2.6% of that in 2023.

Boeing has had significant issues with its commercial aircraft division in the last several years, with numerous accidents and plane crashes. CEO Mike Calhoun is stepping down from that role in 2024.¹¹⁵ Before that, in 2023, he earned \$32.8 million in compensation.¹¹⁶

NUCLEAR WEAPONS

In 2023, Boeing finished production of key components for the U.S. Air Launched Cruise Missile.¹¹⁷ The company is still producing the guided tail-kit assembly for the B61-12 nuclear gravity bomb.¹¹⁸

Boeing is also contracted by the US for engineering services on the B-1 and B-52 bombers.¹¹⁹ Boeing also builds the so-called "Doomsday" plane, the mobile command, communications and control plane by which the U.S. government would retain the ability to use nuclear weapons in case of a nuclear attack on the country, though it has lost the renewal contract after 2023.¹²⁰

Boeing is most heavily involved in the U.S. Minuteman III programme - and has been for generations. Boeing currently has five contracts related to work on this ICBM, valued at over \$19 million and running through at least 2039.¹²¹

CONTRACTS

In 2023, Boeing had at least 11 outstanding contracts, valued at \$7 billion for nuclear weapons related work.

Boeing has two contracts related to the U.S. air launched cruise missiles, with a combined total value of more than \$67.6 million.¹²² The company also has contracts for engineering services to ensure the survivability and reliability of the E4B plane to be used as a command and control centre in the case of nuclear war, as well as to make sure the B-1 and B-52 retain capacity to drop nuclear bombs.¹²³

Boeing has two outstanding contracts for work on the tail-kit of the B61-12, the new variation of the nuclear weapon the US deploys in Europe, with a combined value of \$250 million.¹²⁴



Earned by Mike Calhoun, CEO.

Most of Boeing's nuclear weapons contracts are for work on the Minuteman III system. The company has five outstanding contracts, some running through 2039, worth a combined \$4.5 billion.¹²⁵

LOBBY & INFLUENCE

Boeing spent \$17.7 million lobbying in the US in 2023, of which \$3.2 million was spent hiring external firms. Boeing hired the following firms to lobby on their behalf: Atlantic Strategies Group LLC; Cornerstone Government Affairs, Inc.; Crossroads Strategies, LLC; Empire Consulting Group; Ernst & Young LLP (Washington Council Ernst & Young); Etherton and Associates Inc.; Gephardt Group Government Affairs; J.Sullivan Advocacy; Mehlman Consulting Inc.; Monument Advocacy; Norm Dicks and Associates LLC; S-3 Group; Squire Patton Boggs; Stapleton & Associates, LLC; Team Subject Matter, LLC; The Lugar Group (FKA Lugar Hellmann Group), and; West Front Strategies LLC.¹²⁶ No lobbying activities were reported in France in 2023.

Board member John M. Richardson is a former Deputy Administrator in the National Nuclear Security Administration, the body overseeing U.S. nuclear warhead production, and sits as a board member at the Center for New American Security.¹²⁷

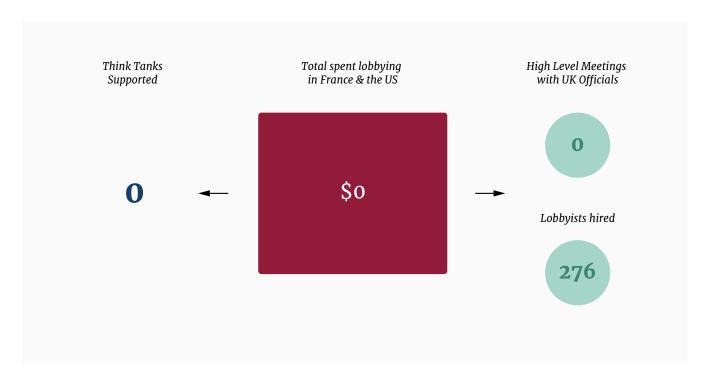
In the UK, Boeing was involved in 12 meetings with decision makers, including one with the Ministry of Defence, and several with the Foreign, Commonwealth and Development Office to discuss the defence sector.¹²⁸

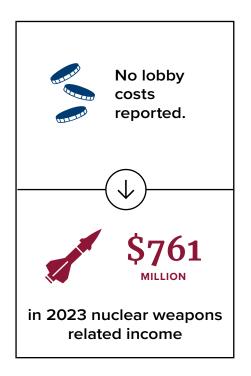
Boeing board member, Stayce D. Harris is also a director at BlackRock Fixed-Income Funds. BlackRock has significant investments in Boeing, holding nearly \$6 billion in outstanding shares of the company.¹²⁹

Boeing has supported several think tanks that have programmes or publications on nuclear weapons, including the Carnegie Endowment for International Peace (\$25,000-100,000), the Center for New American Security (CNAS) (\$50,000-99,999), the Center for Strategic and International Studies (CSIS) (\$100,000-249,999), the Hudson Institute (\$50,000-99,999), and the Stimson Center (\$10,975).

Boeing Senior VP, Stephen E. Biegun is a member of the Aspen Strategy group and the Council on Foreign Relations. He also sits as a trustee at the U.S. German Marshall Fund and is a director at the Atlantic Council.¹³¹

Draper (Charles Stark Draper Laboratory)





The Charles Stark Draper Laboratory is a non-profit entity.¹³² In 2023, Draper was awarded contracts valued at more than \$2.5 billion for work on the Trident II system for the UK and US.

NUCLEAR WEAPONS

Draper oversees the effort to upgrade and maintain the MK6 guidance system for Trident nuclear missiles, which enables the missile to operate with a high degree of accuracy without relying on external aids like GPS signals.¹³³

CONTRACTS

Draper currently has three outstanding contracts for work related to the US and UK Trident system, two of which were awarded in 2023 and are valued at over \$2.5 billion.¹³⁴ The remaining outstanding contracts have a total value of more than \$1 billion.¹³⁵

LOBBY & INFLUENCE

Draper hasn't registered any lobbying in the US, UK or France in 2023. However, the company does have ties with the nuclear weapons industry and U.S. government.

Board member, Vice Admiral Terry Benedict, U.S. Navy (retired) is a member of the U.S. Strategic Command Senior Advisory Group, Stockpile Assessment Team and serves on the Board of Regents of the Strategic Deterrent Coalition. He also used to work at Bechtel.¹³⁷





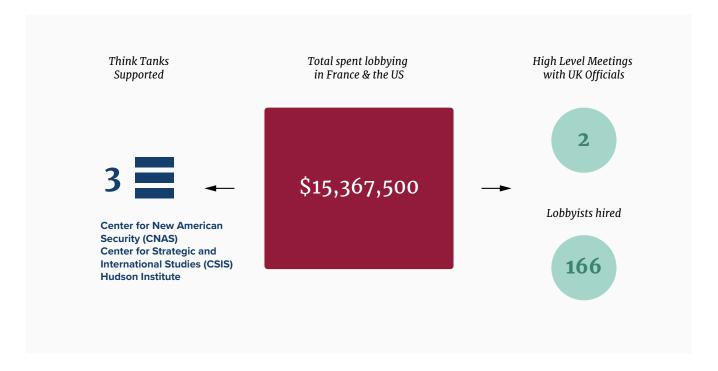
David R. Shedd, Chairman of the Board earned an undisclosed amount.

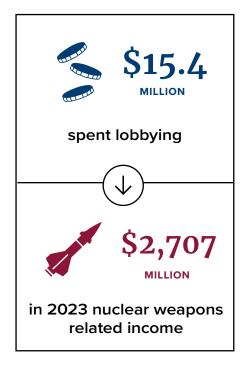
Several members of the Draper board of directors or executive leadership team have backgrounds in the nuclear weapons industry. Board members Wanda Sigur and Scott MacKay and Principal Director, Administration Bob Durkin were at Lockheed Martin. Mary Kim was formerly in-house counsel at General Dynamics. Carrie George was at L3 Harris. Bob Bacon was at General Dynamics and BAE Systems. Suzanne Jones was also at BAE Systems, as well as Northrop Grumman. Amy Hart and Frank Serna were also at Northrop Grumman. Julia MacDonough and Jerry Wohletz were at BAE Systems.



U.S. Air Force 341st Missile Maintenance Squadron transports a new re-entry system to be installed at an Intercontinental Ballistic Missile launch facility near Malmstrom Air Force Base, Mont. Public domain.

General Dynamics





General Dynamics works on the Trident nuclear weapons system for the US and the UK, and for the submarines designed to deliver those nuclear weapons. In 2023, about 6.4% of General Dynamic's revenue (\$2.7 billion) was from contracts related to nuclear weapons.¹³⁹ Phebe N. Novakovic Chairman, CEO of General Dynamics Corp. earned over \$22.6 million in 2023.¹⁴⁰

NUCLEAR WEAPONS

General Dynamics is responsible for integrating Trident nuclear weapons in the new U.S. Columbia-class program and the United Kingdom Dreadnought-class submarines. General Dynamics receives contracts through the U.S. contract system, but sometimes for work on UK weapons.¹⁴¹

Electric Boat, one of the business units of General Dynamics is the prime contractor for the Columbia-class ballistic missile submarine for the U.S. government. The company is contracted to build 12 boats in the \$113 billion programme.¹⁴²

CONTRACTS

General Dynamics has five contracts for work on US and UK nuclear-armed submarines, with a total value of over \$28 billion, the longest of which ends in 2028.¹⁴³

The company also has five Trident related contracts for \$1.1 billion, the longest of which runs until at least 2028.¹⁴⁴

LOBBY & INFLUENCE

General Dynamics spent \$15.4 million lobbying in the US in 2023, of which \$3.2 million was spent hiring external firms. General Dynamics hired the following firms to lobby on their behalf: ACG Advocacy; Alignment Government Strategies; American Defense International, Inc.; Baker Donelson Bearman Caldwell & Berkowitz /The Daschle Group; C. Baker Consulting, Inc.; Cornerstone Government Affairs, Inc.; CT Group; Ervin Graves Strategy Group, LLC; Fife Strategies, LLC; Hannegan Landau Poersch & Rosenbaum Advocacy, LLC; Harbinger Strategies, LLC; Icebreaker Strategies, LLC; Innovative Federal Strategies, LLC; Meltsner Strategies, LLC; Moran Global Strategies, Inc.; Nelson, Mullins, Riley & Scarborough; PRASAM; Team Subject Matter, LLC; The Nickles Group, LLC and; Van Scoyoc Associates. No lobby expenditures were reported in France. 146

In the UK, General Dynamics held two meetings with key officials in 2023, the Parliamentary Under-Secretary and the Secretary of State. Both meetings were to discuss defence matters.¹⁴⁷ JP Morgan Chase currently has approximately \$299.31 million in outstanding shares and bonds of General Dynamics.¹⁴⁸ Phebe N. Novakovic serves on the JP Morgan Chase board of directors.¹⁴⁹

General Dynamics also provided financing to several think tanks that have programmes on or publish information about nuclear weapons. General Dynamics funded the Center for New American Security (CNAS) (\$25,000-49,999), the Center for Strategic and International Studies (CSIS) (\$100,000-249,999), and the Hudson Institute (\$20,000-49,999).

General Dynamics governance and executive leadership are also connected to a number of think tanks. The Center for Strategic and International Studies includes Phebe N.

Novakovic, the Chairman and CEO of General Dynamics on their board of trustees. ¹⁵¹ General Dynamics board member Admiral Cecil Haney (Ret), is also on the board of Center for New American Security. ¹⁵² James N. Mattis is an honorary director at the Atlantic Council and also serves on the General Dynamics board. ¹⁵³

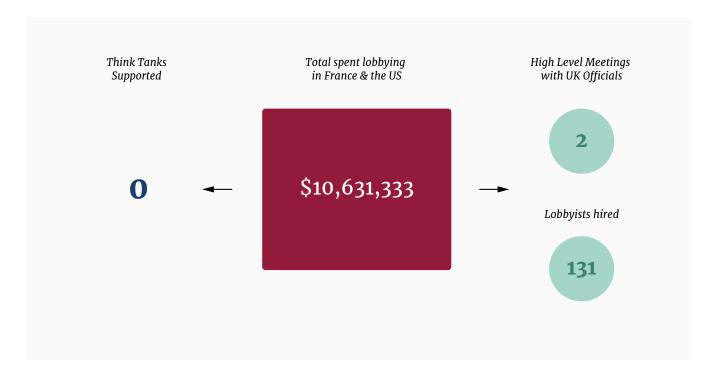
Several other board members have connections to the U.S. government, think tanks or are former military. Government connections include James N. Mattis, who served as Former U.S. President Donald Trump's Secretary of Defence. Rudy F. deLeon also served as U.S. Deputy Secretary of Defense in 2000-2001.

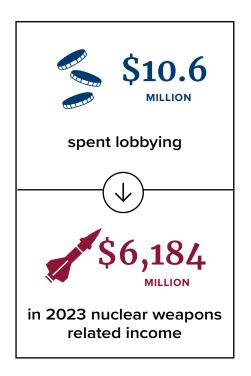
Admiral Cecil Haney (Ret.), also on the GD board, used to be responsible for the U.S. nuclear arsenal in his role as Commander of USSTRATCOM, and Peter A. Wall was formerly Chief of the General Staff for the British Army and Director of Operations for the UK Ministry of Defence 2007-2009.¹⁵⁴



Earned by Phebe N. Novakovic, Chairman and CEO.

Honeywell International





Honeywell earns approximately \$6.2 billion per year for its nuclear weapons related work, about 17% of its total revenue.¹⁵⁵

Honeywell's Board Chairman, Darius E. Adamczyk stepped down as CEO in June 2023, but remains Chairman of the Board. He was replaced by Vimal Kapur, who will also take over the Chairman role in June 2024. Vimal Kapur earned \$14.4 million as CEO in 2023.

In 2023, Honeywell ended its involvement in the Savannah River Nuclear Solutions joint venture managing the site which produces tritium and is currently being expanded to also include plutonium pit production, both critical components for nuclear weapons.¹⁵⁹

NUCLEAR WEAPONS

Honeywell is involved in maintaining and stockpiling nuclear weapons by operating three sites for the US. The Kansas City National Security Campus manufactures non-nuclear components for nuclear weapons. The Nevada National Security Site is where the U.S. conducted over 800 nuclear test explosions and where current subcritical nuclear tests are conducted. The Sandia National Laboratory plays a key role in U.S. nuclear weapons development and stockpiling.



Earned by Vimal Kapur, Chairman and CEO.

CONTRACTS

Honeywell has four outstanding contracts related to nuclear weapons work, valued at more than \$70 billion and continuing through at least 2027. Several contracts are with subsidiaries, including Honeywell Federal Manufacturing & Technologies which holds the 10-year, \$16.2 billion contract for the Kansas City facility, ¹⁶³ and the National Technology & Engineering Solutions of Sandia, LLC, has a 10-year \$43.9 billion contract for the Sandia National Laboratory. ¹⁶⁴ It also holds a joint venture contract with Jacobs Solutions and Huntington Ingalls Industries over 10-years, worth \$9.8 billion for the Nevada National Security Site. ¹⁶⁵

LOBBY & INFLUENCE

Honeywell spent \$10.6 million lobbying in the US in 2023, of which \$1.7 million was spent hiring external firms. Honeywell hired the following firms to lobby on their behalf: Akin Gump Strauss Hauer & Feld; Brownstein Hyatt Farber Schreck, LLP; Capitol Tax Partners, LLP; Corrigan & Ussery LLC; Etherton and Associates, Inc.; Guidepost Strategies, LLC; Innovative Federal Strategies, LLC, and; The Duberstein Group Inc.¹66 In France, Honeywell spent between €75,000-100,000 lobbying in 2023.¹67 Honeywell was involved in two meetings in the UK in 2023, both to discuss UK investment opportunities.¹68

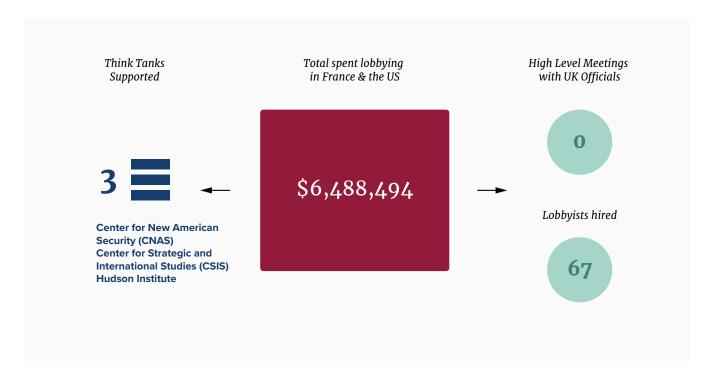
Honeywell board members are connected to several financial institutions, including Arcspring LLC, a private equity firm, and two members formerly held roles with the Federal Reserve Bank of San Francisco, and on the Federal Reserve Bank of Philadelphia. These financial institutions are not known to currently have investments in Honeywell.

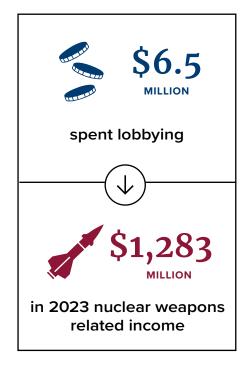
Honeywell's Board Chairman, Darius E. Adamczyk is part of the Aspen Economic Strategy Group, a think tank which issues broad commentary on a range of issues, and the Council on Foreign Relations.¹⁷⁰



The U1A Complex at the Nevada Nuclear Security Site from which scientists monitor subcritical nuclear weapons experiments. Photo: U.S. Department of Energy

Huntington Ingalls Industries





Huntington Ingalls Industries is connected to three joint ventures involved in management and operations at U.S. nuclear weapons facilities: Los Alamos National Laboratories (via Triad National Security); the Nevada Nuclear Security Site (via Mission Support and Test Services), and; the Savannah River Site and Savannah River National Laboratory (via Savannah River Nuclear Solutions, LLC). The company earned \$1.3 billion in nuclear weapons related income in 2023.

In 2023, HII generated \$11.5 billion in annual revenue, of which approximately 11% was as a result of nuclear weapons related contracts. Christopher D. Kastner, President and Chief Executive Officer (formerly Chief Operating Officer) was elected to the role in 2022 and was paid \$14 million.⁷¹

NUCLEAR WEAPONS

HII is one of two parent companies responsible for Savannah River Nuclear Solutions, managing and operating the Savannah River Site, which produces tritium and is currently being expanded to also include plutonium pit production, both critical components for nuclear weapons.¹⁷²

The Los Alamos National Laboratory is responsible for the nuclear design and engineering and life extension programmes for U.S. nuclear warheads and has started to build capacity to produce plutonium pits.¹⁷³ At Los Alamos, the company provides personnel, systems, tools and corporate reachback in the areas of pit production, plutonium manufacturing, production scale-up and nuclear operations and manufacturing.¹⁷⁴

HII is also involved in the Nevada National Security Site where the U.S. conducted over 800 nuclear test explosions and where current subcritical nuclear tests are conducted.¹⁷⁵ The site retains the capability to resume full-scale nuclear testing within a couple years, at the discretion of the U.S. President.¹⁷⁶ Mission Support and Test Services LLC (MSTS) the company that manages and operates the site is a limited liability company consisting of Honeywell International Inc., Jacobs Solutions Inc., and Stoller Newport News Nuclear, Inc. (SN3), a subsidiary of HII.¹⁷⁷

CONTRACTS

Huntington Ingalls Industries is one of two partners in the Savannah River Nuclear Solutions LLC, and holds a 19-year, \$36 billion contract for management and operations of that facility.¹⁷⁸



Earned by Christopher D. Kastner, President and CEO.

HII is one of three companies, along with Jacobs Solutions and Honeywell that hold a 10-year, \$9.8 billion contract for the Nevada National Security Site.⁷⁹

HII is one of the listed subcontractors for Triad National Security, LLC, which operates Los Alamos National Laboratories, which earns the company about \$1 million each year. 180

LOBBY & INFLUENCE

HII spent \$6.5 million lobbying in the US in 2023, of which \$1.5 million was spent hiring external firms. HII hired the following firms to lobby on their behalf: BGR Government Affairs; Crossroads Strategies, LLC; Dahlberg Strategic; Federal City Strategies; Gephardt Group Government Affairs; Ked Strategies, LLC; SPLYSS LLC; Taft Stettinius & Hollister LLP; The Group DC, LLC, and; The Livingston Group, LLC.¹⁸¹

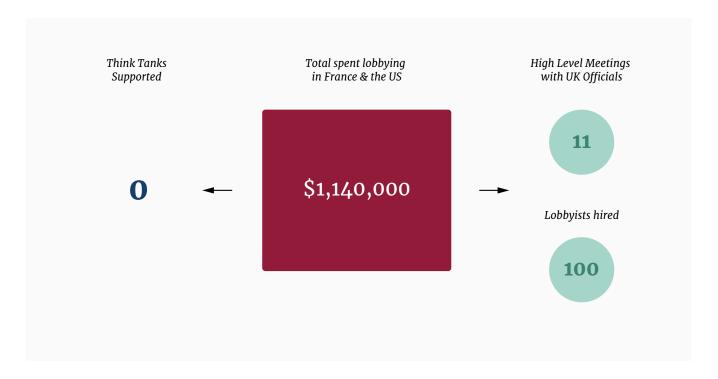
HII does not use corporate funds to contribute to federal candidates, political parties, or political committees, but does encourage employees to contribute to an employee funded political action committee known as HIIPAC.¹⁸² That fund made \$235,500 in contributions to 94 U.S. political campaigns.¹⁸³

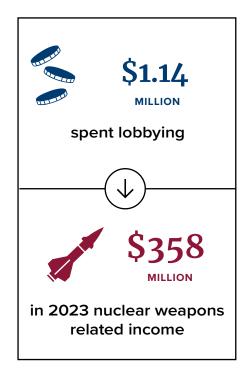
However, HII does contribute to think tanks which have programmes on, or publish about nuclear weapons issues. The company contributed to the Center for New American Security (CNAS) (\$50,000-99,999), the Center for Strategic and International Studies (CSIS) (over \$250,000) and the Hudson Institute (\$20,000-49,999).

Admiral Kirkland Donald, the chairman of the HII board, and Stephane L. O'Sullivan, John K. Welch and two other board members, are also on the board of Battelle Memorial Institute, one of the firms involved in the management and operations of the Lawrence Livermore National Laboratory.¹⁸⁵

Eric D. Chewning was appointed in 2023 as HII executive vice president and is a life member of the Council on Foreign Relations.¹⁸⁶ Tracy B. Mckibben, an HII board member, is also a member of the Council on Foreign Relations.¹⁸⁷

Jacobs Solutions





Formerly known as Jacobs Engineering, this company announced in November 2023 that it will spin-off the business segment currently connected to the management and operations of the Los Alamos National Laboratory. This agreement is supposed to be finalised in the second half of 2024.¹⁸⁸

NUCLEAR WEAPONS

The Nevada National Security Site retains the capability to resume full-scale nuclear testing within a couple years, at the discretion of the U.S. President. Mission Support and Test Services LLC (MSTS), the company that manages and operates the site, is a limited liability company consisting of Honeywell International Inc., Jacobs Solutions Inc., and Stoller Newport News Nuclear, Inc. (SN3), a subsidiary of HII. 190

Jacobs is also responsible for delivering nuclear safety and technical advice to the UK Royal Navy's submarine service, including for Vanguard submarines.¹⁹¹

CONTRACTS

Jacobs is one of three companies, along with Honeywell and Huntington Ingalls Industries that hold a 10-year, \$9.8 billion contract for the Nevada National Security Site. 192

Jacobs has two outstanding contracts with the UK for support in the new nuclear-armed submarines, totalling \$362 million.¹⁹³





Earned by Robert V. Pragada, CEO.

LOBBY & INFLUENCE

Jacobs spent \$1,140,000 lobbying in the US in 2023, of which \$270,000 was spent hiring external firms. Jacobs hired the following firms to lobby on their behalf: Ballard Partners; Brownstein Hyatt Farber Schreck, LLP, and; PRASAM.¹⁹⁴

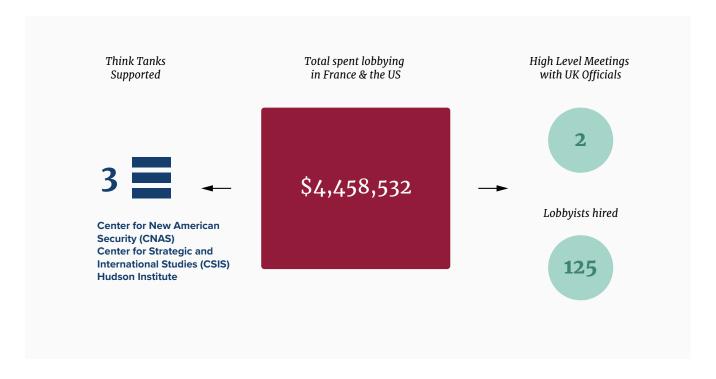
In the UK, Jacobs participated in 11 meetings with decision makers, including the Defence Suppliers Forum (DSF), a collaborative twice-yearly primary forum for engaging with senior leaders from across the UK defence sector on strategic issues of mutual interest.¹⁹⁵

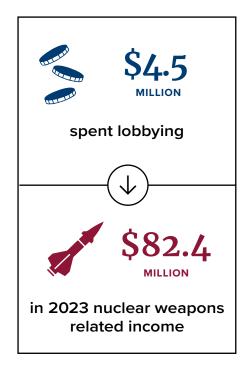
Jacobs is not known to be financing any of the think tanks working on nuclear weapons policy monitored in this report. However, Vincent (Vince) K. Brooks, a Jacobs board member, is on the Council on Foreign Relations and a visiting Senior Fellow at Harvard Kennedy School's Belfer Center for Science and International Affairs. 196



From left, Capt. Ben Shea, 91st Operations Support Squadron minuteman combat crew commander, and 2nd Lt. Taylor Yost, 74oth Missile Squadron deputy MMCCC, review Missile Alert Facility checklists at Malmstrom Air Force Base, North Dakota. Photo by U.S. Air Force, Senior Airman Alyssa M. Akers.

L₃ Harris





L3 Harris acquired Aerojet Rocketdyne, a deal that was completed in July 2023.¹⁹⁷ For the purpose of this report, the contracts previously listed with Aerojet Rocketdyne are now combined with those held by L3 Harris as are lobbying expenses.

L3 Harris reported \$19.4 billion in annual revenue in 2023, less than 0.5% of which came from nuclear weapons. CEO Chris Kubasik took home just under \$20 million in 2023.

NUCLEAR WEAPONS

A subsidiary of L3 Harris, Interstate Electronics Corp, provides supplies, services and support for flight test instrumentation systems for the Trident nuclear weapons system for the US and UK.²⁰⁰

L3 Harris is also producing radio-frequency and satellite communications products for the U.S. Minuteman III system.²⁰¹

Aerojet Rocketdyne is the primary boost propulsion system manufacturer for all U.S. and UK nuclear-armed missiles, including the Trident and Minuteman III systems, and the new Sentinel system.²⁰² In addition to Sentinel's Post Boost Propulsion System, Aerojet Rocketdyne is on contract to develop the third stage large solid rocket motor for the Sentinel program.²⁰³ In 2023, Aerojet Rocketdyne opened a new facility in Huntsville, Alabama to support the production of the U.S. Sentinel ICBM system.²⁰⁴

CONTRACTS

L3 Harris has two outstanding contracts for nuclear weapons work. One is for the Minuteman III ICBM system, running through 2030.²⁰⁵ The other contract is for Trident II flight test instrumentation, and continues through 2026.²⁰⁶

One outstanding contract for Minuteman III components held by Aerojet Rocketdyne concluded in early 2023.²⁰⁷

L3 Harris board members and executives are also connected to a number of think tanks. For example, General Peter W. Chiarelli, U.S. Army (Ret.) is also President of the Gates Global Policy Center.²¹¹ Board member Robert B. Millard is a member of the Council on Foreign Relations and a Fellow of the American Academy of Arts and Sciences.²¹²

LOBBY & INFLUENCE

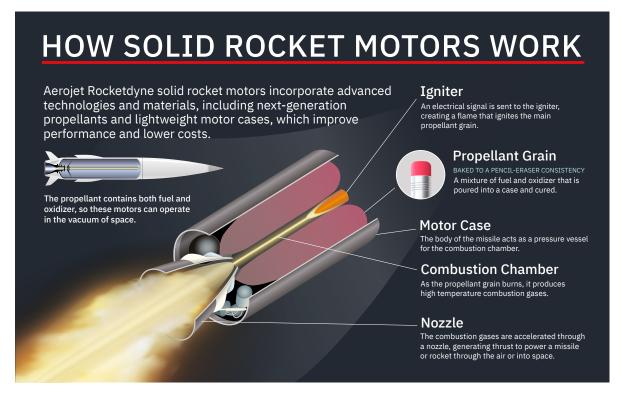
L3 Harris combined with Aerojet Rocketdyne spent \$4.5 million lobbying in the US in 2023, of which \$969,750 was spent hiring external firms. L3 Harris hired the following firms to lobby on their behalf: Ivy Green Consulting; McAllister & Quinn, LLC; PRASAM; The Gaboton Group, LLC, and; Velocity Government Relations, LLC. Aerojet Rocketdyne hired Defense Consulting Group, LLC; Ervin Graves Strategy Group, LLC; Fife Strategies, LLC, and; The Nickles Group, LLC.²⁰⁸

In the UK, L3 Harris was involved in two meetings with key officials ²⁰⁹

L3 Harris also supported several think tanks with nuclear weapons related programmes or publications. L3 Harris contributed to the Center for New American Security (CNAS) (\$25,000-49,999), the Center for Strategic and International Studies (CSIS) (\$50,000-99,999), and the Hudson Institute (\$50,000-99,999).

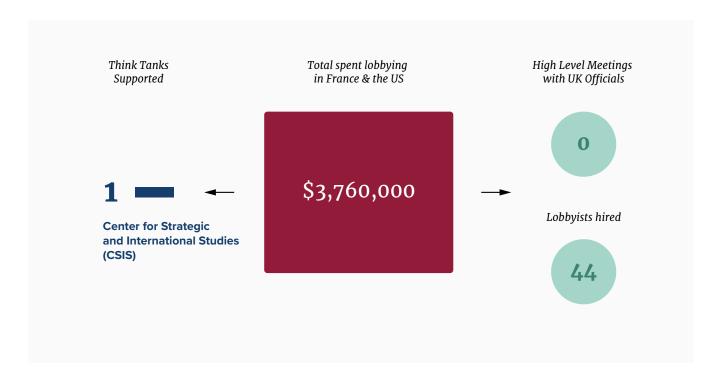


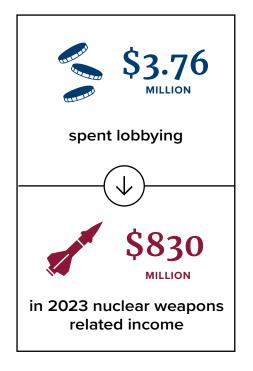
Earned by Chris Kubasik, Chair and CEO.



L3Harris explanation of how solid rocket motors for nuclear armed missiles work. Image from L3 Harris website. © 2024 L3Harris Technologies, Inc.

Leidos





Leidos generated \$15.4 billion in revenue in 2023, 5.4% of which was related to nuclear weapons contracts related to nuclear weapons production facilities. CEO Thomas Bell took home over \$2.5 million in 2023.²¹³

NUCLEAR WEAPONS

Leidos is part of the joint venture "Consolidated Nuclear Security" which operates the Pantex Plant and the Y-12 National Security Complex. ²¹⁴ The Y-12 National Security Complex is responsible for the remanufacture of components for the B61-12 nuclear gravity bomb and the Pantex Plant is responsible for producing high explosives, requalifying the B61 pit, and final assembly of the complete B61-12 bomb for delivery to the U.S. Air Force. ²¹⁵ Pantex is also the facility in which the warheads for SLBMs (the W88 Alt 370) are produced. ²¹⁶

CONTRACTS

Consolidated Nuclear Security LLC includes member companies Bechtel National, Inc.; Leidos; ATK Launch Systems; and SOC LLC, with Booz Allen Hamilton, Inc. as a teaming subcontractor. The consortium holds a 14-year, \$48.9 billion contract for the Y-12 and Pantex sites, with each company earning an estimated \$829 million per year.²¹⁷ There were no new company awards in 2023.



Earned by Thomas Bell, CEO.

LOBBY & INFLUENCE

Leidos spent \$3.8 million lobbying in the US in 2023, of which \$1.3 million was spent hiring external firms. Leidos hired the following firms to lobby on their behalf: 535 Group, LLC; Alpine Group Partners, LLC; American Defense International; American Defense International, Inc.; Avise Solutions; CR Federal; Park Government Relations, LLC; Potomac Capitol Associates, Inc.; Team Hallahan LLC; The OB-C Group. LLC, and; Troutman Pepper Strategies.²¹⁸ No lobby expenditures were reported in France, nor were any meetings of note in the UK.

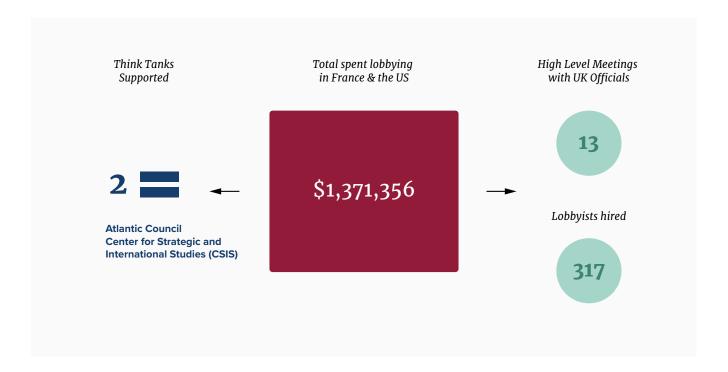
A number of Leidos board members have connections to other parts of the nuclear weapons industry. Miriam John, Leidos board member, was formerly at the Sandia National Laboratory. Patrick M. Shanahan and Cindy Gruensfelder were both formerly at Boeing, where Cindy worked on ICBMs.²¹⁹

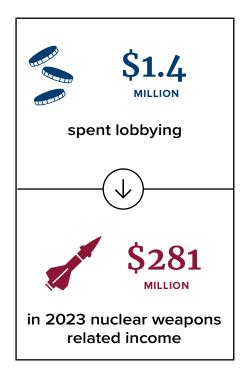
Leidos has also provided between \$50,000-99,999 in financial support to the Center for Strategic and International Studies (CSIS), which has programmes and publications on nuclear weapons.²²⁰



Staff Sgt. Nathan Nadeau, 576th Flight Test Squadron, shows the Minuteman III downstage trainer. Photo: U.S. Air Force, 2nd Lt. Drake Cales.

Leonardo





Leonardo has a role in the French and U.S. nuclear arsenals. Several shareholders posed questions to Leonardo in advance of their annual meeting in 2023 about the company's role in MBDA, specifically as it related to the production of the ASMPA nuclear-armed missiles for France. Leonardo chose not to respond.²²¹ The Italian government has a significant shareholding in Leonardo, holding over 30% of outstanding shares.²²² Roberto Cingolani was appointed CEO and General Manager of Leonardo on 9 May 2023.²²³

NUCLEAR WEAPONS

French air-launched nuclear missiles, the ASMPA, are produced by MBDA. MBDA is contracted for three lots of missiles to be delivered in 2024.²²⁴ MBDA is also contracted to produce the next generation ASN4G missiles, which have twice the range of the ASMPA.²²⁵ Leonardo is one of three companies that owns MBDA.²²⁶

Leonardo DRS, the company's U.S. subsidiary, produces key electronics for the Columbia-class next generation nuclear-armed submarines for the US.²²⁷

CONTRACTS

The French government notes that it spent \$220 million on sea- and air-launched missiles, with MBDA as the prime contractor. However, it is unclear how much of these funds went directly to MBDA.²²⁸ Based on the information provided about payments and the number of companies involved, one can estimate that Leonardo earned \$281 million in nuclear weapon related contracts in 2023.²²⁹



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Earned by Roberto Cingolani, CEO and General Manager.



Lawrence Livermore National Laboratory plutonium facility work area. Photo: U.S. Department of Energy.

In 2023, Leonardo DRS was awarded more than \$1 billion for work on the Columbia-class submarines.²³⁰

LOBBY & INFLUENCE

Leonardo spent \$1.4 million lobbying in the US in 2023, of which \$470,000 was spent hiring external firms. Leonardo hired the following firms to lobby on their behalf: Ballard Partners; Fife Strategies, LLC; O'Brien, Gentry & Scott, LLC; Passage Consulting Group LLC; PRASAM, and; Stapleton & Associates, LLC.²³¹

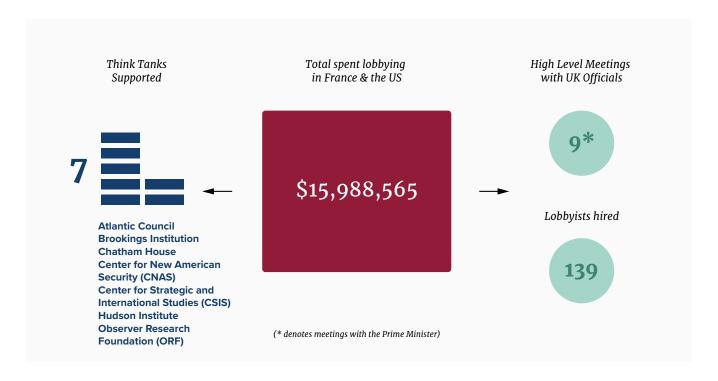
In the UK, Leonardo was involved in 13 meetings with key government officials, including three with the Ministry of Defence. MBDA was connected to at least five meetings with key representatives of the UK government. Of these, at least two were to discuss weapons developments and exports.²³²

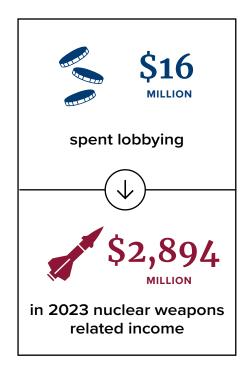
Leonardo was not involved in lobbying themselves in France, but MBDA, of which Leonardo is part, spent approximately €88,048 (\$81,036) lobbying in 2023.²³³

Leonardo also provided funding to several think tanks with nuclear weapons related programmes or publications. It gave between \$150,000-349,999 to the Atlantic Council.²³⁴ William J. Lynn III, the CEO and Chairman of Leonardo DRS (the company's U.S. subsidiary) and DRS board member Frances F. Townsend are also on the board of the Atlantic Council.²³⁵ Townsend is also on the board of the Center for Strategic and International Studies (CSIS), to which Leonardo gave \$250.000.²³⁶

William J. Lynn III is also on the board of the Center for New American Security (CNAS), but the company is not listed among that think tank's significant donors in the last year for which information is available.²³⁷

Lockheed Martin





Lockheed Martin is one of the largest weapons producers in the world. In 2023, the company reported that it did not receive a significant increase in sales due to the ongoing conflict in Ukraine, although it did indicate new orders "attributable to a response to the conflict and continue to expect to receive them over the next several years." The company generated more than \$67.6 million in revenue in 2023, 4.28% of which can be attributed to contracts related to nuclear weapons.²³⁸ Lockheed Martin CEO Jim Taiclet took home over \$22.8 million in 2023, \$2 million less than the previous year.²³⁹

At the end of 2023, the Sisters of St. Francis Philadelphia, the Sisters of Charity of St. Elizabeth, and the Benedictine Sisters of Mount St. Scholastica filed a shareholder proposal at Lockheed Martin noting "Lockheed Martin's business is also connected to controversial weapons that are illegal under international law and pose legal, reputational, and regulatory risk to the Company and its investors" and requesting the company issue a public report describing the alignment of its political activities (including direct and indirect lobbying and political and electioneering expenditures) with its Human Rights Policy.²⁴⁰ The proposal has been opposed by the company which claims such a review is not in the best interest of stockholders.²⁴¹

NUCLEAR WEAPONS

Lockheed Martin produces the Trident II D5 Fleet Ballistic Missile for the UK and U.S. nuclear arsenals.²⁴² Lockheed Martin is also developing the re-entry system for

the Mk21A, which will deploy the W87-1 nuclear warhead on the new Sentinel ICBM. The company is also contracted for re-entry system work on the existing Minuteman III system.²⁴³

CONTRACTS

Lockheed Martin has, at least, 21 outstanding contracts for nuclear weapons development and production, valued at \$16.8 billion. Three contracts were awarded in 2023, valued at \$2.3 billion and continuing through 2039.244

17 contracts are related to the Trident system, with a total value of \$15.4 billion and running through 2029.245



Earned by James D. Taiclet, Chairman, President & CEO.

LOBBY & INFLUENCE

Lockheed Martin spent \$16 million lobbying in the US in 2023, of which \$2 million was spent hiring external firms. Lockheed Martin hired the following firms to lobby on their behalf: Baker Donelson Bearman Caldwell & Berkowitz / The Daschle Group; Ballard Spahr LLP; BGR Government Affairs; Brachman, Marshall; Capitol Counsel LLC; Etherton and Associates, Inc.; Flagship Government Relations, Inc.; Hannegan Landau Poersch & Rosenbaum Advocacy, LLC; Holly Strategies Incorporated; Plurus Strategies, LLC; Public Strategies Washington, Inc.; Rey, Mark; The Group DC, LLC; The McKeon Group, Inc.; Van Scoyoc Associates, and; Venable LLP.246

In 2023, Lockheed Martin was part of nine meetings with officials in the UK government, including the Prime Minister and Ministry of Defence.247

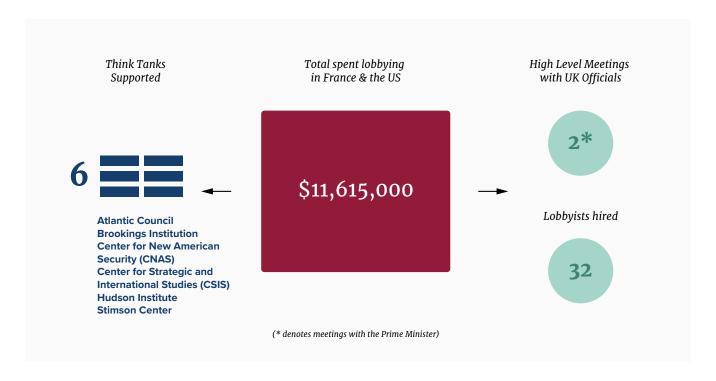
Lockheed Martin is the second largest contributor to the think tanks working on nuclear weapons policy issues covered in this report. Lockheed Martin contributes to the Atlantic Council (\$250,000-499,999), the Brookings Institution (\$250,000-499,999), Chatham House (undisclosed amount), the Center for New American Security (CNAS) (\$100,000-249,999), the Center for Strategic and International Studies (CSIS) (\$250,000+) the Hudson Institute (\$100,000+), and the Observer Research Foundation (ORF) (₹7,118,644).248

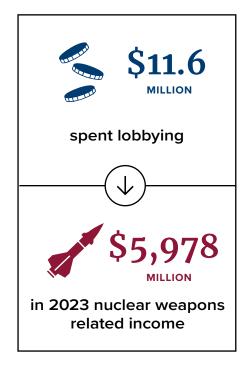
Lockheed Martin is also a corporate member of the Council on Foreign Relations (CFR). CEO Jim Taiclet and Lockheed board member Jeh C. Johnson are also on the CFR board.²⁴⁹ Board member Joseph F. Dunford, Jr. is also a Senior Fellow at the Belfer Center, Harvard University, and a director at the Atlantic Council.250



Entrance to DOE'S Sandia National Laboratories, Albuquerque, New Mexico. Photo: U.S. Department of Energy

Northrop Grumman





Northrop Grumman will produce the next generation U.S. ICBM system, the Sentinel.

Northrop Grumman recognises that it has a human rights responsibility to exit certain programmes, including those involving the production of cluster munitions and depleted uranium. However, the shareholder proposal on the table for the May 2024 annual meeting calls out the company for engaging in high-risk business activities in the areas of controversial arms trade, military training, nuclear weapons, and border militarization and the board responded saying that its political activities are "to support long-term, sustainable growth in the interest of our shareholders". The company does state it will decline a potential sale where the risk to human rights or company reputation are unacceptable irrespective of whether that sale would be legally permissible.

Business practices of the company tell a different story. For example, two workers at a Northrop Grumman missile plant in Magna, Utah that is one of the manufacturing facilities for Sentinel, died on the job in 2023 when they were asphyxiated by an argon gas leak. Utah state investigators categorised the workplace safety violations that led to their deaths as "wilful, serious" – the most severe category the agency uses. The names of the slain workers and the circumstances of their deaths only became public later that year due to a journalistic exposé by Inkstick Media's Taylor Barnes." 253

Northrop Grumman generated about 15% of its total 2023 revenue from nuclear weapons, with nuclear weapons contracts providing annual income of at least \$9.6 billion. CEO Kathy J. Warden got a 17% pay increase in 2023, taking home \$25 million.²⁵⁴

NUCLEAR WEAPONS

Northrop Grumman is part of the joint venture "Consolidated Nuclear Security" which operates the Pantex Plant and the Y-12 National Security Complex.²⁵⁵ The Y-12 National Security Complex is responsible for the remanufacture of components for the B61-12 nuclear gravity bomb and the Pantex Plant is responsible for producing high explosives, requalifying the B61 pit, and final assembly of the complete B61-12 bomb for delivery to the U.S. Air Force.²⁵⁶ Pantex is also the facility in which the warheads for SLBMs (the W88 Alt 370) are produced.²⁵⁷ Northrop is also responsible for engineering, software, maintenance and sustainment services for the Minuteman III missile system. It has the prime contract for the next generation ICBM, the Sentinel, and provides a number of key components for both Trident nuclear missiles and the dedicated Columbia and Dreadnought-class submarine systems they will be launched from.

Northrop Grumman also has a significant role in ensuring that both B-2 and B-52 bomber planes will be able to successfully drop B61 nuclear gravity bombs.

CONTRACTS

Northrop Grumman has 14 outstanding contracts related to nuclear weapons work, with a total value of over \$95.4 billion. Consolidated Nuclear Security LLC includes member companies Bechtel National, Inc.; Leidos; ATK Launch Systems (part of Northrop Grumman); and SOC LLC, with Booz Allen Hamilton, Inc. as a teaming subcontractor. The consortium holds a 14-year, \$48.9 billion contract for the Y-12 and Pantex sites, with each company earning an estimated \$829 million per year. The B61 10-year contract brings in the most for the company each year, earning Northrop an estimated \$1.9 billion per year. The five Minuteman III contracts bring in about \$1.3 billion each year. The Sentinel system will earn the company \$1.5 billion per year until 2029, and the three Trident contracts are valued at just under \$192 million per year.

LOBBY & INFLUENCE

Northrop Grumman spent \$11.6 million lobbying in the US in 2023, of which \$1.4 million was spent hiring external firms. Northrop Grumman hired the following firms to lobby on their behalf: 535 GROUP, LLC; Covington & Burling LLP; Etherton and Associates Inc.; Innovative Federal Strategies, LLC; Kadesh & Associates, LLC; Reston Strategy Group, LLC; Team Subject Matter, LLC, and; The Duberstein Group Inc.²⁶¹

Northrop Grumman did not report any lobbying in France in 2023. In the UK, two meetings regarding defence are on the record, one of which was with the Prime Minister.²⁶²

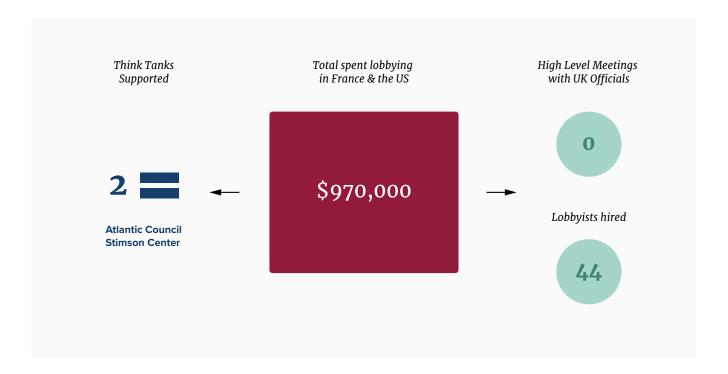
Northrop Grumman is the largest contributor of companies identified in this report to the think tanks working or publishing on nuclear weapons issues. It contributes to the Atlantic Council (\$100,000-249,999), the Brookings Institution (\$250,000-499,999), the Center for New American Security (CNAS) (more than \$500,000), the Center for Strategic and International Studies (CSIS) (more than \$250,000), the Hudson Institute (more than \$100,000), and the Stimson Center (\$15,000).²⁶³

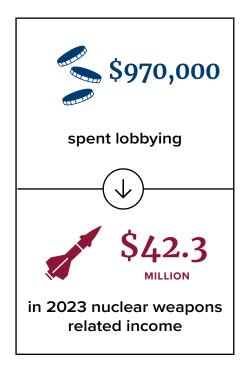
Northrop Grumman is a corporate member of the Council on Foreign Relations.²⁶⁴ Ann Marie Fudge, a Northrop Grumman board member, is a senior trustee of the Brookings Institution.²⁶⁵ Two Northrop Grumman board members are also on the boards of directors of financial institutions that have outstanding loans to the company. James Turley is also on the board of Citigroup, a financial institution that has more than \$1.3 billion in outstanding loans to Northrop Grumman. Mary Winston is also on the board of Toronto-Dominion Bank, which has \$199 million in loans or underwriting to Northrop Grumman.²⁶⁶



Earned by Kathy J. Warden, Chairman, CEO and President.

Peraton Inc





Peraton is a combined company comprising Veritas Capital and the IT and Mission Support Services Business of Northrop Grumman. As such, it has some contracts that were originally awarded to Northrop Grumman, and some awarded to components of Veritas Capital.²⁶⁷

NUCLEAR WEAPONS

Peraton produces key software components designed specifically for the Trident and Minuteman systems, including command and control and nuclear safety analysis and technical evaluation.

CONTRACTS

Peraton has at least four outstanding contracts with the U.S. Department of Defence for nuclear weapons development and production. One of these contracts, for Minuteman III components, is through 2039.²⁶⁸ There was one new six-year contract awarded in 2023, with a total value of \$83 million.²⁶⁹

LOBBY & INFLUENCE

Peraton spent \$970,000 lobbying in the US in 2023, of which \$340,000 was spent hiring external firms. Peraton hired the following firms to lobby on their behalf: Innovative Federal Strategies, LLC and Monument Advocacy.²⁷⁰



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Stu Shea, CEO, earned an undisclosed amount.

Peraton executive Tarik Reyes also serves on the Board of Managers, for Sandia National Labs (NTESS) within the U.S. Department of Energy National Nuclear Security Agency.²⁷¹

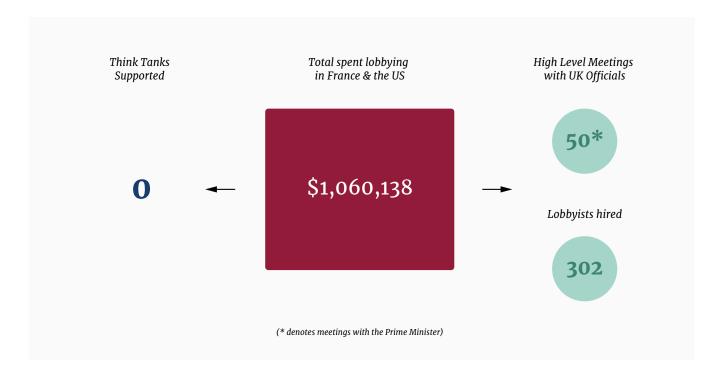
Advisory board member Constantine "Costa" Saab is a non-resident Senior Fellow at the Atlantic Council, and the company contributes between \$50,000-99,999 to that think tank.²⁷² Peraton also contributes \$50,000 to the Stimson Center, which has nuclear weapons related projects.²⁷³

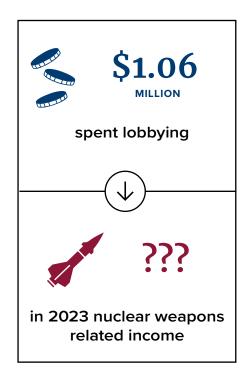
Peraton Advisory Board member Lt. General Robert (Bob) Ashley is also an Adjunct Fellow at the Center for New American Security.²⁷⁴



1st Lt. Pamela Blanco-Coca, 319th Missile Squadron missile combat crew commander, and her deputy commander, 2nd Lt. John Anderson, simulate key turns of the Minuteman III Weapon System. Photo: U.S. Air Force, Senior Airman Jason Wiese.

Rolls-Royce





Rolls-Royce is involved in the UK nuclear arsenal as part of the Dreadnought alliance. In 2023, the company generated £15.4 billion in revenue, of which CEO Tufan Erginbilgic received £13.6 million. 275

NUCLEAR WEAPONS

Rolls-Royce is heavily involved in the UK Dreadnought Alliance, one of two commercial partners in the enterprise (along with BAE Systems). Rolls-Royce builds and maintains the propulsion systems for all UK nuclear-armed submarines.²⁷⁶

CONTRACTS

Rolls-Royce did not get any new nuclear weapons related contracts from the UK in 2023, however the UK Ministry of Defence did announce that the company would provide all nuclear reactor plans for the AUKUS deal, the trilateral agreement between Australia, the UK and US on nuclear-powered submarines.²⁷⁷

The UK estimated that their new nuclear weapons system, including the Trident missile upgrades and the new submarines, would cost a total of £31 billion (including inflation, over the lifetime of the programme) and set a contingency of £10 billion. The exact amounts contracted to Rolls-Royce are not completely clear, but the company does have a £480 million contract for nuclear propulsion, as well as an additional part of the more than £2 billion contracted for the Dreadnought submarines. 278



Earned by Tufan Erginbilgic, CEO.

LOBBY & INFLUENCE

Rolls-Royce spent \$1 million lobbying in the US in 2023, of which \$120,000 was spent hiring J.A. Green and Company to lobby on their behalf.²⁷⁹

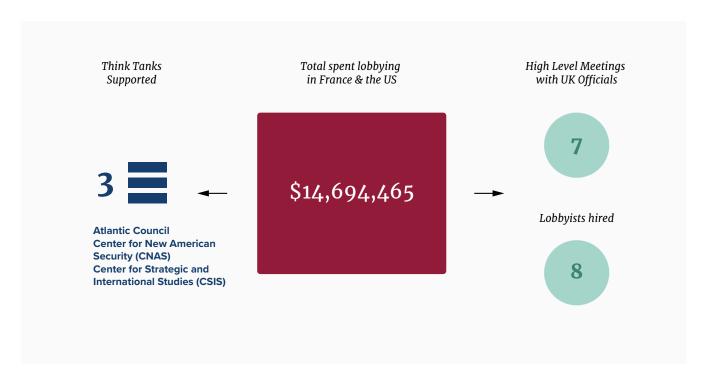
In the UK, Rolls-Royce was involved in 50 meetings with key government officials, including the Prime Minister, in 2023. The majority of these were with the Department for Business and Trade, but the company also had two meetings with the Ministry of Defence and three with the Foreign, Commonwealth and Development Office.²⁸⁰

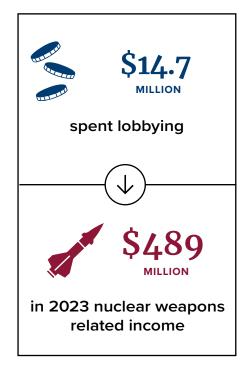
In France, Rolls-Royce was represented by the lobby firm Compagnie Européenne D'intelligence Stratégique (CEIS), who spent between €10,000-25,000 on behalf of 177 clients lobbying in 2023.²⁸¹



A B61-12 model goes through a vibration test to analyze structural integrity at Sandia National Laboratory. Photo: US Department of Energy

RTX (formerly Raytheon Technologies)





In July 2023, Raytheon Technologies changed its name to RTX Corporation. RTX subsidiaries include Collins Aerospace and Rockwell Collins, both of which have had nuclear weapons related contracts.

The 2024 shareholder meeting of RTX will vote on a proposal brought by the School Sisters of Notre Dame Cooperative Investment Fund calling on the company to prepare a human rights impact assessment. The proposal goes on to explain that the company may be required to disclose more about its nuclear weapons involvement, among other concerns. While the RTX board addressed some concerns raised by the proposal, it failed to make any comment on the nuclear weapons aspects.²⁸³

In 2023, Christopher T. Calio took over as CEO of RTX, earning \$15.9 million during the year.²⁸⁴ The \$5 billion in RTX contracts for nuclear weapons work is less than 1% of RTX's total annual revenue.²⁸⁵

NUCLEAR WEAPONS

RTX produces very low frequency, high power transmission components for Minuteman III command and communications. RTX will also be training for the Dreadnought-class submarine crews at the UK Naval Base Clyde.

RTX is contracted to build the Long-Range Standoff (LRSO) Cruise Missile, which will replace the currently fielded Air Launched Cruise Missile (ALCM), be loaded with nuclear warheads and launched from B-21 and B-52 bombers.²⁸⁶

CONTRACTS

RTX has seven outstanding contracts related to nuclear weapons, with a total estimated value of \$5 billion.²⁸⁷

The 13-year, \$1.6 billion contract with the UK contract for Dreadnought-class submarine support and the 11-year, \$2 billion contract with the US for the LRSO are the two largest RTX contracts.²⁸⁸

LOBBY & INFLUENCE

RTX spent \$14.7 million lobbying in the US in 2023, of which \$3.2 million was spent hiring external firms. RTX hired the following firms to lobby on their behalf: Akin Gump Strauss Hauer & Feld; American Defense International, Inc.; Atlantic Strategies Group; BGR Government Affairs; Brownstein Hyatt Farber Schreck, LLP; C. Baker Consulting, Inc.; Cornerstone Government Affairs, Inc.; DLA Piper LLP (US); Ernst & Young LLP (Washington Council Ernst & Young); Etherton and Associates, Inc.; Innovative Federal Strategies, LLC; Invariant LLC; J.A. Green and Company; S-3 Group; The Roosevelt Group; Thorn Run Partners, and; West Front Strategies LLC.²⁸⁹

In the UK, RTX was involved in seven meetings with high level government officials.²⁹⁰ RTX reported no lobbying costs in France in 2023.²⁹¹

RTX has also contributed to a number of think tanks that engage in nuclear weapons policy discourse. RTX has supported the Atlantic Council (\$100,000-249,999), the Center for New American Security (CNAS) (\$100,000-249,999), and the Center for Strategic and International Studies (CSIS) (\$100,000-249,999).²⁹²

RTX board member Brian C. Rogers is also a Trustee of the Brookings Institution and Robert Work is a member of the Council on Foreign Relations, the International Institute for Strategic Studies and a Distinguished Senior Fellow at the Center for New American Security.²⁹³

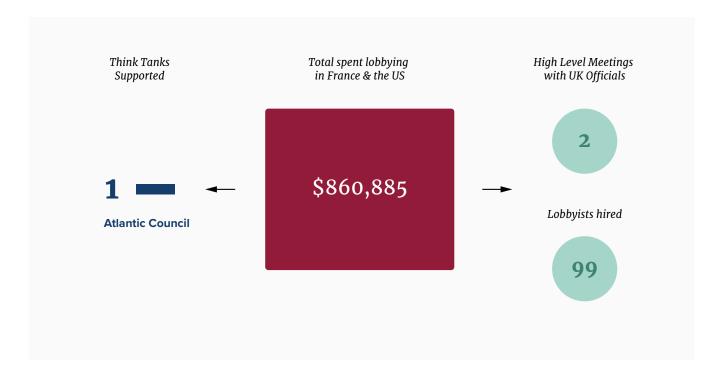


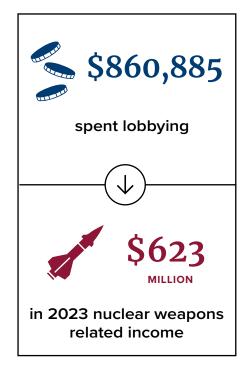
Earned by Christopher T. Calio, CEO.



A view of a missile displayed during a military parade to commemorate the 70th anniversary of the Korean War armistice in Pyongyang, North Korea, July 27, 2023, in this image released by North Korea's Korean Central News Agency. KCNA via REUTERS.

Safran





Safran owns half of ArianeGroup, significantly involved in the production of French nuclear weapons.²⁹⁴ Safran acquired Thales Aeronautical Electrical Systems activities (within Equipment & Defense perimeter) in 2023 as well, though that is a different branch of Thales than the one engaged in the French nuclear-armed submarines.²⁹⁵

In 2023, Safran generated €23 billion in revenue.²⁹⁶ CEO Olivier Andriès took home €2.2 million for the year.²⁹⁷

NUCLEAR WEAPONS

ArianeGroup is a 50/50 joint venture between Airbus and Safran.²⁹⁸ ArianeGroup is the prime contractor for French M51 sea-launched ballistic missiles which are designed to deliver nuclear warheads. The warheads are produced under the direction of the French government.²⁹⁹

CONTRACTS

In 2023, France spent €838 million on the sea-based component of its nuclear arsenal. It is unclear how much of that spending went to private contractors including Safran. However, based on the information provided about payments and the number of companies involved, one can estimate that Safran earned \$623 million in nuclear weapon related contracts. In 2011



Earned by Oliver Andriès, CEO.

LOBBY & INFLUENCE

Safran spent \$520,000 lobbying in the US in 2023, of which \$120,000 was spent hiring external firms. Safran hired Baker Donelson Bearman Caldwell & Berkowitz /The Daschle Group to lobby on their behalf.³⁰² Safran also made significant investments in lobbying in France. Safran spent €350,000 on its own lobbying and an estimated €18,924 hiring external lobbyists.³⁰³ In the UK, Safran participated in two roundtables discussing UK-French business and trade.³⁰⁴

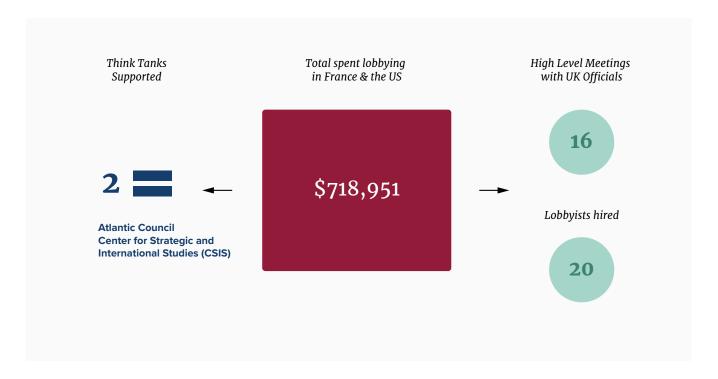
Safran also provided financial support to the Atlantic Council which has programmes or publications related to nuclear weapons, giving between \$25,000-49,999.305

Alexandre Lahousse is one of the French Government recommended members of the Safran board of directors, he is also the Head of the Industrial Affairs and Economic Intelligence Department at the French Directorate General of Weapons Procurement (Direction générale pour l'armement – DGA).



Russian RS-24 ICBM. Photo by Vitaly V. Kuzmin.

Thales





Thales is the significant non-state owner of Naval Group, holding 35% of available shares. The French state owns 62.5%, and the rest are held by employees and former employees.³⁰⁷ Thales provides key components for nuclear submarines for the UK and France.

In 2023, Thales reported €18.4 billion in sales, up from the previous year.³⁰⁸ However, this does not include income from Naval Group, which was €91 million.³⁰⁹

NUCLEAR WEAPONS

Naval Group is the prime contractor behind the next-generation nuclear-armed submarines for France, as well as the M51 missile integration with that submarine.³¹⁰ Thales is also listed as a significant contractor for the naval component of the French ASN4G, the new submarine-launched nuclear missile for the French arsenal.³¹¹

Thales claims it "does not design, produce or sell nuclear weapons", yet Gwendoline Blandin-Roger, Vice President, Underwater Systems, Thales, noted the French Government's "continuing trust in Thales to support its highly strategic nuclear deterrence-related operations" in a press statement in July 2023.³¹²

CONTRACTS

In 2023, Thales was contracted by the French government to provide sonar technologies and other technical support for the next generation of nuclear armed submarines but the contracted amounts were not made public.³¹³ Naval Group also has outstanding contracts for the nuclear-powered ballistic missile submarines that will serve in the French Navy between the 2030s and the 2090s.³¹⁴ However, based on the information provided about payments and the number of companies involved, one can estimate that Thales earned \$563 million in nuclear weapon related contracts including the income generated for its ownership of Naval Group.³¹⁵

Also in 2023, Thales Glasgow was selected to provide state-of-the-art 'optronic masts' – 21st Century successors to the iconic periscope – for all four future nuclear deterrent submarines (HMS Dreadnought, Valiant, Warspite, and George VI) under a £169 million contract.³¹⁶

LOBBY & INFLUENCE

Thales spent \$400,000 lobbying in the US in 2023, all of which was spent hiring external firms. Thales hired Baker Donelson Bearman Caldwell & Berkowitz /The Daschle Group, and Innovative Federal Strategies, LLC to lobby on their behalf.³¹⁷

In France, Thales spent an estimated \leqslant 345,185 on lobbying activities, \leqslant 250,000 of which was the company's own activities. ³¹⁸

Thales was also connected to 16 meetings with key officials in the UK in 2023, three of which were at the Ministry of Defence.³¹⁹

Patrice Caine the CEO and Chairman of the Board for Thales is also the Vice-President of GIFAS (Groupement des Industries Françaises Aéronautiques et Spatiales) which lobbies on behalf of the company in France.³²⁰

Thales also supports think tanks that have projects or publications on nuclear weapons. Thales's funding supports the Atlantic Council (\$50,000-99,999) and the Center for Strategic and International Studies (CSIS) (\$100,000-249,999).³²¹



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Earned by Patrice Caine, Chairman and CEO.

WEAPONS & FACILITIES AND THE COMPANIES THAT BUILD THEM

















Lawrence Livermore

National

Laboratory















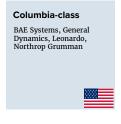














	WEAPON/ FACILITY	COUNTRY	COMPANY NAME	DESCRIPTION
bomb	B61-12 gravity bomb	US	Boeing, Northrop Grumman	Gravity bomb designed to be dropped from airplanes, currently deployed by the US in Belgium, Italy, Germany, Türkïye and the Netherlands
facility	Kansas City National Security Campus	US	Honeywell International	Facility designed to manufacture integral non- nuclear components for nuclear weapons
facility	Lawrence Livermore National Laboratory	US	Bechtel	Facility modernising two nuclear warheads, the W80-4 and W81-7 and developing the new nuclear explosive device, LX-21
facility	Los Alamos National Laboratory	US	Huntington Ingalls Industries	Facility responsible for the nuclear design, engineering and life extension programmes for U.S. nuclear warheads
facility	Nevada National Security Site	US	Mission Support and Test Services LLC which consists of Honeywell International, Jacobs Solutions and Stoller Newport News Nuclear, Inc., a subsidiary of Huntington Ingalls Industries	Facility where the U.S. conducted over 800 nuclear test explosions and where current subcritical nuclear tests are conducted
facility	Pantex Plant	US	Bechtel, Leidos, Northrop Grumman	Responsible for producing high explosives, recertifying the B61 plutonium pit, and final assembly of the complete B61-12 bomb and producing W88 Alt 370 warheads for Trident nuclear missiles.
facility	Sandia National Laboratory	US	Honeywell International	Facility that weaponises the nuclear explosive package into a nuclear weapon
facility	Savannah River Site and Savannah River National Laboratory	US	Huntington Ingalls Industries	The only U.S. facility that has the capability to extract, recycle, purify, and reload tritium for U.S. nuclear weapons
facility	Y-12 National Security Complex	US	Bechtel, Leidos, Northrop Grumman	Responsible for the remanufacture of components for the B61-12 nuclear gravity bomb
missile	ASMPA	France	MBDA (Airbus, BAE Systems, Leonardo)	Air-launched ballistic missile
missile	ASN4G	France	MBDA (Airbus, BAE Systems, Leonardo), Thales	Air-launched ballistic missile that will replace the ASMPA
missile	M51	France	ArianeGroup (Airbus, Safran), Naval Group, Thales	Submarine-launched nuclear-armed missile
missile	AGM-86 ALCM	US	Boeing, RTX	Air-launched nuclear-armed cruise missile, will be replaced by the long-range stand-off missile
missile	Minuteman III	US	Boeing, L3 Harris, Lockheed Martin, Northrop Grumman, Peraton, RTX	Intercontinental ballistic missile (ICBM)
missile	Sentinel	US	Bechtel, L3 Harris, Lockheed Martin, Northrop Grumman	Next-generation intercontinental ballistic missile (ICBM) for the US, to replace Minuteman III system
missile	Trident II D5	US, UK	Babcock International, BAE Systems, Draper, L3 Harris, Lockheed Martin, Northrop Grumman, Peraton	Submarine-launched ballistic missile
submarine	SNLE 3G-class	France	Thales, Naval Group	Next-generation nuclear-armed submarine
submarine	Dreadnought-class	UK	Babcock International, BAE Systems, General Dynamics, Northrop Grumman, Rolls- Royce, RTX, Thales	New nuclear-armed submarine being built in the UK to replace the Vanguard-class
submarine	Vanguard-class	UK	Babcock International, Jacobs Solutions, Rolls- Royce	Current UK nuclear-armed submarines
submarine	Columbia-class	US	BAE Systems, General Dynamics, Leonardo, Northrop Grumman	Nuclear-armed submarines which will replace the current U.S. Ohio-class

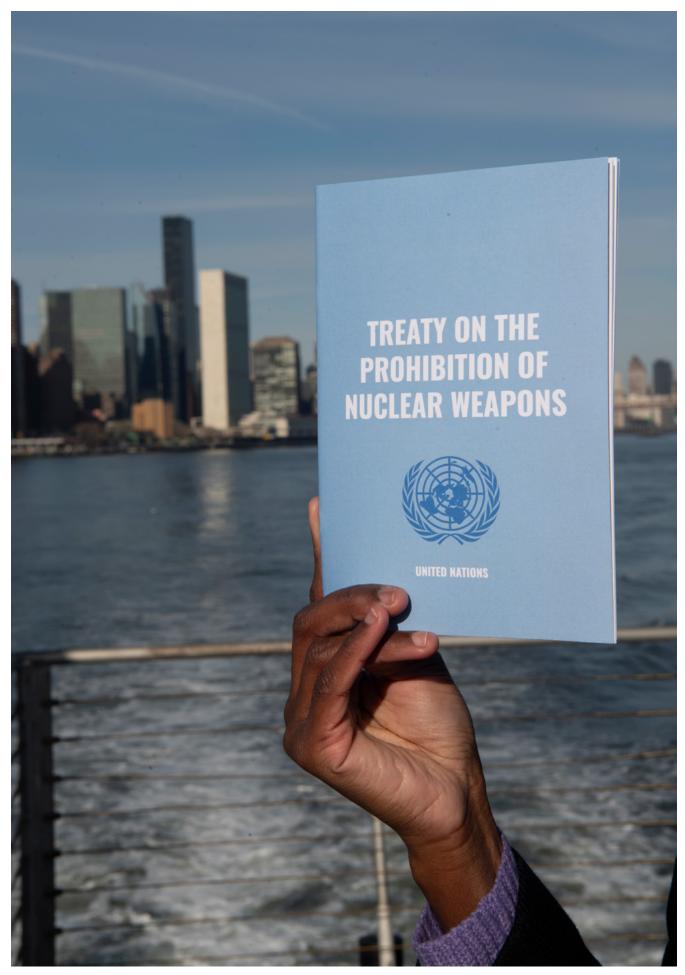


Photo: ICAN | Darren Ornitz.

Methodology

COUNTRIES

The estimates for country nuclear weapon spending include nuclear warhead and nuclear-capable delivery systems' operating costs and development where these expenditures are publicly available and are based on a reasonable percentage of total military spending when more detailed budget data is not available. When SIPRI Military Expenditure data is used for these calculations, we use the military expenditure calculation in local currency for the 2023 financial year.

Currency exchange calculations are based on annual averages, as explained in the companies methodology, and yearly differences are calculated on a constant currency basis - meaning that the same exchange rate was used for all calculations into USD. For the five-year comparison, the original currency spending figures for each year were converted to USD at the last stage of the calculation.

Due to lack of reliable and consistent global information, these estimates do not include the costs to remediate the environment contaminated by nuclear weapons or to compensate victims of nuclear weapon use and testing, although these are also important markers of the added financial and human cost of nuclear weapons. A 2011 Global Zero cost estimate which added "unpaid/ deferred environmental and health costs, missile defences assigned to defend against nuclear weapons, nuclear threat reduction and incident management" found that this "full" cost of global nuclear arsenal was over 50% higher than just the cost of nuclear weapons system maintenance and development.

The methodology and sources used to calculate each country's spending on nuclear weapons in this report is detailed in each country section.

COMPANIES

The companies listed in this report on nuclear spending differ slightly from the companies listed in the Don't Bank on the Bomb report and website. These differences are primarily because this report seeks to present information about the company's activities to influence decision makers on nuclear weapons issues- in addition to what work that company does as part of the nuclear weapons industry.

Bharat Dynamics (India), China Aerospace Science and Technology (China), Rostec (Russia) and Walchandnagar Industries Limited (India) are all part of the nuclear weapons industry, but there is little publicly available information about their specific contracting amounts, joint ventures (or otherwise), or efforts to influence decision makers via lobbying, think tank engagement or other activities. Any financial institution seeking to invest in these companies should, at a minimum, engage in an enhanced due diligence process to prevent their investments from supporting the production, development or manufacture of nuclear weapons and their specifically designed key components.

In places where multiple companies were included the total contract value was divided equally across the number of companies, unless there is a clear ownership division published. This is an estimate to prevent double reporting.

US CONTRACTS

Department of Defence (DOD) contracts pulled from contract websites may not include all contracts as only those over \$7 million are reported. In places where multiple companies were included, the total contract value has been divided equally across the number of companies (unless details were specified). This is an estimate, to prevent double reporting.

Additional contract information was researched using USASpending.gov, wherein searches by contractor name were performed. Subcontract listings were not included unless specifically noted.

Potential award amounts were listed, as opposed to obligated amounts, to illustrate the agreed scope of the contract costs.

U.S. Department of Energy contracts with consortiums (Consolidated Nuclear Security, MSTS, etc.) do not have details about the percentage of work done or fees accrued by each of the companies comprising the joint venture, so figures were equally divided among the three entities.

A NOTE ON UK CONTRACTS

For Trident, the UK often does not have contracts directly with the companies themselves. Instead, contract awards are done by the US, and the UK then reimburses the US for costs incurred.

OTHER CONTRACTS

Information about other contracts was sourced from media reports, company websites, and industry analysis. Sourced materials are clearly noted, and a full bibliography of sources used is available on request.

LOBBY DATA

All US Lobbying reports were taken either from the US Senate Lobbying Disclosures site (https://lda.senate.gov/system/public/), or the US House site (https://disclosurespreview.house.gov), where each lobbyist or defence contractor files quarterly reports, and the full list of referenced reports is available upon request. Each company was examined, as well as each individual lobbying firm listing that company as a client. The combined total of these expenses was included in the report. Some companies did not report any of their own lobbying activities, and only hired external lobbying firms.

UK Lobbying information was obtained through the Transparency International UK data dashboard on lobbying activities: https://openaccess.transparency.org.uk/.

The French Transparency Register was the source of information on French lobby expenditures: https://www.hatvp. fr/. Estimates were required, as French lobbyists are not required to disclose per-client figures, so these figures are estimated based on the number of clients, and total reported amounts. The figures for the defence companies themselves are the median of the reported range.

CURRENCY CONVERSION

Exchange rates used in this report are based on an average currency conversion rate for 2023, as provided by the <u>U.S. IRS</u>, except for North Korea and Pakistan which are an average of 2023 rates as listed on xe.com.

Used exchange rates are as follows:

1USD = 0.924 Euro

1USD = 0.804 GBP

1 USD = 82.572 INR (Indian Rupee)

1 USD = 7.075 Yuan (China)

1 USD = 3.687 ILS (Israeli New Shekel)

1 USD = 85.509 Rouble (Russia)

1 USD = 900 KPW (North Korean Won)

1 USD = 253.916 PKR (Pakistani Rupee)

This report aims to provide an overview of the most recent annual contributions of nuclear weapons producers to major think tanks which regularly write and research on nuclear weapons.

THINK TANKS

This report aims to provide an overview of the most recent annual contributions of nuclear weapons producers to major think tanks which regularly write and research on nuclear weapons.

To select think tanks to include in the report, we started with the University of Pennsylvania's 2019 Global Go To Think

Tank Index Report and selected the top Defence and National Security think tanks in nuclear-armed states, and then chose the think tanks with established nuclear weapons programs, or that frequently write and research about nuclear weapons. From these, entirely government- or university-funded think tanks were eliminated from consideration in the report. Think tanks with little to no public information about funding sources were also not included. Think tanks included in previous reports that had not published new financial information since the last report by May 1, 2024, were also not included.

The report considers funding from nuclear weapon-producing companies in a one-year period for these selected think tanks during the most recently self-reported timeframe. The

funding information is all publicly available through think tank annual reports and websites. Funding information for the most recent one-year period available was selected and no information before FY 2020 was considered. Most think tanks only provide a range of possible contribution sizes, and the median was used for the purposes of comparisons and summary information. The actual figures may be higher or lower.

Many think tanks have official policies on intellectual independence from funders, including the Atlantic Council, the Carnegie Endowment of International Peace, the Chatham House, and the Stimson Center among others.

When available, the report notes formal partnerships or membership structures between nuclear weapon producing companies and think tanks, given that these partnerships give companies access and participation in think tank work and may entail a financial contribution. The report also notes when a member of a board of the think tank, including the Board of Trustees, Board of Directors or Advisory Board, held a current or former senior position at a nuclear-weapon-producing company.



ICAN Act On It Forum Day 2. Photo: ICAN Norway | Morgan Mackay.

Conclusion

The report, and the four preceding it, paint a bleak picture, but progress is possible, and evident in recent years.

While the nine nuclear-armed governments have steadily increased their investments in nuclear weapons, in 2023, 101 cities and municipalities joined the ICAN cities appeal, including Durham and Leicester from the United Kingdom and Lyon and Montpellier from France, calling on their government to join the UN Treaty on the Prohibition of nuclear weapons. These cities join international capitals like Washington, Paris, and Berlin which have already adopted the appeal.

While they continue to make massive profits from contracts to produce and maintain weapons of mass destruction, the number of companies that recognise that nuclear weapons are problematic and that their increasing obligations under human rights reviews and investor scrutiny require them to step away from the industry is growing. Industry publications on human rights, sustainability and good governance practices have increased in recent years.³²³

It is clear that pressure from the public, investors, and governments is having an effect. And while the UN Treaty on the Prohibition of Nuclear Weapons works to shut down the business to develop and maintain nuclear weapons, it opens new doors for companies to transition their work and special skills into efforts that actually promote peace and sustainability. Some companies are already engaged in decommissioning weapons and environmental clean-up at former nuclear weapons production sites, and this business will boom when nuclear-armed states decide to disarm and address the impacts of past nuclear use and testing, as required by the Treaty. Who better than the bomb builders to know where all the toxics are buried, and to work together with those without a vested interest, in cleaning up the legacy of the nuclear age.

The UN Treaty on the Prohibition of Nuclear Weapons works to shut down the business of nuclear weapons, it opens doors for companies to transition their work and special skills into efforts that actually promote peace and sustainability.



Photo: ICAN | Darren Ornitz.

About ICAN and the Authors

The International Campaign to Abolish Nuclear Weapons (ICAN) is a global campaign working to mobilise people in all countries to inspire, persuade and pressure their governments to sign and ratify the Treaty on the Prohibition of Nuclear Weapons. ICAN comprises more than 650 partner organisations in over 100 countries. More information about ICAN can be found at www.icanw.org.

Alicia Sanders-Zakre and Susi Snyder co-authored this report.

Alicia is the Policy and Research Coordinator of ICAN where she directs and coordinates research on the Treaty on the Prohibition of Nuclear Weapons, the humanitarian impact of nuclear weapons and general nuclear weapons policy. Previously, she was a research assistant at the Arms Control Association and at the Brookings Institution and she has published over 100 news articles, editorials and reports on nuclear weapons, and is the author and co-author of previous ICAN reports on nuclear weapons spending. She can be reached with any comments or questions at alicia@icanw.org.

Susi is the Programme Coordinator of ICAN, her responsibilities include facilitating the development and execution of ICAN's key programmes, including the management of ICAN's divestment work and engagement with the financial sector. She coordinated the Don't Bank on the Bomb research and campaign while working for the Dutch organisation PAX since 2013. Susi was a Foreign Policy Interrupted/ Bard College fellow in 2020 and one of the **2016 Nuclear Free Future Award Laureates**. Previously, Susi worked with PAX and before that served as the Secretary General of the **Women's International League for Peace and Freedom** at their Geneva secretariat. She was named Hero of Las Vegas in 2001 for her work with Indigenous populations against US nuclear weapons development and nuclear waste dumping. She can be reached with any comments or questions at **susi@icanw.org**

About the Treaty on the Prohibition of Nuclear Weapons

On 7 July 2017 – following a decade of advocacy by ICAN and its partners – an overwhelming majority of the world's nations adopted a landmark global agreement to ban nuclear weapons, known officially as the Treaty on the Prohibition of Nuclear Weapons (TPNW). The TPNW prohibits nations from developing, testing, producing, manufacturing, transferring, possessing, stockpiling, using or threatening to use nuclear weapons, or allowing nuclear weapons to be stationed on their territory.

It also prohibits them from assisting, encouraging or inducing anyone to engage in any of these activities. A nation that possesses nuclear weapons may join the treaty, so long as it agrees to destroy them in accordance with a legally binding, verifiable, time-bound plan. Similarly, a nation that hosts another nation's nuclear weapons on its territory may join, so long as it agrees to remove them by a specified deadline. Nations are obliged to provide assistance to all victims of the use and testing of nuclear weapons and to take measures for the remediation of contaminated environments. The preamble acknowledges the harm suffered as a result of nuclear weapons, including the disproportionate impact on women and girls, and on Indigenous peoples around the world. The TPNW reached 50 states parties in October 2020, entered into force on 22 January 2021, and held its First Meeting of States Parties in June 2022, adopting the landmark Vienna Action Plan and Declaration. At its Second Meeting of States Parties in November 2023, parties assessed progress and recommitted to the landmark Vienna Action Plan.

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