

Germany

Between January 2021 and August 2023, seven German financial institutions had substantial financing or investments relations with nuclear weapon producing companies

Introduction

This document contains country-specific information on private sector involvement in the nuclear weapon industry. For a full picture of the financial sector involvement in companies associated with the production of nuclear weapons, please see the website: www.DontBankontheBomb.com

The nuclear weapon producers section of this document includes a brief summary of the nuclear weapons related work of each of the identified producers.

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Financiers

This section contains the results of our research into which financial institutions are financially involved with identified nuclear weapon producing companies. The financial institutions identified include banks, pension funds, insurance companies and asset managers. They have provided various types of financial services to nuclear weapon companies including loans, investment banking and asset management.

The information was retrieved from annual reports, financial databases and other sources. Findings include financial institutions participating in loans and underwriting deals since 1 January 2021. In addition, to provide a fuller picture of the overall credit granted to the nuclear weapons producing companies, participation in loans which have been closed before that date, but have not matured before 1 October 2022, is included. For bond-and shareholding, findings only include financial institutions which own at least 0.5% of the outstanding shares or bonds of one or more of the fully profiled companies at most recent filing dates. The data was collected in August 2023, meaning the most recent filing date in many cases was June, 30rd, 2023.

Commas (,) indicate thousands separators while periods (.) used as decimal points. All figures are in USD millions.

Key global findings

Between January 2021 and August 2023, 287 financial institutions had substantial financing or investments relations with one or more of the 24 companies heavily involved in the production of nuclear weapons. Investors held \$476,843 million in bonds and shares in these companies. \$342,647 million was provided in loans and underwriting.

Key findings for Germany

In Germany, two financial institutions held \$1.1 billion in shares and bonds in nuclear weapon producing companies.

INSTITUTION		AIRBUS	HUNTINGTON INGALLS INDUSTRIES	LEIDOS	ROLLS- ROYCE	TEXTRON	TOTAL
Allianz	Bondholding		\$51	\$26	\$305	\$24	\$405
Deka Group	Shareholding	\$718					\$718
Grand total		\$718	\$51	\$26	\$305	\$24	\$1,123

TABLE 1: SHARES AND BONDS HELD BY GERMAN FINANCIAL INSTITUTIONS TO NUCLEAR WEAPON PRODUCERS. ALL FIGURES IN USD MILLIONS.

Five financial institutions provided \$15.9 billion in loans and underwriting to nuclear weapon producing companies.

INSTITUTION		AIRBUS	BAE SYSTEMS	BOEING	HONEYWELL	L3HARRIS	LEONARDO
BayernLB	Loans	\$321		\$58	\$56		
Commerzbank	Loans	\$400	\$91	\$1,145			\$340
	Underwriting			\$867			
Deutsche Bank	Loans	\$577	\$91	\$2,091	\$1,800	\$208	\$226
	Underwriting			\$1,086	\$887		
DZ Bank	Loans	\$321					
KfW	Loans	\$178					
Grand total		\$1,796	\$181	\$5,246	\$2,742	\$208	\$565

INSTITUTION		PERATON	ROLLS-ROYCE	RTX	SAFRAN	THALES	TOTAL
BayernLB	Loans	\$60	\$570				\$1,064
Commerzbank	Loans		\$618			\$314	\$2,907
	Underwriting					\$76	\$943
Deutsche Bank	Loans		\$589	\$850		\$314	\$6,744
	Underwriting			\$1,174	\$573	\$76	\$3,796
DZ Bank	Loans						\$321
KfW	Loans						\$178
Grand total		\$60	\$1,777	\$2,024	\$573	\$781	\$15,953

TABLE 2: LOANS AND UNDERWRITING PROVIDED BY GERMAN FINANCIAL INSTITUTIONS TO NUCLEAR WEAPON PRODUCERS. ALL FIGURES IN USD MILLIONS.

Nuclear weapon producing companies

This report identifies 24 companies significantly involved in maintaining and modernising the nuclear arsenals of France, India, the United Kingdom, China, the Russian Federation and the United States.

This is not an exhaustive list. These companies are providing necessary components, services and infrastructure to develop, test, maintain and modernise nuclear weapons. References and additional information can be found on the website, www.dontbankonthebomb.com.

Airbus (The Netherlands)

Airbus, headquartered in the Netherlands, is part of the joint venture MBDA, the prime contractor for the ASMPA medium-range air-to-ground nuclear armed cruise missile for the French nuclear arsenal.¹ MBDA is also contracted by the French government for work related to development of the ASMPA-successor, the ASN4G.²

Airbus, as part of ArianeGroup, is also the main contractor for the M51 submarine-launched ballistic missiles for the French nuclear arsenal.³

BAE Systems (United Kingdom)

BAE Systems is involved in three nuclear weapon arsenals: those of France, the United Kingdom and the United States.

BAE Systems is part of the MBDA joint venture, the prime contractor for the ASMPA medium-range air-to-ground nuclear armed missile for the French nuclear arsenal.⁴ MBDA is also contracted by the French government for work related to development of the ASMPA-successor, the ASN4G.⁵

In June 2022, BAE Systems received an 18-year, \$12 billion contract to continue supporting the U.S. ICBM inventory, including the Minuteman III and the next-generation LGM-35A Sentinel (formerly known as the Ground Based Strategic Deterrent system).⁶

BAE is also contracted by the US government for work on the U.S. and UK Trident II D5 strategic weapon systems, under several contracts valued at up to \$607.8 million.⁷

BAE Systems is also part of the Dreadnought Alliance, a joint management team between the Submarine Delivery Agency (SDA) of the British Ministry of Defence, BAE Systems and Rolls-Royce.⁸ In May 2022, the Ministry of Defense announced it had awarded additional contracts for the Dreadnought programme of over £2 billion to BAE Systems and Rolls-Royce, as an initial investment within a planned overall total of £10 billion for the whole delivery phase.⁹

Bechtel (USA)

Bechtel is a family run company involved in U.S. nuclear weapon development at the Lawrence Livermore National Laboratory, the Y-12 Complex, and the Pantex Plant, as a member of the Lawrence Livermore National Security, LLC¹⁰ and the Consolidated Nuclear Security, LLC¹¹ consortia respectively.

Bechtel also provides launch system design, construction, and integration as a subcontractor in the next development phase for the LGM-35A Sentinel, the new U.S. Ground-Based Strategic Deterrent.¹²

Bharat Dynamics Limited (India)

Bharat Dynamics Limited (BDL) is a Government of India Enterprise under the Ministry of Defence.¹³ BDL is the prime production agency for the Indian Integrated Guided Missile Development Programme. It is involved in several nuclear capable missile programmes, including the Prithvi and Agni systems, and provides support for life extension programmes.¹⁴

Boeing (USA)

Boeing is building new nuclear weapons for the U.S. It has a \$250 million contract for the Long-Range Standoff weapon system.¹⁵

Boeing also holds two contracts for the guided tail-kit of the B61-12 upgrade with a total potential value of \$317.4 million.¹⁶

Boeing holds several contracts related to the US Minuteman Intercontinental Ballistic Missile (ICBM) systems¹⁷, potentially valued at over \$4.4 billion.¹⁸

In November 2023, Boeing completed a three-year, \$52 million contract for maintenance, repair, and rebuilding as well as technical services in support of the navigation subsystem for the Trident II (D5) missile system.¹⁹

China Aerospace Science and Technology (China)

China Aerospace Science and Technology (CASC) is part of China's state-owned (aero)space and defence industry.²⁰ China is currently significantly expanding its dual-capable DF-26 intermediate-range ballistic missile force and appears to be developing a new long-range ballistic missile, the DF-27.²¹ At the time of writing, it is still unclear whether the DF-27 will carry a nuclear payload.²² CASC states that it is the only manufacturer of intercontinental strategic nuclear missiles in China.²³

Fluor (USA)

Fluor is the lead partner in Savannah River Nuclear Solutions (SRNS), the joint venture responsible for the management and operation of the Department of Energy's

Savannah River Site and Savannah River National Laboratory, which produces nuclear components for nuclear weapons.²⁴ The contract²⁵ with a potential value of \$36.1 billion²⁶ was extended in September 2022 by five more years.²⁷

As a subcontractor of the joint venture Triad National Security²⁸, Fluor also “provides personnel, systems, tools and corporate reachback support for the critical area of capital construction” for the Los Alamos Laboratory.²⁹

General Dynamics (USA)

General Dynamics has a number of contracts related to key components for the UK & U.S. Trident II (D5) systems, including a \$33.1 million contract awarded in October 2022 to provide U.S. Trident II Strategic Weapon System Kings Bay Trident Trainer Facility kit and engineering support services³⁰, and a \$69.1 million six-year contract, awarded in 2019, for the Strategic Weapon System Fire Control Subsystem hardware, associated deliverables, and spares for the second hull of the UK Dreadnought Class ballistic missile submarines.³¹

General Dynamics subsidiary General Dynamics Mission Systems holds contracts to support development, production and installation of fire control systems for the Columbia and Dreadnought ballistic missile submarine classes, together valued at \$885.9 million.³²

General Dynamics is also building the new nuclear-armed submarines (Columbia class) for the U.S. Navy, under a 14-year contract through 2031, potentially valued at \$22.8 billion.³³

General Dynamics also works on command-and-control systems for the LGM-35A Sentinel, the new U.S. Ground Based Strategic Deterrent.³⁴

Honeywell International (USA)

Honeywell International will work on guidance and missile electronics in developing the LGM-35A Sentinel, the new U.S. Ground Based

Strategic Deterrent.³⁵

In March 2022, Honeywell was awarded a six-year \$74.1 million contract for repair of the Pendulous Integrating Gyroscopic Accelerometer guidance instrument for the Minuteman III.³⁶

Through joint venture partnerships, Honeywell operates three U.S. sites involved in the nuclear weapon component production and modernisation programmes: Kansas City National Security Campus³⁷, Nevada National Security Site³⁸ and Sandia National Laboratory³⁹.⁴⁰ Honeywell was also part of Savannah River Nuclear Solutions (SRNS), which operates the Savannah River Site, but exited this joint venture in July 2023.⁴¹

Huntington Ingalls Industries (USA)

As a subcontractor of the joint venture Triad National Security, Huntington Ingalls Industries (HII) provides “personnel, systems, tools and corporate reachback in the areas of pit production, plutonium manufacturing, production scale-up and nuclear operations and manufacturing” for the Los Alamos Laboratory.⁴² The contract has a potential value of \$33.1 billion and is expected to run until at least October 2028.⁴³

As part of Mission Support and Test Services LLC (MSTS), HII is involved in the management and operation of the Nevada National Security Site, which maintains facilities related to nuclear weapon modernisation and stockpiling.⁴⁴ The ten-year contract is worth \$9.9 billion and is set to expire in November 2027.⁴⁵

Through its subsidiary Stoller Newport News Nuclear (SN3), HII is also involved in the joint venture managing and operating of the Savannah River Site and Savannah River National Laboratory, which produces critical components for nuclear weapons.⁴⁶ In September 2022, this contract, with a potential value of \$36.1 billion, was extended with another five years.⁴⁷

Jacobs Engineering (USA)

As part of Mission Support and Test Services LLC (MSTS), Jacobs Engineering is involved in the management and operation of the Nevada National Security Site, which maintains facilities related to nuclear weapon modernisation and stockpiling.⁴⁸ The ten-year contract is worth \$9.9 billion and is set to expire in November 2027.⁴⁹

L3Harris Technologies (USA)

L3Harris subsidiary Interstate Electronics Corporation was awarded a new five-year contract in 2021 for flight test instrumentation support and services related to the Trident II (D5) nuclear missile.⁵⁰ The potential value of the contract is \$292.1 million.⁵¹

In July 2023, L3Harris acquired Aerojet Rocketdyne.⁵² Aerojet Rocketdyne builds solid boost propulsion systems and has powered every U.S. intercontinental ballistic missile (ICBM) ever fielded, including Trident II D5 missiles and the Minuteman III.⁵³ Aerojet Rocketdyne is also part of the team put together by Northrop Grumman to build the LGM-35A Sentinel, the new Ground Based Strategic Deterrent, for which it is developing a large solid rocket motor and the post-boost propulsion system.⁵⁴

Leidos (USA)

Leidos is part of the Consolidated Nuclear Security (CNS), LLC joint venture that manages and operates the Pantex Plant and the Y-12 National Security Complex where US nuclear weapons are assembled.⁵⁵ Under the \$48.9 billion contract, the joint venture is “fully responsible for high-hazard enriched uranium, special nuclear material (SNM), high-explosive and nuclear weapon assembly/disassembly functions”.⁵⁶

Leonardo (Italy)

MBDA, in which Leonardo has a 25% stake, is the prime contractor for ASMPA nuclear missiles for the French arsenal.⁵⁷ MBDA is also involved in developing the new ASN4G replacement for the ASMPA.⁵⁸

Leonardo also provides the integrated electric propulsion components for the U.S. Navy’s Columbia-class submarine,

for which it was awarded contracts valued at over \$1 billion and \$3 billion in April 2023 and January 2024 respectively.⁵⁹

Lockheed Martin (USA)

Lockheed Martin is producing command and control systems and, as part of the Northrop Grumman team, is responsible for missile payload integration for the LGM-35 Sentinel, the new U.S. Ground Based Strategic Deterrent.⁶⁰ In October 2023, Lockheed Martin was also awarded an \$996 million contract to develop a reentry vehicle for the Sentinel.⁶¹

Lockheed Martin has been the principal designer, manufacturer and sustainer of Minuteman III re-entry systems since the 1960s and anticipates continuing through 2030.⁶² The company has several outstanding contracts for this work, including a ten year contract, valued at \$879 million⁶³, and a \$320.6 million contract, both awarded in 2019.⁶⁴

Lockheed Martin is also contracted to design and develop a fully functional prototype for the Airborne Launch Control System Replacement (ALCS-R) program, under a \$94.3 million contract.⁶⁵ The contract states that “ALCS-R will deliver an affordable total system replacement of the legacy ALCS to support the Minuteman III intercontinental ballistic missile weapon system through estimated 2036 and provide a solution to meet the survivable launch platform – airborne fire control requirements for the ground based strategic deterrent weapon system through 2075”.⁶⁶

The U.S. Navy is also planning to use the Lockheed Martin C-130J-30 Hercules aircraft for nuclear command and communications, specifically in a Take Charge And Move Out (TACAMO) role.⁶⁷ In April 2023, it awarded Lockheed Martin a \$70.5 million contract modification to study the aircraft’s readiness for the for the TACAMO program.⁶⁸

Lockheed Martin is responsible for the construction of the Trident II (D5) nuclear missiles for both the UK and the U.S.⁶⁹ It has several outstanding contracts related to Trident production, valued at more than \$8.9

billion, some of which planned to continue through at least 2028.⁷⁰

Northrop Grumman (USA)

Northrop Grumman is building the LGM-35A Sentinel, the new intercontinental ballistic missile system for the U.S., under a \$13.3 billion nine-year contract awarded in 2020.⁷¹

Northrop Grumman subsidiary ATK Launch Systems is part of the Consolidated Nuclear Security (CNS), LLC joint venture that since 2013 manages and operates the Pantex Plant and the Y-12 National Security Complex, where U.S. nuclear weapons are assembled.⁷² Under the contract, potentially valued at \$48.9 billion, the joint venture is “fully responsible for high-hazard enriched uranium, special nuclear material (SNM), high-explosive and nuclear weapon assembly/disassembly functions”.⁷³

ATK Launch Systems was also awarded a \$86.4 million contract in 2018 for procurement of motor and component test, evaluation, engineering support, and disposal for all stages of Minuteman and Peacekeeper systems, which will run through 2026.⁷⁴

Northrop Grumman also has two outstanding contracts from 2021 for work on the Minuteman III system, with a potential total value of \$6.2 billion.⁷⁵ In November 2023, Northrop Grumman Space & Mission Systems Corp completed a \$1.7 billion contract for Minuteman III sustainment support, which had been running since 1999.⁷⁶

Northrop has several outstanding contracts from both the U.S. and UK for work on the Trident missiles, together valued at over \$1.1 billion.⁷⁷

Under an additional contract awarded in June 2022, valued at \$455.5 million, Northrop Grumman will perform shipyard field operations, program management, systems engineering, documentation, logistics and hardware production activities in support of the Columbia and Dreadnought Fleet Ballistic Missile Program.⁷⁸

Northrop Grumman is also integrating a Radar Aided Targeting System (RATS) into the B-2 Spirit Stealth Bomber, which “allows the B-2 to fully employ the B-61 mod 12 nuclear bomb”.⁷⁹

Peraton Inc (USA)

Under a \$6.7 million contract, Peraton provides Missile Applications Software Support to the Minuteman III system.⁸⁰

Peraton is also one of the subcontractors in the management and operation of Sandia National Laboratory.⁸¹

Furthermore, Peraton holds a \$360 million contract running until 2039 to providing Nuclear Safety Cross-Check Analysis (NSCCA) and Nuclear Safety Analysis and Technical Evaluation (NSATE) support for the Minuteman III.⁸²

Rolls-Royce (United Kingdom)

Rolls Royce produces key components for the new Dreadnought submarines for the UK nuclear weapons system.⁸³ In 2019, the UK government awarded Rolls-Royce Submarines with a contract worth nearly £480 million for nuclear propulsion power plants.⁸⁴ Rolls-Royce is also part of the Dreadnought Alliance, a joint management team between the Submarine Delivery Agency (SDA) of the British Ministry of Defence, BAE Systems and Rolls-Royce.⁸⁵ In May 2022, the Ministry of Defense announced it had awarded additional contracts for the Dreadnought programme of over £2 billion to Rolls-Royce and BAE Systems, as an initial investment within a planned overall total of £10 billion for the whole delivery phase.⁸⁶

Rostec (Russian Federation)

Rostec produces the Iskander-M missile system.⁸⁷ SpecChemistry JSC, one of the Rostec entities, produces over 80% of necessary components for Russian missiles.⁸⁸ Another entity of Rostec, United Aircraft Corporation (UAC) is also producing the Tupolev Tu-160M strategic missile-carrying bomber.⁸⁹ This upgraded version of the supersonic TU-160 bomber can carry both conventional and nuclear warheads⁹⁰, and is expected to serve as a key component of Russia’s nuclear triad.⁹¹

RTX Corporation(USA)

Under a \$2 billion, 6-year contract awarded in 2021, RTX Corporation supports the continued development and manufacture of the Long Range Standoff (LRSO) weapons system.⁹²

Collins Aerospace, an RTX unit, will build the secondary launch platform-airborne system for the LGM-35A Sentinel, the new U.S. Ground Based Strategic Deterrent.⁹³

In October 2023, RTX completed a \$79 billion, 10-year contract for logistic support, installation, and sustainment of Minuteman MEECN (Minimum Essential Emergency Communication Network) programme and the Minuteman MEECN programme upgrade.⁹⁴

In 2022, RTX also received a £160 million contract to train the crew of the UK Dreadnought nuclear-armed submarine at HM Naval Base Clyde.⁹⁵

Safran (France)

As part of ArianeGroup Safran is responsible for the ongoing maintenance of the M51 submarine launched ballistic missiles for the French nuclear arsenal.⁹⁶

Safran's subsidiary, Safran Ceramics, is involved in the design, development, manufacture and sale of solid propulsion systems and related equipment for all types of rockets and tactical and cruise missiles for air, sea and ground forces, through a joint venture with MBDA called Roxel.⁹⁷ Roxel is also involved in ASMP/ ASMP-A missile production, providing boosters and additional devices.⁹⁸

Textron (USA)

Textron has a contract, valued at approximately \$66.1 million, for Mod 5F midsections for the U.S. Minuteman Missiles.⁹⁹ Textron Systems provides multiprobe antennas for the Minuteman missiles, under a contract with a potential value of \$39.9 million.¹⁰⁰

Textron Systems will be involved in developing the missile payload integration for the LGM-35A Sentinel, the new U.S. Ground Based Strategic Deterrent.¹⁰¹

Thales (France)

According to the French Ministry of Defence, however, Thales is one of MBDA's subcontractors in the French ASMPA mid-life upgrade.¹⁰²

The French Ministry of Defence also lists Naval group, of which Thales has 35% shareholding, as the main contractor for the M51 missile adaptation for the French nuclear submarines.¹⁰³ Naval Group is also currently developing a third-generation nuclear armed submarine for France.¹⁰⁴

Walchandnagar Industries (India)

Walchandnagar Industries Limited (WIL) produces the launch systems for India's Agni missiles.¹⁰⁵ Walchandnagar also states it supplied "critical equipment" for India's first indigenous nuclear powered ballistic missile submarine, the INS Arihant.¹⁰⁶ Walchandnagar reports continued development in the missile sector, as well as for the Indian Navy's strategic submarine programme.¹⁰⁷

¹ 'Projet annuel de performances. Budget général. Programme 146. Projets Annuels de Performances. Annexe au Projet de Loi de Finances pour 2024: Équipement des forces' (2023), *RÉPUBLIQUE FRANÇAISE (2023)*, p. 31. Available at: <https://www.budget.gouv.fr/documentation/file-download/21423>; *ASMPA (2023) | MBDA Missile Systems*. Available at: <https://www.mbda-systems.com/product/asmpa/>. Available at: <https://www.mbda-systems.com/product/asmpa/>.

² 'Projet annuel de performances. Budget général. Programme 146. Projets Annuels de Performances. Annexe au Projet de Loi de Finances pour 2024: Équipement des forces' (2023), *RÉPUBLIQUE FRANÇAISE (2023)*, p. 34. Available at: <https://www.budget.gouv.fr/documentation/file-download/21423>.

³ *Ibid*, p. 36. Available at: <https://www.budget.gouv.fr/documentation/file-download/21423>.

⁴ 'Projet annuel de performances. Budget général. Programme 146. Projets Annuels de Performances. Annexe au Projet de Loi de Finances pour 2024: Équipement des forces' (2023), *RÉPUBLIQUE FRANÇAISE (2023)*, p. 31. Available at: <https://www.budget.gouv.fr/documentation/file-download/21423>;

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⁵ Projet annuel de performances. Budget général. Programme 146. Projets Annuels de Performances. Annexe au Projet de Loi de Finances pour 2024: Équipement des forces' (2023), *RÉPUBLIQUE FRANÇAISE* (2023), p. 34. Available at: <https://www.budget.gouv.fr/documentation/file-download/21423>.

⁶ BAE Systems wins contract to continue sustaining U.S. intercontinental ballistic missiles. BAE Systems, 27 June 2022. Available at: <https://www.baesystems.com/en-us/article/bae-systems-wins-contract-to-continue-sustaining-us-intercontinental-ballistic-missiles>; *IDV to BAE SYSTEMS TECHNOLOGY SOLUTIONS & SERVICES INC.* | USAspending, 24 June 2022. Available at: https://www.usaspending.gov/award/CONT_AWD_N0003022C6001_9700_-NONE_-NONE- (Accessed: 16 October 2023); *Contracts for June 24, 2022 (2022) U.S. Department of Defense*. Available at: [U.S. Department of Defense > Contract](https://www.defense.gov/News/Contracts/Contract/Article/3196439/) (Accessed: 16 October 2023).

⁷ *CONTRACT to BAE SYSTEMS TECHNOLOGY SOLUTIONS & SERVICES INC.* | USAspending, 1 October 2021. Available at: https://www.usaspending.gov/award/CONT_AWD_N0003022C6001_9700_-NONE_-NONE- (Accessed: 16 October 2023); *Contracts for September 30, 2021 (2022) U.S. Department of Defense*. Available at: [> U.S. Department of Defense > Contract](https://www.defense.gov/News/Contracts/Contract/Article/3196439/) (Accessed: 16 October 2023); *Contracts for September 18, 2023 (2023) U.S. Department of Defense*. Available at: [> U.S. Department of Defense > Contract](https://www.defense.gov/News/Contracts/Contract/Article/3196439/) (Accessed: 16 October 2023); *Contracts for November 15, 2023 (2023) U.S. Department of Defense*. Available at: [> U.S. Department of Defense > Contract](https://www.defense.gov/News/Contracts/Contract/Article/3196439/) (Accessed: 24 January 2024);

BAE Systems has been awarded a five-year Systems Engineering and Integration Support Services contract to continue supporting the U.S. Navy Strategic Systems Programs (SSP) office, BAE Systems, 27 October 2021. Available at: [BAE Systems awarded \\$478 million U.S. Navy contract for systems engineering and integration services](https://www.baesystems.com/en-us/article/bae-systems-awarded-478-million-u-s-navy-contract-for-systems-engineering-and-integration-services) | BAE Systems.

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⁸ *Alliance partners (2024) | Dreadnought Alliance*. Available at: [Alliance partners - Dreadnought Alliance](https://www.dreadnoughtalliance.com/news/alliance-partners-2024).

⁹ *More than £2 billion Available at: https://www.gov.uk/government/news/more-than-2-billion-to-boostuksubmarine-programme. to boost UK submarine programme.* Government of the United Kingdom, 9 May 2022.

¹⁰ *CONTRACT to LAWRENCE LIVERMORE NATIONAL SECURITY LIMITED LIABILITY COMPANY.* | USAspending, 9 May 2007. Available at: https://www.usaspending.gov/award/CONT_AWD_DEAC5207NA27344_8900_-NONE_-NONE- (Accessed: 19 October 2023).

¹¹ *NNSA Production Office contract (2014) Energy.gov.* Available at: <https://www.energy.gov/nnsa/nnsa-production-office-contract> (Accessed: 19 October 2023);

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¹² *Company adds Bechtel and Kratos Defense and Security Solutions to its nationwide team.* Northrop Grumman, 25 February 2020. Available at: [Northrop Grumman Expands its Ground Based Strategic Deterrent Nationwide Team | Northrop Grumman](https://www.northropgrumman.com/newsroom/press-releases/2020/02/25/northrop-grumman-expands-its-ground-based-strategic-deterrent-nationwide-team); *Modernizing the Nation's Aging Intercontinental Ballistic Missile (ICBM) System (2023) | Bechtel.* Available at: [Sentinel | Bechtel](https://www.bechtel.com/projects/us-nuclear-security-enterprise/).

¹³ *Company Profile (2023) | BHARAT DYNAMICS LIMITED INDIA.* Available at: <https://bdl-india.in/company-profile>.

¹⁴ 'Nuclear capable Prithvi-2 missile successfully testfired at night', *The Economic Times*, last updated: 20 November 2019. Available at: <https://economictimes.indiatimes.com/news/defence/nuclear-capable-prithvi-2-missile-successfully-testfired-at-night/articleshow/72147446.cms> ;

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