# **United States of America**

189 Financial Institutions made an estimated USD\$ 375,845 million available to 20 nuclear weapon producing companies since January 2014.

#### Introduction

This document contains country specific information from the 2018 Don't Bank on the Bomb update.

Hall of Fame and Runners-up include financial institutions with headquarters in the country that have published policies banning or limiting investment in nuclear weapons producers.

Hall of Shame are the financial institutions that have significant financing relationships with one or more of the nuclear weapons producers identified in the report.

Nuclear weapon producers this document includes a brief summary of the nuclear weapons related work of each of the identified producers. For more detail go to the <a href="https://www.DontBankOnTheBomb.com">www.DontBankOnTheBomb.com</a> website.

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#### Hall of Fame

#### Green Century

Green Century is a US-based fund manager with a focus on sustainability. It was founded and is owned by a group of 9 non-profit organisations, and uses all profits to support those organisations.¹ At the end of 2017, it had around USD 525 million (€429 million) in assets under management.²

Green Century's prospectus states that for each of the Green Century funds "[c]ompanies determined to have significant business involvement in the following will not be included (...): genetically modified organisms (GMOs), firearms, military weapons, nuclear power, alcohol, tobacco, adult entertainment and gambling". As a result, all companies classified as involved in manufacturing of "Nuclear Weapons", or "Nuclear Weapons Components" are excluded.

Green Century Capital Management is the investment advisor to the Green Century Funds and offers three environmentally and socially responsible funds, the Green Century MSCI International Index Fund (GCIFX/GCINX), the Green Century Equity Fund (GCEQX), and the Green Century Balanced Fund (GCBLX). The policy applies to all funds and all types of assets, including assets managed externally.<sup>5</sup>

Green Century makes use of an exclusion list to implement the policy, based on a variety of research providers, including MSCI, Factset, and Bloomberg. The list is not publicly available.<sup>6</sup>

Website: Twitter:

https://greencentury.com/ @Green\_\_Century

## Runners-Up

Financial Institution	Excludes all producers		Applies policy to all financial products	No investments found
Azzad Asset Management		✓		

## Azzad Asset Management



Azzad Asset Management is a faith-based socially responsible investment firm offering Islamic investment portfolios and mutual funds, financial planning, and retirement plans for individuals and businesses.<sup>7</sup>

Azzad's socially responsible investment policy states that the company "screen[s] all potential investments to exclude companies that profit from (...) weapons, prisons, war and international conflict (...) and other areas that cause societal or environmental harm." Companies that derive significant income (defined as more than 5% of their total income) from the processing or sale of weapons of mass destruction are excluded from investment. This also covers companies involved in the production, development, trade or maintenance of nuclear weapons or specially designed delivery systems. Companies involved in a joint venture that is involved in the production of nuclear weapons or key components thereof are not excluded.9

The policy applies to all types of investments, both managed internally and externally. 10

Azzad Asset Management makes use of an exclusion list to implement the policy, but this list is not publicly available. <sup>11</sup>

Azzad Asset Management was found to hold shares in the US-based nuclear weapon producer BWX Technologies. It clarified that this was based on a mistake and the shareholding has since been sold. 12



We commend Azzad for adopting a nuclear weapon policy. We recommend Azzad to apply the policy to all nuclear weapon producers, regardless of the percentage of their turnover that is related to nuclear weapons.

Website: Twitter: Facebook: <a href="http://www.azzadfunds.com/">http://www.azzadfunds.com/</a> @AzzadFunds <a href="https://www.facebook.com/azzadfunds/">https://www.facebook.com/azzadfunds/</a>

## Policy research methodology

To identify financial institutions with a policy on nuclear weapons, we research a variety of sources: NGO reports, screening-agency information, financial institutions' reports and websites, information from campaigners and other public sources. For practical reasons, the scope of this report is limited to those financial institutions that have an investment policy or a summary of that policy in English. The list of institutions in the Hall of Fame is therefore not exhaustive. We welcome additions from those able to provide them.

The financial institutions for which a nuclear weapons policy was actually found, were grouped in two categories. Financial institutions with a clear and comprehensive nuclear weapons exclusion policy are included in the "Hall of Fame", while financial institutions whose nuclear weapons policy is less strict or clear are included in the "Runners-up" category. This is not a comprehensive list, and others may exist in the country. To be included in the Hall of Fame, the nuclear weapons policy of the financial institution must meet the following criteria:

- The financial institution has published its policy and/or a summary of it;
- The policy excludes investments in nuclear weapon companies (withdrawing past investments and avoiding future investments)
- The policy has an 'all-in' comprehensive scope:
  - o no exceptions for any types of nuclear weapon companies
  - o no exceptions for any types of activities by nuclear weapon companies
  - o no exceptions for any type of financing or investment by the financial institution

Financial institutions whose nuclear weapon policy does not meet all of the above criteria are included in the "Runners-up" category. For more on the report methodology, see the website.

The Don't Bank on the Bomb project seeks to recognise all financial institutions with investment policies that explicitly mention nuclear weapons, even if some of these policies are not comprehensive. By naming investment in nuclear weapon producing companies as an issue of concern, even less effective policies recognise the stigma associated with these weapons of mass destruction, however, because of loopholes in some policies, some financial institutions may appear in both the Runners-up and Hall of Shame categories.



#### Hall of Shame

This section contains the results of our research into which financial institutions are financially involved with the nuclear weapon producing companies identified in the report. 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. For more detail on what types of financial services, please contact info@dontbankonthebomb.com.

All sources of financing provided since 1 January 2014 to the companies listed were analysed from annual reports, financial databases and other sources. The financial institutions which are most significantly involved<sup>1</sup> in the financing of one or more nuclear weapon companies are shown here.

Figures presented are rounded up/down to the nearest dollar at the filing date. Commas (,) indicate thousands separators while periods (.) used as decimal points.

									Nucle	ear we	apon p	rodu	cers								
Financial institutions	Aecom	Aerojet Rocketdyne	Airbus Group	BAE Systems	Bechtel	Boeing	BWX Technologies	CH2M Hill	Fluor	General Dynamics	Honeywell International	ngalls	Jacobs Engineering	Larsen & Toubro	Lockheed Martin	Northrop Grumman	Orbital ATK	Safran	Serco	Thales	Grand Total
Academy Securities						16									18						33
Aetna	40																				40
Affiliated Managers Group			325				16 0										11 6				601
Alkeon Capital Manageme nt							62														62
Allstate	16		43	73		133				58		26			163	76	22				610
Alyeska Investment Group																	10 8				108
Amalgamat ed Bank of Chicago																	29				29
American Century Investments													46								46
American Equity			60	39		55				55											209
American Family										93					82	103					278
American Financial Group				35					12												47
American Internation al Group (AIG)			108	69		740			13	35		8			217	101	7				129 7
American National Insurance									38												38

<sup>&</sup>lt;sup>1</sup> Don't Bank on the Bomb defines significant involvement as providing loans, investment banking or holdings above a threshold of 0.5% of all outstanding shares or bonds.



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Financial institutions	Aecom	Aerojet Rocketdyne	Airbus Group	BAE Systems	Bechtel	Boeing	BWX Technologies	сн2м ніІІ	Fluor	General Dynamics	Honeywell International	Huntington Ingalls	Jacobs Engineering	Larsen & Toubro	Lockheed Martin	Northrop Grumman	Orbital ATK	Safran	Serco	Thales	Grand Total
American Savings	9																				9
Bank American United Mutual Insurance				33					41	30		17									121
Ameriprise Financial		8		526		598				494	1,77 6	7			1,02 9	207	15	30			468 9
Apto Partners						20															20
AQR Capital Manageme nt							59					39 1	99			467	77				109 3
Ariel Capital Holdings									42												42
Arovid Associates										564							18 7				751
Arrowstreet Capital							44						12								44
Artisan Partners				241			20 0		119				13 1								691
Associated Banc-Corp																	29				29
Auto- Owners Insurance									20												20
BancPlus																	29				29
Bank of America	1,76 5	26 7	435	506	1,10 0	1,71 9	18 6	22 0	2,07 7	2,14 1	5,09 9	41 0	49 7		4,49 5	605	34 0	3,47 7	51 2		258 51
Bank of New York Mellon	71	29		336		1,43 7	60		57	559	1,64 1	12 2	68		632	441	17 5				562 8
Banner Bank																	29				29
BB&T	159						11 0					96	44				10 6				517
Bessemer Group									70												70
BlackRock	507	21 6	3,76 2	1,63 8		7,25 2	26 2		448	3,26 7	6,51	88 2	42 6	34 4	5,65 6	3,44 4	50 7	2,43 2	88	73 7	383 83
Blaylock Beal Van						26				20					18	15					78
Blue Harbour Group							97														97
BOK Financial	8																				8
Boston Private							47														47
Cacti Asset Manageme nt													42								42
California First																	29				29



									Nucle	ear we	a nog	rodu	cers								
Financial institutions	Aecom	Aerojet Rocketdyne	Airbus Group	BAE Systems	Bechtel	Boeing	BWX Technologies	CH2M Hill	Fluor	General Dynamics	Honeywell International	ngalls	Jacobs Engineering	Larsen & Toubro	Lockheed Martin	Northrop Grumman	Orbital ATK	Safran	Serco	Thales	Grand Total
National																					
Bancorp Cantor																					
Fitzgerald						6															6
Capital Bank	10																				10
Capital Group	32		4,33 7	3,95 8		11,0 81	16 9			3,83 9	121	62			10,4 47	2,24 4		449			367 39
Capital One Financial	241											96									338
Cardinal Capital Manageme							80														80
Carlson							52														52
Capital Carlyle Group																	5				5
Cascade Bancorp																	29				29
CastleOak Securities						20															20
Cathay General Bancorp	10																				10
CAVU Securities						14															14
Central Pacific Financial Corporation	6																29				35
Charles Schwab		11				606	27		36				33		557		29				130 0
Citigroup	241	29	322	872	1,02 0	2,97 7			1,77 7		4,53 0	62		40 2	2,98 0	667	19 6	414			164 89
Citizens Bank & Trust							36														36
Citizens Financial Group		65											50								115
CL King & Associates						6									18						24
CNO Financial Group				30																	30
Comerica	59														6		36				101
D,E, Shaw & Co,						_	31														31
Davis Selected Advisers																		429			429
Denver Investments																	4				4
Dimensiona I Fund Advisors	154	46					38		106			63	17 3				82				661



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									Nucle	ear we	apon p	rodu	cers								
Financial institutions	Aecom	Aerojet Rocketdyne	Airbus Group	BAE Systems	Bechtel	Boeing	BWX Technologies	СН2М НіІІ	Fluor	General Dynamics	Honeywell International	Huntington Ingalls	Jacobs Engineering	Larsen & Toubro	Lockheed Martin	Northrop Grumman	Orbital ATK	Safran	Serco	Thales	Grand Total
Discovery Capital Manageme nt							67					10 7									174
Divine Capital Markets						24															24
Drexel Hamilton						21				50					29	15					115
Eastern Bank																	10 6				106
Eaton												11					13				24
Vance Evercore						6,73				4,35	2,63										137
Fairview Capital Investment Manageme						1			34	0	1										34
Fidelity Investments	734	10 2		483		1,05 5	57		324	1,60 3	1,12 0	55 2	24		490	1,87 3	11 5				875 7
Fiduciary Manageme nt										<u> </u>	621	2	0			3	3				621
Fifth Third Bancorp	229	45										96	90				14 7				607
First Eagle Investment Manageme nt												24					45				477
First Midwest Bancorp	15																				15
First Niagara Financial																	10 6				106
First Trust Advisors							29					43									71
FirstBank	15																				15
Focus Financial Partners													51								51
Foundation Asset Manageme nt																			16		16
Franklin Resources				1,39 3			51			751	890	80		27 8		332			95		387 0
Fred Alger & Company											529										529
Geode Capital Manageme nt	40	12				1,06 3	36		67	597	1,05 9	93	69		650	469	45				420 2
GGCP		17 7																			177
Glenmede																	70				70



									Nucle	ear we	apon p	rodu	cers								
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Financial	Aecom	Aerojet Rocketdyne	Airbus Group	BAE Systems	Bechtel	Boeing	BWX Technologies	CH2M Hill	Fluor	General Dynamics	Honeywell International	Huntington Ingalls	Jacobs Engineering	Larsen & Toubro	Lockheed Martin	Northrop Grumman	Orbital ATK	Safran	Serco	Thales	Grand Total
Goldman	47		495	497		1,43			214	331	3,87	17	11	17	2,93	628	32				108
Sachs Goto Capital Markets						3					9	3	2		7						3
Great Pacific Securities						23															23
Greenhaven Associates	52		742																		794
Guggenhei m Capital									48	35		7	43		104	92	8	20			355
Guzman & Co						20															20
Hahn Capital Manageme nt													36								36
Hancock Holding							36														36
Hartford Financial Services		3		51													4				58
Hotchkis & Wiley Capital Manageme nt	19	9																			28
Huntington Bancshares						818															818
JPMorgan Chase	1,37 7	98	633	668	720	2,89 8	18 0	22 0	9	1,83 6	6,51 1	46 6	50		2,82 0	10,4 08	21 4	41	53 0		296 79
Keycorp	20	30					74										13 3				258
Kingstown Capital Manageme nt		42																			42
Knights of Columbus									8												8
Laurion Capital Manageme nt							56														56
Lazard											555										555
Lebenthal Holdings						64									11						76
Legg Mason	62	17		35		143			615		839				144	92	11 0	20			207 7
Leucadia National Corporation		11 3															J				113
Liberty Mutual Insurance			94	74						34					80		9				291



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Financial institutions	Aecom	Aerojet Rocketdyne	Airbus Group	BAE Systems	Bechtel	Boeing	BWX Technologies	CH2M Hill	Fluor	General Dynamics	Honeywell International	Huntington Ingalls	Jacobs Engineering	Larsen & Toubro	Lockheed Martin	Northrop Grumman	Orbital ATK	Safran	Serco	Thales	Grand Total
Loews				30					10												40
Corporation Longview Asset Manageme nt										6,54 3											654 3
Loop Capital						64						25			11						100
Lord, Abbett & Co	87											29	60								176
LSV Asset Manageme nt				220		595			48			57					13 9				105 8
Luminus Manageme nt	25																				25
Lyrical Asset Manageme nt	131																				131
M&T Bank		23						20 0													223
Madison Investment													37								37
Manning & Napier									16												16
MassMutua I Financial			999	51			36								670		6	75			183 8
MBS						3															3
MetLife				121		150			18		123	11			238	228	21	116			102 6
MFR						5															5
Millennium Manageme nt		15																			15
Mischler Financial Group						21									18	17					55
Modern Woodmen of America									25									25			50
Morgan Stanley	504	58	442	131		1,69 2			37		4,05 3		90	29 2	2,34 1		82	137			985 8
MSD Partners																			16 0		160
Muzinich &	49																				49
National Life Group																		20			20
National Rural Electric Cooperative Association							48					47									95
National Western Life Group									30												30



									Nucle	ear we	apon p	rodu	cers								
Financial institutions	Aecom	Aerojet Rocketdyne	Airbus Group	BAE Systems	Bechtel	Boeing	BWX Technologies	СН2М НіІІ	Fluor	General Dynamics	Honeywell International	ngalls	Jacobs Engineering	Larsen & Toubro	Lockheed Martin	Northrop Grumman	Orbital ATK	Safran	Serco	Thales	Grand Total
Nationwide Mutual Insurance										130	133	47			214	263	46				834
Neuberger Berman										323											323
New Jersey Department of the Treasury	57																32				89
New York Life Insurance	233	2	63	104		174				136	215	23			165	235	62	80			149 3
NewSouth Capital Manageme nt		10 3																			103
Northern Trust	200	19				1,51 0	11 0		68	689	1,32 6	15 1	15 3		1,21 7	478	15 5				607 7
Northweste rn Mutual Life Insurance	43		47	86		169				118					310	175	9	80			103 7
Ohio Public Employees Retirement System		10																			10
Old Republic Internation al									19			8					9				36
Pacific Asset Manageme nt				42					13									18			72
Paloma Partners		9																			9
Penserra Capital Manageme nt						5															5
People's United Financial																	10 6				106
PNC Financial Services	50						11 0			46		19 3	70				14 7				617
Poplar Forest Capital	46																				46
Primecap Manageme nt Principal	432		1,53 4								562		49 0								301 8
Financial Group Prudential		12		41								75			127		35	25			315
Financial (US)	70		52	67		1,69 4			10	67	287	12 6			353	153	47				292 8



									Nucle	ear we	apon p	rodu	cers								
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Pzena Investment Manageme nt	72																				72
Raymond James Financial																	29				29
Regions Financial		73					74		501								14 7				796
Ruane, Cunniff & Goldfarb													28 3								283
SAR Holding						23									18						40
Shapiro Capital Manageme nt							95														95
Shenkman Capital Manageme nt																	10				10
Siebert Brandford Shank Financial						23									18						41
Siebert Capital						3															3
Smith Asset Manageme nt Group							30														30
State Farm			43	105		95			72	156	257				242	137					110 5
State Fund						5,85				60 2,47	87 4,21	57	28		13,4	5,23	17				147 333
State Street State	153	45		466		7	87		285	9	6	8	6		93	1	1		23		68
Teachers Retirement System of Ohio	43																				43
Steel Partners Holdings		87																			87
Stephens Investment Manageme nt Group																	51				51
Stifel Financial	18																29				48
SunTrust	393	17 0				90						14 8					30 0				110 2
Synovus Financial Corporation																	10 6				106
T, Rowe Price		17				5,78 7	57 9				2,05 6				110	310			37		889 6



									Nucle	ear we	apon p	rodu	cers								
Financial institutions	Aecom	Aerojet Rocketdyne	Airbus Group	BAE Systems	Bechtel	Boeing	BWX Technologies	CH2M Hill	Fluor	General Dynamics	Honeywell International	Huntington Ingalls	Jacobs Engineering	Larsen & Toubro	Lockheed Martin	Northrop Grumman	Orbital ATK	Safran	Serco	Thales	Grand Total
Teacher Retirement System of Texas												73									73
Telsey Advisory Group						20															20
The London Company of Virginia										505							18 3				688
Thrivent Financial	30			30								89			110		38				297
TIAA	40	17	97	141		1,03 0	43		113	871	1,70 9	17 6	42		763	943	12 0	75			617 9
Travelers						91			8	63		10					13				185
Tribal Capital Partners						5															5
Two Sigma Investments									101												101
United Services Automobile Association									20									35			55
US Bancorp	349	11 5				965	11 0		810	66	306	32 2	40 6		1,12 5	72	30 0				494 5
Vanguard	435	78	1,08 1	660		8,31 9	39 1		677	4,14 4	6,91 7	82 0	65 2	21 9	5,89 8	3,53 8	47 5	663	37	26 3	352 66
Victory Capital		86					80						13 7								304
Voya Financial	159					102											61	25			347
Waddell & Reed Financial				47								18			488						552
Wedge Capital Manageme nt	48																				48
Wellington Manageme nt			748	97		844				890	3,00 7	14			2,85 1	731					918 3
Wells Fargo	992	14 4		131		1,86 7	30 0	22 0	268	1,60 9	2,97 8	55 0	70 1		2,42 0	947	37 0				134 95
Western & Southern Financial															104		14				118
Westwood Holdings Group												55									55
William Blair & Company				129			34 5														474
Williams Capital Group						77					64				29						169
Winslow Asset		19																			19



									Nucle	ear we	apon p	rodu	cers								
Financial institutions	Aecom	Aerojet Rocketdyne	Airbus Group	BAE Systems	Bechtel	Boeing	BWX Technologies	CH2M Hill	Fluor	General Dynamics	Honeywell International	Huntington Ingalls	Jacobs Engineering	Larsen & Toubro	Lockheed Martin	Northrop Grumman	Orbital ATK	Safran	Serco	Thales	Grand Total
Manageme nt																					
WoodmenLi fe																		20			20
Zeo Capital Advisors																	6				6
Zions Bancorpora tion	45																				45



### Nuclear weapon producing companies

This report identifies 20 companies operating in France, India, the Netherlands, the United Kingdom and the United States that are significantly involved in maintaining and modernising the nuclear arsenals of France, India, the United Kingdom and the United States. **This is not an exhaustive list.** These companies are providing necessary components and infrastructure to develop, test, maintain and modernise nuclear weapons. The contracts these companies have with nuclear armed countries are for materials and services to keep nuclear weapons in their arsenals. In other nuclear-armed countries –Russia, China, Pakistan and North Korea – the maintenance and modernization of nuclear forces is carried out primarily or exclusively by government agencies. References and additional information is on the website, www.dontbankonthebomb.com

#### Aecom (USA)

Aecom is part of the group of companies managing US nuclear weapons laboratories and testing facilities, including those responsible for design and fabrication of electronic, mechanical and structural systems for nuclear weapons. Without Aecom, modernisations plans for the US nuclear arsenal would come to a halt. Aecom and its partners have been cited for substandard performance in recent years, and the US government cut the fees in recent years, citing "significant or 'First Degree' performance failure".

#### Aerojet Rocketdyne (USA)

Aerojet Rocketdyne, formerly known as GenCorp is involved in the design, development and production of land- and seabased nuclear ballistic missile systems for the United States. It is currently producing propulsion systems for the Minuteman III and Trident II (D5) nuclear missile systems.

#### Airbus (The Netherlands)

Airbus is a Dutch company that produces and maintains submarine-launched nuclear missiles for the French navy (the M51.2), it is also developing the next generation submarine launched missiles, the M51.3. Airbus is a key member of the joint venture MBDA-Systems, which has contracts to extend the life of French ASMPA missiles through 2035. MBDA also has contracts for the new French missiles, the ASN4G.

#### BAE Systems (United Kingdom)

BAE Systems is involved in the nuclear weapons programmes of France, the UK and the US. It produces key components for Trident II (D5) missiles for the US and UK nuclear arsenals. It also produces US Minuteman III Intercontinental Ballistic Missile (ICBM) systems. BAE Systems is also part of the MBDA joint venture and provides nuclear armed air-to-surface missiles for France.

#### Bechtel (USA)

Bechtel manages the Los Alamos and Lawrence Livermore national laboratories in the US, which play an important role in the research, design, development and production of nuclear weapons. The US National Nuclear Security Administration has been repeatedly criticized for renewing these contracts despite significant performance issues. Bechtel is also involved in the production and refurbishment of US nuclear weapons at the Y-12 National Security Complex in Tennessee and the life extension programme for the W76 warheads deployed on Trident II (D5) ballistic missiles at the Pantex Plant in Texas.

#### Boeing (USA)

Boeing is contracted to help keep the Minuteman III nuclear intercontinental ballistic missiles operational in the US nuclear arsenal until 2030. Boeing will also be producing the new Ground Based Strategic Deterrent system for the US, designed to replace the Minuteman III system. Boeing is also producing the guided tail kit for the new B61-12 US nuclear gravity bomb (the ones meant to be deployed to Europe). In addition, Boeing also has contracts for key components for US and UK Trident II (D5) nuclear weapons.

#### BWX Technologies (USA)

BWX Technologies ("BWXT") formerly known as Babcock & Wilcox Company operates several US nuclear weapons facilities through joint ventures. These facilities including the Lawrence Livermore National Laboratory, Los Alamos National Laboratory, and Nevada National Security Site (NNSS), previously known as the Nevada Test Site, each of which are engaged in aspects of nuclear warhead modernisation for the US arsenal and have also provided data to UK nuclear labs. Along with other partners, BWXT was cited for substandard performance in recent years, and



relevant US government agencies were criticized for renewing their contracts.

#### CH2M HIII (USA)

CH2M Hill is one of the joint venture partners operating the former nuclear weapons test site in the US (now called the Nevada National Security Site). The site continues to conduct nuclear weapons related experiments, sending data to both US and UK nuclear weapons laboratories. CH2M Hill was acquired by Jacobs Engineering in December 2017, information about CH2M Hill is included here for reference purposes.

#### Fluor (USA)

Fluor is the lead partner responsible for the management and operation of the US nuclear weapons facilities at Savannah River South Carolina. Fluor is responsible for managing the nuclear arsenal at the sites (Savannah River Site and Savannah River National Laboratory) among other tasks.

#### General Dynamics (USA)

General Dynamics holds numerous contracts related to the Trident II (D5) missile systems for the UK and US. It provides a range of engineering, development, and production activities to support to US and UK Trident II Strategic Weapons Systems. It is also involved in the guidance systems of the Trident II (D5) nuclear missiles of the US Navy.

#### Honeywell International (USA)

Honeywell International manages and operates the National Security Campus (formerly Kansas City Plant), which produces about 85% of the non-nuclear components for US nuclear weapons including electronic, mechanical and hardware components. Honeywell is also involved in managing other US nuclear weapon facilities including Savannah River, the National Nuclear Security Site (former test site), and the Sandia Lab. The work at Sandia includes the systems integration work connecting nuclear weapons to their delivery vehicles. Honeywell is also involved in producing key components for the Trident II (D5) nuclear missiles which comprise part of the UK and US arsenals.

#### Huntington Ingalls Industries (USA)

Huntington Ingalls Industries is involved in management of the US nuclear arsenal and related facilities, including tritium production at the Savannah River Site, the only source of new tritium for the US nuclear arsenal.

#### Jacobs Engineering (USA)

Jacobs Engineering Group is involved in the joint venture AWE-ML. They are The AWE is responsible for warhead maintenance for the UK's Trident II-nuclear arsenal. According to reports, the AWE facility is also developing a new warhead, the Mark 4A or Mk4A. The company is also part of the consortium responsible for the US nuclear weapons test site- Nevada National Security Site (NNSS) near Las Vegas.

#### Larsen & Toubro (India)

Larsen & Toubro is responsible for developing the launcher system for the nuclear-capable short-range surface-to-air Akash missile system for the Indian nuclear arsenal.

#### Lockheed Martin (USA)

Lockheed Martin is responsible for the construction of the Trident II (D5) nuclear missiles for the US and the UK. It is also involved in the production and maintenance of the Minuteman III nuclear intercontinental ballistic missiles for the US, and will now be developing the new Long Range Stand-Off (LRSO) missile. It is part of the team that manages the UK Atomic Weapons Establishment, that designs, manufactures and maintains nuclear warheads for the UK. It is also engaged in US nuclear weapons modernisation at the Pantex, Savannah River and Y-12 facilities.

#### Northrop Grumman (USA)

Northrop Grumman makes Intercontinental Ballistic Missiles (ICBM) for the US nuclear arsenal. It is currently involved the Minuteman III missiles, and will now be producing the new "Ground Based Strategic Deterrent" (GBSD) nuclear missiles. It also produces Trident II (D5) launcher subsystem components for the US and the UK. It is also partly responsible for the Nevada National Security Site (NNSS), previously known as the Nevada Test Site, which is engaged in aspects of nuclear warhead modernisation for the US arsenal and has also provided data to UK nuclear labs.

#### Orbital ATK (USA)

Orbital ATK (formerly known as ATK or Alliant Techsystems) produces rocket propulsion systems for Trident II (D5) submarine launched ballistic missiles for the US and UK nuclear arsenals. Orbital ATK is also responsible for the solid propellant stages of the Minuteman III Intercontinental Ballistic



Missile (ICBM) for the US and has a contract to produce components for the new "Ground Based Strategic Deterrent" (GBSD) nuclear missiles". It is also involved in the nuclear weapons facilities Y-12 and Pantex which are refurbishing nuclear weapons for the US arsenals. Northrop Grumman announced it will acquire Orbital ATK in the first half of 2018.

#### Safran (France)

Safran and Airbus together form ArianeGroup which is in charge of producing the solid rocket motors on the M51, the strategic ballistic missile in France's nuclear arsenal. The M51 carries multiple warheads and is replacing the M45.

#### Serco (United Kingdom)

Serco is part of the joint venture AWE-ML, which runs the UK Atomic Weapons Establishment. It is responsible for manufacturing and maintaining the nuclear warheads for UK arsenal. It is also involved in the development of an entirely new warhead, the Mark 4A or Mk4A which reportedly commenced without formally notifying the UK parliament.

#### Thales (France)

Thales is working alongside the French government to modernise the M51.3 nuclear ballistic missiles and keep the ability to launch them from submarines. It has also been directly involved in production of the French M51 nuclear missile.



<sup>&</sup>lt;sup>1</sup> Green Century, "Why Choose Green Century", Green Century website (https://greencentury.com/why-choose-greencentury/#oen), viewed 23 January 2018; Green Century, written response to PAX dated 5 February 2018.

<sup>&</sup>lt;sup>2</sup> Green Century, written response to PAX dated 5 February 2018.

<sup>&</sup>lt;sup>3</sup> Green Century, "Prospectus", November 28, 2017, pages 33-35, Green Century website http://greencentury.com/wpcontent/uploads/pdf/prospectus.pdf, viewed 23 January 2018.

<sup>&</sup>lt;sup>4</sup> Green Century, "Prospectus", November 28, 2017, Green Century website http://greencentury.com/wpcontent/uploads/pdf/prospectus.pdf, viewed 23 January 2018; Green Century, written response to PAX, 1 December 2017; Green Century, written response to PAX, 5 February 2018.

<sup>&</sup>lt;sup>5</sup> Green Century, written response to PAX, 1 December 2017.

<sup>&</sup>lt;sup>6</sup> Green Century, written response to PAX, 1 December 2017.
7 Azzad Asset Management, "Ethical Investing", Azzad Asset Management website (<a href="http://www.azzadfunds.com/">http://www.azzadfunds.com/</a>), viewed 23 January 2018.
8 Azzad Asset Management, "Ethical Investing Philosophy", Azzad Asset Management website (<a href="http://www.azzadfunds.com/philosophy-process/">http://www.azzadfunds.com/philosophy-process/</a>), viewed 23 January 2018.

<sup>9</sup> Azzad Asset Management, written response to PAX, 10 November 2017.

<sup>10</sup> Azzad Asset Management, written response to PAX, 10 November 2017.

<sup>11</sup> Azzad Asset Management, written response to PAX, 10 November 2017.

<sup>12</sup> Azzad Asset Management, written response to PAX, 6 December 2017.