

Carbon Action

Carbon Action is an investor-led initiative to accelerate company action on climate change, including energy efficiency activities which deliver a positive return on investment.

329 investors with US \$25 trillion

in assets under management have asked the world's highestemitting publicly-listed companies to take three specific actions in response to climate change. Over the period 2011-16, investors asked companies to help tackle climate change in three ways:

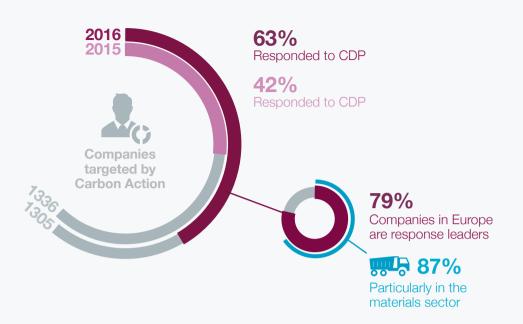
Make emissions reductions

Publicly disclose emissions reduction targets

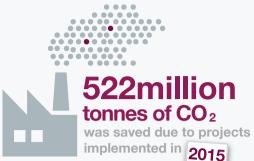
Invest in emissions reduction projects with a positive return

The Carbon Action sample and the methodology used to calculate the sample has changed for 2016 and now incorporates scope 3 emissions as a factor in determining the sample of 1,305 companies (including 5 influential media companies and 5 banks with the largest funding of coal projects to pilot investor influence in these related yet indirect areas).

Response Rates







Average return on investment for carbon reducing projects







based on information disclosed to CDP





Targets



1305

Companies targeted by Carbon Action.

818

Responded to CDP.

86%

have set an emissions reduction target.

62%

have absolute and/or intensity targets covering 90-100% of their operations for scope 1+2.

8%

have absolute and or intensity targets covering 90-100% of their operations for scopes 1,2 and 3.

We Mean Business

For 2017 the Carbon Action focus will evolve:

- while continuing to encourage emissions reductions (including via projects with positive returns), the new strategic context provided by the Paris Agreement coming into force and the Taskforce on Climate-related Financial Disclosure will be highlighted
- in addition, investors will request that companies sign-up to the We Mean Business coalition's agreed priority initiatives (inc. Science Based Targets) for relevant sectors.

is saved.

160

have signed up to at least one of the 9 We Mean Business initiatives.

15

companies have had their science-basedtargets approved by the Science Based Targets Initiative



	Utilities	Materials	Consumer Discretionary	Consumer Staples	Industrials	Information Technology	Health Care	Energy	Tele-communication Services	\$ Financials	TOTAL
Response rate The number of companies targeted by Carbon Action that have responded to the 2016 CDP questionnaire.	0	0	0	0	0	0	0	0	0	0	O
Africa / Middle East Asia Australasia Europe Latin America North America	0% 33% 50% 86% 78% 34%	100% 56% 87% 77% 47% 51%	0% 56% 0% 96% 0% 73%	50% 59% 75% 81% 83% 81%	0% 71% 57% 79% 33% 73%	0% 95% 0% 88% 0% 93%	100% 75% 0% 100% 0% 91%	29% 29% 67% 52% 40% 32%	0% 67% 100% 100% 0% 100%	0% 0% 0% 100% 0% 100%	58% 57% 73% 79% 54% 58%
Regional responders The number of responding companies within each region.	0	0	0	0	0	0	0	0	0	0	0
Africa / Middle East Asia Australasia Europe Latin America North America	0 13 2 31 7 22	11 54 13 58 8 52	0 36 0 26 0 41	1 24 3 34 5	0 39 4 41 1 38	0 36 0 7 0 37	1 3 0 11 0 10	2 13 6 22 4 36	0 2 1 5 0 2	0 0 0 2 0 3	15 220 29 237 25 292
Targets The number of companies setting absolute, intensity and renewable energy/consumption /production targets.	nda		lı II.	l _{il}	il.	lh.	al	h.		• -	
Intensity targets Absolute targets Intensity and absolute targets Renewable energy consumption/ production targets Intensity/absolute target and	11 12 18 2	77 39 30 1	32 14 25 0	39 19 25 1	39 25 35 1	20 19 13 0	4 12 2 0	30 8 12 0	3 1 3 0	0 4 0 0	255 153 163 5
renewable energy targets Set all three % setting targets	12 87%	10 87%	8 86%	10 86%	6 89%	9 89%	4 100%	3 66%	3 100%	0 100%	65 86%

	&			-	<u> </u>	•	C	***		\$	TOTAL
Absolute/ intensity targets 90-100% of operations: the number of absolute and intensity targets that relate to over 90% of the total operations of a company. The targets are broken down by scope.	L.			L			l.ı.	li a	L.	1	
Africa / Middle East Asia Australasia Europe Latin America North America	54 20 4 5 17 8	86 9 6 3 66 2	53 1 3 5 39 5	54 5 5 7 28 9	81 13 9 8 48 3	52 1 6 7 35 3	32 2 0 0 24 6	16 7 0 2 7 0	12 3 6 0 2	11 0 0 1 9	451 61 39 38 275 38
Science based targets The number of targets that are deemed science-based based on the CDP questionnaire response.		•	•	•	•	•		•	•.	••	
Yes No, but we anticipate setting one in the next 2 years % setting targets	20 15 37%	15 37 17%	9 22 17%	30 15 56%	12 46 15%	11 23 21%	16 11 50%	1 10 6%	4 1 33%	5 2 45%	123 182 27%
Regional absolute/intensity targets: 90-100% of operations 90-100% of operations: absolute and intensity scope 1+2 and scopes 1,2+3 emissions targets by region. Africa / Middle East Asia Australasia Europe Latin America North America	0 3 0 13 1	8 26 3 15 1 1	0 22 0 12 0 5	0 2 1 13 0 12	0 15 0 23 0	0 18 0 3 0 14	1 7 0 10 0 6	0 5 0 1 0	0 1 0 1 0	0 0 0 1 0 8	9 99 4 92 2 69

	&			—	<u></u>	•	0			\$	TOTAL
Emissions Total combined scope 1+2 emissions and scope 3 emissions by type, plus tonnes of CO2e per mUSD total revenue.	31%	33%	3%	4%	11%	2%	1%	16%	1%	0%	100%
Scope 1+2 (mtCO2e) (% of total)	1,961	2,096	210	227	671	99	40	1,029	44	7	6,385
Tonnes CO2e/mUSD revenue Scope 3 (mtCO2e)	1,580 2,000	1,039 4,328	62 3,107	73 961	248 3,012	58 546	62 180	408 4,781	62 71	20 16	3,612 19,003
Projects Emissions reduction initiatives that were implemented within the reporting year as well as the total projects by activity type.		•	•	•	•			•	•	•	
Number of projects implemented Projects (per acvity type)	153,020 335	14,454 721	19,247 517	13,357 700	6,119 680	29,260 346	1,400 152	4,293 326	18,191 64	1,555 45	260,896 3,886
							•		•	•	
Projects – emission reductions Total combined scope 1 and 2 emissions savings from projects as well as emission reductions per project type.			•	•			•		•		
Total emissions offset (Scope 1+2) Median emissions reducon	153,303 11.59	133,631 2.14	22,128 0.51	6,821 0.73	147,950 0.76	7,939 0.53	1,156 1.55	46,646 9.61	2,399 11.78	209 0.23	522,183 39
		•	•	•	•	•	,	•	•	•	
Projects – investment The total companies have invested in carbon saving projects and the annual monetary savings they set to gain from the implementation of projects, plus annual investment per kilo tonnes CO2 saving.	ı	ī			П						I
Annual Investment (mUSD) Annual monetary savings (mUSD)	56,220 5,738	19,763 36,382	27,544 2,473	1,836 1,162	185,918 34,975	14,019 23,956	438 183	7,015 5,165	344 405	52 14	313,148 110,452























Top 10 emitters

The top emitters in absolute scope 1,2 and 3 emissions within each sector.

RWE AG	LafargeHolcim Ltd	Volkswagen AG	Wal-Mart Stores, Inc.	American Airlines Group	Samsung Electronics	Bayer AG	Exxon Mobil Corporation	AT&T Inc.	Bank of America
ENGIE	Kuraray Co., Ltd.	MARTINREA	Archer Daniels Midland	Inc	LG Display	Novartis	PJSC Gazprom	Deutsche Telekom AG	JPMorgan Chase & Co
ENGIE American Electric Power Company, Inc. ENEL SpA Duke Energy Corporation The Tokyo Electric Power Company Holdings, Inc (TEPCO) NRG Energy Inc	ArcelorMi8al AptarGroup Italcementi Nippon Shokubai Co., Ltd. Nippon Steel & Sumitomo Metal Corporation	INTERNATIONAL INC. General Motors Company Carnival Corporation Honda Motor Company Ford Motor Company Toyota Motor Corporation	Archer Daniels Midland Nestlé Kroger Kimberly-Clark Corporation Tyson Foods, Inc. JBS S/A Tesco Procter & Gamble	Inc Delta Air Lines A.P. Moller - Maersk United Continental Holdings Deutsche Lufthansa AG Air France - KLM International Consolidated Airlines Group, S.A.	LG Display Taiwan Semiconductor Manufacturing SK Hynix Alphabet, Inc. Intel Corporation Hitachi, Ltd. International Business Machines (IBM)	Novartis GlaxoSmithKline Merck & Co., Inc. Johnson & Johnson Teva Pharmaceutical Industries Ltd Eli Lilly & Co. Pfizer Inc. Roche Holding AG	Royal Dutch Shell Sasol Limited Chevron Corporation BP Total Eni SpA PTT	Verizon Communications Inc. Vodafone Group Nippon Telegraph & Telephone Corporation (NTT) Telefonica Orange	JPMorgan Chase & Co Citigroup Inc. Barclays Royal Bank of Scotland Group
FirstEnergy Corporation E.ON SE The AES Corporation	Vedanta Ltd POSCO JFE Holdings, Inc.	Marrio8 International, Inc. Nissan Motor Co., Ltd. Daimler AG	Company Anheuser Busch InBev	Nippon Yusen Kaisha Line Southwest Airlines Co. Mitsui O.S.K. Lines Ltd	Innolux Corporation Micron Technology, Inc.	SANOFI	ConocoPhillips	KDDI Corporation Telstra Corporation BT Group	

Ton 10 non-responders

TOTAL **We Mean Business** The number of companies within the Carbon Action sample that have signed up to one or more of the initiatives, plus a breakdown of the number of companies signed up to each initiative and the number signed up to the Science Based Target Initiative. Total in sample 156 316 149 158 170 86 27 227 11 5 1305 Within Carbon Action, signed 20 31 20 32 21 14 6 10 5 160 up to WMB Within Carbon Action, not 136 285 129 126 149 72 21 217 6 1145 signed up to WMB % signed up to WMB 13% 12% 22% 4% 45% 12% 13% 10% 20% 16% 20%