CLIMATE ACTION 100+

2019 PROGRESS REPORT

Climate Action 100+

Global Investors Driving Business Transition

ASIA INVESTOR GROUP ON CLIMATE CHANGE

Ceres

Sustainability is the bottom line.

IIGCC

The Institutional Investors Group on Climate Change

Investor Group on Climate Change

PRI Principles for Responsible Investment

CLIMATE ACTION 100+ IS SUPPORTED BY FIVE PARTNER NETWORKS

ASIA INVESTOR GROUP ON CLIMATE CHANGE

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Sustainability is the bottom line.

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THANKS TO OUR DATA PROVIDERS

Data and related commentary were provided by Carbon Tracker Initiative (CTI), CDP, InfluenceMap (IM), Transition Pathway Initiative (TPI) and 2° Investing Initiative (2°ii) which are each members of the Climate Action 100+ Technical Advisory Group. Additional data was provided by the Science Based Targets Initiative (SBTi).

THANKS TO OUR INVESTOR SIGNATORIES AND FUNDERS

Climate Action 100+ relies on the extensive in-kind contributions of time and resources from investors participating in company engagement and the initiative's working groups. The Steering Committee thanks them for their generous and ongoing support.

The five investor networks are thankful for the support of our philanthropic partners ClimateWorks Foundation, Grantham Foundation for the Protection of the Environment, William and Flora Hewlett Foundation, KR Foundation, New York Community Trust — Lise Strickler and Mark Gallogly Charitable Fund, and Sea Change Foundation International.

Preparation of this report was led by Emma Herd and Laura Hillis of IGCC, supported by a project team including Valerie Kwan (AIGCC), Ryan Heslin, Morgan LaManna, Cynthia McHale and Sue Reid (Ceres), Oliver Grayer and Tom Fern (IIGCC), and Ben Pincombe and Marshall Geck (PRI).

Note: All dollar figures cited throughout this report are in USD. All temperature references are in Celsius.

Report and data current at: September 2019 unless otherwise noted.

SIGN ON TO CLIMATE ACTION 100+

Asset owners and asset managers are invited to become a signatory to Climate Action 100+. For more information or to provide feedback please contact info@climateaction100.org or visit climateaction100.org

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INTRODUCTION

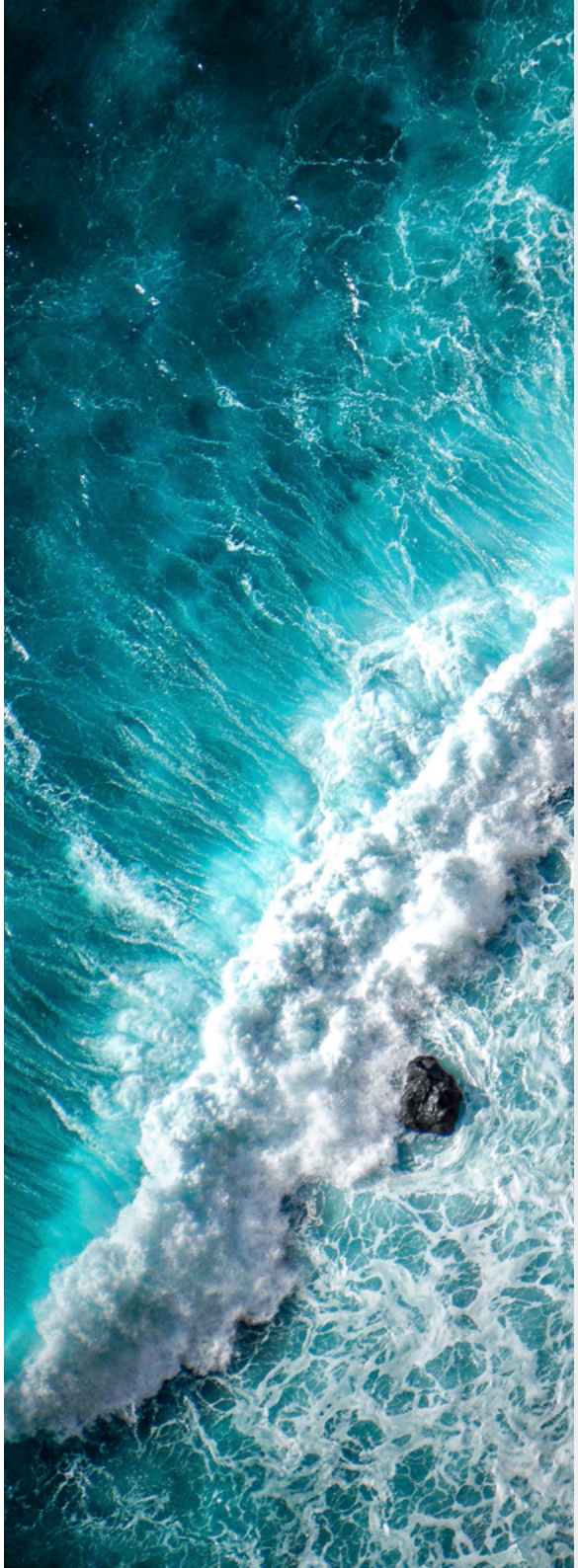
ABOUT THIS REPORT

Since its launch in December 2017, Climate Action 100+ has grown into one of the largest investor-led engagement initiatives, with over 370 investor signatories.

This first Climate Action 100+ Progress Report provides an overview of the activities that have been undertaken during its first phase and observed progress against the initiative's goals. It is designed for Climate Action 100+ stakeholders, including investor signatories, non-profit partners and the 161 companies that are the focus of the initiative.

This report has the following key sections:

- An overview of Climate Action 100+, its engagement agenda and how investors lead engagement with companies.
- A first review of sector progress across the oil and gas, utilities, mining and metals, transportation, industrials and consumer products sectors, which includes a set of indicators which track the performance of companies against Climate Action 100+ goals. This data serves as a baseline for future reporting of company progress.
- A regional review (Asia) and issue review (lobbying).
- A summary of forward looking priorities for the initiative in its next phase.



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CLIMATE ACTION 100+ AT A GLANCE

373 investor signatories, representing over

$35 TRILLION

in assets under management

Growth in investor signatories since launch

65%

Global investors across

28 MARKETS

Up to

80%

of global industrial emissions accounted for by the companies targeted by Climate Action 100+

161 GLOBAL COMPANIES

engaged across

33 MARKETS

[Climate Action 100+ investors] ... have committed to engage with the world's largest corporate greenhouse [gas] emitters to improve their climate performance and ensure transparent disclosure of emissions ... they are betting on green because they understand this is the path to prosperity and peace on a healthy planet. The alternative is a dark and dangerous future.

António Guterres,
United Nations Secretary General
September 2018

Investors concerned about climate change have never been better organised, thanks to Climate Action 100+...nor have they ever had more success.

The Economist
May 30, 2019

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INDUSTRY LEADING PUBLIC COMMITMENTS HAVE RESULTED FROM ENGAGEMENT

Royal Dutch Shell, one of the world's oil and gas supermajors, released a joint statement committing to a range of industry leading climate commitments, including emissions reduction targets that include scope 3 emissions.

Glencore, the world's largest exporter of thermal coal, agreed to cap coal production to current levels of about 145 million tonnes per year.

Xcel Energy, a major US electric utility, has set out an intention to reach zero carbon electricity by 2050.

Maersk, the world's biggest shipping company, committed to net zero emissions by 2050.

Rio Tinto has exited from mining coal, published a TCFD report, and committed to an asset by asset review to set emissions reduction targets.

Nestlé committed to net zero emissions by 2050, including scope 3 emissions.

PTT Public Company Limited (Thailand) has released a TCFD aligned report, indicating the company's intention to align its strategy with the goals of the Paris Agreement.

Volkswagen committed to become 'climate neutral' by 2050 and launch nearly 70 electric vehicle models by 2028.

AES Corporation has conducted scenario analysis against three transition pathways, and committed to a 70% reduction in carbon intensity by 2030.

Duke Energy Corporation announced an update to its carbon transition plan, with a 50% reduction in GHG emissions by 2030 and net zero emissions generation by 2050.

PetroChina developed a climate change strategy and signalled the company's intention to align its climate policy to the goals of the Paris Agreement.

HeidelbergCement committed to achieve net zero emissions by 2050.

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FOREWORD FROM THE CLIMATE ACTION 100+ STEERING COMMITTEE

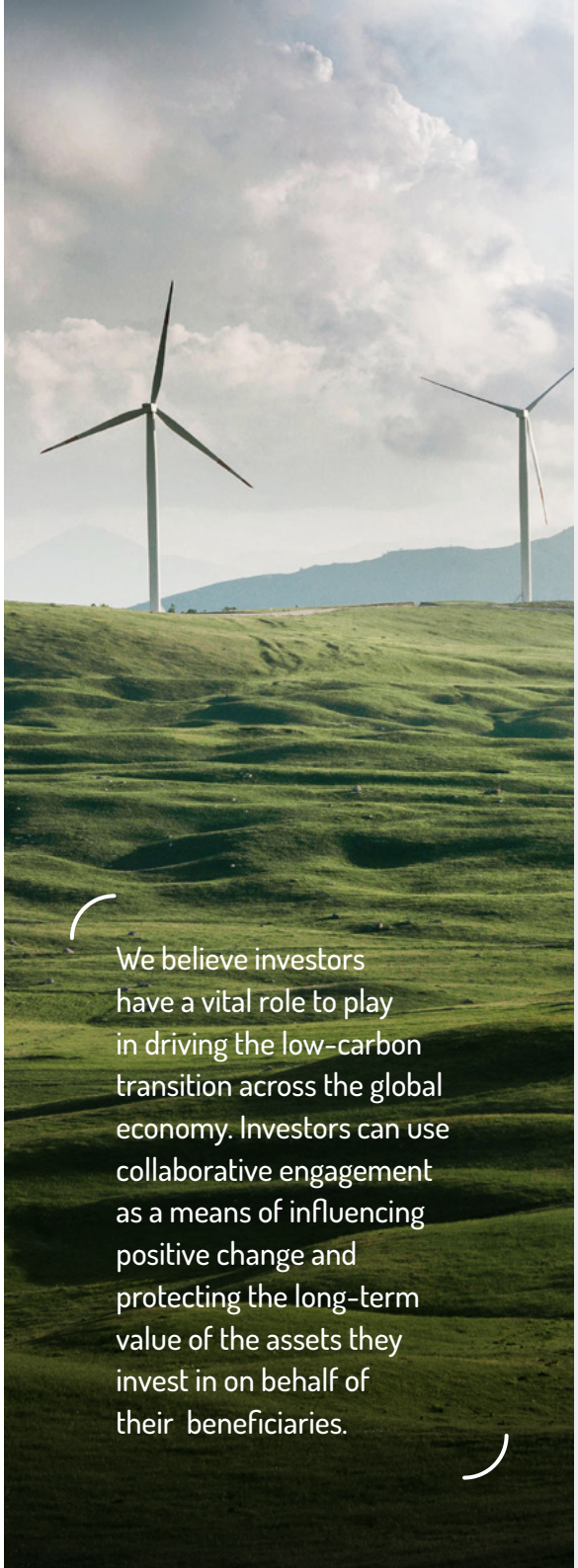
We are pleased to present the first progress report for Climate Action 100+.

In this report we outline the origins of Climate Action 100+, its governance structure and the three goals central to the engagement agenda: to improve corporate climate governance, curb greenhouse gas emissions in line with the Paris Agreement, and strengthen climate-related financial disclosures. We present a summary of progress in this first phase of the initiative, and the first assessments of company performance against Climate Action 100+ goals.

Since its launch at the One Planet Summit in late 2017, Climate Action 100+ has grown to be one of the most influential and significant investor initiatives on climate change with 373 investor signatories representing more than $35 trillion in assets under management. The first phase of the initiative has seen some breakthrough commitments from companies in hard to abate sectors, the initiation of collaborative investor engagement on climate in Asia, and a raft of disclosure commitments on corporate lobbying on climate change. Signatories of Climate Action 100+ have been important catalysts for action alongside significant moves by policy-makers and civil society.

Climate change is one of the most significant risks facing investors today. Climate related risks are systemic and will impact all economies, asset classes and industries, whether directly or indirectly. As such, climate change threatens the ability of long-term investors to sustain value and meet their investment objectives over time. We believe investors have a vital role to play in driving the low-carbon transition across the global economy. Investors can use collaborative engagement as a means of influencing positive change and protecting the long-term value of the assets they invest in on behalf of their beneficiaries.

The IPCC's Special Report on the Impacts of Global Warming of 1.5°C calculates that a 1.5°C warming trajectory will require a global reduction in greenhouse gas emissions of about 45% by 2030, and net zero emissions by 2050. Certain



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sector leaders are already announcing net zero ambitions and repositioning their companies for a low carbon economy but many are yet to follow and the task ahead remains immense.

Climate change requires that companies we engage with undertake demanding shifts in strategy, capital allocation and technological deployment. As the owners and investors in these companies, Climate Action 100+ signatories have an important role to play in progressing these changes.

While the early results shared in this report are encouraging, expectations for this initiative are high, and the investors and partner organisations involved understand the scale of the challenges ahead. We welcome feedback on the initiative and our first progress report.

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CLIMATE ACTION 100+ OVERVIEW

INVESTORS DRIVING CORPORATE CLIMATE ACTION

In December 2017 investors launched Climate Action 100+, a five-year initiative to ensure the world's largest corporate greenhouse gas (GHG) emitters take critical action to align with the goals of the Paris Agreement. Now comprised of over 370 investors with more than $35 trillion in assets under management, Climate Action 100+ is one of the largest investor-driven climate initiatives to date.

Climate Action 100+ was co-founded by global investors and investor networks to address the recognised financial risks presented by climate change to companies' assets and liabilities. The Chairman and CEO of Climate Action 100+ signatory, AXA — one of the world's leading insurers — has warned that while 'a 2°C world might be insurable, a 4°C world certainly would not be'. Researchers from Cambridge University have described climate risk as 'unhedgeable.'

A key strategy for investors looking to manage climate related financial risks in their portfolios is to ensure the companies they invest in are mitigating climate change. This is relevant for multiple asset classes, including equity and fixed income among others.

Climate Action 100+ focuses on companies that are key to the low carbon transition, considered to be systemically important greenhouse gas emitters. 161 focus companies were selected that account for over 80% of corporate GHG emissions, based on 2018 emissions data reported to CDP and Climate Action 100+ analysis[1]. These companies are critical to the decarbonisation of investment portfolios and the global economy.

> Making it more difficult for companies to ignore the cost of their carbon footprint could play a role in forcing them to reduce it. This is an exercise in transparency and peer pressure that will have long-term consequences.
>
> **Financial Times**
> Dec 12, 2017, reporting on the launch of Climate Action 100+

1 Based on total 2018 emissions for all Climate Action 100+ focus companies (CDP data), compared to 2018 global emissions (Global Carbon Project data).

HOW WAS THE CLIMATE ACTION 100+ FOCUS LIST IDENTIFIED?

Companies were selected using two criteria:

1. **100 focus companies: Using the MSCI ACWI as a base, an initial 100 focus companies with the largest volume of direct and indirect scope 1, 2 and 3 emissions were identified using CDP modelled and reported data.**
2. **'+' list companies: Investors were then invited to nominate companies that: have specific opportunities to drive the clean energy transition; that may be highly exposed to climate-related financial risks; or may be crucial at a regional or national level. A further 61 companies were identified through this process.**

View a detailed description of the process here.

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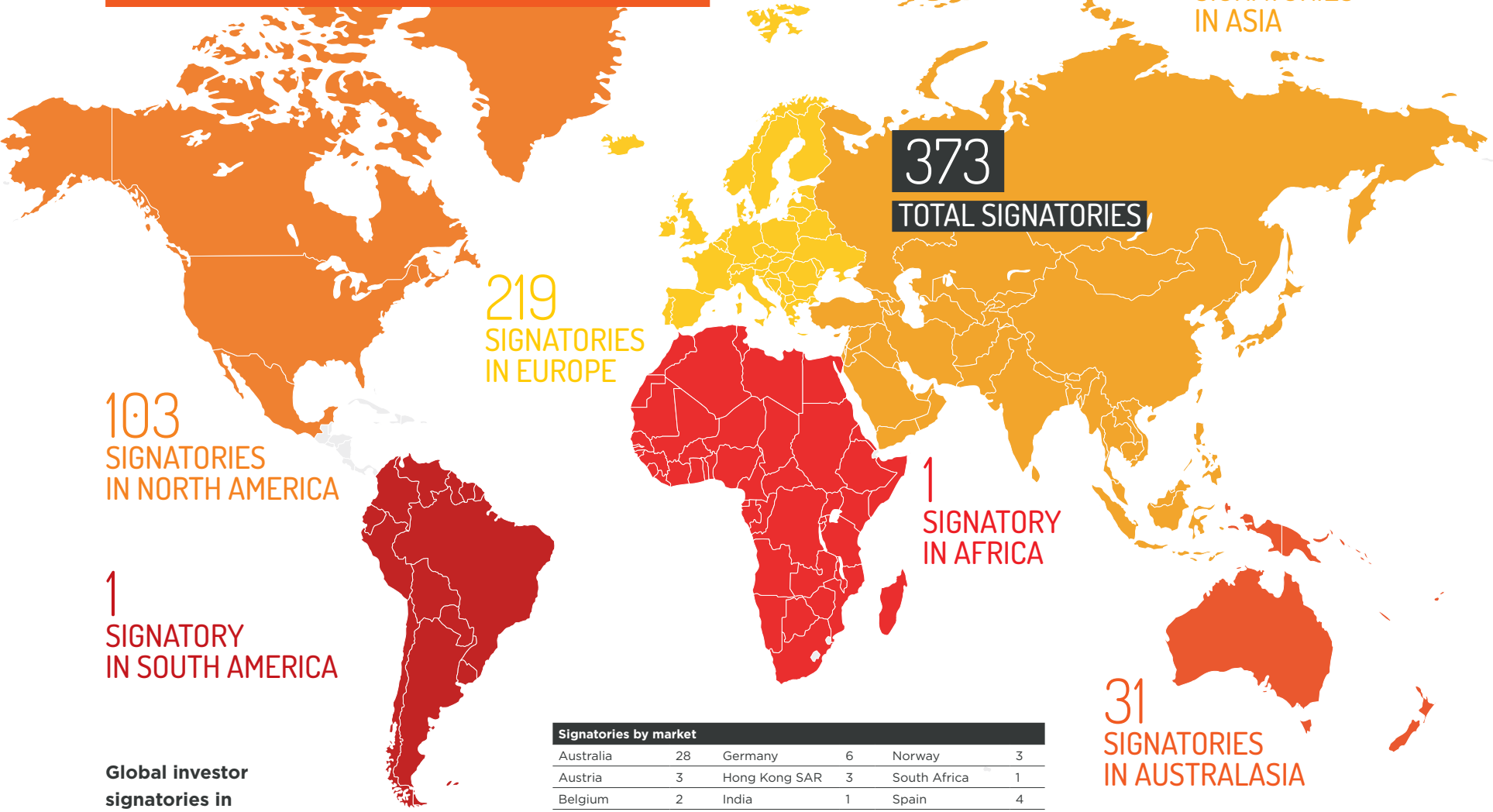
OUR GLOBAL FOOTPRINT



Global investor signatories in

28

MARKETS

Signatories by market					
Australia	28	Germany	6	Norway	3
Austria	3	Hong Kong SAR	3	South Africa	1
Belgium	2	India	1	Spain	4
Canada	19	Indonesia	1	Sweden	21
China (Mainland)	2	Ireland	3	Switzerland	42
Colombia	1	Italy	2	Taiwan	2
Denmark	13	Japan	9	United Kingdom	57
Estonia	1	Luxembourg	1	United States	86
Finland	12	Netherlands	21		
France	26	New Zealand	3	**Total signatories**	**373**

Investor network locations	
IIGCC	Europe
Ceres	North America
AIGCC	Asia
IGCC	Australasia
PRI	Global

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GOALS OF CLIMATE ACTION 100+

THE ENGAGEMENT AGENDA – WHAT COMPANIES NEED TO DO

Investors participating in Climate Action 100+ recognise that decarbonisation of the global economy is complex and will require unique strategies and approaches across businesses and sectors. Signatories have agreed on a common engagement agenda that seeks commitments from boards and senior management to:

1. GOVERNANCE

Implement a strong governance framework which clearly articulates the board's accountability and oversight of climate change risks and opportunities.

2. ACTION

Take action to reduce GHG emissions across the value chain, consistent with the Paris Agreement goal of limiting global average temperature increase to well below 2°C above pre-industrial levels.

3. DISCLOSURE

Provide enhanced corporate disclosure in line with the final recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and, when applicable, sector-specific Global Investor Coalition on Climate Change (GIC) Investor Expectations on Climate Change guidelines to enable investors to assess the robustness of companies' business plans against a range of climate scenarios, including well below 2°C, and improve investment decision-making.

Supporting this high-level agenda, investors are identifying and communicating with companies on more detailed company-specific expectations.

WHAT ARE THE GOALS OF THE PARIS AGREEMENT?

The Paris Agreement is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC) which was drafted and agreed to by 195 countries in Paris in late 2015.

The Paris Agreement sets out a framework for limiting dangerous climate change and deals with GHG emissions mitigation, adaptation, and finance. Its goals include the following:

- **Article 2.1(a) states: "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels."**
- **Article 4.1 states: "In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of GHG emissions as soon as possible."**
- **These goals should be achieved "taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs."**

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THE JOURNEY SO FAR

SEPTEMBER 2016

The initial meeting that led to Climate Action 100+ was convened by CalPERS at the French Mission to the UN

JANUARY – DECEMBER 2017

Investor networks collaborate with investors to develop Climate Action 100+

SEPTEMBER 2017

Announcement and call for investors to join Climate Action 100+ at PRI in Person, Berlin

DECEMBER 2017

Climate Action 100+ official launch at the One Planet Summit in Paris, with an initial list of 100 companies, 225 signatories at launch

JANUARY – JUNE 2018

Engagement agenda and governance established, many engagements with companies commence

JUNE 2018

Additional 61 'plus list' companies identified by investors added for engagement

JANUARY 2019

Formation of the Asia Advisory Group to support engagements in Asia

AUGUST 2019

Over 370 investor signatories representing $35 trillion representing growth of 60% since launch

SEPTEMBER 2019

Climate Action 100+ launches its first progress report

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HOW INVESTORS WORK WITH COMPANIES

Climate Action 100+ has established a common high-level agenda for company engagement. Investors are responsible for driving each engagement, as independent fiduciaries, to develop and implement the company specific engagement priorities and strategy.

Investors have adopted a wide range of engagement approaches such as sending a formal letter or conducting meetings with the company board and senior executives. If dialogue needs to escalate, investors may decide to file a shareholder resolution or exercise voting rights to hold directors and management accountable at the Annual General Meeting (AGM).

ORGANISING ENGAGEMENT

Company engagements are driven by a range of factors, including the profile of the company and industry sector, the company's approach to climate change, its responsiveness to engagement, the lead investor's active ownership approach, and the regional context.

In many cases, multiple investors may be working on engagement with a company. They may choose to engage by:

- Holding one-on-one meetings with companies
- Holding group meetings with companies
- Conducting investor roundtables
- Making a statement at a company AGM
- Supporting shareholder resolutions on climate change risk
- Voting for the removal of directors who have failed in their accountability of climate change risk
- Voting against reports, accounts and company led resolutions
- Making joint statements with the company

In addition to engagement through Climate Action 100+, many investors will engage directly with the same companies through their own organisation's active ownership agenda.

Signatories by type*

51%
Asset Owner

48%
Asset Manager

3%
Engagement Service Provider

INVESTOR ENGAGEMENT HIGHLIGHTS

4
shareholder resolutions filed

Over
50%
of engagements at senior management or higher level

*Note some investors identify as both Asset Owner and Asset Manager so total does not equal 100%.

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SUPPORTING INVESTOR ENGAGEMENT

COORDINATING IMPLEMENTATION

Regionally focused working groups each support engagement with a subset of focus companies to provide participating investors with resources and help ensure that engagements are effective. The working groups are led by investor networks that support the initiative: AIGCC (Asia), Ceres (North America), IGCC (Australasia), IIGCC (Europe), and PRI (multi-region).

SUPPORTING GOVERNANCE

A global steering committee supports the initiaitve by establishing strategic priorities, governance and infrastructure. It is comprised of five investor representatives and the CEOs of the five investor networks.

In recognition of the global nature of the initiative and the different priorities and conditions for company engagement in each region, the roles of steering committee chair and vice chair rotate every six months between different regional representatives.

For more information on the governance and operating structure of the CA100+, please visit the 'about us' section on our website.

CLIMATE ACTION 100+ GOVERNANCE AND OPERATING STRUCTURE

Note: Dual-listed companies may be represented in more than one network.

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CLIMATE ACTION 100+ SECTOR AND COMPANY PROGRESS REVIEW

INTRODUCTION TO PROGRESS REVIEW

Since Climate Action 100+ launched, the initiative has influenced some of the world's largest corporate GHG emitters to act on climate change, raising the bar for key sectors including shipping, electric utilities and oil and gas.

The following section of the report summarises progress against Climate Action 100+ goals during the first phase of the initiative, including six sector reviews, one regional (Asia) review and one issue (lobbying) review. These reviews include:

- A summary of regional, issue or sectoral decarbonisation challenges
- Selected assessment indicators that provide an independent view of how companies are progressing
- Key company milestones and engagement case studies.

It is clear from the sector-level assessments included in this report that many focus companies are not yet aligned with the Climate Action 100+ engagement agenda. Climate Action 100+ will continue to work with data provider partners to research and evaluate companies to identify engagement priorities, and to measure both company-level and overall progress of the initiative.

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MEASURING COMPANY PROGRESS AGAINST CLIMATE ACTION 100+ GOALS

It is important that investors participating in Climate Action 100+ have access to the most accurate and complete information about company performance against the three goals of the initiative.

The Climate Action 100+ Technical Advisory Group (TAG) was established to develop a set of indicators and an analytical framework. The TAG comprises some of the world's leading organisations focused on corporate climate performance — Carbon Tracker Initiative (CTI), CDP, InfluenceMap (IM), Transition Pathway Initiative (TPI), and 2° Investing Initiative (2°ii). Each organisation has provided assessment indicators for this report.[1] As this is the first report on company progress against the goals of Climate Action 100+, this data serves as a baseline for future measurement and reporting.

Key company assessment indicators at the sectoral level have been provided by TPI, CTI (oil and gas and electric utilities), and 2°ii (automobile companies and electric utilities). Data has been provided by the Science Based Targets Initiative (SBTi) showing how many companies have set a science based target (SBT) or have committed to doing so, and by CDP showing the number of companies disclosing emissions data to CDP. Assessments of company lobbying practices in the issue review (lobbying) are provided by InfluenceMap[2]. Appendix A and each data provider's website include more information about the assessment indicators.

Many of the assessment indicators included in the report from the third-party data providers do not include the new commitments made by companies since the launch of Climate Action 100+. This is largely because data providers have used the most recent publicly available company reporting, generally from FY2018.

1 TPI indicators throughout the report cover 159 of 161 companies, for more information see appendix A.
2 InfluenceMap indicators used in the report cover 109 of 161 companies, for more information see appendix A.

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SECTOR PROGRESS SUMMARY

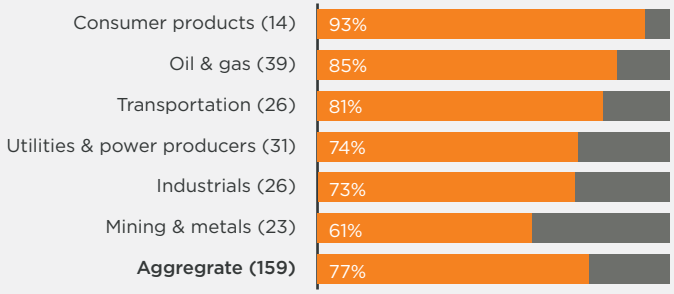
1. HOW COMPANIES ARE PERFORMING ON CLIMATE GOVERNANCE

Investors expect boards to be accountable for oversight of climate risks, policy positions and lobbying activities. Through engagement, they advocate for companies to disclose explicit board-level responsibility for climate change policy, and to ensure that the company's lobbying activities are aligned with its internal climate position.

This report includes two TPI indicators that assess companies' climate governance performance: one that queries whether companies have assigned board responsibility for climate change and one that assesses whether companies' climate policy positions are consistent with those taken by industry associations of which the companies are members.

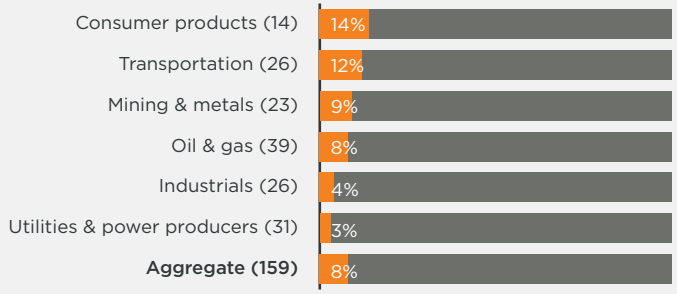
TPI's analysis shows 77% of companies have clear board responsibility for climate, but nearly all companies perform very poorly on alignment of their climate lobbying activities — less than 8% of companies have alignment between the lobbying undertaken by their industry associations and their stated policy position.

Percentage of companies that have nominated a board member or board committee with clear responsibility for climate change policy



Source: TPI, August 2019

Percentage of companies that ensure consistency between their climate change policy and the positions taken by industry associations of which they are a member



Source: TPI, August 2019

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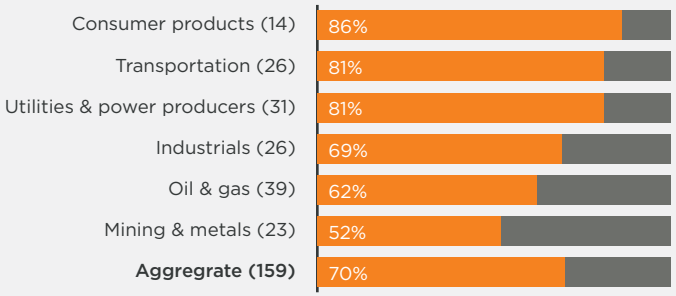
2. HOW COMPANIES ARE PERFORMING ON CLIMATE ACTION

The action goal for Climate Action 100+ seeks to ensure focus companies have aligned their business strategies with the goals of the Paris Agreement through a range of measures. Investors participating in Climate Action 100+ have made progress in seeing companies set targets, and demonstrating they are implementing strategies to achieve their targets.

Two TPI assessments of corporate climate action are presented: whether companies have set long-term quantitative emissions targets, and companies' emissions intensity relative to the Paris Agreement goals to limit the increase in global temperature to well below 2°C. TPI's methodology uses a sector-by-sector approach[1], recognising different sectors face different challenges including where emissions are concentrated in the value chain and the costs of emission reductions.

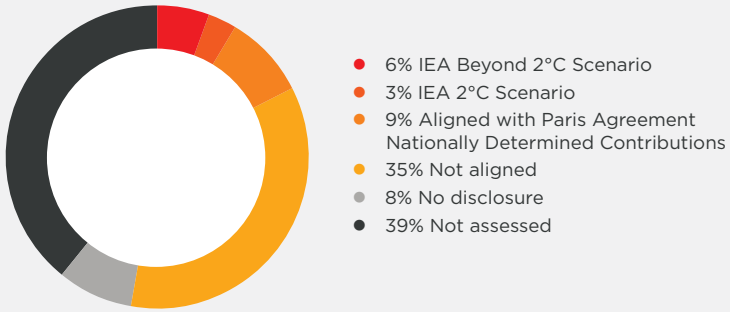
TPI's analysis shows 70% of companies have set long-term quantitative targets for reducing GHG emissions. However, only 9% of companies have targets that are aligned with either the IEA Beyond 2°C Scenario or the IEA 2°C Scenario. A further 9% of companies are aligned with emissions reductions pledged by governments as part of the Paris Agreement via Nationally Determined Contributions. 35% are not aligned with any of these scenarios, and the remainder were either not assessed (39%) or had insufficient public disclosure (8%).

Percentage of focus companies that have set long-term quantitative targets for reducing GHG emissions



Source: TPI, August 2019

Is the focus company's emissions intensity[2] aligned with, or will it be aligned with, limiting global warming to below 2°C?



Source: TPI, August 2019

1 TPI's carbon performance assessment is based on The Sectoral Decarbonisation Approach (SDA) created by the Science Based Targets Initiative (SBTi). TPI's assessment covers 97 of the 161 Climate Action 100+ companies: oil and gas, consumer goods, and industrials sectors are excluded (not assessed).
2 Measures of emissions intensity reflect GHG emissions relative to the intensity of industrial production, e.g. grams of CO_2 released per unit of energy produced.

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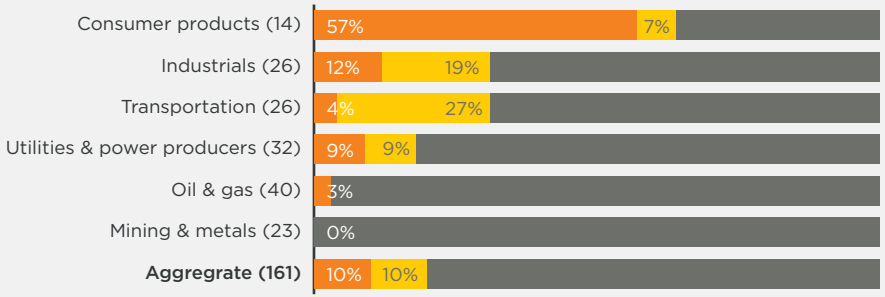
2. HOW COMPANIES ARE PERFORMING ON CLIMATE ACTION (CONTINUED)

The third climate action indicator is whether companies have set, or committed to set, a science based target (SBT). According to SBTi, 'targets adopted by companies to reduce GHG emissions are considered 'science based' if they are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement — to limit global warming to well below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C.' SBTi outlines three SBT setting approaches as detailed on the organisation's website. One in five (20%) of Climate Action 100+ focus companies have set or committed to set an SBT.

SBTi do not currently have a methodology to set SBTs for the oil and gas sector, however one company within this sector has set a target using the utilities methodology, as this company (Origin Energy) is also an electric utility.

Percentage of companies that have set, or committed to set a SBT[1]



Source: SBTi, July 2019

● Approved ● Set or committed

1 Science Based Targets may not cover all material emissions of a company. For example consumer goods SBTs may not cover scope 3 emissions, the key emissions of that particular sector. For more information on data methodology, please refer to page 75 of the report.

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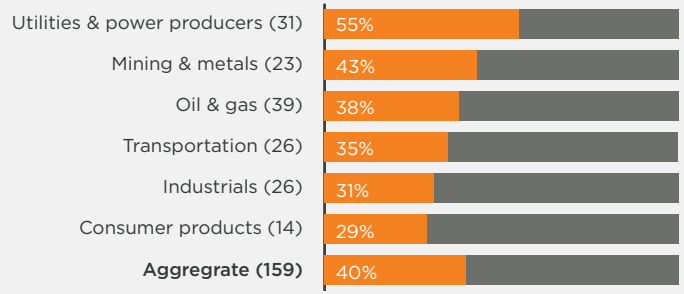
3. HOW COMPANIES ARE PERFORMING ON CLIMATE DISCLOSURE

Enhanced corporate disclosure in line with the final Task Force on Climate-related Financial Disclosures (TCFD) recommendations enables investors to assess the robustness of companies' business plans against a range of climate scenarios, and improves investor decision making. Climate scenario analyses require a company to identify new strategies and plans to thrive in a decarbonised world.

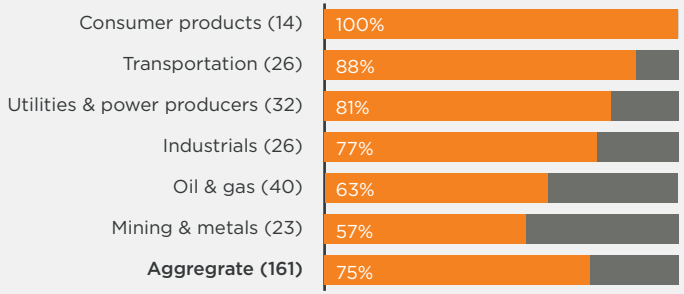
The TPI and CDP disclosure indicators assess whether companies have committed to climate scenario planning based on most recent data (TPI), and the percentage of companies that reported to CDP in 2018. Both of these disclosures are crucial for investors to effectively assess and manage climate change risks and opportunities in their portfolios.

Percentage of companies that undertake and disclose climate scenario analysis



Source: TPI, August 2019

Percentage of companies responding to CDP by sector, 2018



Source: CDP, August 2019

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SECTOR REVIEW:

OIL AND GAS

Climate Action 100+ investors are calling on the 40 oil and gas companies on the focus list to create long-term energy transition plans, with aligned short and medium term targets.

Near-term objectives may include: a substantial reduction of capital deployment in activities associated with high GHG emissions (e.g. development of new oil reserves), a substantial increase in low-carbon capital deployment (e.g. renewable energy infrastructure), decarbonisation targets and changes in policy advocacy in order to accelerate a clean energy transition.

Investors want to understand the long-term investment strategies of oil and gas companies in a world that limits warming to well below 2°C. Companies are aligning their business plans with the low-carbon transition via two pathways:

1. Diversification into other forms of energy.
2. A disciplined approach to capital expenditure, limited to projects likely to be viable in a lower demand environment.

In the case of the former, Shell, Repsol, Equinor and Total have developed initial investment plans to diversify their businesses, and have set long-term intensity targets to reduce emissions. In the case of the latter, following a resolution backed by 99% of shareholders, BP has agreed to set out how each of its major investments is compatible with the Paris Agreement. While investors welcome diversification into new energies, they also want to see capital expenditure constrained to projects that are viable or aligned with a lower demand environment.

While these commitments represent important progress, no company in the sector has yet comprehensively explained to investors how its business, and associated scope 1, 2 and 3 emissions profile fit with achieving net zero emissions by mid-century.

40

Climate Action 100+ Focus Companies

$2,410BN

Market capitalisation

Source: Bloomberg, June 2019

8.8 GIGATONNES CO_2E

2018 reported GHG emissions[1]

Source: CDP

1 Emissions data by sector reflects total focus company FY2018 reported scope 1, 2 and 3 emissions. It does not include estimated values for companies that did not disclose to CDP.

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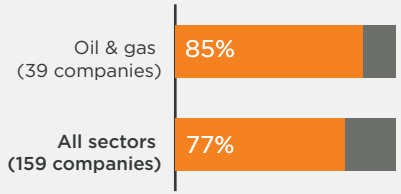
GOVERNANCE

The oil and gas sector indicators on governance show oil and gas companies are comparatively strong in assigning board oversight for climate change (85%). However, nearly all companies (92%) hold memberships with industry associations that take positions on climate that are in conflict with their internal position.

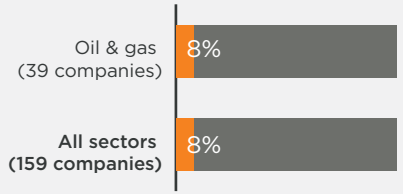
Oil and gas sector climate governance indicators

Percentage of companies that have nominated a board member or board committee with clear responsibility for climate change policy



Source: TPI, August 2019

Percentage of companies that ensure consistency between their climate change policy and the positions taken by industry associations of which they are a member



Source: TPI, August 2019

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ACTION

On the action indicators, oil and gas companies perform more poorly than other sectors. Only 62% of the focus companies have set long-term emissions reduction targets even of limited scope. Although more than half of the companies in this sector have set emissions reduction targets, only a small group of these companies—largely in Europe—have set targets for scope 3 emissions. For the oil and gas sector to align with the aims of the Paris Agreement, a focus on scope 3 emissions reduction—likely via limitations on upstream capital expenditures—is critical.

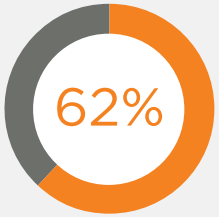
The two CTI indicators related to climate action provide a way to evaluate oil and gas company capital expenditures and carbon budgets under Paris aligned climate scenarios. Focusing on projects that have not yet been sanctioned, nearly four out of five (79%) companies have a significant amount (40% plus) of potential upstream capital expenditures related to projects that would not be needed in the International Energy Agency Beyond 2°C Scenario[1] (IEA B2DS). CTI's capital expenditure analysis of oil and gas companies is measured over the time period 2018–30. This figure excludes the highest cost projects that would not be needed even in the IEA's more carbon-friendly 'New Policies Scenario.'

> 100% of companies have some unsanctioned upstream projects that are unneeded in the IEA B2DS scenario.
>
> **Carbon Tracker Initiative**
> August, 2019

1 Investors recognise the IEA Beyond 2°C scenario (IEA B2DS) as a scenario that supports assessment of a broad group of supply and demand side sectors and therefore to be valuable for the purposes of comparison. In the B2DS, the energy sector reaches carbon neutrality by 2060 to limit future temperature increases to 1.75°C by 2100, the midpoint of the Paris Agreement's ambition range. Many investors continue to request that companies set targets compatible with, and stress test their business against, a scenario limiting warming to 1.5°C by 2100 with limited or no temperature overshoot. In practice this means scenarios that achieve carbon neutrality by 2050.

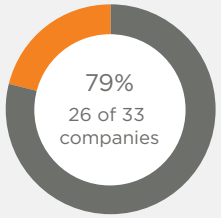
Oil and gas sector climate action indicators

Percentage of focus companies that have set long-term quantitative targets for reducing GHG emissions



Source: TPI, August 2019

Percentage of companies that have more than 40% of unsanctioned upstream capital expenditure that is unneeded in the IEA B2DS scenario



Source: CTI, August 2019

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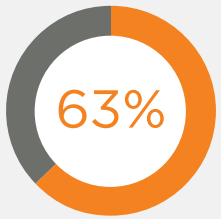
DISCLOSURE

Focus companies in the oil and gas sector perform comparatively weakly on climate disclosure, with just 63% of companies reporting their emissions data to CDP and only 25% publicly supporting the TCFD. Just over a third conduct climate scenario planning and disclose the results of that analysis (38%), a critically important disclosure for investors in this sector.

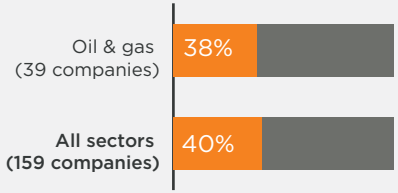
Oil and gas sector climate disclosure indicators

Percentage of companies within the sector reporting to CDP



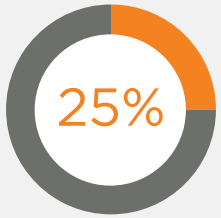
Source: CDP, August 2019

Percentage of companies that undertake and disclose climate scenario analysis



Source: TPI, August 2019

Percentage of companies within the sector signed on as a supporter of the TCFD



Source: TCFD, August 2019

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KEY COMPANY MILESTONES

- **Equinor** made a joint statement with investors that outlined commitments to deliver: alignment of a strategy with the Paris Agreement; updates to targets in line with the Paris Agreement; portfolio resilience testing against tougher scenarios and new lobbying disclosures.
- **BP** supported a shareholder resolution that requires the company to disclose on how its business strategy is consistent with the Paris Agreement, including: capital expenditure alignment on a project by project basis; remuneration alignment; targets for scope 1 and 2 and projections for scope 3 emissions.
- **Santos** released a scenario analysis on its portfolio, committed to asset level analysis and reporting, and produced a TCFD report.
- **Occidental Petroleum Corporation** announced its aspiration to become carbon neutral (including scope 3 emissions) by using CCS technology.
- **Eni S.p.A.** publicly stated a long-term ambition to become carbon neutral excluding its scope 3 emissions.
- **PTT** released a report aligned with the TCFD recommendations (see case study).
- **Shell** issued a joint statement with investors that sets out significant company commitments (see case study).

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ENGAGEMENT CASE STUDY — OIL AND GAS SECTOR:

SHELL

Royal Dutch Shell PLC, commonly known as Shell, is a British–Dutch oil and gas company headquartered in the Netherlands and incorporated in the United Kingdom.

Engagement with Shell led to a first of its kind: a joint statement between Shell and leading investors committing to set carbon reduction targets on the full range (including scope 3) of its carbon emissions.

Following longstanding engagement, led by Robeco and the Church of England Pension Board, and supported by IIGCC and Eumedion, Shell set a Net Carbon Footprint Ambition to reduce emissions (including those of its customers) by around half by 2050 and by around 20% by 2035. In December 2018, investors and Royal Dutch Shell made a joint statement on the delivery of the climate strategy, which included new commitments in five areas:

1. Short-term targets: To operationalise its long-term ambition, Shell will start setting specific net carbon footprint targets for shorter-term periods (three or five years).
2. Remuneration link: Shell will incorporate a link between energy transition and long-term remuneration as part of its revised Remuneration Policy, which will be subject to a shareholder vote at the 2020 AGM.
3. Review of progress: Every five years Shell will review its targets and the pace of its decarbonisation. It will report on progress annually and seek third party assurance on its climate reporting.
4. Alignment with the TCFD recommendations: Shell will continue to produce scenario analysis and align its disclosures with the TCFD recommendations.
5. Corporate climate lobbying: An enhanced review and disclosure of industry associations.

In early 2019 Shell set short-term targets to operationalise its long-term ambition, and published a review of its membership of industry associations. After identifying 'material misalignment on climate-related policy positions,' Shell will not renew its membership of the American Fuel and Petrochemical Manufacturers Association.

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ENGAGEMENT CASE STUDY— OIL AND GAS SECTOR:

PTT

PTT Public Company Limited (PTT) is a Thai, state-owned oil and gas company listed on the Stock Exchange of Thailand.

Lead investors have been engaging with PTT for a number of years. Since the launch of Climate Action 100+ the lead investors have had a number of face to face meetings with the company to introduce the initiative, its goals, and investor expectations. Given the company's ownership by the state, investors were also keen to understand the extent of the government's ambition and motivation for a low-carbon transition, and how this might influence PTT's agenda.

PTT has released a TCFD aligned report, outlining the company's awareness and focus on the issue of climate change.

Investors plan to continue to focus on enhancing the ambition of PTT's emission reduction targets and the potential to further bolster senior management and board level engagement with key issues. Engagements will also focus on the company's climate scenario planning and efforts to align its business and operations with the Paris Agreement.

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ENGAGEMENT CASE STUDY — OIL AND GAS SECTOR:

ORIGIN ENERGY

Origin Energy Limited, an integrated energy company, has energy retailing, power generation, and natural gas production interests in Australia, New Zealand, and internationally.

Engagement with Origin Energy has been led by First State Super. Investors have been advocating for:

- Increased disclosure on Origin's transition plans, including delivery of a just transition for power station workers
- Disclosure on industry association memberships and lobbying activities
- More robust emissions reduction targets aligned with the Paris Agreement
- Executive remuneration aligned with climate targets.

Several meetings have been held with Origin, to discuss transparency and disclosure issues in relation to climate change, stranded asset risk, accounting policies and board composition. Meetings this financial year engaged Origin representatives to understand their approach to climate change and their strategy in a changing energy industry. This discussion was extended to a Climate Action 100+ Roundtable for asset owners and investors, hosted at First State Super. Investors now understand Origin's transition plans and that the company has considered a range of climate scenarios.

Key outcomes from engagement have been the discussion with Origin regarding its climate scenario analysis and decarbonisation plans towards exiting coal-fired generation by 2032.

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SECTOR REVIEW:

MINING AND METALS

The 23 mining and metals companies engaged by Climate Action 100+ include diversified miners, steel manufacturers and industrial conglomerates that own large metals operations.

Over half of the mining and metals focus companies are headquartered in Asia, Australasia and South America — all critically important regions for advancing the goals of Climate Action 100+. Emissions from these companies are concentrated in the extraction of metals and industrial processes such as steel manufacturing. Key challenges include the development of new (and often unproven at scale) technologies to decarbonise industrial processes such as carbon capture and storage (CCS), and the lack of an agreed methodology for diversified miners to set overall targets for scope 1, 2 and 3 emissions.

But some companies in the sector have made breakthroughs: Thyssenkrupp and ArcelorMittal have both set goals to achieve carbon neutrality by 2050. Rio Tinto, the world's second largest mining company, has exited coal. POSCO, a South Korean steel manufacturer, has agreed to align its emissions with the country's Nationally Determined Contributions to the Paris Agreement.

23

Climate Action 100+ Focus Companies

$530BN

Market capitalisation

Source: Bloomberg, June 2019

3.6 GIGATONNES CO_2E

2018 reported GHG emissions[1]

Source: CDP

1 Emissions data by sector reflects total focus company FY2018 reported scope 1, 2 and 3 emissions. It does not include estimated values for companies that did not disclose to CDP.

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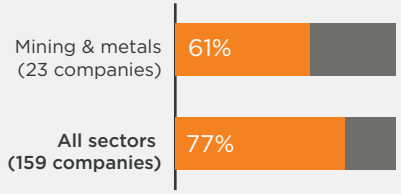
GOVERNANCE

Despite some significant announcements, the mining and metals sector is underperforming against most key assessment indicators. On climate governance, this sector is the weakest of all sectors in setting board responsibility for climate change (61%), and nearly all of the companies (91%) maintain memberships in industry associations that engage in lobbying against climate policy.

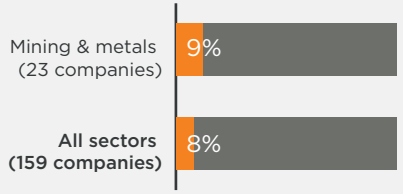
Mining and metals sector climate governance indicators

Percentage of companies that have nominated a board member or board committee with clear responsibility for climate change policy



Source: TPI, August 2019

Percentage of companies that ensure consistency between their climate change policy and the positions taken by industry associations of which they are a member



Source: TPI, August 2019

KEY COMPANY MILESTONES

- **Teck Resources** released a climate scenario analysis and a TCFD aligned report with content influenced by Climate Action 100+ investor engagement.
- **POSCO** committed to align its emission reduction target with South Korea's Nationally Determined Contribution (NDC) under the Paris Agreement.
- **Thyssenkrupp** announced its aim to be climate neutral by 2050 (and its 30% emission reduction plans for 2030).
- **ArcelorMittal** stated its ambition to be carbon neutral in its European operations by 2050.
- **BHP Billiton** committed to develop targets for its scope 3 emissions.
- **Southern Copper Corporation** agreed to initiate a multi-year process to report in line with the TCFD.
- **BlueScope Steel** committed to set an SBT, disclosed their membership of industry associations, produced a TCFD-aligned report, and signed Australia's largest solar power purchasing agreement.
- **Glencore** agreed to cap coal production to current levels of about 145 million tonnes per year (see case study).
- **Rio Tinto** reviewed its lobbying activity, exited from mining coal and commited to an asset by asset review of its emission reduction targets (see case study).

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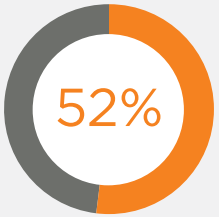
ACTION

The companies in this sector perform comparatively poorly on climate action: only half (52%) of focus companies have set emissions reduction targets, the lowest level of all sectors analysed. No company in this sector has set or committed to set a SBT.

Mining and metals sector climate action indicators

Percentage of focus companies that have set long-term quantitative targets for reducing GHG emissions



Source: TPI, August 2019

Percentage of companies that have set, or committed to set a SBT

Source: SBTi, August 2019

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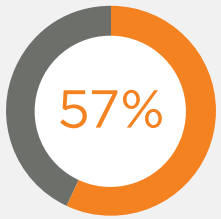
DISCLOSURE

Assessment indicators related to disclosure show that only 57% of the mining and metals companies report to CDP, the lowest level of all sectors assessed. 43% of companies in this sector undertake and disclose climate scenario analysis and 43% have also signed on as supporters of the TCFD.

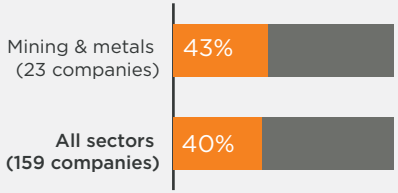
Mining and metals sector climate disclosure indicators

Percentage of companies within the sector reporting to CDP



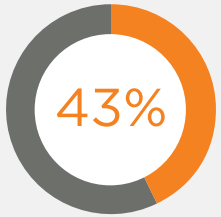
Source: CDP, August 2019

Percentage of companies that undertake and disclose climate scenario analysis



Source: TPI, August 2019

Percentage of companies within the sector signed on as a supporter of the TCFD



Source: TCFD, August 2019

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ENGAGEMENT CASE STUDY — MINING AND METALS SECTOR:

GLENCORE

Glencore is a Swiss mining company and one of the world's largest diversified resources companies.

Following sustained investor engagement, Glencore published a statement which included a number of major commitments:

- A commitment not to grow coal production capacity beyond current levels, capping production at 145 million tonnes per year
- A strategy that sets out a plan to align material capital expenditure and investments with the aims of the Paris Agreement
- Emissions reduction targets for scope 1 and 2 emissions
- Review of progress, including disclosure of scope 3 emissions
- Alignment of reporting with the recommendations of the TCFD
- A review of corporate climate change lobbying activities.

Investors will continue to engage with Glencore to ensure it is meeting existing commitments and continuing to improve its approach in line with Climate Action 100+ goals.

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ENGAGEMENT CASE STUDY — MINING AND METALS SECTOR:

RIO TINTO

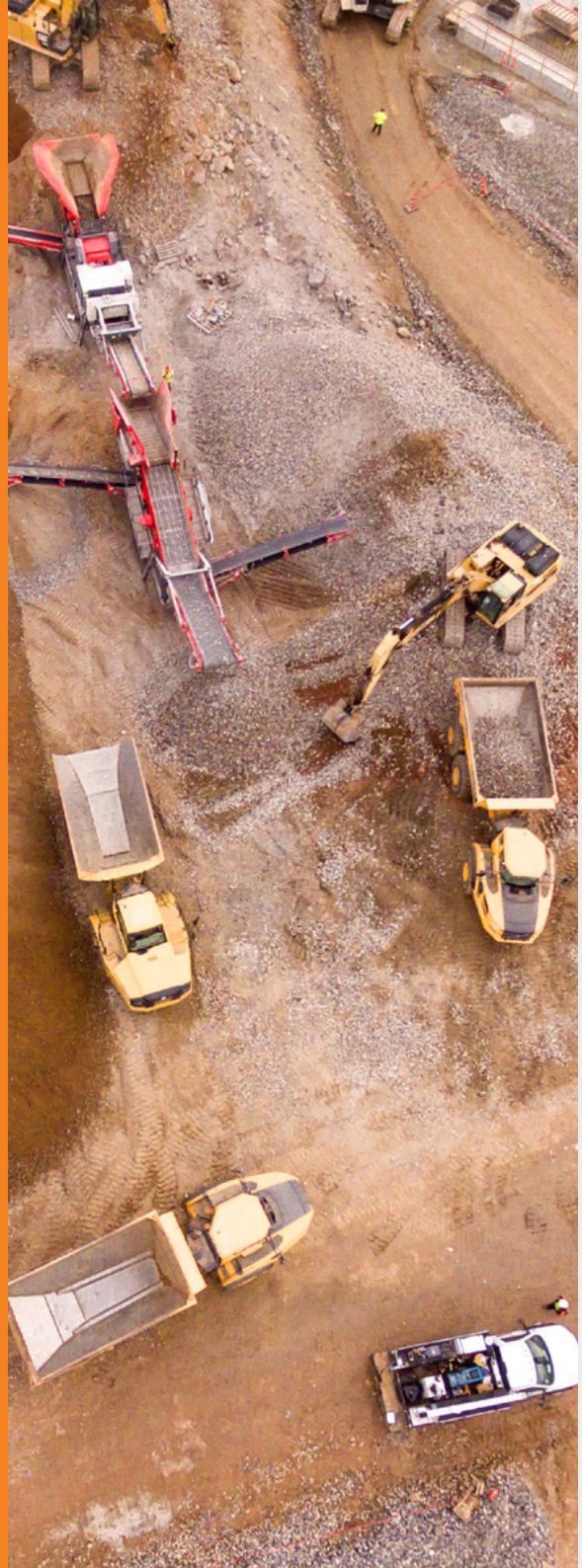
Rio Tinto is an Anglo-Australian multinational and one of the world's largest metals and mining corporations.

Two lead investors, AustralianSuper (Australia), and CCLA (Europe), initiated engagement under Climate Action 100+ with Rio Tinto in 2018. Investors have had a number of meetings with Rio Tinto's senior management and board. Lead investors advocated for improved governance, including ownership of climate risk at the board level, emissions reduction targets aligned with the Paris Agreement and TCFD reporting. This engagement is an example of the global investor collaboration that is facilitated by Climate Action 100+.

Rio Tinto has:

- Supported the recommendations of the TCFD and published its first report in February 2019
- Reviewed its lobbying activity
- Exited from mining coal
- Committed to an asset by asset review to underpin new emissions targets, plus scope 3 projections under different Asian steel-making scenarios
- Joined the Energy Transitions Commission to accelerate progress for hard to abate sectors.

Investors will continue to engage with Rio Tinto to ensure it is meeting its commitments and continuing to improve its approach in line with Climate Action 100+ goals.



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SECTOR REVIEW:

TRANSPORTATION

The 26 transportation companies engaged by Climate Action 100+ fall broadly into two groups: manufacturers of transport vehicles such as auto companies and aerospace companies, and operators of transportation businesses, including shipping and airlines.

In both cases, the most material emissions are associated with the use of transport vehicles (scope 3 emissions for manufacturers and scope 1 emissions for operators).

Breakthroughs have been achieved at three companies that have each set targets for carbon neutrality: shipping operator Maersk and auto companies Daimler and Volkswagen. The technologies for decarbonising the airline and shipping industries are yet to be fully developed, and wide-scale deployment remains a future goal. The ambition and commitment shown by Maersk, despite a lack of readily available solutions, sends a strong leadership signal within the sector.

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Climate Action 100+ Focus Companies

$1,119BN

Market capitalisation

Source: Bloomberg, June 2019

4.6 GIGATONNES CO_2E

2018 reported GHG emissions[1]

Source: CDP

1 Emissions data by sector reflects total focus company FY2018 reported scope 1, 2 and 3 emissions. It does not include estimated values for companies that did not disclose to CDP.

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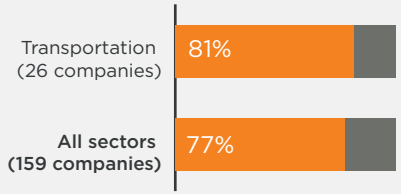
In summary, focus companies in the transportation sector are comparatively strong on a number of indicators (notably climate action), however fall short on disclosure. These companies perform particularly weakly on conducting scenario analysis.

On climate governance, 81% of focus companies in the transportation sector have set clear accountability for climate change governance at board level, but fall short in governance of lobbying. 88% of companies retain membership of an industry association that is undertaking advocacy misaligned with the company's internal climate policy.

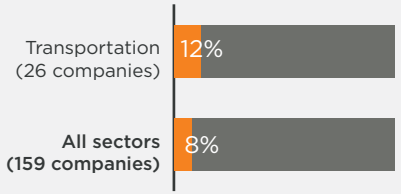
Transportation sector climate governance indicators

Percentage of companies that have nominated a board member or board committee with clear responsibility for climate change policy



Source: TPI, August 2019

Percentage of companies that ensure consistency between their climate change policy and the positions taken by industry associations of which they are a member



Source: TPI, August 2019

KEY COMPANY MILESTONES

- **Volkswagen** announced a goal of making its fleet completely carbon neutral by 2050 in its sustainability report.
- **Maersk** committed to net zero emissions by 2050 (see case study).
- **Daimler** published 'Ambition2039: Our path to sustainable mobility' which aims to have a carbon neutral new passenger car fleet by 2039.

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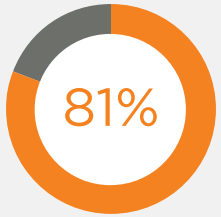
On climate action, a significant 31% of transportation companies have set or committed to set an SBT, including 4% that have been approved.

The second set of climate action indicators relates to auto companies' planned technology mix in 2024. This assessment has been provided by 2° Investing Initiative, which researched the mix of vehicle technologies (electric, hybrid, and internal combustion engine) being produced by auto companies engaged by Climate Action 100+, and assessed whether this aligns with the International Energy Agency's Beyond 2 Degrees Scenario (IEA B2DS).

The data shows that production aligned with the IEA's B2DS scenario would see the share of electric vehicles rising to 9% of each automobile company's technology mix by 2024. The companies assessed are not aligned with this scenario, as only 3% of their planned production mix for that time period is electric vehicles. To align with the B2DS scenario automobile companies assessed will need to substantially accelerate their production of electric and hybrid cars by an additional 6% and 13% respectively.

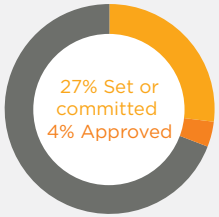
Transportation sector climate action indicators

Percentage of focus companies that have set long-term quantitative targets for reducing GHG emissions



Source: TPI, August 2019

Percentage of companies that have set, or committed to set a SBT



Source: SBTi, August 2019

Planned versus required technology mix for automobile companies by 2024

Auto Focus Companies Technology Mix (13 companies)	Required 2024 Technology Mix for B2DS Alignment (%)	Planned 2024 Technology Mix of Auto Companies (%)	Actual 2019 Technology Mix of Auto Companies (%)
Automobiles Electric	9%	3%	1%
Automobiles Hybrid	19%	6%	4%
Automobiles Internal Combustion Engine	72%	91%	95%

Source: 2°ii, August 2019

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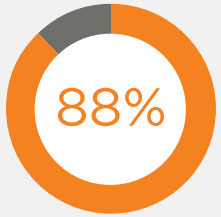
DISCLOSURE

The transportation sector is one of the highest reporters of emissions data to CDP (88%). However, only 15% of companies in the transportation sector have demonstrated public support for the TCFD recommendations. Only about a third of companies in this sector have disclosed climate scenario planning.

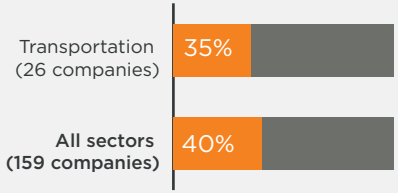
Transportation sector climate disclosure indicators

Percentage of companies within the sector reporting to CDP



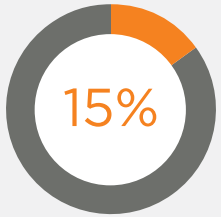
Source: CDP, August 2019

Percentage of companies that undertake and disclose climate scenario analysis



Source: TPI, August 2019

Percentage of companies within the sector signed on as a supporter of the TCFD



Source: TCFD, August 2019

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ENGAGEMENT CASE STUDY — TRANSPORTATION:

MAERSK

A.P. Moller Maersk (Maersk) is the world's largest container shipping company.

Engagement with Maersk is being led by MP Investment Management and Hermes Investment Management, along with four other collaborating investors. Following engagement and dialogue with Climate Action 100+ investors, in December 2018 Maersk committed to achieving net zero emissions by 2050.

This commitment is particularly notable because the shipping sector does not have many readily-available options to decarbonise and its assets can last for 20–25 years, so Maersk will need to find innovative solutions quickly. The company stated that the new target means it will need to develop carbon free ships by 2030. Such solutions could include biofuels, hydrogen, electrified transport, fleet renewal, and efficiency improvements.

Significantly, Maersk is aiming to reach its target without buying carbon offsets.

Climate Action 100+ investors are now continuing their dialogue with the company as it works to implement the target. The shipping sector is crucial to global industry and contributes about 3% of global GHG emissions.

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ENGAGEMENT CASE STUDY — TRANSPORTATION:

VOLKSWAGEN

Volkswagen (VW) is a German automobile manufacturer, and one of the largest automobile companies in the world by sales.

Engagement with the company is being led by Hermes Investment Management and BMO Global Asset Management. Investors met with the company multiple times, and used AGM statements and a shareholder resolution to advance the Climate Action 100+ agenda with the company and other shareholders.

In March 2019, VW committed to become 'climate neutral' by 2050 and to launch nearly 70 electric vehicle models by 2028 (up from the 50 models previously planned). This target will see the share of electric vehicles in the group fleet rise to at least 40% by 2030.

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INDUSTRIALS

The 26 focus companies in this sector are engaged in a range of businesses including heavy equipment manufacturing, construction materials, chemicals and cement production.

Many of these operations, notably chemicals and cement production, are considered hard to abate and will likely require innovative technologies, including the application of CCS at scale. The Energy Transitions Commission anticipate that 5–8 gigatonnes of carbon capture per year are likely to be required to reach net zero emissions from the whole energy and industrial system by mid-century which will require a step change in deployment of these technologies.

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Climate Action 100+ Focus Companies

$829BN

Market capitalisation

Source: Bloomberg, June 2019

4.1 GIGATONNES CO_2E

2018 reported GHG emissions[1]

Source: CDP

1 Emissions data by sector reflects total focus company FY2018 reported scope 1, 2 and 3 emissions. It does not include estimated values for companies that did not disclose to CDP.

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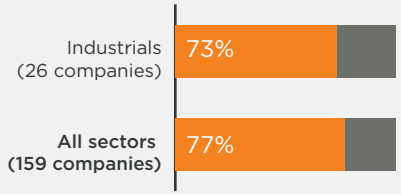
GOVERNANCE

The data presented in this report shows the industrials companies are performing relatively weakly across most indicators. On governance, 73% of industrials companies have set board accountability for climate policy, yet only one of the 26 has ensured consistency between its climate policy and those of its industry associations.

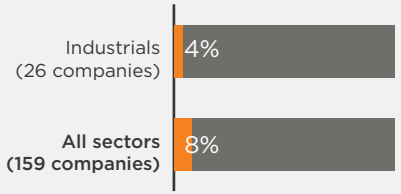
Industrials sector climate governance indicators

Percentage of companies that have nominated a board member or board committee with clear responsibility for climate change policy



Source: TPI, August 2019

Percentage of companies that ensure consistency between their climate change policy and the positions taken by industry associations of which they are a member



Source: TPI, August 2019

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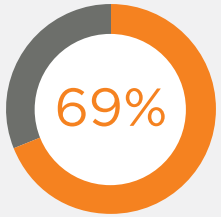
On climate action, the industrials sector presents a mixed picture. 69% of companies have set long-term quantitative targets for reducing GHG emissions, and nearly one third of industrials companies has set, committed to set, or has an approved SBT. There are some clear leaders emerging in this sector: for example, HeidelbergCement has announced an ambition to become carbon neutral by 2050 and set the first verified SBT in the cement sector, a significant milestone for the industry. Saint Gobain, CRH and Koninklijke Philips NV have each committed to reductions in GHG emissions and to set SBTs.

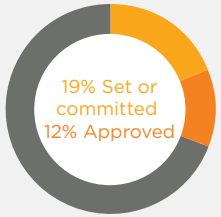
Industrials sector climate action indicators

Percentage of focus companies that have set long-term quantitative targets for reducing GHG emissions



Source: TPI, August 2019

Percentage of companies that have set, or committed to set a SBT



Source: SBTi, August 2019

KEY COMPANY MILESTONES

- **HeidelbergCement** became the first cement company globally to set a verified science based target to 2030, and a goal to achieve carbon neutrality by 2050.
- **Saint Gobain** and **CRH** committed to develop and set science based targets within two years. Saint Gobain also signed on as a supporter of the TCFD.
- **Boral** addressed some of the recommendations of the TCFD in its 2018 Sustainability Report, which forms part of its Boral Review 2018. They enhanced disclosure in their 2019 Sustainability Report, published in September 2019.
- **Daikin, Panasonic** and **Toray** each signed on as supporters of the TCFD, and have committed to report in-line with its recommendations.

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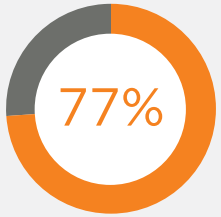
DISCLOSURE

On climate disclosure, the industrials companies are one of the least active in producing climate scenario analyses (31%). Three quarters (77%) reported to CDP in 2018, and 35% have signed on in support of the TCFD disclosure framework.

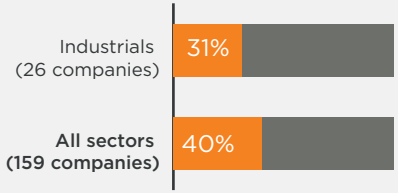
Industrials sector climate disclosure indicators

Percentage of companies within the sector reporting to CDP



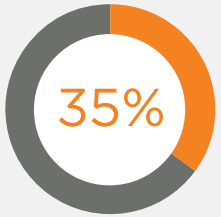
Source: CDP, August 2019

Percentage of companies that undertake and disclose climate scenario analysis



Source: TPI, August 2019

Percentage of companies within the sector signed on as a supporter of the TCFD



Source: TCFD, August 2019

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ENGAGEMENT CASE STUDY — INDUSTRIALS:

HEIDELBERGCEMENT

Headquartered in Germany, HeidelbergCement is the second largest cement producer worldwide.

Engagement with HeidelbergCement has been led by UK pension fund RPMI Railpen and has had two main focuses: political lobbying and alignment with the goals of the Paris Agreement. Following presentation of the European Investor Expectations of Corporate Climate Lobbying, HeidelbergCement included disclosures in line with these recommendations within its annual report.

The company also disclosed:

> 'We are committed to review our governance processes with respect to direct and indirect political lobbying in 2019. Specifically, we would like to analyse how the political engagement of associations that we are a member of aligns with our sustainability goals published in our Sustainability Commitments 2030, including our commitment to fulfil our share of the global responsibility to keep temperature rise below 2°C as agreed at the COP21 in Paris and the IIGCC (Institutional Investors Group on Climate Change) supported investor expectations on corporate climate lobbying. We intend to publish the results of this analysis together with our reviewed governance processes and possible actions taken in our next annual report.' (Source: HeidelbergCement Annual Report 2018)

In 2019 the company became the first in the sector to develop a goal to achieve carbon neutrality by 2050, and to set an approved SBT to 2030. In July 2019, institutional investors with $2 trillion in assets under management wrote to HeidelbergCement and its peers setting out detailed investor expectations for future climate commitments.

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ELECTRIC UTILITIES

The 32 electric utility focus companies engaged by Climate Action 100+ are a mix of electric and gas power companies with some grid operators. Berkshire Hathaway, a diversified conglomerate is included because it owns 90% of Berkshire Hathaway Energy — a portfolio of utility companies.

There are two interlinked challenges for the sector: managing the shift away from coal (by 2030 in OECD countries and 2050 in non-OECD countries) while limiting the role of natural gas, and developing new business models around portfolios of renewable energy with greater volumes of intermittence and storage to achieve carbon neutrality in the energy system by mid-century.

Engagement with companies in this sector has been influenced by differing regulatory and policy environments. A number of United States and European utilities have now committed to medium and long-term GHG emissions reductions, including net zero emissions by 2050, and have begun to produce more robust disclosure, including climate scenario analyses and stress-testing. Just transition planning for workers is also an emerging priority, although much more needs to be done. In Australia, a reliance on coal-fired power and existing policy settings make progress challenging, however engagement is progressing on targets and lower carbon energy technologies. In Asia, investors have initiated engagement with some of the largest power producers in key markets including Mainland China, India and South Korea.

The data presented here shows that while many utilities are taking meaningful action on climate, there are significant gaps in aligning these strategies with the Paris Agreement goal of limiting global warming to well below 2°C, through accelerated fossil fuel asset phase out and retirement.

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Climate Action 100+ Focus Companies

$1,476BN

Market capitalisation

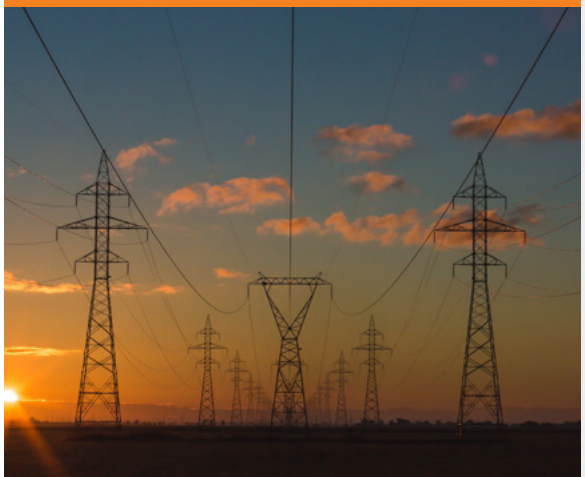
Source: Bloomberg, June 2019

2.8 GIGATONNES CO_2E

2018 reported GHG emissions[1]

Source: CDP

1 Emissions data by sector reflects total focus company FY2018 reported scope 1, 2 and 3 emissions. It does not include estimated values for companies that did not disclose to CDP.



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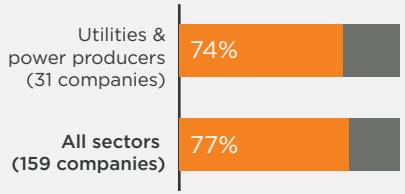
Three quarters (74%) of the electric utilities focus companies have board-level accountability for climate policy. However this sector performs very poorly on lobbying: only 3% of companies have ensured consistency between their climate policy and the positions taken by industry associations they support.

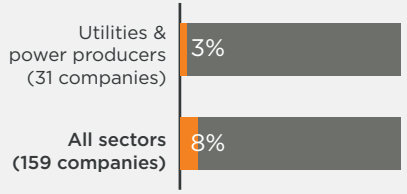
Electric utilities sector climate governance indicators

Percentage of companies that have nominated a board member or board committee with clear responsibility for climate change policy



Source: TPI, August 2019

Percentage of companies that ensure consistency between their climate change policy and the positions taken by industry associations of which they are a member



Source: TPI, August 2019

KEY COMPANY MILESTONES

- **Vistra Energy** committed to setting by the end of 2019 a company-wide target for the reduction of GHG emissions, taking into consideration the Paris Agreement.
- **Southern Company** committed to a 50% reduction in carbon emissions from 2007 levels by 2030, and low to no emissions by 2050.
- **ENEL** published its commitment to carbon-free electricity generation by 2050.
- **American Electric Power** committed to a 70% reduction in carbon emissions from 2000 levels by 2030, and an 80% reduction in carbon emissions by 2050.
- **Centrica** committed to demonstrating alignment with the Paris Agreement by 2030 and developing a path to net zero by 2050.
- **WEC Energy Group** committed to an 80% reduction in carbon emissions from 2005 levels by 2050.
- **E.ON SE** announced a net zero emissions by 2050 ambition with interim targets of carbon neutral buildings and the electrification of its fleet by 2030.
- **Xcel Energy** made a significant commitment in the context of the electric power industry: to deliver carbon-free electricity by 2050.
- **Dominion Energy** committed to a 55% reduction in carbon emissions from 2005 levels by 2030 and an 80% reduction by 2050.
- **EDF** committed to carbon neutrality by 2050 with associated 2030 targets.
- **Duke Energy Corporation** agreed to eliminate carbon emissions from its power plants, potentially using offsets to reach net zero by 2050. Duke will transition from coal and invest in solar, nuclear and other carbon-free technologies, as well as natural gas, during the transition.

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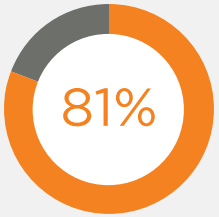
On climate action, over 80% of companies in the electric utilities sector have set long-term GHG emissions reduction targets, and just under one fifth (18%) have an approved SBT or have set or committed to set one.

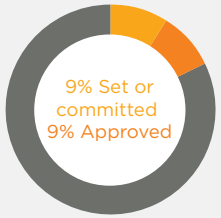
Electric utilities sector climate action indicators

Percentage of focus companies that have set long-term quantitative targets for reducing GHG emissions



Source: TPI, August 2019

Percentage of companies that have set, or committed to set a SBT



Source: SBTi, August 2019

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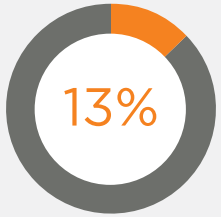
Data from CTI assesses utility companies' plans to phase out coal, and the value of their potential stranded coal assets. The first indicator assesses whether power companies have either retired or announced plans to retire coal-fired generation that are consistent with the IEA's Beyond 2 Degrees Scenario (B2DS) to limit warming to 2°C. Only 13% of companies studied meet this assessment. The second indicator shows that only one quarter of companies have a future coal portfolio that is at least 50% aligned with the energy demands from coal in a Paris agreement climate scenario aligned climate scenario (IEA B2DS).

The technology mix table provided by 2°ii assesses electric utilities based on their energy technology mix (renewables, hydro, nuclear, gas and coal) against the IEA B2DS. It shows that a market aligned with this scenario would see renewable electricity rising to 17% of the technology mix by 2024. This shows that companies need to change the technological mix of their generation more rapidly than currently planned (13%), while producing less electricity from gas and coal.

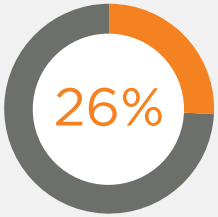
Electric utilities sector climate action indicators (continued)

Does the company have a coal phase-out plan aligned with the aims of the Paris Agreement (IEA B2DS methodology)?



Source: CTI, August 2019

Does the company have a future coal portfolio that is at least 50% aligned with the energy demands from coal in a Paris aligned climate scenario (IEA's B2DS)?



Source: CTI, August 2019

Utilities Technology Mix

Utilities Focus Companies Technology Mix (31 companies)	Required 2024 Technology Mix Required for B2DS Alignment (%)	Planned 2024 Technology Mix of Utilities Companies (%)	Actual 2019 Technology Mix of Utilities Companies (%)
Utilities Renewables	17%	13%	10%
Utilities Gas	24%	31%	32%
Utilities Coal	28%	29%	29%
Utilities Hydro	19%	9%	9%
Utilities Nuclear	9%	15%	15%

Source: 2°ii, August 2019

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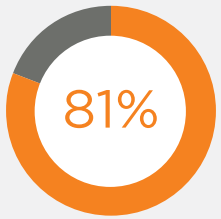
DISCLOSURE

The utilities sector performs comparatively well on climate disclosure: 81% of companies reported their emissions data to CDP in 2018 and 55% of companies have undertaken and disclosed climate scenario analysis, considerably higher than the overall rate of 40% for all sectors. However only 34% are supporters of the TCFD.

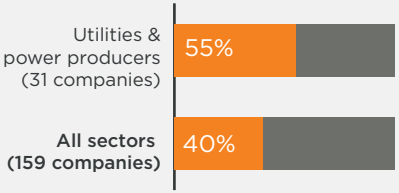
Electric utilities sector climate disclosure indicators

Percentage of companies within the sector reporting to CDP



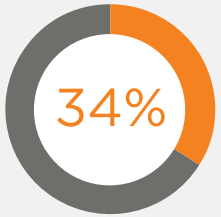
Source: CDP, August 2019

Percentage of companies that undertake and disclose climate scenario analysis



Source: TPI, August 2019

Percentage of companies within the sector signed on as a supporter of the TCFD



Source: TCFD, August 2019

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ENGAGEMENT CASE STUDY — ELECTRIC UTILITIES:

AES CORPORATION

AES Corporation (AES) is a Fortune 500 company that generates and distributes electrical power. AES is headquartered in Arlington, Virginia, and provides energy to 15 countries through a portfolio of distribution businesses and thermal and renewable generation facilities.

Climate Action 100+ engagement with AES has been led by Mercy Investment Services. The company has performed climate scenario analyses with three pathways: Business as Usual (3–6°C warming), Greener Scenario (2°C warming), and 1.5–2°C Scenario (well below 2°C warming). It has also announced a commitment to reduce the carbon intensity of its power generation by 70% by 2030. This climate scenario report followed investor engagement with the company over a number of years.

Notably, engagement has also focused on the company's plans for a just transition for thermal coal generation asset phase out in small towns outside of the United States. Specifically, the company is looking at strategies to retain and transition its existing workforce while other generation fleets are brought online. As utilities increasingly decarbonise their generation portfolios and retire coal assets, just transition for workers will increase in global relevance and strategic importance to investors.

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XCEL ENERGY

Xcel Energy (Xcel) is a major electric power company that supplies electricity and natural gas to retail customers in the United States.

In December 2018, Xcel made a significant commitment for an electric power utility: to deliver carbon-free electricity by 2050. The company also released a climate report, 'Energy and Carbon', that sets out its commitment to an 80% reduction in emissions associated with electricity by 2030, and zero emissions electricity by 2050. Xcel has said it does not assume that negative emission technologies will be available, which is a basis for setting more ambitious emission reduction goals.

While the company does not yet have a clear plan to implement these targets beyond 2030, it will use this target to drive its business planning and strategies. Investors will continue to engage with Xcel and expect to hear how it will implement these targets, and improve its approach to scope 3 emissions associated with its natural gas distribution activities.

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The 14 consumer product companies engaged by Climate Action 100+ represent a mix of retail, food and beverage, consumer products, and paper companies.

These companies are exposed to physical risks, (from shifting rainfall patterns, temperature variation, and extreme weather events), as well as risks associated with GHG emissions via their operations and supply chain. The key challenge for these companies is to address emissions from their extended supply chain (scope 3) emissions. Investors are advocating for SBTs that include scope 3 emissions, and for the disclosure of specific emission reduction plans for important sources such as livestock production, deforestation, and product waste.

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Climate Action 100+ Focus Companies

$1,780BN

Market capitalisation

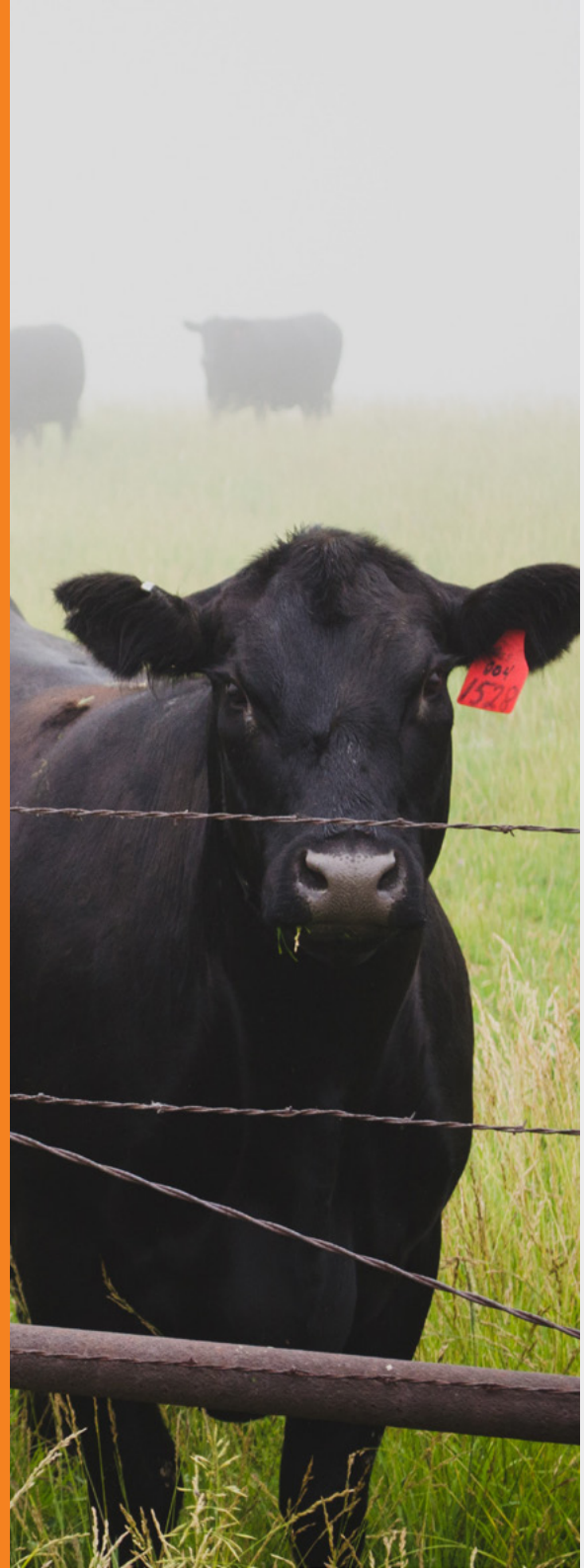
Source: Bloomberg, June 2019

6.0 GIGATONNES CO_2E

2018 reported GHG emissions[1]

Source: CDP

1 Emissions data by sector reflects total focus company FY2018 reported scope 1, 2 and 3 emissions. It does not include estimated values for companies that did not disclose to CDP.



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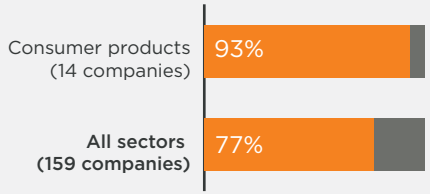
GOVERNANCE

This sector performs comparatively well across most indicators. On climate governance, 93% of companies have set out explicit board responsibility for climate policy — the highest level of all sectors. Like all other sectors, there is still a significant gap with companies' governance of lobbying practices: only 14% have ensured alignment of their internal climate policy with the policy positions of the industry associations they support.

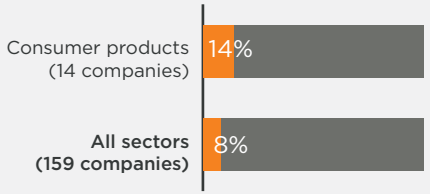
Consumer products sector climate governance indicators

Percentage of companies that have nominated a board member or board committee with clear responsibility for climate change policy



Source: TPI, August 2019

Percentage of companies that ensure consistency between their climate change policy and the positions taken by industry associations of which they are a member



Source: TPI, August 2019

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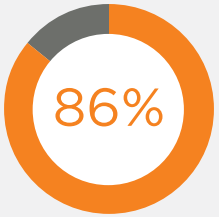
ACTION

On climate action, 86% of consumer products companies have set long-term emissions reduction targets, and this sector has by far the highest percentage of companies (64%) with a committed or approved SBT.

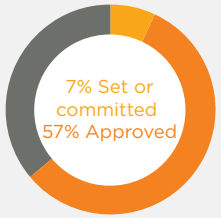
Consumer products sector climate action indicators

Percentage of focus companies that have set long-term quantitative targets for reducing GHG emissions



Source: TPI, August 2019

Percentage of companies that have set, or committed to set a SBT



Source: SBTi, August 2019

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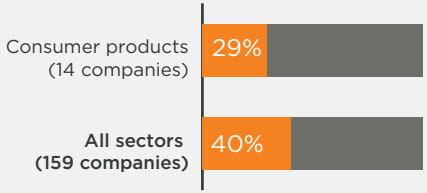
This is the only sector where 100% of companies report their emissions data to CDP. About a third of the consumer products companies publicly support the recommendations of the TCFD. However only 29% of these companies disclose climate scenario analyses.

Consumer products sector climate disclosure indicators

Percentage of companies within the sector reporting to CDP

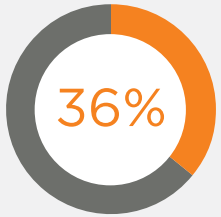
Source: CDP, July 2019

Percentage of companies that undertake and disclose climate scenario analysis



Source: TPI, August 2019

Percentage of companies within the sector signed on as a supporter of the TCFD



Source: TCFD, August 2019

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ENGAGEMENT CASE STUDY — CONSUMER PRODUCTS

NESTLÉ

Nestlé is a multinational food and drink company headquartered in Vevey, Switzerland. It is one of the largest food companies in the world.

The Climate Action 100+ engagement with Nestlé has been led by Ethos Foundation and APG Asset Management, along with 18 other collaborating investors. To date, the coalition has held at least three meetings with the company. They have also made statements at Nestle's AGM in the last two years.

Following engagement, Nestlé agreed to report in line with the TCFD and incorporate social dimensions into its climate scenario analyses, such as the potential impacts of climate change on crops and agricultural labourers. The company is due to produce a white paper on its scenario analysis in the second half of 2019. Investors are also talking to the company about improving how it measures and addresses the emissions resulting from its supply chain. Like many food and beverage companies, supply chain emissions make up the largest portion of Nestlé's emissions. The company has started a new project to better quantify scope 3 emissions. Furthermore, although Nestlé has set an SBT to 2020, the investors are encouraging the company to set short-term targets for post 2020 and link them to executive remuneration.

In September 2019, the company announced a significant target of net zero emissions by 2050 that had aspects consistent with many investor asks, including covering scope 3 emissions and setting interim targets for reaching the long-term goal. Another focus of the dialogue is to enhance the embedding of climate issues at the board level.

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The Asia region is responsible for about half of global emissions (49%) and is highly exposed to physical and transition risks from climate change, particularly via extreme weather events. A fifth of the companies engaged by Climate Action 100+ are located in Asia.

Over the past five years, several governments in Asia have signalled their intention to take significant steps to mitigate climate change and transform their economies. The Chinese Central Government has sent clear signals that it sees climate change as a key economic and environmental risk, and is providing strong policy leadership in the region. There has also been growth in market-based regulatory and industry led ESG and climate initiatives across Asia. And investors, particularly in Japan, are increasingly interested in understanding the risks and opportunities presented by climate change.

PRIORITIES FOR ASIAN ENGAGEMENTS TO DATE

In the first phase of Climate Action 100+ engagements, Asia has been approached slightly differently than other regions. Unlike North America, Australasia and Europe, where several investor initiatives on climate were underway for years before Climate Action 100+, in Asia a priority has been to establish a framework for collaborative engagement on climate, leveraging a strong history of engagement on corporate governance. Another priority has been to increase the number of local investor participants in Climate Action 100+.

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Climate Action 100+ Focus Companies

$473BN
Market capitalisation

Source: Bloomberg

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OUTCOMES AND MILESTONES

In its first phase, there have been significant steps forward in advancing Climate Action 100+ goals in Asia:

- **Development of a cross-regional engagement framework** — local investors have led the development of a framework for engagement where investors in Asia that are more familiar with the local market environment and companies collaborate with international investors that bring ESG and engagement experience to the initiative.
- **Establishing the Asia Advisory Group** to oversee and advise on the strategy around engaging in the region and to address specific challenges that may arise, for example structural barriers such as state ownership and political context.
- **Growth in investor signatories in Asia** with 18 investors participating, representing $3 trillion in assets under management from Japan (9), Mainland China (2), Hong Kong SAR (3), Taiwan (2), India (1), Indonesia (1). These investors work collaboratively with 34 other international investor peers.
- **Increase in local capacity via AIGCC and PRI** — both organisations have increased their presence and resources by appointing staff in the region who understand the markets and languages, and can further develop local relationships.

ASIA ADVISORY GROUP

Climate Action 100+ is the first collaborative engagement on climate that has been undertaken at this scale in Asia. To ensure engagement will be successful and undertaken in a culturally appropriate way, the Asia Advisory Group was established by PRI and AIGCC to provide strategic insights and assist with fostering greater understanding of the local market context.

Thanks to the members of the Asia Advisory Group for their contribution to date:

- **Rebecca Mikula-Wright, Director, AIGCC**
- **Anne Simpson, Director of Board Governance and Strategy, CalPERS**
- **Sophia Cheng, CIO, Cathay Financial Holdings**
- **Richard Pan, Managing Director, Head of QFII Investment, Head of International Business, China Asset Management Co., Ltd.**
- **Hiro Mizuno, Executive Managing Director and CIO, Government Pension Investment Fund**
- **Emily Chew, Global Head of ESG Research and Integration, Manulife Investment Management**
- **Ben Pincombe, Head of Active Ownership, Climate Change, PRI**

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WORKING WITH INVESTORS AND COMPANIES IN JAPAN

Nearly one third of the 32 focus companies in Asia are headquartered in Japan.

To date there has been significant progress in the market on climate and ESG issues, led in large part by the Japanese Government Pension Fund (GPIF). The Japanese Stewardship Code encourages collective engagement with companies and local investors, and was central in developing a tailored strategy for engaging collaboratively in the market via Climate Action 100+.

There are now nine Japanese investors participating in Climate Action 100+, forming a strong foundation for continued engagement and collaboration. Notably the support and endorsement of GPIF in the initiative and on the Asian Advisory Group has helped to build credibility and momentum. Engagement with financial and corporate regulators and business industry associations was also vitally important to lay the foundations for effective and positive engagement between investors and companies.

Japanese engagements are structured to be co-led by one international asset owner, and one Japanese asset manager. This serves the dual purpose of providing capacity building on active ownership for local investors, while retaining critical local and cultural insights and language skills in the engagement group. Engagement in Japan is underway with all ten companies and has been received positively.

Of the 10 companies in Japan engaged through Climate Action 100+, five have committed to set or have an approved science based target, and eight have publicly supported the TCFD. These levels of support are very high compared to other markets in Asia, and globally.

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ENGAGEMENT CASE STUDY — REGIONAL REVIEW:

PETROCHINA

PetroChina is a Chinese oil and gas company and is the listed arm of state-owned China National Petroleum Corporation, headquartered in Beijing. It is China's second largest oil producer.

Engagement with PetroChina is being led by Hermes Investment Management. Lead investors had a face to face meeting with senior representatives and technical experts responsible for low-carbon transition technologies development in February 2019. Access at this level of a company is rare in Asia and sets a best practice example for the region. During that meeting and in following communication, investors have advocated for the company to improve disclosure of its climate change strategy and risk management plan.

In response to investor engagement, in its latest sustainability report PetroChina disclosed a climate change strategy and plan that set out the company's intention to align it's climate policy to the goals of the Paris Agreement and a less than 2°C scenario. The company also described other short and long-term climate commitments.

As a member of Oil and Gas Climate Initiative (OGCI), PetroChina is collaborating with global peers to develop low-carbon technology and contributes to joint commitments in reducing methane emissions with time-bound targets. Members of the OGCI are formulating long-term quantitative individual commitments or have indicated intention to do so. Monitoring progress of this target setting process will be part of the engagement focus with PetroChina going forward.

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CORPORATE LOBBYING ON CLIMATE — A PRIORITY FOR INVESTORS

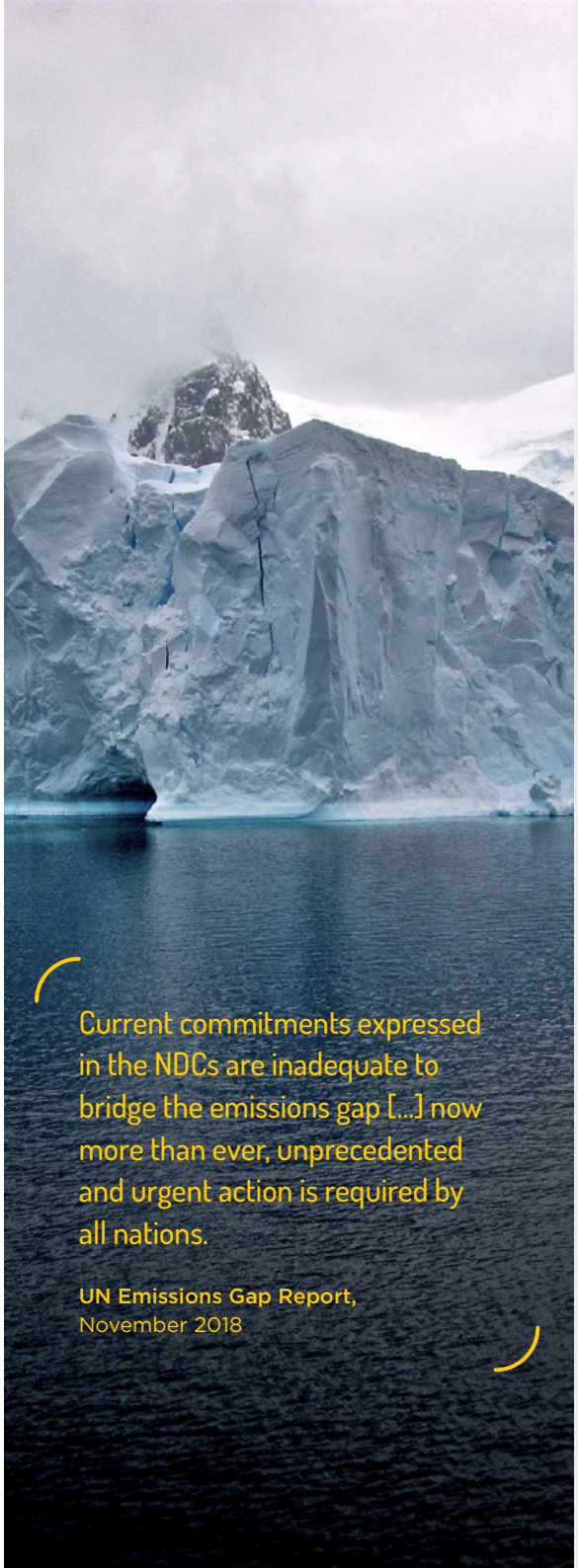
Investors recognise that clear, stable and ambitious climate policy is crucial to their ability to assess and manage climate-related risks, to support innovation, and to invest in low-carbon and climate-resilient opportunities.

Conversely, delayed implementation of climate policies or the absence of effective climate policy impacts on investor confidence and risks increasing the levels of long-term economic damage from climate change. To date, 515 investors with $35 trillion in assets under management have signed the Global Investor Statement to Governments on Climate Change.

Yet research suggests that many companies that investors retain investments in are blocking or significantly weakening effective climate policy, either directly or via industry association memberships. As such, investors have recognised that to ensure a smooth energy transition and to safeguard the value of assets, acting to prevent negative climate lobbying is as fundamental a focus for engagement as securing emissions targets.

FEW COMPANIES CLEARLY SUPPORT CLIMATE POLICY

Climate Action 100+ research partner InfluenceMap has found few focus companies clearly support development of climate policy with around 90% of companies assessed holding memberships in industry associations that have opposed climate policies. InfluenceMap has identified only 8 of 109 focus companies to have fully aligned their own lobbying positions and practices in support of meaningful climate policy and the implementation of the Paris Agreement.



Current commitments expressed in the NDCs are inadequate to bridge the emissions gap [...] now more than ever, unprecedented and urgent action is required by all nations.

UN Emissions Gap Report, November 2018

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INVESTOR EXPECTATIONS ON CORPORATE LOBBYING ON CLIMATE CHANGE

Corporate lobbying on climate is an issue that is linked to each of the three goals of the Climate Action 100+ engagement agenda to seek stronger governance, action on climate change and improved disclosure. A group of investors working through Climate Action 100+ have set out new European Investors Expectations on Corporate Lobbying on Climate Change. This statement builds on the 2015 global investor statement on climate lobbying, with a similar initiative being adapted for the US market. The European statement expects companies to be transparent and to produce disclosures setting out:

1. How a company lobbies positively to support the Paris Agreement
2. How a company will address industry associations that lobby against effective climate policies
3. The governance processes in place to ensure board oversight of climate advocacy
4. An ongoing commitment to transparency in order to ensure investor and public confidence.

An investor initiative, led by the Church of England Pension Board, Sweden's AP7 and French fund manager, BNP Paribas Asset Management and supported by IIGCC has focused on European-listed Climate Action 100+ companies and asked them to produce disclosures in line with the expectations. So far this has yielded 11 commitments to produce reviews of lobbying activity from companies across industrials, mining, oil and gas: Anglo American, ArcelorMittal, BASF, BHP, BP, Equinor, Glencore, HeidelbergCement, Rio Tinto, RWE, and Shell. A similar programme will operate in the United States to secure commitments. Some companies have also reviewed their membership of industry associations following publication of their reviews, notably Shell has now left the American Fuel and Petrochemical Manufacturers Association and Volkswagen has threatened to leave VDA, Germany's influential automotive lobby group.

NEXT STEPS — PRIORITIES FOR 2020

As the initiative moves into 2020, a crucial year for the UNFCCC process, investors have three priorities:

1. Securing more foundational lobbying disclosure commitments from companies
2. Scrutinising the disclosures that companies have produced
3. Ensuring companies are aligned with investor positions regarding key policies such as meaningful carbon pricing and energy policies that favour the rapid phase out of coal.

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Lobbying indicators

Has the company aligned its own climate policy positions and lobbying activities in support of implementing meaningful climate policy and the goals of the Paris Agreement?

Sector and (number of companies)	Positioning towards climate policy and regulations		
	Clear Support	Mixed Support	Not Supporting
Oil and gas (24)	0%	33%	67%
Industrials (16)	19%	31%	50%
Mining (13)	0%	38%	62%
Transportation (21)	0%	52%	48%
Utilities (25)	16%	48%	36%
Consumer products (10)	40%	60%	0%

Does the company retain membership to at least one industry group lobbying against meaningful climate policy?

Sector and (number of companies)	Membership to oppositional industry groups	
	Membership	No Membership
Oil and gas (24)	100%	0%
Industrials (16)	88%	12%
Mining (13)	100%	0%
Transportation (21)	95%	5%
Utilities (25)	80%	20%
Consumer products (10)	80%	20%

Source: InfluenceMap, August 2019

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ENGAGEMENT CASE STUDY:

GENERAL MOTORS AND FORD MOTOR COMPANY

General Motors (GM) and Ford Motor Company (Ford) are multinational corporations headquartered in Detroit and Dearborn, Michigan, respectively. They design, manufacture, and distribute vehicles, and also offer financial services.

In 2018, following pressure from automakers the Trump administration proposed to weaken GHG passenger vehicle standards as well as to revoke California's authority to regulate tailpipe emissions. The Climate Action 100+ engagement group (led by the Office of the Comptroller of New York City for Ford, and BMO Global Asset Management for GM) took steps to ensure that Ford and GM played a positive role in the rulemaking process.

Through Climate Action 100+ engagement, investors urged both companies to align their lobbying and that of their industry association (the Alliance of Automobile Manufacturers) with their stated positions on climate and fleet decarbonisation. Investors also asked the companies to negotiate an alternative compliance pathway with California; such an agreement would ensure emission reductions, preserve California's authority (critical to ensuring ongoing progress), and provide regulatory certainty necessary for investment in clean technologies. Ford subsequently took a leading role in seeking to negotiate a solution with California. In May 2019, investors sent letters to GM which garnered considerable press coverage. Investors also filed shareholder resolutions asking the companies to disclose their lobbying practices.

In June 2019, 17 automakers—including Ford and GM—sent a public letter to President Trump and the governor of California asking them to reopen negotiations on vehicle standards, echoing many of the specific recommendations made by investors. Further, on July 25, 2019, California announced that it had entered into a compromise agreement with Ford, Honda, VW and BMW, under which the automakers would annually reduce emissions on a nationwide basis, effectively meeting the standards set by the Obama administration one year later (in 2026).

In September 2019, the Department of Justice opened an antitrust investigation into the four auto companies that have entered into a compromise agreement regarding vehicle GHG emissions with California. The legal justification for such an action is weak. Joining the compromise agreement benefits companies by enabling them to avoid regulatory uncertainty, consumers by reducing their overall costs, and society by reducing emissions. The Climate Action 100+ Global Steering Committee and Working Groups will continue to monitor such political and regulatory developments and keep investors informed.

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THE CHALLENGE AHEAD IS CLEAR

This report shows that while companies across many sectors have announced ambitious goals, the task of moving all 161 companies into alignment with the goals of the Paris Agreement has only just begun.

Building on its first phase, investors working through Climate Action 100+ and its supporting investor networks will focus on a number of strategic priorities to accelerate corporate action on climate change.

ENGAGEMENT PRIORITIES

- **Lobbying reform –** as the first global stocktake of country targets through UNFCCC approaches in 2020, the role of the private sector to support effective climate policy has never been clearer. Investors will focus on securing more disclosure commitments on climate lobbying, and will look for companies to set out clear support for climate policy.
- **Clear goals or targets for emissions reductions towards net zero by mid-century –** many investors are asking companies to align their business plans with the Paris Agreement, and a carbon constrained future. This includes setting short, medium and long-term goals for emissions reductions and net zero, while ensuring a just transition for workers in sectors vulnerable to climate disruption.
- **Implementation of the TCFD recommendations –** only 30% of focus companies have formally supported the TCFD recommendations. Investors are looking for all companies to produce credible TCFD reporting including climate scenario analyses that test the financial resilience of businesses. Such analysis is central to the development of business strategies compatible with the goals of the Paris Agreement.

SUPPORTING INVESTORS

- **Recruiting new investor signatories –** representing key regions and markets particularly in Asia, Africa and Latin America. Research has demonstrated engagement is most effective when local investors are involved. Country specific strategies will be developed for markets where engagement is new like Mainland China and Russia.

MEASURING AND COMMUNICATING PROGRESS

- **Working with partners to measure impact –** an ongoing priority will be to continue working toward the development of a comprehensive benchmarking framework to assess company progress toward the three high level goals of Climate Action 100+ while also reflecting differences in sectoral and regional expectations.

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APPENDIX A: DATA INDICATORS

Climate Action 100+ focus company assessment indicators are a critical part of the Climate Action 100+ initiative. This data is used to:

- Engage with companies on performance gaps and opportunities to strengthen their response to climate change
- Measure performance against global peers to inform engagement priorities and opportunities
- Highlight leading and lagging companies
- Report on progress over time.

The selection and development of indicators to support Climate Action 100+ was led by the Climate Action 100+ Technical Advisory Group, which includes our research partners – Carbon Tracker Initiative, InfluenceMap, Transition Pathway Initiative, and 2 Degree Investing Initiative. CDP provided the GHG emissions data for the original 100 focus companies, and provided the most recent sector-level GHG emissions data that is included in this report. The Science Based Targets initiative provided data on the number of companies that have committed, set or have approved targets.

The following pages provide context and background to the indicators included for the sector analysis part of the report, as well as the lobbying and Asia sections.

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FULL LIST OF INDICATORS

Indicatory	Methodology[1]	Number of companies	Date	Source	Climate Action 100+ goals
Has the company nominated a board member or board committee with explicit responsibility for oversight of the climate change policy?	Companies are assessed as yes on this indicator if they provide evidence of clear board or board committee oversight of climate change, or if they have a named individual/ position responsible for climate change at board level.	159[2]	August 2019	TPI	Governance
Does the company ensure consistency between its climate change policy and the positions taken by industry associations of which it is a member?	Companies are assessed as yes on this indicator if they disclose their memberships of industry associations that engage on climate-related issues and their involvement in these industry associations.	159[2]	August 2019	TPI	Governance
Has the company set long-term quantitative targets for reducing its greenhouse gas emissions?	This indicator assesses whether companies have set long-term quantitative targets for reducing their greenhouse gas emissions. Long term is defined as more than five years in duration from being set, and these targets can relate to Scope 1, 2 or 3 emissions.	159[2]	August 2019	TPI	Action
Is the company's emissions intensity aligned with, or will it be aligned with, limiting global warming to below 2 degrees Celsius?	For this indicator, TPI performed quantitative benchmarking of companies' emissions pathways against the Paris goals, including limiting the increase in global temperature to below 2°C. A sector-by-sector approach was taken, recognising that different sectors face different challenges arising from the low-carbon transition, including where emissions are concentrated in the value chain and how costly it is to reduce emissions. TPI's carbon performance assessment is based on The Sectoral Decarbonization Approach (SDA), which was created by CDP, WWF and WRI in 2015 (sciencebasedtargets.org/sda).	97	August 2019	TPI	Action
Has the company committed to set, already set, or have an approved Science Based Target?	The data provided by SBTi highlights companies that have a) committed to set an SBT b) set an SBT that is awaiting approval and c) have an SBT that has been evaluated and approved by SBTi. Targets are assessed as 'science based' if they are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement – to limit global warming to well-below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C. SBT do not yet have a methodology to evaluate a number of the companies evaluated in this report.	161	July 2019	SBTi	Action
Does the company undertake climate scenario planning?	This indicator assesses whether companies have undertaken and disclosed climate scenario analysis. To be assessed as yes companies need to mention the 2 degrees scenario in relation to business planning, or confirm they have conducted climate-related scenario analysis, and describe in their disclosures the business impact of one or more climate scenario analysis. These assessments were made based on most recent company public disclosures.	159[2]	August 2019	TPI	Disclosure
Has the company formally signed on as supporters of the TCFD?	This indicator assesses whether a company has signed on as a 'supporter' to the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) recommendations as at August 2019. Companies can sign on to support the TCFD recommendations at: fsb-tcfd.org/supporting-tcfd-recommendations	161	August 2019	CDP	Disclosure
Does the company report its climate change data to CDP?	This indicator assesses whether a company has completed CDP's climate change questionnaire in its 2018 reporting.	161	August 2019	CDP	Disclosure

1 All assessments unless otherwise indicated, were made using the most recent publicly available company disclosures, generally from FY2018 reporting.
2 TPI's assessment for this indicated includes 159 of 161 companies. Andeavour and Eskom Holdings SOC Limited were not able to be assessed.

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Indicatory	Methodology	Number of companies	Date	Source	Climate Action 100+ goals
Has the company aligned its policy positions and engagement activities in support of meaningful climate policy?	This indicator assesses each company's climate policy positions and engagement activities against legislation that has been proposed or implemented by government agencies mandated to act on climate change and deliver on the Paris Agreement's goals. This process produces a score for each company. Under InfluenceMap's system an organisation score of above 75 indicates clear support, below 50 indicates increasing opposition.	109	August 2019	IM	Governance
Does the company retain membership to at least one industry association lobbying against meaningful climate policy?	This indicator assesses companies disclosed industry and business association memberships against a score for each of those associations that quantifies its level of support for meaningful climate policy. This is underpinned by producing an organisational score on climate policy lobbying for 80 of the world's most significant industry and business associations. Industry associations that score 50 or below under this system can be considered to be lobbying with increasing opposition to meaningful climate policy.	109	August 2019	IM	Governance
Does the (oil and gas) company have some unsanctioned upstream projects that are unneeded in the IEA B2DS scenario?	This indicator uses Carbon Tracker's asset level upstream oil & gas capex scenario framework based on project level information from Rystad Energy Group to estimate potential future upstream project economics and capital expenditures and to evaluate these against the remaining carbon budget in a climate scenario aligned with the goals of the Paris agreement (IEA B2DS). A company with unsanctioned upstream projects that do not fit within the available projects in a climate constrained scenario (IEA B2DS) are at risk of creating stranded assets and unnecessary carbon emissions.	33 (oil and gas upstream activities only)	August 2019	CTI	Action
Does the (oil and gas) company have unsanctioned upstream projects that are unneeded in the IEA B2DS scenario?	This indicator uses Carbon Tracker's asset level upstream oil and gas capital expenditure scenario framework based on project level information from Rystad Energy Group to estimate potential future upstream project economics and capital expenditures and to evaluate these against the remaining carbon budget in a climate scenario aligned with the goals of the Paris agreement (IEA B2DS). A company with unsanctioned upstream projects that do not fit within the available projects in a climate constrained scenario (IEA B2DS) are at risk of creating stranded assets and unnecessary carbon emissions.	33 (oil and gas upstream activities only)	August 2019	CTI	Action
Has the electric utility company released a coal phase-out plan that is aligned with the goals of the Paris Agreement (International Energy Agency, Beyond 2°C Scenario methodology, at June 2019)? (% Yes/No)	This indicator assesses whether companies that have coal assets have a coal power plant retirement schedule which is in alignment with the goals of the Paris agreement (IEA B2DS). This is assessed through a six question methodology to assess exposure and alignment based on companies reported disclosures.	31 (utilities only)	August 2019	CTI	Action
Does the company have a future coal portfolio that is at least 50% aligned with the energy demands from coal in a Paris agreement climate scenario (IEA's B2DS)? (% Yes/No)	This indicator uses Carbon Tracker's asset level coal power generation data and measures the alignment of the companies' announced coal plants retirement schedule relative to a least cost economic pathway laid out by a Paris aligned phaseout scenario (IEA's B2DS). Companies with a coal phaseout plan that is less than 50% in line with a Paris aligned climate scenario have a high exposure to changing coal economics.	31 (utilities only)	August 2019	CTI	Action
How does the utility company's current and planned technology mix (renewables, hydro, nuclear, gas and coal) align with the IEA B2DS by 2024?	The indicator analyses the deviation of the technology mix of the CA100+ companies from a theoretical global market technology mix required by the B2DS scenario. The portfolio is defined as being behind, slightly behind, on-level, slightly ahead or ahead of what is required (for green technologies, being ahead would represent a higher % than what is required in a B2DS scenario. For brown technologies, being ahead would represent a lower % than what is required in a B2DS scenario). The mix of technologies assessed is renewables, pumped hydro, nuclear, gas, and coal.	32 (utilities only)	August 2019	2°ii	Action
How does the automobile company's current and planned technology mix (hybrid, electric, internal combustion engine) align with the IEA B2DS by 2024?	The indicator analyses the deviation of the technology mix of the CA100+ companies from a theoretical global market technology mix required by the B2DS scenario. The portfolio is defined as being behind, slightly behind, on-level, slightly ahead or ahead of what is required. The mix of technologies assessed is hybrid, electric, and internal combustion engines.	13 (automotive only)	December 2018	2°ii	Action

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CLIMATE ACTION 100+ TECHNICAL ADVISORY GROUP (TAG) AND RESEARCH PROVIDERS

Carbon Tracker Initiative (CTI)

CTI is an independent financial think tank that carries out in-depth analysis on the impact of the energy transition on capital markets and the potential investment in high-cost, carbon-intensive fossil fuels. Its team of financial market, energy and legal experts apply groundbreaking research using leading industry databases to map both risk and opportunity for investors on the path to a low-carbon future.

CDP

CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. Over the past 15 years CDP has created a system that has resulted in unparalleled engagement on environmental issues worldwide. To achieve this, CDP runs the global disclosure system that enables companies, cities, states and regions to measure and manage their environmental impacts, and has built the most comprehensive collection of self-reported environmental data in the world.

InfluenceMap (IM)

IM enables a world where crucial decisions are legitimately influenced and objectively made. InfluenceMap empowers its partners with data-driven and clearly communicated analysis on critical societal issues such as climate change. In our flagship project analysing climate policy lobbying, our goal is to enable our partners in the finance, NGO and progressive corporate worlds to eliminate blockages to an ambitious policy pathway globally and encourage support.

Transition Pathways Initiative (TPI)

The TPI is a global initiative led by asset owners and supported by asset managers. Aimed at investors and free to use, it assesses companies' preparedness for the transition to a low-carbon economy, supporting efforts to address climate change. Launched January 2017, over 50 investors globally have already pledged support for the TPI; jointly they represent over $15 trillion combined Assets Under Management and Advice.

2 Degree Investing Initiative (2°ii)

The 2°ii is the global think tank for developing climate and long-term risk metrics and related policy options in financial markets. 2°ii coordinates the world's largest research projects on climate metrics in financial markets, with over 40 research partners in the public, private and philanthropic sector, and over €3 million re-granted to research partners to date. As part of this work, 2°ii developed the first science-based target setting and 2°C scenario analysis tool for financial portfolios, applied by over 200 financial institutions and three financial supervisory authorities to date.

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APPENDIX B: CLIMATE ACTION 100+ FOCUS COMPANIES

Company name	HQ Location	Region	Sector
Dangote Cement Plc	Nigeria	Africa	Industrials
Eskom Holdings SOC Limited	South Africa	Africa	Utilities & Power Producers
Sasol Limited	South Africa	Africa	Oil & Gas
Anhui Conch Cement	China	Asia	Industrials
ANTAM	Indonesia	Asia	Mining & Metals
Bumi Resources	Indonesia	Asia	Mining & Metals
China Petroleum & Chemical Corporation (Sinopec)	China	Asia	Oil & Gas
China Shenhua Energy	China	Asia	Mining & Metals
China Steel Corporation	Taiwan	Asia	Mining & Metals
CNOOC	China	Asia	Oil & Gas
Coal India	India	Asia	Mining & Metals
Daikin Industries, Ltd.	Japan	Asia	Industrials
Formosa Petrochemical	Taiwan	Asia	Oil & Gas
Hitachi, Ltd.	Japan	Asia	Industrials
Hon Hai Precision Industry	Taiwan	Asia	Industrials
Honda Motor Company	Japan	Asia	Transportation
JX Holdings, Inc	Japan	Asia	Oil & Gas
Korea Electric Power Corp	South Korea	Asia	Utilities & Power Producers
Nippon Steel & Sumitomo Metal Corporation	Japan	Asia	Mining & Metals
Nissan Motor Co., Ltd.	Japan	Asia	Transportation
NTPC Ltd	India	Asia	Utilities & Power Producers
Oil & Natural Gas	India	Asia	Oil & Gas
Panasonic Corporation	Japan	Asia	Industrials
PetroChina Company Limited	China	Asia	Oil & Gas
POSCO	South Korea	Asia	Mining & Metals
Power Assets Holdings Limited	China	Asia	Utilities & Power Producers
PTT	Thailand	Asia	Oil & Gas
Reliance Industries	India	Asia	Oil & Gas
Saic Motor Corporation	China	Asia	Transportation
SK Innovation Co Ltd	South Korea	Asia	Oil & Gas
Suzuki Motor Corporation	Japan	Asia	Transportation
Toray Industries, Inc.	Japan	Asia	Industrials
Toyota Motor Corporation	Japan	Asia	Transportation
United Tractor	Indonesia	Asia	Mining & Metals
Vedanta Ltd	India	Asia	Mining & Metals

Company name	HQ Location	Region	Sector
A.P. Moller - Maersk	Denmark	Europe	Transportation
Air France-KLM	France	Europe	Transportation
Airbus Group	Netherlands	Europe	Transportation
Anglo American	United Kingdom	Europe	Mining & Metals
ArcelorMittal	Luxembourg	Europe	Mining & Metals
BASF SE	Germany	Europe	Industrials
Bayer AG	Germany	Europe	Industrials
Bayerische Motoren Werke Aktiengesellschaft	Germany	Europe	Transportation
BHP Billiton	Australia	Europe	Mining & Metals
BP	United Kingdom	Europe	Oil & Gas
Centrica	United Kingdom	Europe	Utilities & Power Producers
CEZ, a.s.	Czech Republic	Europe	Utilities & Power Producers
Compagnie De Saint-Gobain S.A.	France	Europe	Industrials
CRH plc	Ireland	Europe	Industrials
Daimler AG	Germany	Europe	Transportation
Danone S.A.	France	Europe	Consumer products
E.ON SE	Germany	Europe	Utilities & Power Producers
EDF	France	Europe	Utilities & Power Producers
Enel SpA	Italy	Europe	Utilities & Power Producers
ENGIE	France	Europe	Utilities & Power Producers
Eni SpA	Italy	Europe	Oil & Gas
Fiat Chrysler Automobiles NV	Italy	Europe	Transportation
Fortum Oyj	Finland	Europe	Utilities & Power Producers
Naturgy	Spain	Europe	Utilities & Power Producers
Glencore plc	Switzerland	Europe	Mining & Metals
HeidelbergCement AG	Germany	Europe	Industrials
Iberdrola, S.A.	Spain	Europe	Utilities & Power Producers
Koninklijke Philips NV	Netherlands	Europe	Industrials
Air Liquide S.A	France	Europe	Industrials
LafargeHolcim Ltd	Switzerland	Europe	Industrials
Lukoil OAO	Russia	Europe	Oil & Gas
LyondellBasell Industries	Netherlands	Europe	Industrials

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Company name	HQ Location	Region	Sector
Nornickel	Russia	Europe	Mining & Metals
National Grid plc	United Kingdom	Europe	Utilities & Power Producers
Nestlé S.A.	Switzerland	Europe	Consumer products
OMV AG	Austria	Europe	Oil & Gas
Peugeot S.A.	France	Europe	Transportation
PGE Polska Grupa Energetyczna S.A.	Poland	Europe	Utilities & Power Producers
PJSC Gazprom	Russia	Europe	Oil & Gas
Renault S.A.	France	Europe	Transportation
Repsol	Spain	Europe	Oil & Gas
Rio Tinto	United Kingdom	Europe	Mining & Metals
Rolls-Royce Holdings plc	United Kingdom	Europe	Transportation
Rosneft Oil Company	Russia	Europe	Oil & Gas
Royal Dutch Shell	Netherlands	Europe	Oil & Gas
RWE Aktiengesellschaft	Germany	Europe	Utilities & Power Producers
Severstal' Pao	Russia	Europe	Mining & Metals
Siemens AG	Germany	Europe	Industrials
SSAB AB	Sweden	Europe	Mining & Metals
SSE plc	United Kingdom	Europe	Utilities & Power Producers
Equinor ASA	Norway	Europe	Oil & Gas
thyssenkrupp AG	Germany	Europe	Mining & Metals
Total	France	Europe	Oil & Gas
Unilever PLC	United Kingdom	Europe	Consumer products
Volkswagen AG	Germany	Europe	Transportation
Volvo	Sweden	Europe	Transportation
CEMEX S.A.B. de C.V.	Mexico	North America	Industrials
Ecopetrol Sa	Colombia	South America	Oil & Gas
Suzano Papel e Celulose	Brazil	South America	Consumer products
Petróleo Brasileiro SA - Petrobras	Brazil	South America	Oil & Gas
Vale S.A.	Brazil	South America	Mining & Metals
The AES Corporation	USA	North America	Utilities & Power Producers
American Airlines Group Inc.	USA	North America	Transportation
American Electric Power Company, Inc.	USA	North America	Utilities & Power Producers
Berkshire Hathaway Inc.	USA	North America	Other
The Boeing Company	USA	North America	Transportation
Bunge Limited	USA	North America	Consumer products
Canadian Natural Resources Limited	Canada	North America	Oil & Gas
Caterpillar Inc.	USA	North America	Industrials

Company name	HQ Location	Region	Sector
Chevron Corporation	USA	North America	Oil & Gas
The Coca-Cola Company	USA	North America	Consumer products
Colgate-Palmolive Company	USA	North America	Consumer products
ConocoPhillips	USA	North America	Oil & Gas
Cummins Inc.	USA	North America	Industrials
Delta Air Lines, Inc.	USA	North America	Transportation
Devon Energy Corporation	USA	North America	Oil & Gas
Dominion Energy, Inc.	USA	North America	Utilities & Power Producers
DuPont de Nemours, Inc.	USA	North America	Industrials
Duke Energy Corporation	USA	North America	Utilities & Power Producers
Enbridge Inc.	Canada	North America	Oil & Gas
Exelon Corporation	USA	North America	Utilities & Power Producers
Exxon Mobil Corporation	USA	North America	Oil & Gas
FirstEnergy Corp.	USA	North America	Utilities & Power Producers
Ford Motor Company	USA	North America	Transportation
General Electric Company	USA	North America	Industrials
General Motors Company	USA	North America	Transportation
Imperial Oil Limited	Canada	North America	Oil & Gas
Ingersoll-Rand Public Limited Company	USA	North America	Industrials
International Paper Company	USA	North America	Consumer products
Kinder Morgan, Inc.	USA	North America	Oil & Gas
Lockheed Martin Corporation	USA	North America	Transportation
Marathon Petroleum Corporation	USA	North America	Oil & Gas
Martin Marietta Materials, Inc.	USA	North America	Industrials
NextEra Energy, Inc.	USA	North America	Utilities & Power Producers
NRG Energy, Inc.	USA	North America	Utilities & Power Producers
Occidental Petroleum Corporation	USA	North America	Oil & Gas
PACCAR Inc.	USA	North America	Transportation
PepsiCo, Inc.	USA	North America	Consumer products
Phillips 66	USA	North America	Oil & Gas
PPL Corporation	USA	North America	Utilities & Power Producers
The Procter & Gamble Company	USA	North America	Consumer products
The Southern Company	USA	North America	Utilities & Power Producers
Southern Copper Corporation	USA	North America	Mining & Metals
Suncor Energy Inc.	Canada	North America	Oil & Gas

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Company name	HQ Location	Region	Sector
Teck Resources Limited	Canada	North America	Mining & Metals
Andeavor (acquired by Marathon Petroleum)	USA	North America	Oil & Gas
TC Energy	Canada	North America	Oil & Gas
United Airlines Holdings, Inc.	USA	North America	Transportation
United Technologies Corporation	USA	North America	Transportation
Valero Energy Corporation	USA	North America	Oil & Gas
Vistra Energy Corp.	USA	North America	Utilities & Power Producers
Walmart, Inc.	USA	North America	Consumer products
WEC Energy Group, Inc.	USA	North America	Utilities & Power Producers
Weyerhaeuser Company	USA	North America	Consumer products
Xcel Energy, Inc.	USA	North America	Utilities & Power Producers
Adelaide Brighton Ltd	Australia	Australasia	Industrials
AGL Energy Ltd	Australia	Australasia	Utilities & Power Producers
Bluescope Steel Ltd	Australia	Australasia	Mining & Metals
Boral Ltd	Australia	Australasia	Industrials
Origin Energy Ltd	Australia	Australasia	Oil & Gas
Qantas Airways Ltd	Australia	Australasia	Transportation
Santos Ltd	Australia	Australasia	Oil & Gas
South32 Ltd	Australia	Australasia	Mining & Metals
Wesfarmers Ltd	Australia	Australasia	Consumer products
Woodside Petroleum Ltd	Australia	Australasia	Oil & Gas
Woolworths Group Ltd	Australia	Australasia	Consumer products

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Organisation	HQ Location	Region	Asset Owner	Asset Manager
Aberdeen Standard Investments	United Kingdom	Europe		•
ABP	The Netherlands	Europe	•	
Acadian Asset Management	United States	North America		•
Achmea	The Netherlands	Europe	•	
Achmea Investment Management	The Netherlands	Europe		•
ACTIAM	Netherlands	Europe		•
Addenda Capital	Canada	North America		•
Aegon	The Natherlands	Europe	•	
Aegon Asset Management	Netherlands	Europe		•
Æquo - Shareholder Engagement Services	Canada	North America		
AGF Investments Inc.	Canada	North America		•
Ahold Delhaize Pensioen	Netherlands	Europe	•	
AIA Group Limited	Hong Kong SAR	Asia	•	
Aktia Bank	Finland	Europe		•
Ålandsbanken	Sweden	Europe		•
Alberta Investment Management Corporation	Canada	North America		•
Alecta	Sweden	Europe	•	
AllianceBernstein	Australia	Oceania		•
Allianz Global Investors	Germany	Europe		•
Allianz SE	Germany	Europe	•	
AMF	Sweden	Europe	•	
Amherst College	United States	North America	•	
AMP Capital	Australia	Oceania		•
Amundi	France	Europe		•
Andra AP-fonden, AP2	Sweden	Europe	•	
AP3	Sweden	Europe	•	
AP4 (Fjärde AP-fonden)	Sweden	Europe	•	
AP7	Sweden	Europe	•	
APG	Netherlands	Europe		•
Arjuna Capital	United States	North America		•
As You Sow	USA	North America		
ASABRI	Indonesia	Asia	•	
ASR Nederland N.V.	Netherlands	Europe	•	
Asset Management One Co., Ltd.	Japan	Asia		•
at	France	Europe		•
ATP	Denmark	Europe	•	
Ausbil Investment Management Limited	Australia	Oceania		•

Organisation	HQ Location	Region	Asset Owner	Asset Manager
Australian Ethical Investment	Australia	Oceania		•
AustralianSuper	Australia	Oceania	•	
Avaron Asset Management	Estonia	Europe		•
Avenir Capital	Australia	Oceania		•
Aviva Investors	United Kingdom	Europe		•
Avon Pension Fund	United Kingdom	Europe	•	
AXA Group	France	Europe	•	
AXA IM	France	Europe		•
Bailard, Inc.	United States	North America		•
Baldwin Brothers Inc	United States	North America		•
Bancolombia	Colombia	South America		•
BankInvest	Denmark	Europe		
Bank J. Safra Sarasin	Switzerland	Europe		•
BBC Pension Trust Ltd	United Kingdom	Europe	•	
Bernische Lehrerversicherungskasse, Switzerland	Switzerland	Europe	•	
BMO Global Asset Management	UK	Europe		•
BNP Paribas Asset Management	France	Europe		•
Border to Coast Pensions Partnership Ltd	UK	Europe	•	
Boston Common Asset Management	United States	North America		•
Boston Trust/Walden Asset Management	United States	North America		•
BPL Pensioen	The Netherlands	Europe	•	
Brawn Capital Limited	Hong Kong SAR	Asia		•
Breckinridge Capital Advisors	USA	North America		•
British Columbia Investment Management Corporation	Canada	North America		•
British Columbia Municipal Pension Board of Trustees	Canada	North America	•	
Brunel Pension Partnership	UK	Europe	•	
BT Financial Group	Australia	Oceania	•	
Caisse de pensions de l'Etat de Vaud (CPEV), Switzerland	Switzerland	Europe	•	
Caisse de pensions ECA-RP, Switzerland	Switzerland	Europe	•	
Caisse de Prévoyance de l'Etat de Genève (CPEG), Switzerland	Switzerland	Europe	•	
Caisse de Prévoyance des Interprètes de Conférence (CPIC), Switzerland	Switzerland	Europe	•	
Caisse des Dépôts	France	Europe	•	

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Organisation	HQ Location	Region	Asset Owner	Asset Manager
Caisse intercommunale de pensions (CIP), Switzerland	Switzerland	Europe	•	
CaixaBank Asset Management SGIIC, S.A.U.	Spain	Europe	•	
Caja Ingenieros Gestion	Spain	Europe		•
CalPERS	USA	North America	•	
CalSTRS	USA	North America	•	
Calvert	USA	North America		•
Candriam Investors Group	Belgium	Europe		•
CAP Prévoyance, Switzerland	Switzerland	Europe	•	
CareSuper	Australia	Oceania	•	
Cathay Life Insurance Co., Ltd.	Taiwan	Asia	•	
Cathay Securities Investment Trust Co., Ltd.	Taiwan	Asia		•
Cbus	Australia	Oceania	•	
CCAP Caisse Cantonale d'Assurance Populaire, Switzerland	Switzerland	Europe	•	
CCLA	UK	Europe	•	
CenterSquare Investment Management	United States	North America		•
Central Finance Board of the Methodist Church	UK	Europe		•
China Asset Management Company Co., Ltd	China	Asia		•
Christian Brothers Investment Services	USA	North America		•
Christian Super	Australia	Oceania	•	
Christopher Reynolds Foundation	USA	North America	•	
Church Comissioners for England	UK	Europe	•	
Church of England Pensions Board	UK	Europe	•	
Church of Sweden Asset Management	Sweden	Europe	•	
CIEPP - Caisse Inter-Entreprises de Prévoyance Professionnelle, Switzerland	Switzerland	Europe	•	
ClearBridge Investments	USA	North America		•
cnp assurances	France	Europe	•	
Colonial First State Global Asset Management	Australia	Oceania		•
comgest	France	Europe		•
Committee on Mission Responsibility Through Investment of the Presbyterian Church United StatesA.	United States	North America		
Connecticut Retirement Plans & Trusts	USA	North America	•	
Core Capital Management, LLC	USA	North America		•

Organisation	HQ Location	Region	Asset Owner	Asset Manager
Coutts	United Kingdom	Europe		•
CP Fonct. de Police et des Etablissements Pénitentiaires, Switzerland	Switzerland	Europe	•	
CtW Investment Group	USA	North America	•	
Dana Investment Advisors	United States	North America		•
de Pury Pictet Turrettini & Cie	Switzerland	Europe		•
Degroof Petercam Asset Management (DPAM)	Belgium	Europe		•
Deutsche Asset Management	Germany	Europe		•
Devon Funds Management Limited	New Zealand	Oceania		•
DNB Asset Management	Norway	Europe		•
Domini Impact Investments LLC	United States	North America		•
Earth Capital	United Kingdom	Europe		•
East Bay Municipal Utility District Employees Retirement System	United States	North America	•	
East Capital	Sweden	Europe		•
Ecofi Investissements	France	Europe		•
Elo Mutual Pension Insurance Company	Finland	Europe	•	
Employees' Retirement System of the State of Hawaii	USA	North America	•	
Environment Agency Pension Fund	UK	Europe	•	
ERAFP	France	Europe	•	
Erste Asset Management GmbH	Austria	Europe		•
Essex Investment Management, LLC	USA	North America		•
Etablissement Cantonal d'Assurance (ECA VAUD), Switzerland	Switzerland	Europe	•	
ete	Switzerland	Europe	•	
Ethos Foundation, Switzerland	Switzerland	Europe	•	
Everence and the Praxis Mutual Funds	USA	North America		•
EverHope Capital	USA	North America	•	
Evli Bank Plc	Finland	Europe		•
Federal Finance Gestion	France	Europe		•
FIM/S-Bank Wealth Management	Finland	Europe		•
First State Super	Australia	Oceania	•	
Folksam	Sweden	Europe	•	
Fond. métallurgie vaud. bâtiment (FMVB), Switzerland	Switzerland	Europe	•	
Fondation de prévoyance du Groupe BNP PARIBAS en Suisse, Switzerland	Switzerland	Europe	•	
Fondation Leenaards, Switzerland	Switzerland	Europe	•	
Första AP-fonden (AP1)	Sweden	Europe	•	

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Friends Fiduciary Corporation	United States	North America	•	•
FRR	France	Europe	•	
Fukoku Capital Managemet, Inc	Japan	Asia		•
GAM Investments	United Kingdom	Europe		•
Generali Group	France	Europe	•	
GES International	Sweden	Europe		
Gestion FÉRIQUE	Canada	North America	•	
GLC Asset Management Group Ltd.	Canada	North America		•
Government Pension Investment Fund (GPIF)	Japan	Asia	•	
Grantham, Mayo, Van Otterloo & Co. LLC	USA	North America		•
Greater Manchester Pension Fund	UK	Europe	•	
Green Century	USA	North America		•
Greentech Capital Advisors	United States	North America		•
Hamon Asset Management	Hong Kong SAR	Asia		•
Handelsbanken	Sweden	Europe		•
Hannon Armstrong	USA	North America	•	
Harvard University Endowment	United States	North America	•	
Hermes Equity Ownership Services	UK	Europe		
Hermes Investment Management	United Kingdom	Europe		•
HESTA	Australia	Oceania	•	
HSBC Global Asset Management	UK	Europe		•
Humanis	France	Europe	•	
Hwabao WP Fund Management Co., Ltd	China	Asia		•
IFM Investors	Australia	Oceania		•
Illinois State Treasurer's Office	United States	North America	•	
Ilmarinen Mutual Pension Insurance Company	Finland	Europe	•	
Industriens Pension	Denmark	Europe	•	
Insight Investment	UK	Europe		•
Investec Asset Management	United Kingdom	Europe		•
Ircantec	France	Europe	•	
Ireland Strategic Investment Fund	Ireland	Europe	•	
Ivey Foundation	Canada	North America	•	
Janus Henderson Investors	UK	Europe		•
JCIR	USA	North America	•	
JCP Investment Partners	Australia	Oceania		•
JLens	United States	North America	•	
Kames Capital	United Kingdom	Europe		•
KBI Global Investors	Ireland	Europe		•

Organisation	HQ Location	Region	Asset Owner	Asset Manager
Kempen	The Netherlands	Europe		•
Keva	Finland	Europe	•	
Kirkon eläkerahasto (The Church Pension Fund)	Finland	Europe	•	
KLP	Norway	Europe	•	
La Francaise Group	France	Europe		•
Lægernes pension	Denmark	Europe	•	
Länsförsäkringar AB	Sweden	Europe	•	
LAPFF	UK	Europe		
Legal & General Investment Management	UK	Europe		•
LGT Capital Partners	Switzerland	Europe		•
Local Government Super	Australia	Oceania	•	
Local Pensions Partnership (Investments Ltd)	UK	Europe		•
LocalTapiola Asset Management Ltd	Finland	Europe		•
London Pensions Fund Authority	UK	Europe	•	
Los Angeles County Employees Retirement Association (LACERA)	USA	North America	•	
Lothian Pension Fund	UK	Europe	•	
Loyola MaryMount University	United States	North America	•	
Lyxor Asset Management	France	Europe		•
M&G Investments	UK	Europe		•
MAIF	France	Europe	•	
Makalani Management Company (Pty) Limited	South Africa	Africa		•
Man Group	United Kingdom	Europe		•
Manulife Investment Management	Canada	North America		•
Maryland State Retirement and Pension System	USA	North America	•	
Meeschaert Asset Management	France	Europe		•
Mercy Investment Services	United States	North America	•	
Merian Global Investors	United Kingdom	Europe		•
Merseyside Pension Fund	UK	Europe	•	
metalworking pension fund	Italy	Europe	•	
Miller/Howard Investments, Inc.	United States	North America		•
Mirabaud Asset Management	Switzerland	Europe		•
Mirova	France	Europe		•
Mistra The Swedish Foundation for Strategic Environmental Research	Sweden	Europe	•	
Mitsubishi UFJ Trust & Banking Corporation	Japan	Asia		•
MN	Netherlands	Europe		•

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Organisation	HQ Location	Region	Asset Owner	Asset Manager
Morphic Asset Management	Australia	Oceania		•
MP Investment Management A/S	Denmark	Europe	•	
MPC Renewable Energies	Germany	Europe		•
Nathan Cummings Foundation	United States	North America	•	
Natixis Asset Management	France	Europe		•
NEI Investments	Canada	Europe		•
Nest Sammelstiftung, Switzerland	Switzerland	Europe	•	
Neuberger Berman	USA	North America		•
New Alternatives Fund	United States	North America	•	•
New York City Pension Funds	United States	North America	•	
New York State Common Retirement Fund	United States	North America	•	
New Zealand Superannuation Fund	New Zealand	Oceania	•	
Newton Investment Management	United Kingdom	Europe		•
Nikko Asset Management Co. Ltd.	Japan	Asia		•
NN Investment Partners	Netherlands	Europe		•
Nordea Asset Management	Sweden	Europe		•
North East Scotland Pension Fund	UK	Europe	•	
Northern Ireland Local Government Officers' Superannuation Committee	United Kingdom	Europe	•	
Northern Pool	UK	Europe		•
Northern Trust Asset Manaagement	United States	North America		•
Nova Scotia Pension Services Corporation	Canada	North America	•	
Nykredit	Denmark	Europe		•
NZ Funds Management	New Zealand	Oceania		•
ODDO BHF Asset Management	France	Europe		•
OFI Asset Management	France	Europe		•
Öhman	Sweden	Europe		•
Ontario Teachers' Pension Plan	Canada	North America	•	
OP Wealth Management	Finland	Europe		•
OPTrust	Canada	North America	•	
Oregon State Treasurer	United States	North America	•	
Osmosis Investment Management	UK	Europe		•
Pacific View Asset Management	USA	North America		•
Pax World Management LLC	United States	North America		•
PBU - Pension Fund of Early Childhood Teachers and Educators	Denmark	Europe	•	
Pegaso Fondo Pensione	Italy	Europe	•	
Pendal Group	Australia	Oceania		•
PenSam	Denmark	Europe	•	
Pension Protection Fund	UK	Europe	•	

Organisation	HQ Location	Region	Asset Owner	Asset Manager
PensionDanmark	Denmark	Europe	•	
Pensions Caixa 30	Spain	Europe	•	
Pensionskasse Basel-Stadt, Switzerland	Switzerland	Europe	•	
Pensionskasse Bühler AG Uzwil, Switzerland	Switzerland	Europe	•	
Pensionskasse Caritas, Switzerland	Switzerland	Europe	•	
Pensionskasse der Stadt Winterthur, Switzerland	Switzerland	Europe	•	
Pensionskasse Römisch-katholische Landeskirche des Kantons Luzern, Switzerland	Switzerland	Europe	•	
Pensionskasse SRG SSR, Switzerland	Switzerland	Europe	•	
Pensionskasse Stadt Luzern, Switzerland	Switzerland	Europe	•	
Pensionskasse Unia, Switzerland	Switzerland	Europe	•	
PFA	Denmark	Europe	•	
pgb pension services	Netherlands	Europe	•	
PGGM	Netherlands	Europe		•
Pictet Asset Management	UK	Europe		•
PIMCO	USA	North America		•
PKA	Denmark	Europe	•	
Plato Investment Management Limited	Australia	Oceania		•
PME	The Netherlands	Europe	•	
Prévoyance Santé Valais (PRESV), Switzerland	Switzerland	Europe	•	
prévoyance.ne, Switzerland	Switzerland	Europe	•	
Profelia Fondation de prévoyance, Switzerland	Switzerland	Europe	•	
Progressive Investment Management	USA	North America		•
Prosperita Stiftung für die berufliche Vorsorge, Switzerland	Switzerland	Europe	•	
Provident Fund	Austria	Europe	•	
Public Sector Pension Investment Board	Canada	North America	•	
Pyrford International Ltd	UK	Europe		•
QSuper	Australia	Oceania	•	
Rabobank Pensioenfonds	The Netherlands	Europe		•
Raiffeisen Capital Management	Austria	Europe		•
Rathbone Greenbank Investments	United Kingdom	Europe		•
Regnan - Governance Research & Engagement	Australia	Oceania		
Resona Bank, Ltd.	Japan	Asia		•
Retraites Populaires, Switzerland	Switzerland	Europe	•	

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Organisation	HQ Location	Region	Asset Owner	Asset Manager
Reynders, McVeigh Capital Management	United States	North America		•
Richmond Global Compass	United States	North America		•
Riverwater Partners	United States	North America		•
RLAM	United Kingdom	Europe		•
Robeco	Netherlands	Europe		•
RobecoSAM	Switzerland	Europe		•
Rockefeller Asset Management	USA	North America		•
Rothschild & Co Asset Management Europe	France	Europe		•
RPMI Railpen	UK	Europe	•	•
Ruffer LLP	United Kingdom	Europe		•
Sampension	Denmark	Europe	•	
San Francisco Employees' Retirement System	USA	North America	•	
Sarasin & Partners LLP	UK	Europe		•
SBI Funds Management Pvt Ltd	India	Asia		•
Schroders	UK	Europe		•
SDG Invest	Denmark	Europe		•
Seattle City Employees' Retirement System	USA	North America	•	
SEB Investment Management	Sweden	Europe		•
SEIU Master Trust	USA	North America	•	
Seventh Generation Interfaith Inc.	United States	North America		
Shareholder Association for Research & Education	Canada	North America		
Sierra Club Foundation	USA	North America	•	
Sisters of St. Dominic of Caldwell	United States	North America	•	
Skandia	Sweden	Europe	•	•
Skoll Foundation	USA	North America	•	
Solaris Investment Management	Australia	Oceania		•
Sompo Japan Nipponkoa Asset Management	Japan	Asia		•
South Yorkshire Pensions Authority	UK	Europe	•	
Sp-Fund Management Company Ltd	United States	North America		•
Sparinvest	Luxembourg	Europe		•
SPF Beheer	Netherlands	Europe		•
St. Galler Pensionskasse, Switzerland	Switzerland	Europe	•	
Stance Capital	United States	Europe		•
Statewide Super	Australia	Oceania	•	
Stichting Pensioenfonds Openbaar Vervoer (SPOV)	Netherlands	Europe	•	
Stichting Spoorwegpensioenfonds	Netherlands	Europe	•	
Stiftung Abendrot, Switzerland	Switzerland	Europe	•	

Organisation	HQ Location	Region	Asset Owner	Asset Manager
Storebrand Asset Management	Norway	Europe	•	•
Strathclyde Pension Fund	UK	Europe	•	
Sumitomo Mitsui Trust Bank	Japan	Asia		•
Sustainable Insight Capital Management	US	North America		•
SVVK-ASIR	Switzerland	Europe	•	
Swedbank Robur	Sweden	Europe		•
Swell Asset Management	Australia	Oceania		•
Sycomore	France	Europe		•
TD Asset Management	Canada	North America		•
Terra Alpha Investments	USA	North America		•
Terre des Hommes, Switzerland	Switzerland	Europe	•	
The Board of Pensions of the Presbyterian Church (United StatesA.)	United StatesA.	North America	•	
The Dai-ichi Life Insurance Company Limited	Japan	Asia	•	
The Joseph Rowntree Charitable Trust	United Kingdom	Europe	•	
The McKnight Foundation	United States	North America	•	
The Representative Church Body of the Church of Ireland	Ireland	Europe	•	
The Royal Bank of Scotland Group Pension Fund	United Kingdom	Europe	•	
The Sustainability Group of Loring, Wolcott & Coolidge	USA	North America		•
TPT Retirement Solutions	UK	Europe	•	
Transport for London	United Kingdom	Europe	•	
Trillium Asset Management, LLC	USA	North America		•
Trusteam Finance	France	Europe		•
Tundra Fonder	Sweden	Europe		•
UBS Asset Management	Global, inc Switzerland, UK, USA	Europe		•
Unigestion	Switzerland	Europe		•
Union Investment	Germany	Europe		•
UniSuper	Australia	Oceania	•	
Unitarian Universalist Association	United States	North America	•	
United Church Funds	United States	North America	•	
University of California Office of the Chief Investment Officer	United States	North America	•	
University of Rochester	United States	North America	•	
University of Toronto Asset Management Corporation on behalf of the University of Toronto	Canada	North America	•	

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UNJSPF	USA	North America	•	
USS	UK	Europe	•	
Vancity Investment Management Ltd.	Canada	North America		•
Varma Mutual Pension Insurance Company	Finland	Europe	•	
Veris Wealth Partners	USA	North America		
Veritas Pension Insurance Co	Finland	Europe	•	
VERKA VK Kirchliche Vorsorge VVaG	Germany	Europe	•	
Vermont Pension Investment Committee	USA	North America	•	
Vermont State Treasurer's Office	USA	North America	•	
Vert Asset Management	United States	North America		•
VicSuper	Australia	Oceania	•	
VidaCaixa	Spain	Europe	•	
Vision Super Pty Ltd	Australia	Oceania	•	
Walter Scott & Partners Limited	UK	Europe		•
Washington State Investment Board	USA	North America	•	
Water Asset Management	USA	North America		•
WaveCrest Wealth Management	USA	North America		•
WaveStone Capital	Australia	Oceania		•
Wells Fargo Asset Management	United States	North America		•
Wespath Investment Management	USA	North America	•	
West Midlands Pension Fund	UK	Europe	•	•
West Yorkshire Pension Fund	United Kingdom	Europe	•	
WHEB Asset Management	United Kingdom	Europe		•
World Resources Institute	United States	North America	•	
Zevin Asset Management	USA	North America		•

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GLOBAL PARTNERS

Asia Investor Group on Climate Change (AIGCC) is an initiative to create awareness among Asia's asset owners and financial institutions about the risks and opportunities associated with climate change and low carbon investing. AIGCC provides capacity for investors to share best practices and to collaborate on investment activity, credit analysis, risk management, engagement, and policy. AIGCC represents the Asian investor perspective in the evolving global discussions on climate change and the transition to a greener economy. AIGCC coordinates Climate Action 100+ in Asia, collaborating with the PRI offices in Beijing and Tokyo.

Ceres is a sustainability non-profit organisation working with the most influential investors and companies in North America to build leadership and drive solutions throughout the economy. Through powerful networks and advocacy, Ceres tackles the world's biggest sustainability challenges, including climate change, water scarcity and pollution, and human rights abuses. The Ceres Investor Network on Climate Risk and Sustainability comprises more than 170 institutional investors, collectively managing more than $26 trillion in assets, advancing leading investment practices, corporate engagement strategies and policy solutions to build an equitable, sustainable global economy and planet. Ceres coordinates Climate Action 100+ in Canada and the United States.

The **Investor Group on Climate Change (IGCC)** is a collaboration of Australian and New Zealand investors focusing on the impact that climate change has on the financial value of investments. The IGCC represents institutional investors, with total funds under management of over $2 trillion, and others in the investment community interested in the impact of climate change on investments. IGCC collaborate with similar investor organisations on climate change worldwide through the Global Investor Coalition on Climate Change, Climate Action 100+ and the Investor Agenda. IGCC coordinates Climate Action 100+ engagement in Australia and New Zealand.

The Institutional Investors Group on Climate Change (IIGCC) is the European membership body for investor collaboration on climate change and the voice of investors taking action for a prosperous, low carbon future. IIGCC has more than 170 members, mainly pension funds and asset managers, across 13 countries, with over €23 trillion in assets under management IIGCC's mission is to mobilise capital for the low carbon transition by working with business, policymakers and fellow investors. IIGCC works to support and help define the public policies, investment practices and corporate behaviours that address the long-term risks and opportunities associated with climate change. Members consider it a fiduciary duty to ensure stranded asset risk or other losses from climate change are minimised and that opportunities presented by the transition to a low carbon economy – such as renewable energy, new technologies and energy efficiency – are maximised. IIGCC coordinates Climate Action 100+ in Europe.

The **Principles for Responsible Investment (PRI)** is an investor initiative in partnership with the UN Finance Initiative and UN Global Compact. The PRI is the world's leading proponent of responsible investment. It works to understand the investment implications of environmental, social and governance (ESG) factors and to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions. The PRI acts in the long-term interests of its signatories, of the financial markets and economies in which they operate and ultimately of the environment and society as a whole. PRI is responsible for managing a number of Climate Action 100+ engagements in North America, Asia, and Europe and is developing a strategy for Latin America and Africa.

Climate Action 100+
Global Investors Driving Business Transition