CDP Climate Change Report 2016

CEE edition

Written on behalf of 827 investors with US$100 trillion in assets

Scoring Partner:

Report Writer:

CDP 2016 climate change scoring partners

CDP works with a number of partners to deliver the scores for all our responding companies. These partners are listed below along with the geographical regions in which they provide the scoring. All scoring partners complete training to ensure the methodology and guidance are applied correctly, and the scoring results go through a comprehensive quality assurance process before being published. In some regions there is more than one scoring partner and the responsibilities are shared between multiple partners.

In 2016, CDP worked with RepRisk, a business intelligence provider specializing in ESG risks (www.reprisk.com), who provided additional risk research and data into the proposed A-List companies to assess whether they were severe reputational issues that could put their leadership status into question.

FORMERLY FIRSTCARBON SOLUTIONS
ADEC INNOVATIONS
ESG SOLUTIONS

Australia & New Zealand, Benelux, Canada, DACH, Hong Kong, India, Ireland, Italy, Japan, Nordic, Russia, SE Asia, South Africa, Taiwan, UK, USA.

Aligned Incentives

North America*

CONSUS CARBON ENGINEERING

Central and Eastern Europe (CEE)

CQC 中国质量认证中心 CHINA QUALITY CERTIFICATION CENTRE

China

DEKRA

France

Deloitte.

Latin America, Turkey

EY

Japan, Korea

gestão origami

Brazil

KOSIF Korea Sustainability Investing Forum

Korea

Lloyd's Register LRQA

Japan

pwc

Iberia (Spain & Portugal)

REPRISK ESG Business Intelligence

All regions

SGS

Japan

*Aligned Incentives are retained as an alternative scoring partner in the event of a conflict of interest.

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Paul Simpson
Chief Executive Officer, CDP

Measurement and transparency are where meaningful climate action starts, and as governments work to implement the Paris Agreement, CDP will be shining a spotlight on progress and driving a race to net-zero emissions.

The Paris Agreement – unprecedented in speed of ratification – and the adoption of the Sustainable Development Goals (SDGs) marked the start of a new strategy for the world, with a clear message for businesses: the low-carbon revolution is upon us. By agreeing to limit global temperature rises to well below 2°C, governments have signaled an end to the fossil fuel era and committed to transforming the global economy.

The choice facing companies and investors has never been clearer: seize the opportunities of a carbon-constrained world and lead the way in shaping our transition to a sustainable economy; or continue business as usual and face serious risks – from regulation, shifts in technology, changing consumer expectations and climate change itself. CDP's data shows that hundreds of companies are already preparing for the momentous changes ahead, but many are yet to grapple with this new reality.

Investors are poised to capitalize on the opportunities that await. Some of the biggest index providers in the world, including S&P and STOXX, have created low-carbon indices to help investors direct their money towards the sustainable companies of the future. Meanwhile, New York State's pension fund – the third largest in the United States – has built a US$2 billion low-carbon index in partnership with Goldman Sachs, using CDP data.

With trillions of dollars' worth of assets set to be at risk from climate change, investors are more focused than ever on winners and losers in the low-carbon transition. Information is fundamental to their decisions. Through CDP, more than 800 institutional investors with assets of over US$100 trillion are asking companies to disclose how they are managing the risks posed by climate change. Their demands don't stop there: international coalitions of investors with billions of dollars under management are requesting greater transparency on climate risk at the AGMs of the world's biggest polluters.

The glass is already more than half full on environmental disclosure. Over fifteen years ago, when we started CDP, climate disclosure was nonexistent in capital markets. Since then our annual request has helped bring disclosure into the mainstream. Today some 5,800 companies, representing close to 60% of global market capitalization, disclose through CDP.

Now, we are poised to fill the glass. We welcome the FSB's new Task Force on Climate-related Financial Disclosures, building on CDP's work and preparing the way for mandatory climate-related disclosure across all G20 nations. We look forward to integrating the Task Force recommendations into our tried and tested disclosure system and working together to take disclosure to the next level.

We know that business is key to enabling the global economy to achieve – and exceed – its climate goals. This report sets the baseline for corporate climate action post-Paris. In future reports, we'll be tracking progress against this baseline to see how business is delivering on the low-carbon transition and enabling investors to keep score. Already, some leading companies in our sample – including some of the highest emitters – are showing it's possible to reduce emissions while growing revenue, and we expect to see this number multiply in future years.

Measurement and transparency are where meaningful climate action starts, and as governments work to implement the Paris Agreement, CDP will be shining a spotlight on progress and driving a race to net-zero emissions.

The Paris Agreement and the SDGs are the new compass for business. Companies across all sectors now have the chance to create this new economy and secure their future in doing so. High-quality information will signpost the way to this future for companies, investors and governments – never has there been a greater need for it.

Taking action after COP21
Rafal Hummel, Executive Director, EY Poland

With the EU directive 2014/95 coming into force soon, larger publically listed companies in Central and Eastern Europe should already have started to work on the nonfinancial data reporting process. While getting ready to do it, many of these entities will analyze areas they have not focused on in the past. I am sure that such analysis will open their eyes to new risks, but I would also hope that the process identifies real opportunities related to climate change that are of strategic value to the business.

A recent EY survey found that more than half of respondents believe that carbon pricing is the most effective way to cut carbon emissions. Nearly half (48%) say that their company is in favor of carbon pricing, with marginal 7% of the companies opposing. According to CDP's carbon pricing report, 385 European companies have already put an internal price on carbon or are planning to do so. Clearly, a support for the carbon pricing is on the rise. The World Bank Climate Change Group reports that 39 nations and 23 cities, states or regions already use carbon price and, based on the same study, these nations and regions account for 12% of annual global GHG emissions.

Late 2015 and 2016 witnessed an important step forward in taking action on climate change. The Paris Agreement finally provided the policy signals the private sector has been asking for, to help accelerate the global transition to the low-carbon economy. Although its guidelines and targets put us on a sustainable growth path, delivering on the promises makes it largely in hands of the market. Businesses will play a major role in success of the agreement adoption as it requires a significant change in energy production, strategies and operating processes over the decades to come.

The need for greater transparency is constantly increasing, as three out of four investors use climate-related risks and opportunities being reported by companies to underpin their financial decisions. Now, that governments have committed to impose additional and stricter requirements, companies needing to comply with it anyway should turn the duty into a tool helping to differentiate themselves against competitors. **The businesses will only be effective in decarbonizing the economy if actions against climate change become embedded in business-as-usual.** Further, the extensive use of information being disclosed by companies is only possible if it is consistently presented, reliable and comparable across sectors.

Non-financial reporting should have a strategic value to the business. Strategic, as environmental as well as social or employees-related issues may bring actual risk to the entity's business. The way and the extent to which such an entity is able to mitigate risks and communicate its strategy to the market will determine success or failure with all financial results. Investing in external verification of non-financial reports may significantly contribute to building reputation in the market, making the company's performance assessment easier and more reliable mainly through increased credibility for shareholders, suppliers and customers. Entities reporting non-financial data steadily attract long-term capital, as they provide investors with broader information to evaluate their future potential.

With all the enthusiasm after Paris COP21, we are still not satisfied with the response rate from the CDP surveyed companies in Central and Eastern Europe. Despite the relatively low number of companies reporting to CDP in 2016, some positive signs can be found in the attached report Let's let 2017 – a first year after the EU directive 2014/95 coming into force – bring strengthening sustainability trends to CEE.

Closing the gap in Non-Financial Reporting

Steven Tebbe, Managing Director Europe, CDP

Non-financial reporting has come a long way over the last decade, from a dog-and-pony-show to a mainstream requirement for financial markets to fully assess corporations.

Disclosure by investors on environmental matters, such as carbon foot-printing, will help in the global 2 degrees goal and the transition to a low-carbon economy.

Peter de Proft,
Director General, EFAMA (European Fund and Asset Management Association)

Investors despise being kept in the dark. They worry about the issues they don't see or understand. Disclosure of Environmental, Social and Governance (ESG) information is an essential tool for investors to holistically evaluate risks and opportunities, while allowing companies to benchmark their performance against peers. Ultimately if companies want to woo investors and reduce their cost of capital, they need to be good at reporting.

In an attempt to correct the world's largest market failure, European policymakers created the first, legally-binding directive requiring companies across Europe to report ESG data as of this year. The so-called Non-Financial Reporting Directive (NFRD) recognizes the value of non-financial reporting for catalysing our transition to a low-carbon economy.

This Directive - while far from perfect - is an important step in the right direction. The NFRD would have been the opportunity to create a fully harmonized, integrated and light-touch corporate reporting system across Europe, thus enabling investors (and any other stakeholder) to compare companies across Europe on a level-playing field. In the short term however, the Directive runs the risk of leading to 28 different and possibly weak national regulations. Imagine playing the UEFA Euro Championship with every team largely making up their own rules.

Why would the Directive enable "weak" ESG reporting? The Directive offers ambiguous descriptions that give EU member states and companies much freedom to shape reported data compliance. In addition, information disclosure across the supply chain - key to addressing environmental and social issues - is not specified clearly and target-setting requirements are missing. Last but not least, the scope of the companies addressed by the legislation is too small in most countries. In Germany for example, it is likely that only 300 companies will be disclosing, while there should be scope for about 11.000 companies, considering their size and impact on our environment and society.

Fortunately, the NFR Directive will be revised in 2018. Now is therefore the opportunity for the European Commission to design a strong, consistent, EU-wide policy that builds on the expertise of successful practitioners and market-based models. Under the stewardship of the Financial Stability Board (FSB), a Task-Force on Climate-related Financial Disclosure (TCFD) is currently drafting a blue print for the G20 countries on consistent, climate-related financial risk disclosures. Those recommendations will be made public before the end of this year and build on CDP's work and expertise. We salute the leadership of the Task-Force and the political impulse this will give to the low-carbon transition in the world's major economies.

Less visible but just as important is another milestone currently underway in France. Since the United Nations COP21 Paris Agreement of 2015 requires "the alignment of financial flows with climate goals", existing, voluntary, investor climate disclosure should become mandatory. Requiring investors to align environmental criteria, climate change-related risks and scientific decarbonisation targets with their investment strategies will massively redirect capital towards the low-carbon economy that is essential for remaining safely below a 2-degree Celsius warming.

Many CDP signatories are ahead of the curve. Some of our avant-garde investors support voluntary initiatives such as the Portfolio Decarbonization Coalition, co-founded by CDP, and the Montreal Pledge. BlackRock, the world's largest asset manager, called on policy makers to make non-financial reporting a requirement for investment analysis and stop conflicting fiduciary duties. While over 800 institutional investors with US$ 100 trillion assets under management keep calling for more thorough and comparable environmental corporate data through CDP, nearly 130 already walk-the-talk by applying climate disclosure to their own portfolios.

In anticipation of this development, policy makers in France have passed Article 173 into law, making climate reporting mandatory for institutional investors such as asset managers, insurance companies, pension and social security funds.

With about a third of the world's assets under management residing in Europe, the EU as a whole must follow France's leadership in closing the reporting gap. Triggering massive capital reallocation towards the low-carbon economy will enable the safe and liveable future we all want.

Forests & Water

CDP has started the Water and Forests programs to motivate companies to disclose and reduce their environmental impacts and strife for environmental stewardship. The data CDP collects helps to reduce risk, capitalize on opportunities and drive action towards protecting the world's Natural Capital.

81% of European companies reporting to CDP's forest program in 2016 have commitments to address deforestation yet only **42%** stipulate zero or zero net deforestation and forests degradation within a 2020 timeframe. Read the 2016 Global Forests Report (released in early December) to see how companies are translating these into meaningful actions.

Forests

Deforestation and forest degradation account for approximately 10-15% of the world's greenhouse gas emissions. Addressing deforestation is therefore critical for meeting international ambitions to prevent dangerous climate change.

In fact, the most immediate and effective mechanism for mitigating climate impacts could come through curbing deforestation, according to the Stern Review[1].

Global demand for agricultural commodities is the primary driver of deforestation, as land is cleared to produce soy, palm oil and cattle products. Alongside timber and pulp, these commodities are the building blocks of millions of products traded globally. These in turn are wealth generators which feature in the supply chains of countless companies across sectors.

Water

Water plays a critical role to achieve the climate neutral ambitions set by the Paris Agreement.

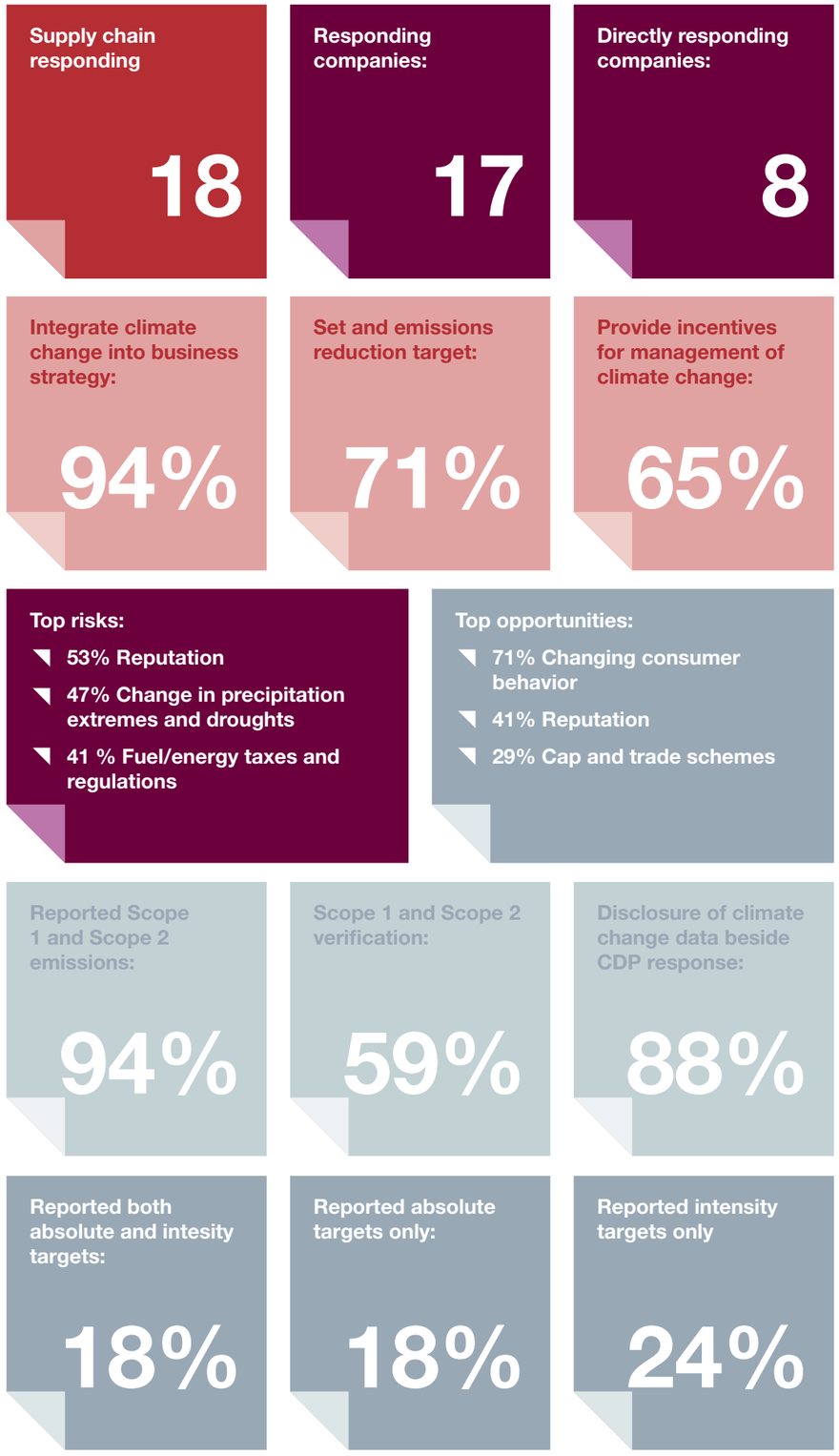
A large-scale shift in energy generation is key to reducing emissions. However, several low carbon technologies require a stable supply of good quality water, such as hydroelectric power, nuclear power and power plants fitted with Carbon Capture and Storage (CCS) equipment. Changes in water availability are already negatively impacting companies operating in countries heavily dependent on hydroelectricity such as Brazil. For example, French utilities ENGIE reported that financial impacts, associated with ongoing droughts in Brazil, cost their organization approximately US$223 million, almost 3% of operating income in 2014.

Worsening water security can severely undermine businesses ability to transition to a low carbon future. Leading companies recognize that corporate water stewardship is necessary for both business resilience and decarbonisation efforts.

Encouragingly, companies are already reporting that improved water management can lead to emission reductions, such as L'Oreal, Mitsubishi, and Mars. If given proper attention, water security can be transformed from a limiting to an enhancing factor for delivering on commitments to tackle climate change.

In 2015, more than a quarter of reporting companies identified opportunities to reduce emissions through improved water management. Read the 2016 global water report (released 15th Nov) to see how companies are improving water management to realize greater emissions reductions.

1 Stern review: The Economics of Climate Change, Chapter 25 Reversing Emissions from Land Use Change http://webarchive.nationalarchives.gov.uk/+/http:/www.hm-treasury.gov.uk/media/C7F/7E/ch_25_reversing_emissions.pdf



Executive Summary

“There is only one issue that will define the contours of this century more dramatically than any other, and that is the urgent threat of changing climate” is how Barack Obama described the extent and importance of the world’s greatest risk.

Climate change is no longer a problem that only future generations will face. It is happening here and now and its effects are already observed across the globe. The shifting weather patterns and the frequency of extreme climate events will only grow more severe, however the magnitude of their impact is still uncertain. With its environmental, economic, social and political repercussions climate change poses a fundamental threat to the way the societies, economies and markets will behave in the coming decades. The need to assess and mitigate inevitable climate risks and its potential implications is therefore imperative for future day-to-day business operations.

Concerns over climate change are a global issue, but addressing the risks it imposes cannot be solely dealt with at government level and requires joint action from all stakeholders. Companies must take responsibility for their overall carbon footprint, as in the long-term it will put significant pressure on consumer behavior, reputation, the security of supply chains, asset value and the continuity of business operations. Taking a proactive approach in managing the climate change impact not only relates to facing risks, but also recognizing its opportunities. Forward-thinking companies reevaluate their business models and integrate climate adaptation into their core strategic planning process, what positively contributes to enhancing their operational efficiency and transparency.

Global Risks Report 2016 –
Impact of climate change the top risk for years to come

The World Economic Forum’s Global Risks Report 2016 completes more than a decade of highlighting the most significant long-term risks worldwide, putting forward actionable solutions and calling for joint collaboration in strengthening resilience.

In 2016 almost 750 experts and decision-makers, drawn from business, academia, civil society and the public sector, assessed 29 separate global risks for both impact and likelihood over a 10-year time horizon. The risk with the greatest potential impact in 2016 was found to be a failure of climate change mitigation and adaptation. This is the first time since the report was published in 2006 that an environmental risk has topped the ranking, ahead of weapons of mass destruction and water crises. The interconnectedness of climate change risk with other environmental, social and economic impacts makes it the greatest threat for businesses.

The report leads to the conclusion that most industries seem to be aware that climate change is likely to affect their future, but are not yet planning for it with any consistency or depth.

CDP’s aim is to help businesses and investors better understand that fighting climate change is vital for a sustainable economy. Improving corporate awareness through measurement and disclosure is essential for the effective management of carbon emissions and corporate exposure to environmental risks. Climate change reporting is recognized by a growing number of investors globally as an enormous business opportunity and gives valuable insights into a company’s performance and value creation potential. CDP with its comprehensive environmental data collection remains a key source of information for 827 institutional investors worldwide, that represent over $ 100 trillion in assets. This year on their behalf CDP has requested the world’s largest companies to report their climate strategies, greenhouse gas emissions as well as energy use. Some 5800 companies, representing close to 60% of the world’s market capitalization, have decided to respond to the questionnaire and link together to make better-informed decisions on climate action, as well as drive systemic change in market behavior.

In the Central and Eastern European Region, the 100 largest companies listed on the Stock Exchanges of Warsaw, Prague and Budapest as well as the Nasdaq Baltic Market have been asked to disclose their climate change related risks and opportunities, policies, strategies, emissions data and reduction targets. The response rate recorded in this area was the same as the year before with only 17 companies reporting to CDP out of which 9 are responding via their parent companies. This corresponds to a market capitalization of 33% and indicates that CEE companies still lag behind their European and global peers. The constant, low number of companies willing to participate in the survey may suggest that disclosing environmental data is still an underestimated element of communication with stakeholders and reputation building within the region. Raising awareness in this area is therefore crucial, as entities which persist in treating climate change issues solely as unnecessary cost and do not take steps towards them, will risk the greatest consequences.

Company	Country	Score	Consecutive years reporting to CDP
Boryszew MAFLOW	Poland	D	6
Budimex S.A	Poland	C-	4
CEZ	Czech Republic	D-	1
ENERGA SA	Poland	D	4
Kernel Holding	Poland	D	2
Magyar Telekom Nyrt.	Hungary	C	7
MOL Nyrt.	Hungary	B	7
Synthos S.A.	Poland	C-	1
Bank Millennium S.A.	Poland	SA	4
Bank Pekao S.A.	Poland	SA	2
Bank Zachodni WBK S.A.	Poland	SA	5
ING Bank Slaski S.A.	Poland	SA	5
Komerční banka, a.s.	Czech Republic	SA	7
Orange Polska SA	Poland	SA	2
Orbis S.A.	Poland	SA	1
Philip Morris CR AS	Czech Republic	SA	7
TEO LT AB	Lithuania	SA	2

Whilst the interest of the larger local firms in CEE in reporting to CDP is limited, governments are increasingly shifting towards taking action against climate change and tightening up the regulatory framework. Latest policy changes, such as the Paris Agreement, will cut emissions significantly and reshape the global energy sector and every other industry, which operations rely on energy. In the first place these regulations will affect businesses through strengthened disclosure requirements and growing pressure on transparency from stakeholders. Such rules should encourage firms to raise the importance of climate change on the corporate agenda, as over time the regulations will only become stricter and those who take responsibility for their overall carbon impact will benefit from accelerated operational efficiency and reduced costs.

Overview Central and Eastern Europe

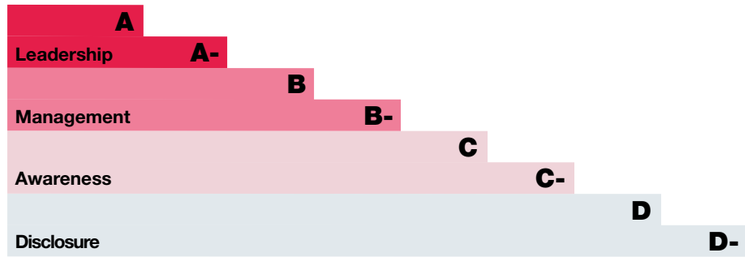
CDP has been engaged in the Central and Eastern Europe region for seven years now, but CEE-based companies still neither feel the pressure from investors nor from the clients to response to CDP's requests. The willingness to participate in the reporting initiative remains at the same unsuccessful level as 2015. Out of the 100 largest listed companies in Poland, Hungary, the Czech Republic and the Baltic States only eight reported directly to CDP this year and nine reported through parent companies. This shows that the awareness in this region remains on a very low level and businesses still do not recognize the links between climate change risks and other major trends that impact their operational activity. On the other hand, part of the reason for the lack of initiative lies also on the side of investors themselves, as their interest in non-financial reporting does not seem to be as visible in CEE as it is in the Western European countries, Australia or Americas.

Companies listed on the Warsaw Stock exchange represent 58% of the CEE100 2016 sample what reflects a strong contribution of Poland to the CEE economy. Compared to the other countries in the region, the number of Polish companies disclosing on climate through CDP remains the highest - five Polish entities, representing a response rate of 9%, decided to answer directly in 2016. In Hungary only two companies out of 10 requested have responded to the questionnaire (yet resulting in the highest regional response rate of 20%), while in Czech Republic for the first time there was one company out of nine questioned submitting their answer directly.

In 2016 every responding company was scored by CDP's independent scoring partners and for the first time rewarded a single letter score, representing the company's progress to leadership.

Communicating progress

Central to CDP's mission is communicating the progress companies have made in addressing environmental issues, and highlighting where risks may be unmanaged. In order to do so in a more intuitive way, CDP has adopted a streamlined approach to presenting scores in 2016. This new way to present scores measures a company's progress towards leadership using a 4 step approach: Disclosure which measures the completeness of the company's response; Awareness considers the extent to which the company has assessed environmental issues, risks and impacts in relation to its business; Management which is a measure of the extent to which the company has implemented actions, policies and strategies to address environmental issues; and Leadership which looks for particular steps a company has taken which represent best practice in the field of environmental management.



Leadership	75-100%	A
	0-74%	A-
Management	40-74%	B
	0-39%	B-
Awareness	40-74%	C
	0-39%	C-
Disclosure	40-74%	D
	0-39%	D-

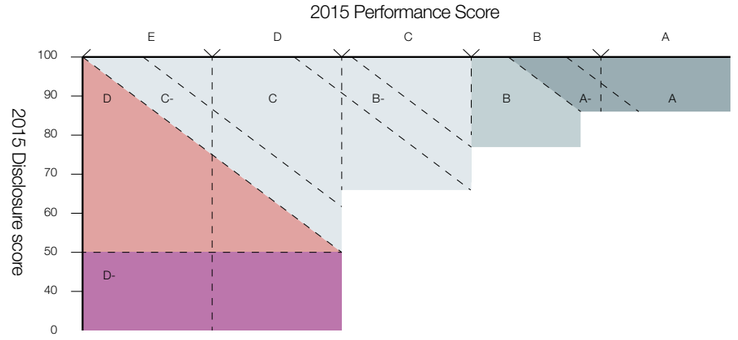
F: Failure to provide sufficient information to CDP be evaluated for Climate Change [1]

1 Not all companies requested to respond to CDP do so. Companies who are requested to disclose their data and fail to do so, or fail to provide sufficient information to CDP to be evaluated will receive an F. An F does not indicate a failure in environmental stewardship.

The scoring methodology clearly outlines how many points are allocated for each question and at the end of scoring, the number of points a company has been awarded per level is divided by the maximum number that could have been awarded. The fraction is then converted to a percentage by multiplying by 100 and rounded to the nearest whole number. A minimum score of 75%, and/or the presence of a minimum number of indicators on one level will be required in order to be assessed on the next level. If the minimum score threshold is not achieved, the company will not be scored on the next level.

The final letter grade is awarded based on the score obtained in the highest achieved level. For example, Company XYZ achieved 88% in Disclosure level, 76% in Awareness and 65% in Management will receive a B. If a company obtains less than 40% in its highest achieved level, its letter score will have a minus. For example, Company 123 achieved 76% in Disclosure level and 38% in Awareness level resulting in a C-. However, a company must achieve over 75% in Leadership to be eligible for an A and thus be part of the A List, which represents the highest scoring companies. In order to be part of the A-list a company must score 75% in Leadership, not report any significant exclusions in emissions and have at least 70% of its scope 1 and scope 2 emissions verified by a third party verifier using one of the accepted verification standards as outlined in the scoring methodology.

Public scores are available in CDP reports, through Bloomberg terminals, Google Finance and Deutsche Boerse's website. CDP operates a strict conflict of interest policy with regards to scoring and this can be viewed at https://www.cdp.net/Documents/Guidance/2016/CDP-2016-Conflict-of-Interest-Policy.pdf



Comparing scores from previous years.

It is important to note that the 2016 scoring approach is fundamentally different from 2015, and different information is requested, so 2015 and 2016 scores are not directly comparable. However we have developed a visual representation which provides some indication on how 2015 scores might translate into 2016 scores. To use this table a company can place its score in the table and see in which range it falls into in the current scoring levels. For more detailed instructions please refer to our webinar: https://vimeo.com/162087170 .

Executive summary from CDP's global climate change report

The challenge of climate change and how to address it is now firmly on the global agenda. The Paris Agreement has been ratified at unprecedented speed by the international community, including some of the world's biggest carbon emitters, such as the US, China, India, the EU and Brazil, and will enter into force in November.

This historic agreement, with defined goals to limit climate change and clear pathways for achieving its goals, marks a step-change in the transition to a low-carbon world.

In the Paris Agreement, emissions reductions are talked about at the country level, and national governments will lead with policy changes and regulation. But companies can move much faster than governments, and they have an opportunity to demonstrate their leadership, agility and creativity in curbing their own substantial emissions. Many companies had already realised the need for action before Paris, and they played an important role in making that summit a success. Others, however, are yet to come on board.

The first in an annual series, the report establishes the baseline for corporate action on climate change. In future reports, CDP will track companies' progress on reducing greenhouse gas emissions in line with the goals of the Paris Agreement against this benchmark.

The report presents analysis on corporate climate action including emissions reductions, the adoption of targets based on the most up-to-date climate science ("science based targets"), use of internal carbon prices, and the uptake of renewable energy.

The benchmark established in this first report includes a number of companies failing to engage even with the critical first step of disclosure. Of close to 2,000 companies in this global tracking sample, only just over a thousand responded with data within the deadline. We hope the remaining 700 odd companies will start to engage during the course of the next five years.

The 1,089 companies that provided the data for the global report will be tracked over the next five years to see how they are performing. Between them these companies account for 12 per cent of global greenhouse gas emissions, and 85 per cent of them have already set targets to reduce their emissions.

Figure 1: Global company tracking sample by sector. The total number of companies in each sector is presented in parentheses.

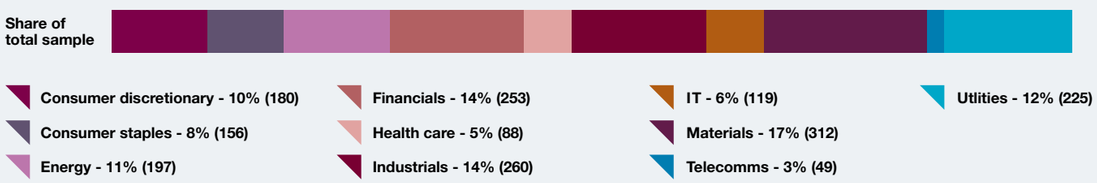


Figure 2: Global company tracking sample by region. The total number of companies is presented in parentheses.

Figure 3: Companies responded and not-responded by sector. The total number of companies in each sector is presented in parentheses.

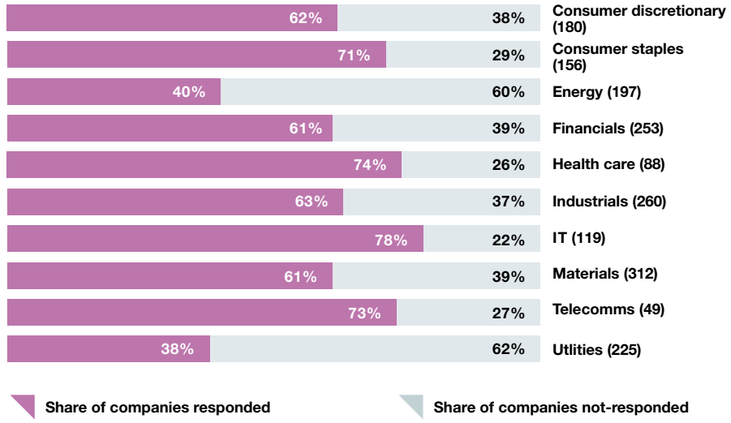
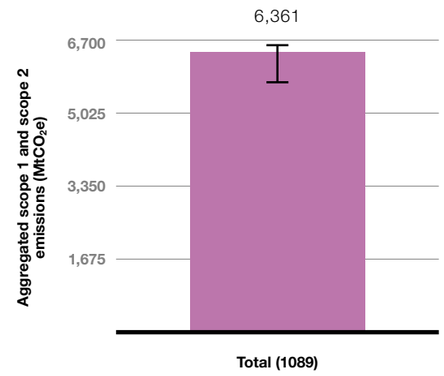


Figure 4: Aggregated scope 1 and scope 2 emissions for total sample. The total number of companies responded is presented in parentheses.



Visibility on the road

Although companies and governments are starting to realise the benefits of the low-carbon transition, the need for a complete economic shift can make it hard for individual companies to start the process of change. A shift in thinking is also needed, to see the transition as an opportunity, rather than a restriction.

In order to achieve this success, however, companies need to measure their emissions, then work out how to reduce them.

Given that only 62 per cent of companies contacted by CDP for the report were able to provide data on their own emissions, many businesses have yet to grasp the importance of this challenge. However, the number disclosing is increasing, and the Paris Agreement should provide a greater incentive to engage.

Business gearing up to go low-carbon, but targets lack long-term vision

Eighty-five per cent of companies that provided data have already set targets (comprising absolute and/or intensity targets) to reduce their greenhouse gas emissions. Setting targets is not enough, however, without realistic plans for meeting them. Even meeting those targets might not be enough if the targets themselves are inadequate.

There has been significant improvement in recent years in the numbers of companies setting targets for emissions reductions, but these targets are in many cases unambitious in their time horizon. While 55 per cent of companies have targets for 2020 and beyond, just 14 per cent set goals for 2030 or beyond, a situation that must change to achieve a transition to well-below 2°C.

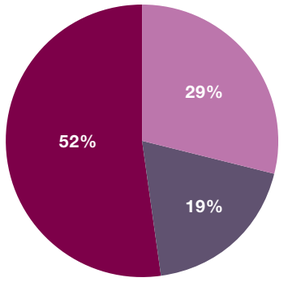
The headline figures from this report mask wide variance in performance both at company level and at sector level. Perhaps inevitably, the energy sector has a lower share of companies with emissions reduction targets, in particular for 2020 and beyond. This should not surprise us, because fossil fuel companies must undergo a major transition to mitigate climate change and are in general not ready to face up to this.

Given that this data is mostly based on calendar year 2015, and so predates the Paris Agreement, we may reasonably hope to see a jump in longer term targets in the next report, which will be based on data generated after the Paris Agreement.

Companies wishing to ensure they are taking meaningful action should set science-based targets; this report and its successors will monitor how many companies are setting targets in line with the latest climate science.

From the sample, 94 have publicly committed to science-based greenhouse gas reduction targets via the Science Based Targets Initiative. Eighty-five of those companies submitted a target to the initiative for official check, and 15 companies have passed the initiative's official check.

Figure 5: Share of companies setting an internal price of carbon



Company targets achieving just one quarter of the emissions reductions required by science; Paris Agreement expected to help close that gap

As well as recording them, we analyse the potential impact of the existing targets to see if they are compatible with the objective of limiting global warming to well-below 2°C.

We found that if the companies in the sample were to achieve their current targets, they could realise 1Gt CO_2e (1,000 MtCO_2e) of reductions by 2030. This is about one quarter of the 4GtCO_2e (4,145 MtCO_2e) of reductions that this group of companies would need to achieve in order to be in line with a 2°C-compatible pathway, leaving a gap of at least 3GtCO_2e (3,145 MtCO_2e) between where companies' current targets take them, and where they should be. This gap is equal to nearly 50 per cent of these companies' current total emissions.

The amount of emissions reductions pledged by companies has been increasing steadily from 2011 to 2015 and we hope to see it close at a faster rate in future years, as company targets become more ambitious in response to the regulatory certainty offered by the Paris Agreement.

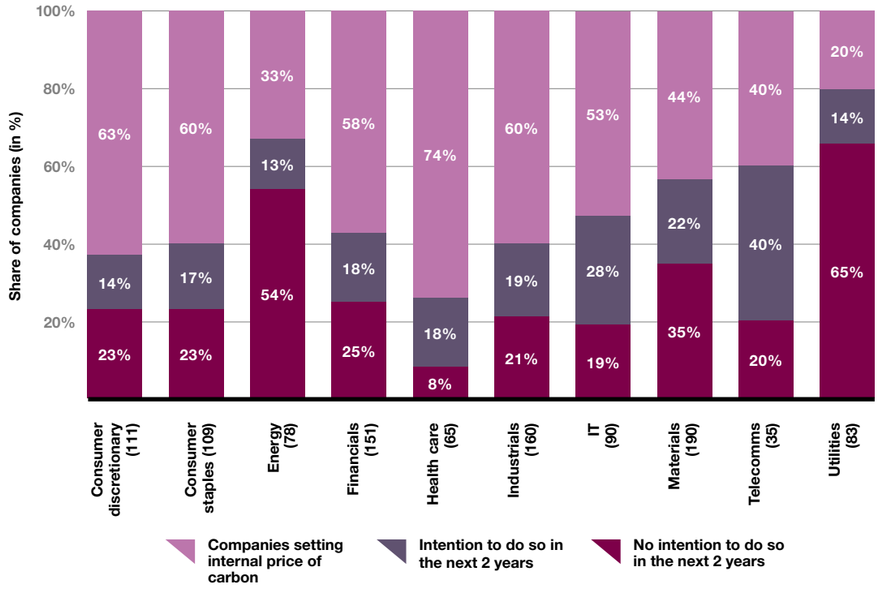
Transition planning: carbon pricing on the rise, yet companies lag in renewable energy production and consumption

Even those companies that have not set themselves targets have almost all established emissions reduction initiatives (97 per cent of all companies), although the success and scope of these initiatives has been varied.

Increasingly, companies are utilising internal carbon pricing as an approach to help them manage climate risks and opportunities. Companies are using this tool in a range of different ways including risk assessment in their scenario planning, as a real hurdle rate for capital investment decisions and to reveal hidden risks and opportunities in their operations. Some companies embed a carbon price deep into their corporate strategy, using it to help to deliver on climate targets, whether it be an emissions or energy related target or to help foster a new line of low-carbon products and services.

Currently 29 per cent of responding companies use internal carbon pricing, while a further 19 per cent plan to do so in the near future. By 2017, about half of this sample should have introduced carbon pricing.

Figure 6: Companies setting an internal price of carbon by sector. The total number of companies responded is presented in parentheses for each sector.



Renewable energy will need to play a major role in any global shift to a low carbon economy. So far, relatively few companies (just 5%) have targets for increasing their renewable energy generation, while 11% have targets for renewable energy consumption.

Of the companies in the utilities sector, 90% of which are electric power companies, fewer than a third have renewable energy generation targets.

Companies decoupling emissions from revenue, showing the low carbon transition does not mean low profit

A small group of companies are showing that reducing environmental impact is compatible with economic growth.

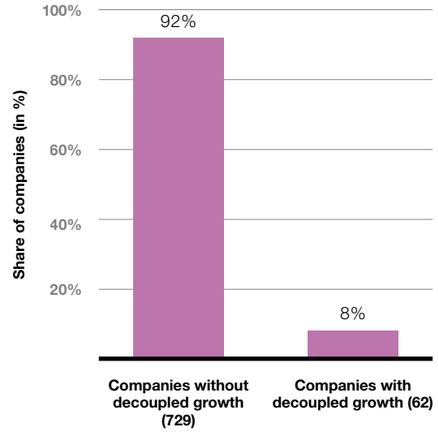
We report on the 62 companies in the sample that can be shown to have made impressive and consistent year on year achievements both in reducing emissions and decoupling growth of revenue from growth of emissions.

They include consumer staples companies such as J. Sainsbury and Walmart de Mexico, as well as utilities companies like Eversource Energy and Idacorp. The materials sector, also a heavy emissions source, is represented by the likes of Givaudan in Switzerland and Lixil in Japan.

'Decoupling' is defined for this purpose as having reduced emissions by 10 per cent or more over five years, while simultaneously growing revenue by 10 per cent.

The success of these leaders points the way for others to realise the opportunity for innovative companies to turn the challenge of emissions reduction from risk management to business success.

Figure 7: Share of companies with decoupled growth over period of five years (time-series sample)



Although correlation must not be taken to be causation, it is worth noting that the group of companies that met the "decoupled growth" criteria increased revenue by 29 per cent over the five-year period of measurement, while reducing GHG emissions by 26 per cent. For the rest of the companies in the tracking sample, revenue decreased by 6 per cent while GHG emissions increased by 6 per cent.

Switching to renewable energy or producing its own renewable energy, using internal carbon pricing to make production more efficient, using innovation to create less energy intensive systems or even selling products to help customers reduce emissions are all strategies that add to the bottom line, rather than to costs.

Figure 8: Comparison of the changes in revenues (left) and GHG emissions (right) over the 5-year period between companies that achieved deocupied growth and other companies.

Company group (no. companies)	Total revenue: (trillion current USD)		Total emissions covered for evaluation GtCO2e	
	Year 1 of the 5-year period	Final year of the 5-year period	Year 1 of the 5-year period	Final year of the 5-year period
No decoupled growth (730)	17.7	16.6 (-6%)	4.82	5.08 (+6%)
Achieved decoupled growth (62)	1.31	1.70 (+29%)	0.468	0.345 (-26%)

CEE responding companies and their performance

CDP is the only global disclosure system for companies, cities, states and regions, to manage their environmental impacts and for investors to access environmental information to underpin their financial decisions.

For over a decade CDP has been encouraging companies to take action towards a more sustainable world. It remains the global standard for measurement and reporting of climate change information and the biggest repository of greenhouse gas emissions information from the business sector.

Now more companies than ever are disclosing to CDP, as a growing number of investors seeks non-financial information and greater transparency. The risks that environmental issues pose for investment portfolios are reaching the center of the decision-making process. Climate change reporting provides investors with access to a critical source of global data that delivers the evidence and insights required to drive action.

Companies can drive change faster than governments and innovate new ways of mitigating the impact of climate change. Those that measure their environmental risk are better positioned to manage it strategically. In recognizing the tangible business benefits of disclosure and action, companies are raising their ambitions and taking meaningful steps to address climate change, deforestation and water security. 5,600 organizations across the globe already recognize the opportunities of reporting to CDP, responding to the needs of institutional investors, purchasing groups and government bodies and acting together to build a low-carbon economy.

Benefits of providing sustainability disclosure for financial efficiency and market position improvement

Companies that disclose to CDP are able to demonstrate:

- Increased awareness of greenhouse gas emissions hot spots so that they can begin to reduce them and therefore better prepare for a changing policy environment.
- Business leadership in understanding the risks from climate change, deforestation and water scarcity.
- How they are creating opportunities to innovate and generate revenue from sustainable products and services.
- How they are future-proofing their business from climate change and water impacts.

The identification of areas where action is required usually takes place during the launching phase of the improvement process. In order to identify ineffective areas of a company's operation, one has to monitor the CO_2e emission and the usage of fuel, water and electricity. However, there is a difference between having the information available and being able to use it in an efficient way.

In order to help companies to meet this challenge, CDP designed and annually revises its international information request. The standardized questionnaire simplifies the data analysis, which also translates into facilitation for investors.

Warsaw Stock Exchange RESPECT Index

A flagship initiative of the Warsaw Stock Exchange, which promotes and educates about responsible investments in Poland. The project was established in 2009 as CEE's first responsible companies index. The index portfolio includes companies listed on the WSE Main Market which follows the highest standards of corporate governance, disclosure and investor relations taking into account environmental, social and governance factors in their business. Nine editions of the survey have already taken place with 16 to 24 companies included in the index portfolio at each time.

The RESPECT Index Project enjoys strong interest from companies listed on the Warsaw Stock Exchange and indirectly helps to improve the standards of corporate social responsibility on the Polish market. In the ninth edition of the survey carried out in 2015, 23 companies were put in the index portfolio.

The return rate of the RESPECT Index was 31% from the first publication on 19 November 2009, while the value of WIG increased by 11%.

Whist there still are some highly polluting entities providing insufficient or no disclosure, reporting emissions and fuel consumption is becoming a common business practice globally, even among the companies that are not formally requested.

Leading companies in the WSE Respect Index are also present within the CEE100 sample, however, only two of them responded directly to CDP and four provided data through their parent company. In total 17 companies included in the sample were named in the 2015 Respect index edition. Moreover, all of them were positively scored against identifying their environmental impacts and almost all set fuel and energy reduction targets. Although the social responsibility awareness among these entities seems to be on a very high level, very few were ready to publicly report their greenhouse gas emissions, climate change risks and strategies on the request of investors and stakeholders.

One of the reasons for the unsatisfying response rate may be the fact, that some of companies resist to disclose crucial climate change data, because it is considered a sensitive factor or a source of competitive advantage. Innovative environmental strategies or opportunities associated with climate change create value for a company and improve its market position. Some of the CEE businesses trying to reach the development level of leading European enterprises can mistakenly see the risk that disclosure could potentially lead to a loss of their competitive edge as other competitors could find it very easy to imitate such a strategy or exploit the opportunities. Reporting to CDP should be rather perceived as an opportunity to prove that they are truly engaged in an environmental strategy at a regional level. Local reporting systems should motivate the companies to present their efforts and achievements to stakeholders locally and globally.

Putting a price on carbon - initiatives

A global initiative launched at the Paris climate talks with the goal of bringing together public-private support for carbon pricing around the world. Governments, businesses and civil society organizations have joined together to establish Carbon Pricing Leadership Coalition (CPLC), aiming to expand the use of effective carbon pricing policies that can maintain competitiveness, create jobs, encourage innovation, and deliver meaningful emissions reductions. 25 governments and over 100 leading businesses and strategic partners have thus far joined the CPLC to contribute to these efforts

A major step towards carbon pricing was taken in China developing its plans for a national ETS. The country has launched pilot emissions trading systems in seven cities and provinces in 2013 and 2014 and plans to create a national system in 2016. It has a goal to reduce emissions intensity by 40-45 percent compared with 2005 levels by 2020.

1 Bulgaria, Croatia, Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia and the Slovak Republic

Sustaining momentum beyond COP21: Carbon pricing

The Paris climate change talks in December 2015 delivered a breakthrough consensus after years of negotiations with the successful adoption of a new global agreement limiting planetary warming to well below two degrees Celsius. Worth noting and equally important is how the Paris Agreement laid a foundation for and accelerate action on carbon pricing — a key tool to move economic transformation away from fossil fuels and redirect it toward cleaner production, improved lifestyles and reduced poverty.

More than 90 countries, accounting for 61% of global emissions, included proposals for carbon pricing initiatives in their national pledges, the Intended Nationally Determined Contributions (INDCs), prepared for the historic COP21 gathering in Paris. Most of these parties requested financial and technological support through international carbon markets to reach their emissions reduction targets, indicating that those markets could provide them with transparency, necessary governance and accounting frameworks that can facilitate best practices and knowledge sharing between nations.

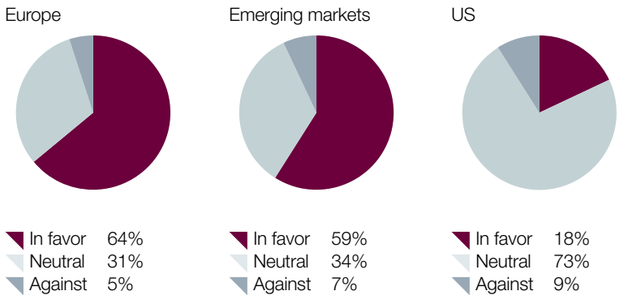
Although carbon-pricing frameworks such as the European Emissions Trading System (EU ETS) and national carbon taxes are already a fact for some companies, a growing number are taking voluntary steps to implement an internal price for carbon in anticipation of such regulations in their operating markets. A recent CDP study shows that more than 517 companies around the world have already set internal prices for their carbon emissions and an another 732 disclose plans to implement one by 2018. Corporate use of an internal price on carbon more than tripled since 2014, when the number of companies setting an internal price for carbon stood at just 150. This is a sharp change comparing also to a decade ago, when many energy sector companies were more commonly raising doubts about the urgency of climate change rather than actively supporting strategies to reduce their carbon footprint.

The EU-11 countries[1] rather lag behind their global peers - ETS and carbon tax have been already implemented or are scheduled for implementation (with no official start date) only in Poland, Estonia and Latvia. In the rest of the countries from this group only the ETS system is implemented or scheduled for implementation, which confirms that in CEE there is still a lot to be done to tackle the carbon footprint effectively.

Prevailing business attitudes toward carbon pricing

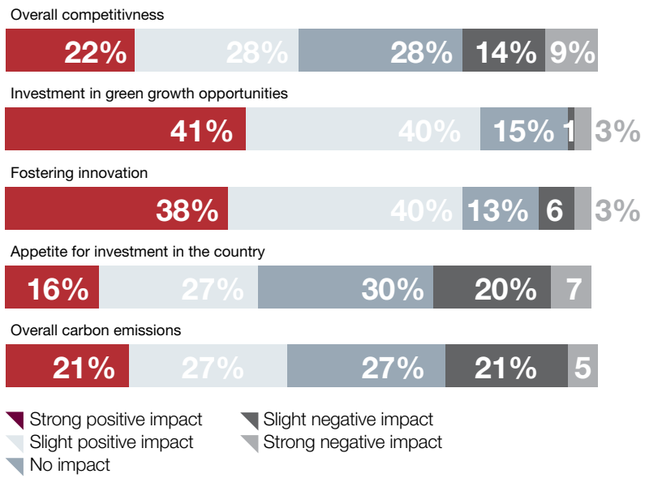
A recent EY study, surveying more than 100 executives from around the world, showed that over a half of the respondents (54%) believe that carbon pricing is the most effective way to cut carbon emissions. In Europe and emerging markets, the majority of companies consider themselves to be in favor of carbon pricing (at 64% and 59% respectively), and in the US, companies were much more likely to be neutral on the topic, with only 18% overtly in favor of carbon pricing (see Figure 9). At the same time, 73% of respondents based in countries where carbon pricing mechanisms have not yet been implemented believe that they will be put in place in the next five years.

Figure 9. Which of the following statements best describes your company's position of the introduction of carbon pricing in the country where you're personally based?



Source: 'Shifting the carbon pricing debate' EY, December 2015

Figure 10. What impact would carbon pricing regulation have on your company?



Source: 'Shifting the carbon pricing debate' EY, December 2015

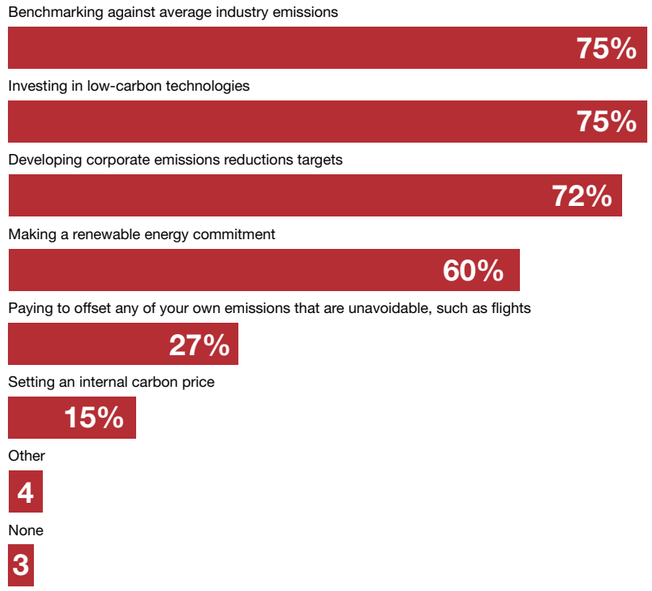
Changing attitudes from businesses globally, and in particular in emerging markets, are providing new impetus to policy discussions on the setting up of carbon pricing schemes. In order to be prepared for regulatory requirements related to a carbon market mechanism, companies are increasingly developing monitoring and verification approaches and identifying mitigation actions. But putting a price on carbon is also expected to bring benefits to companies in a number of areas. When asked about the impacts it would have on businesses, the majority of companies referred to positive rather than negative effects.

Approximately 80% of respondents said carbon pricing would have a strong positive impact on fostering innovation, suggesting that carbon pricing can trigger initiatives beneficial to performance, not just compliance and 81% indicated it will positively influence their companies' green growth opportunities. Furthermore, almost half of companies notice a beneficial influence on their overall competitiveness (see figure 10).

The ability to identify the risks and opportunities of new carbon market policies is crucial to stay ahead of expected change. Forward-thinking companies already see that it may be more cost effective to act sooner rather than later on carbon pricing, which is part of a broader move to decarbonization. Three-quarters of survey respondents already benchmark their carbon emissions against industry averages. Beyond target setting and improved measurement, some companies are also investing in low-carbon assets and turning to renewable energy sources. 75% of surveyed companies also declare investing in low-carbon technologies, and 60% have made a renewable energy commitment of some kind (see figure 11). It is more visible in a group of large companies, with over US$10b in revenues, where nine in ten say they are investing in low-carbon technologies, and more than three-quarters (76%) answering they have made a renewable energy commitment.

This year's Carbon Price report published by CDP is also proving that companies are taking a step further to actually embed the price as part of a strategy to achieve an established climate target. 147 of respondents out of 517 already utilizing carbon pricing, have identified it as a mechanism to systematically achieve emissions reductions and related targets. It gives managers a bottom-line incentive to direct resources to clean energy projects, to avoid investments that could become stranded with tighter regulation of fossil fuels and spurs innovation so companies can set trends rather than adapt to them. It is worth noting, that for the first time, 37 companies reported seeing a direct link between pricing of carbon emissions and tangible impacts on their businesses – for example through its effect on budget allocations, the creation of a new business function, shifting capital towards energy efficiency measures, low-carbon initiatives, investment, energy purchases or product offerings.

Figure 11. What impact would carbon pricing regulation have on your company?



Source: 'Shifting the carbon pricing debate' EY, December 2015

Although, the number of companies adopting internal carbon prices is increasing, it varies between sectors. Out of all entities responding to CDP's 2016 carbon pricing questionnaire the Utilities and Energy GICS sectors had the highest proportion of companies reporting that they currently price or plan to price carbon by 2018 - 63% of Utilities and 52% of Energy respondents - and were followed by Telecommunication Services 40%, Materials 35% and Financials 31%.

By putting a price on carbon pollution, we can create an incentive to reduce them and ensure that those adding up to the GHG emissions will pay for the consequences rather than have the costs passed on to future generations. Implementing it is a necessary step for countries to deliver on their promises made in the Paris agreement. On the other hand, it will help to stimulate innovation by switching up to renewable energy and at the same time making those renewable energy sources more competitive.

Carbon Pricing Report 2016: Initiative example of Societe Generale

"...the Group is one of the first banks to have implemented in 2011 an "Internal Carbon Tax," currently amounting to EUR 10 per ton emitted. The proceeds raised in the business lines are used to fund internal environmental efficiency initiatives. The goal of this scheme is to show that environmental measures are also opportunities to create value and innovation for the bank… Over the three years of this scheme's existence, all 119 winning initiatives, involving building, IT, paper, transport or waste (since 2015), enabled annual recurring savings of an average of EUR 13 million on overheads, an average of 4,700 t per year of CO_2 and an average of 30 GWh of energy savings."

Renewable energy

An increased use of renewable energy is critical to the transition to a low-carbon economy and putting a price on carbon is a powerful tool, which triggers reductions of energy use, improvements in efficiency and stimulates the shift away from fossil-fuels. COP21 in Paris added a momentum to this change, as translating emissions reduction targets into policies and expanding access to clean energy are the necessary steps for reaching the goals set by the agreement. Businesses can drive the creation of a thriving, global market for renewable power by committing to transitioning 100% of their electricity to renewable sources in the shortest possible timescale. But switching to renewable energy offers also significant benefits for companies themselves, through a better ability to manage fluctuating energy costs, increased energy security and positive influence on reputation.

Renewables continue to win investors

Global trends show, that transition to clean energy is also the case for investors. Investments historically allocated to fossil fuels are gradually shifting towards renewables and other sources of clean power, as capital owners recognize growth opportunities associated with it. Falling oil, natural gas, and coal prices in the last two years triggered a notable decline in those industries, while renewable energy has been thriving. Investment in renewables increased by 5% ($285.9 billion) in 2015, exceeding the previous record of $278.5 billion in 2011, as stated in the report "Global Trends in Renewable Energy Investment 2016" prepared by the United Nations Environment Programme (UNEP) and Bloomberg New Energy Finance. In the coming decades it is expected to be almost three times higher as the investment in fossil fuel power, which is a big opportunity to position energy companies at the head of the new global market of low carbon technologies and one they are already beginning to seize.

According to a recent EY study conducted for Power Transactions and trends Q2 2016 - Renewables continue to be the top priority for the buyers. The move toward cleaner sources of energy in most developed countries combined with an urgent need to meet the soaring demand in emerging markets is driving investment in renewables in all regions. Both utilities and non-traditional investors are shifting their focus to the potential of new energy technologies, particularly distributed energy and battery storage. As consumer demand for these technologies increases, more M&A and partnerships between utilities and companies from outside the sector are expected. In Europe renewable assets continued to attract investors with deals worth USD 4 billion in second quarter of 2016 and investors are expected to maintain their interest in clean energy assets backed by power purchase agreements (PPAs), because they provide stable, long-term returns.

Renewables, energy efficiency and distributed generation all pressure traditional assets

Low-carbon investments and taking advantage of these opportunities is also growing in importance, when asset impairments of power and utility companies are considered. Rapid transformation in the sector is creating big challenges for traditional utilities nowadays. Europe's leading energy utilities wrote €22.9 billion off their balance sheets in 2014, what was chiefly the consequence of depressed energy prices in Europe. Falling electricity as well as oil and gas market prices led utilities to book impairment of generation and exploration and production (E&P) assets. New regulation aimed at securing energy supply, or reducing the environmental footprint of energy production, was also an important impairment trigger leading to the revaluation of profitability at some energy-generating facilities. And there is much more to come – regulatory framework is evolving rapidly, and the latest developments could continue to influence asset profitability in the long term.

Conventional power generation is increasingly losing its competitiveness against renewable energy sources thanks to technological developments, which significantly decreased costs of producing such energy. The rise in renewables means production assets need to be flexible to meet the requirements of the future European electricity network. Traditional power and utilities companies need to start factoring this transition in and they need to reassess the risks and rewards of their assets and review the discount rates and long-term growth rates used to determine value in use. Front-runners, which have been successfully adopting clean energy solutions for the past years, have definitely been less severely affected by the consequences of stricter regulations. And businesses operating in other sectors should take the lesson seriously, as the consequences of future developments in policies may also seriously affect their business activities.

Government support

Although growing interest on the side of investors is vital for changing the production decisions of firms in favor of low carbon substitutes, the deployment of clean technologies into the market requires additional support from economic-friendly government policies, not only strict requirements. Poor policy integration can undermine energy security and affordability, as well as affect the performance of energy markets.

Some countries in Central and Eastern Europe will face economic difficulties to meet EU energy and efficiency targets, a EY study states. The EU target to increase energy generation from renewable resources to 20% by 2020 may be difficult for them from an economic point of view, unless changes are made to consider their specific circumstances. The EU-11 countries are at a different starting point compared to western economies. Due to the different technologies used in particular countries and individual determinants, the pressure associated with EU environmental protection is considerably higher within CEE. The differences that distinct its energy sector from the EU-15 include above all: the need for large-scale modernization of energy infrastructure in most EU-11 countries, low levels of energy efficiency, relatively higher energy prices, ongoing issues regarding the energy security and stability of supply (some remain dependent on one energy supplier) and the bigger role of coal in the energy mix. The latest available data from Eurostat shows that this concerns especially Latvia, Hungary, Poland, Slovenia and Slovakia, which were below the 2020 renewable energy targets at the end of 2014.

Investing in renewable energy

In February 2016, IKEA in Poland became energy independent. This means that we produce at least as much energy from renewable sources as we use in all our stores, factories, offices, shopping centres and distribution centres in Poland. Our key source of renewable energy is wind farms. According to current projections, all six IKEA wind farms in Poland produce up to 473 GWh of energy per year. This is more than IKEA's energy consumption in 2015, which was less than 430 GWh. Our investments mean that we can really contribute to improving the state of the environment. Our wind farms reduce carbon dioxide emissions by about 450,000 tonnes, the equivalent of taking more than 150,000 cars off Polish roads.

This is clearly visible in case of the four Polish electric utilities companies, examined in CDP's recent report "Are Polish Electric Utilities Prepared for a Low Carbon Future?". They have a significantly lower diversified energy mix with fossil fuels accounting for the highest percentage and such limited diversification is unlikely to change materially in the near future. Taking into consideration the slight increase in emissions intensity of Polish companies from 2013 to 2015, the cease of free emissions allowance in 2020 could have a significant impact on their carbon cost exposure.

The real struggle for the CEE companies may be also the latest G7 nations pledge to cut subsidies for coal-generated energy. For the first time, the G7 have set a deadline to end the government support for coal, oil and gas by 2025. The call for such action was already raised by the OECD and World Bank and the phasing out of inefficient fossil fuel subsidies may have significant outcomes for the EU-11, as such support seem to be one of obstacles for the shift to clean energy.

While the government's support is crucial for renewable energy, it appears that some CEE governments, skeptical about renewable energy, could support the renewables more actively.

A negative trend can be observed in the financial statements of the big Polish energy players with impairment write-offs of the wind assets reaching 40%.

Case study: Magyar Telekom

The ICT sector is at the dawn of a sharply increasing development now. This tendency might go either positive or negative way, but society, economy and environment, without doubt, are all affected by these changes. As an ICT CEO, I direct Magyar Telekom Group by being aware of the fact that our present decisions definitely shape these future trends and I also expect employees to act in the same responsible spirit.

Our main objective during the past five years was to make sustainability an integral part of Magyar Telekom's identity, thus giving a competitive edge to the company in the long run. As a part of our Sustainability strategy our goal was to decrease the Magyar Telekom Group's CO2 emissions, for which we had originally identified a target of 20% decrease (compared to the year 2004 as a basis), then we decided to aim for total carbon-neutrality by the last year. The greatest sustainability success of 2015 we can look back upon is that the whole Magyar Telekom Group went carbon-neutral, which is partly due to our internal carbon offset initiative and the fact that our electricity consumption came from 100% renewable energy. We were the first to achieve that status among large enterprises in Hungary, and only a few companies worldwide can boast of the same. For the upcoming years our goal is to make our customers more climate-conscious, too, and to be an authentic and responsible company that helps them along that journey with new sustainable products and services.

Christopher Mattheisen,
Chief Executive Officer,
Magyar Telekom Group

Examples from Magyar Telekom's Climate Change Questionnaire response

CC5.1f Explanation why Magyar Telekom does not consider itself to be exposed to inherent Climate Change risks:

In spite the fact that Magyar Telekom networks can suffer more damage due to climate change we do not consider it a significant physical risk, as the value of this risk is 10 times lower as the company's risk significance level. In 2015 the company conducted a monitoring project of damages caused by extreme weather conditions and the results confirmed the low risk (climate change related loss <HUF50 Million). Damages in networks can result in lower availability of Magyar Telekom services that may have negative effects on brand value (besides income and material losses): therefore, the company conducted an "intelligent networks" project to strengthen the safety of the network.

CC6.1c Climate Change-related opportunities in consumer behavior that are very likely to arise within 3-6 years:

Magyar Telekom expects increasing/ future demand of existing/ new ICT services and solutions that can 1. Replace travel and use of materials (paper etc.): e-billing, e-purchase, virtual meetings..., 2. forecast weather (to avoid/ minimise storm, flood damages, to anticipate renewable energy generation etc) and 3. Intelligent ICT solutions to reduce energy consumption (remote control, smart metering etc.) due to changing behavior related to climate change.

This case study is collaborative content sponsored by Magyar Telekom Group

Key findings and Companies' responses overview

The response rate within CEE100 in 2016 accounted for only 17 companies and did not change compared with 2015 results. It has remained almost at the same level since 2014 which indicates that the company's awareness and pressure from the investors is still limited in this region.

Similar to last year, only eight of this year's participants decided to disclose directly to CDP, while the remaining nine reported via parent companies. Additionally, not all of the previous year's respondents reported to CDP in the current year - two of the companies that reported in 2015 did not decide to do so in 2016. One would also expect that companies operating within the energy or industrial sector are the most willing to disclose, where such information is considered more relevant or required not only among investors due to their significant exposition to risks and potential influence on other sectors. The CDP's questionnaire results did however show that financials dominated the group of responding entities for the second year in a row.

Overview of 2016 Disclosure

Reflecting the structure of the Climate Change Information Request, the following sections have been established to present the results of the questionnaire:

- Governance and Strategy,
- Climate Change Risks,
- Climate Change Opportunities,
- Emissions: Scope 1 and Scope 2,
- Targets,
- Verification,
- Scope 3 Emissions.

Figure 12. Number of company responses in the past three years

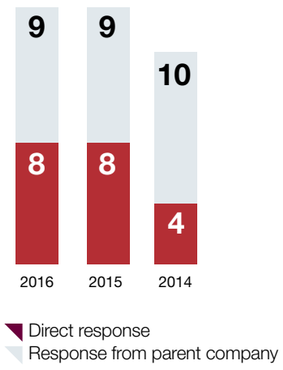
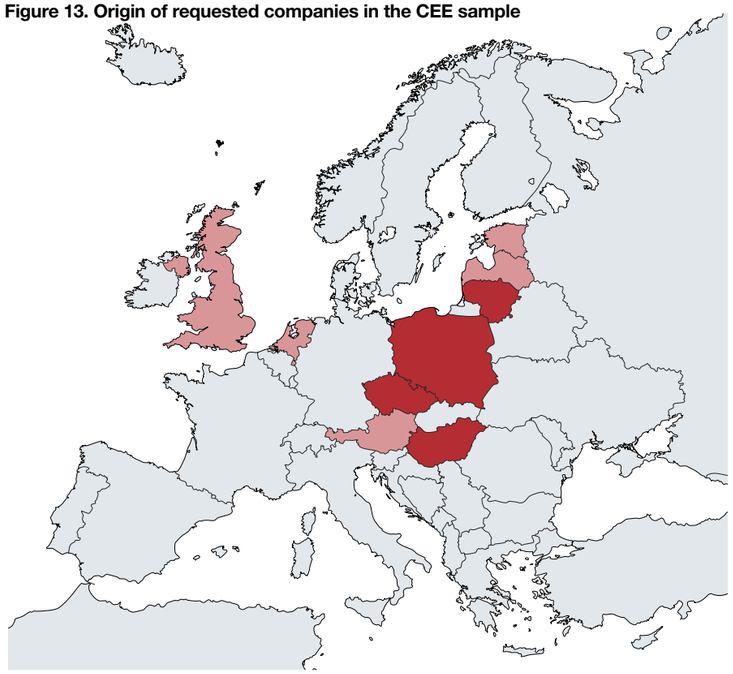


Figure 13. Origin of requested companies in the CEE sample



Provide incentives for management of climate change:

2016: 65%

2015: 77%

Governance and Strategy

The CEE responses show moderate governing structures and strategies for environmental changes. The majority of the companies which answered the questionnaire declared that the direct responsibility for climate changes lies at the board of directors or a senior manager/officer (76%), whereas others have no dedicated person responsible for environmental issues. Likewise, less and less of them provide incentives for management to support climate change initiatives – the number of respondents willing to do so decreased to 65%, comparing to 77% a year before. The trend for CEE is not optimistic, considering that tying sustainability and emissions reduction targets with executives' benefits is one of the best practices to encourage immediate behavioral change, recognized by climate change management leaders globally.

Furthermore, not all respondents take climate change issues and environment related risks into consideration during the process of designing the business strategy. 94% of responding companies have integrated climate change into their business strategy but only 76% have a climate risk management procedure in place (down from 100% in 2015).

The negative trend is also visible in regards to Carbon Pricing. The majority of companies questioned within CEE have not yet adopted internal prices for carbon – only four companies reported that they are already pricing carbon, while over a half do not anticipate to do so in the next two years (53%).

The majority of companies ready to reward employee participation in mitigation of environmental risks are those who reported via parent companies, which shows that climate change resilience plays a significant role for globally operating corporates and reflects stronger awareness of those compared to the CEE region.

The monetary incentive for climate change management remains the most popular for the third successive year and was reported by every company providing rewards for meeting targets related to climate change. It is also the only type of incentive provided among companies reporting directly to CDP. Although encouraging action by offering monetary benefits may seem the most effective way, some respondents decided to reward the active approach also by recognition and only two of them provide other non-monetary incentives for management.

Providing incentives for reliable governance of climate change risks positively contributes to driving the change of behavior among employees and executives. At first, it usually serves a purpose of satisfying one's personal needs or corporate requirements, but over time it changes the way people are thinking and incorporates climate change into day-to-day operations. The entire organization should recognize the value of being sustainable and only spreading the idea along the whole structure can bring the real and long term results. Sustainability initiatives are an important component of vital shareholder, employee and other stakeholder relationships and can lead to new business opportunities.

Figure 14. Integration of Climate Change into company strategy

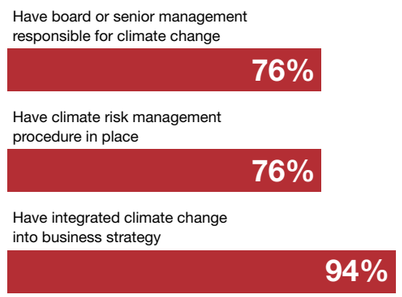
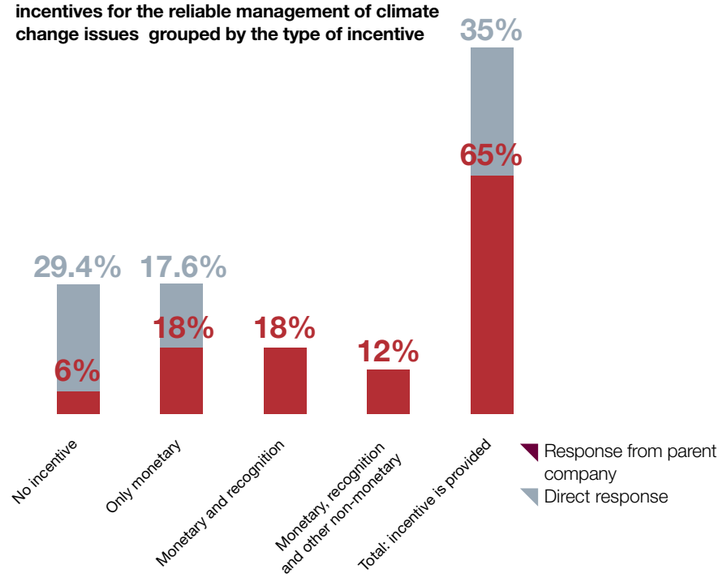


Figure 15. Percentage of companies that provided incentives for the reliable management of climate change issues grouped by the type of incentive



Reputation: Risk or opportunity?

53%
Reported as risk

vs.

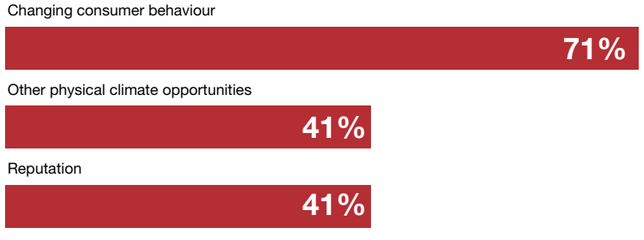
41%
Reported as opportunity

Climate Change Risks

The most common risk associated with climate change and recognized by the companies is reputation, which was reported by 53% of respondents. It remains the most significant risk factor for the third consecutive year. Maintaining a high reputation is essential for business as it is an inherent part of its overall value and determines its attractiveness for investors, clients and employees. Climate change awareness and expectations are on the rise and a poor performance can severely impact existing relationships with stakeholders, dealers or suppliers. Changes in precipitation extremes and droughts as well as fuel/energy taxes regulations were also the most commonly mentioned categories when it comes to risks imposed by climate change. An increasing number of government initiatives to tighten up the regulatory environment poses a heavy threat to business operations for all companies across the market.

Figure 16. Percentage of companies reported risks from the most commonly reported categories

Figure 17.Percentage of companies reported opportunities from the most commonly reported categories



Climate Change Opportunities

Forward-thinking companies, which address climate change risks and actively manage their influence, are also best equipped to seize their opportunities. This year's respondents most frequently mentioned changing consumer behavior as the opportunity driver arising from changes in climate-related developments (71%). It is an increase comparing to the prior year, when 56% of surveyed declared so. More severe and unpredictable weather patterns will impact consumer needs and purchasing power, what creates new areas for companies to explore. Client's preferences as well as the types of products they will be able to purchase in preparation for and after climate disrupting events will affect regions in different ways and to the varying extent. Companies that recognize the potential benefits of these changes and redefine their strategies will easily adapt to uncertain market conditions.

Some issues related to climate change present both risks and opportunities to organizations and reputation can be one of the examples. Building a positive picture through measuring and reducing the carbon footprint can positively differentiate companies from their competitors. Moreover, entities that really act, instead of only admitting to do so, are more successful in attracting customers and do not put their position in the market at risk.

Emissions: Scope 1 and Scope 2

Scope 1 and Scope 2 emissions were disclosed by 94% of companies responding to CDP in 2016 (See Figure 18). As much as 70% of them declared a decrease in emissions compared to 71% in the previous year. The percentage of answers indicating an increase of carbon impact remains on the same level as in 2015. Only one company did not report any changes in emissions level.

Targets and initiatives

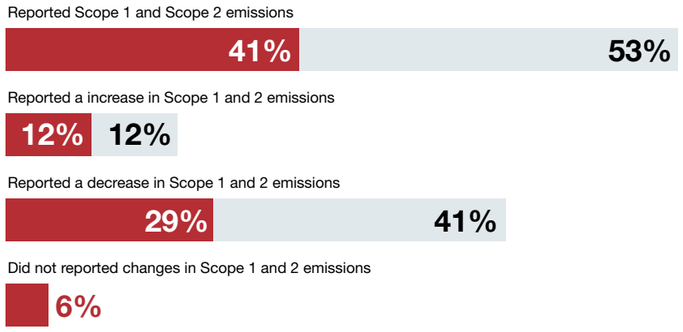
A company can include absolute, intensity or renewable energy targets to minimize its carbon footprint. An absolute target indicates a percentage of emissions reduction which a company wants to achieve in the specified time period with regards to the base year. Every intensity target has its own unit and CO2e emissions reduction assigned to that unit, e.g. t CO2 per employee or hotel room or agency. In turn, renewable energy targets base on supplying energy from non-fossil fuel sources.

In 2016, 71% of CDP respondents decided to set targets supporting emission reduction. The number of companies incorporating such goals into their climate change management strategies is lower compared to previous years' results - 77% in 2015 and 92% in 2014. Almost 50% of responding companies set an absolute target, but only 42% reported intensity goals and 12% defined renewable energy plans.

Quickly developing and expanding companies may not be eager to set an absolute target, which they would not be able to achieve. Those which do so and additionally have a relative target can drive both total emissions reduction and measure the efficiency of their operations. Leading companies should consider setting both absolute and intensity target in the future to benefit from their combined effect. Setting appropriate KPI in relation to intensity goals and ongoing monitoring and reporting it (also using CDP framework), could be an effective way to improve the results.

Emissions reduction initiatives can be accomplished through implementing a variety of different methods, which lead to reaching the predefined goals. The answers submitted by companies indicate that a budget dedicated for energy efficiency is the most common approach in driving investments mitigating the overall carbon impact. It accounted for 17% of all reported methods, followed by compliance with regulatory requirements/standards, which is applied by 15% of respondents (see Figure 19). Both methods turned out to be equally important as a year before.

Figure 18. Percentage of companies reported Scope 1 and Scope 2 emissions



The Greenhouse Gas Protocol

The Greenhouse Gas Protocol (GHG Protocol) is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions.

This initiative arose when World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) recognized that an international standard for corporate GHG accounting and reporting would be necessary in light of evolving climate change policy. The GHG protocol allows companies to account for the GHG impact on their own operations and increase the profits and efficiency as a result. It helps businesses to identify the full impact of their activities and focus on areas of their value chain, where the potential of improvement is the greatest.

The GHG Protocol separates greenhouse gas emissions into three different categories:

- Scope 1: Direct emissions arising directly from sources that are owned or controlled by the entity
- Scope 2: Indirect emissions generated by purchased electricity, heat or steam
- Scope 3: Other indirect emissions that are a consequence of the activities of an organization but occur from sources not owned or controlled by the organization. This includes emissions associated with waste, water, business travel, commuting and procurement.

Companies globally recognize accelerated positive results of implementing environmental activities and are playing a significant role in scaling up the green investment. This trend will only strengthen in years to come. Sustainability initiatives have been gradually implemented in the strategy and business plans also in CEE. Management boards have finally begun to identify value added brought by those initiatives and the payback period from this investment is expected to shorten. According to the 2016 responses received by CDP 52% of reported initiatives are believed to have payback period within three or less years, which indicates that environmental initiatives could bring surprisingly fast results.

This year however, greater number of companies is engaging in long-term initiatives with the payback period exceeding ten years, with 19% of respondents sharing activities in this area. This is 13 percentage points more than the previous year. It may suggest that future risks imposed by climate change are taken more seriously and necessary steps are taken towards far-reaching development plans to mitigate their negative effects.

For climate change disclosure to be as useful as possible for managers, executives, analysts, shareholders and stakeholders, external assurance of data provided is essential. Every company willing to address climate change successfully should gain credibility for its reporting as it helps an organization implement sustainability practices to meet economic, natural and human challenges. Verification of disclosed emissions data was obtained by 71% of surveyed companies out of which 59% ensured reliability for both Scope 1 and Scope 2. The remaining 29% of them did not receive any assurance. It is a significant change in comparison with CDP's 2015 survey results, when only 18% declared no external verification of such information.

Globally, non-financial information (NFI) is increasingly taken into account in the decision making process. Stakeholders want to rely on robust data for their decision making and hence, data management, reporting and disclosure of nonfinancial information is gaining momentum with many companies today. Based on a recent EY study, approximately three quarters of surveyed institutional investors make extensive use of non-financial information to underpin their investment decisions. They develop their own NFI risk assessment models and tighten up minimum investment requirements. More and more often, internal corporate procedures do not allow investment directors to engage capital in companies lacking proactive risk management strategies and not willing to disclose them to the public. What is more, numerous multinational enterprises collaborate only with socially responsible suppliers to maintain their reputation and support their own sustainable growth.

Figure 19. Percentage of companies with defined targets

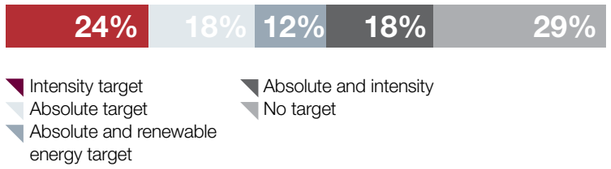


Figure 20. Percentage of companies reporting initiatives by payback period

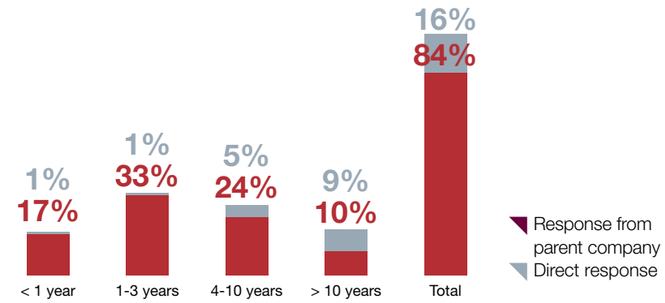
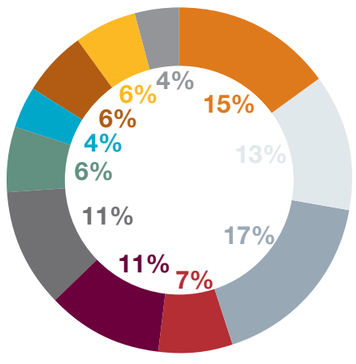
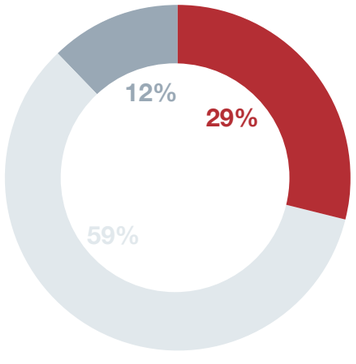


Figure 21. Percentage of methods to drive investments in emissions reduction



- Compliance with regulatory requirements/standards
- Employee engagement
- Dedicated budget for energy efficiency
- Internal incentives/recognition programs
- Financial optimization calculations
- Dedicated budget for low carbon product R&D
- Lower return on investment (ROI) specification
- Internal price of carbon
- Internal finance mechanisms
- Dedicated budget for other emission reduction activities
- Other

Figure 22. Percentage of companies with external verification of emissions data



- Have no external verification or assurance of emissions data
- Have declared that Scope 1 and Scope 2 emissions have been externally assured
- Only scope 1

Acknowledging the growing importance of non-financial reporting, an increasing number of organizations globally has defined an ambition to make their NFI disclosure as robust and as reliable as their financial information, including reasonable external assurance. Verification contributes to enhancing informational value of such data, as well as increases its comparability for all interested parties. However, many companies' statements not always provide accurate assessments of environmental impacts or omit some of disclosure due to lack of standards. Moreover, some of them use non-financial reporting only as marketing tool and communicate only selective and rather positive aspects of their operations, which can be misleading for investors. The need of stakeholders is to have access to consistent, reliable and correct data from different areas of company's operational environment to see the full picture. Integrated disclosure, that covers those requirements, complements traditional financial reporting and helps to set vital targets that improve risk management, create benefits and generate positive returns. International harmonized standards for corporate GHG accounting and reporting together with independent verification could significantly raise it relevance for decision-makers.

In late 2015, on the request of G20 Leaders, the Financial Stability Board established an industry-led Task Force on Climate-related Financial Disclosures (TCFD). It is developing recommendations for voluntary, consistent, comparable, reliable and clear disclosures around climate-related financial risks for companies to provide information to lenders, insurers, investors and other stakeholders. The TCFD has 31 members, which include both users and preparers of climate reports from across the G20's economic sectors and financial markets. The task force released their Phase I report in March 2016, detailing the scope and objectives for their proposed work, a set of fundamental principles of disclosure and CDP have submitted their views and recommendations. The Final Report to the German G20 Presidency is planned to be released in early 2017. It is highly probable that the guidelines to be published will become a global best practice and crucial element in decision-making process for investors. Recommendations are also expected to enable appropriate pricing and distribution of risks throughout the markets and increase investor engagement with respect to corporate climate risk management.

Scope 3 emissions

Although Scope 3 emissions account for considerable part of all emissions not many companies measure their carbon footprint in this area. 58% of surveyed entities reported Scope 3 emissions in at least one field, when in 2015 71% disclosed such information, representing a decline for the second consecutive year.

According to responding companies the following categories of the sources of Scope 3 emissions were considered the most relevant (reported by 50% or more companies):

- Purchased goods and services
- Business travel
- Use of sold products
- Employee commuting

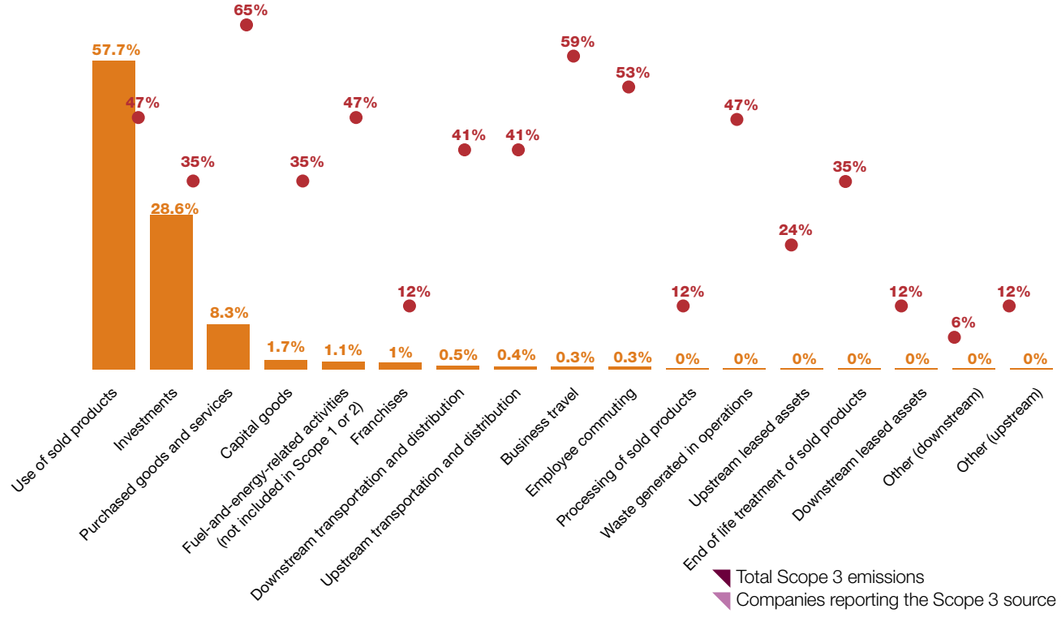
Although, use of sold products continued to be the source with highest level of reported emissions, in prior years it was considered relevant by relatively small percentage of respondents. In 2016 importance given to this category increased significantly and it was acknowledged by almost 58% companies. Carbon emissions calculated in this area may helped them to realize that more focus should be laid on this source.

An increasing number of companies recognizes purchased goods and services as the most significant source of Scope 3 emissions, whilst the carbon consumption of this source remains on a low level. It is also the case for employee commuting, which share amounts to 0,3% of total and only six companies out of 17 surveyed prepared calculation in this field.

It is worth noting, that companies report only some of their Scope 3 footprint. Three of respondents decided to disclose at most in two categories out of 17 specified by CDP. If they are not able to calculate emissions, they usually mark some sources as: "Relevant, not yet calculated". And that gives only part of the picture of their overall carbon impact. CDP encourages companies to focus and calculate emissions for those categories that can be classified as relevant and material in their own business context. This is also reflected in the scoring.

Climate change is a global problem and companies worldwide are taking joint steps to come up with a global solution. Now, more than ever before, they are willing to report the crucial climate change data, as they recognize the tangible business benefits of disclosure and action. However, awareness of and focus on benefits from driving transparency, sustainability and responsibility in business remains still relatively low in the CEE region, where companies seem to underestimate the potential impacts climate change will impose on their day-to-day operations. Despite the growing pressure from investors, reliable climate-related data is insufficient and so is the response rate to CDP. The major milestone, which is the Paris Agreement, sends a clear message to businesses, investors and cities, that the era of unabated fossil fuels is being brought to an end. The CEE companies will be sooner or later forced to respond to regulatory and policy changes resulting from the agreement. The benefits for early adopters will far outweigh the costs of mitigation or adaptation and those who will stay passive will risk the greatest consequences.

Figure 23. Reported Scope 3 emissions



**Odd Arild,
Storebrand CEO**

**Philippe Desfosses,
ERAFP CEO**

**Peter Harrison,
Schroders CEO**

The investment landscape is changing rapidly: the Paris Agreement set out a clear direction of travel on climate change for global policy makers, while developments such as France's Article 173 and the forthcoming Task Force on Climate-related Disclosure are driving greater disclosure and accountability from investors. In the light of this, we ask CEOs from three leading financial institutions how their organisations are responding and where they see the key challenges over the next few years.

1. As an investor what are your top priorities in helping to realise the goals of the Paris agreement? And how do you plan to align with policy-makers' 2 degree targets?

Odd Arild: We have the ambition to be a leading star when it comes to sustainable investments. In Storebrand, sustainability is not a niche, it is included in our main products and services. Which means that we literally have 570 billion NOK in carbon reduction programs. We are presently setting an overall group climate target which will assist us in reaching a 2 degree world, and a 2 degree regulatory ambition.

We have three priorities. The first is about measuring, reporting and lowering our carbon footprint through CDP, Portfolio Decarbonization Coalition (PDC), and Montreal Pledge. The second priority is to work with sustainability and carbon optimization in our main pension portfolios. We're also active in financial innovation – creating one of the world's first fossil free, sustainability optimized index near funds. Our third priority is to be able to report externally in our group communication to the market on our progress towards a 2 degree world.

Philippe Desfosses: Since its inception, as part of fulfilling its fiduciary duty towards the Scheme's contributors and beneficiaries, ERAFP has been working to determine the impact of its investments on the economy, society and the environment. In coming years it will rely not only on the development of appropriate tools to manage climate challenges but also on the experience it has already accumulated, particularly in the area of de-carbonization, such as for the low-carbon equity mandate awarded to Amundi or the virtual platform, built with AM League and Cedrus AM, that managers can use to demonstrate their capacity to reduce the carbon intensity of a portfolio of international equities.

In keeping with its socially responsible investment approach, ERAFP will continue to make a major contribution, in collaboration with the various other stakeholders, to speeding up the financing of the energy transition and to exceeding the objectives laid down by the Paris treaty.

Peter Harrison: The physical impacts and social and political responses to climate change will be defining investment themes of the coming years and decades. We are focusing on building our understanding of the implications for economies, industries and companies; developing tools to support better investment decisions, and engaging companies to promote more transparent and forward-thinking responses.

2. As an investor what are your main drivers for incorporating climate change risks and opportunities in investment decision making? And what are the main barriers?

OA: The main drivers are the risks and opportunities facing the companies we invest in. We believe that a tilt in investments from sustainability laggards to leaders will create greater returns in our portfolios. We also have a mission to influence and support our entire sector to professionalize climate risk, through our different products, services and external engagements like the PDC. The main barrier is data access in two areas; lower quality and availability of data and lack of regulations requiring transparency and reporting on climate risk.

PD: In exchange for the contributions that it receives from its beneficiaries, the Scheme undertakes to pay them pension benefits. This is a promise that the youngest among us will benefit from following a very long period of time. It is through nothing other than observance of our fiduciary duty that we have undertaken energy and climate-related initiatives, with a view to aligning our investment portfolios with international global warming containment objectives.

A strong barrier lies in Research which still needs to be encouraged in order to develop robust indicators. It would provide at issuer level, a comprehensive picture of companies' environmental impacts and especially direct and indirect emissions. Most available methodologies only cover part of scope 3 emissions. Thus, in some sectors such as the automotive industry or the financial sector, global emissions tend to be underestimated

PH: Hitting the commitments our global leaders made in Paris will mean changes on a far bigger scale than financial markets seem to be preparing for, spreading beyond the most obvious sectors or niche asset classes. We need new thinking to understand how large and far reaching the impacts will be. We need to accept that perfect clarity on policies looks unlikely and focus on what we can do: better thinking, better models, better data and a clearer view of how we adapt the portfolios we manage.

3. As an investor how do you balance the needs of the present against the longer term needs of delivering investment/business strategies that avoid dangerous levels of climate change and the associated impacts of these?

OA: As a pension company, we invest for customers who will stay with us for up to 50 years. Our mission is to create the best possible retirement for our customers, both in terms of financial return, but also to support the health of the society where our customers will retire.

PD: As the French public service additional pension scheme manager, ERAFP has a very long-term responsibility towards its contributors and beneficiaries. Driven by its fiduciary duty, ERAFP prioritizes long term investments and seeks to raise the awareness about the importance of changing economic structures with a view to de-carbonization.

PH: At Schroders we have a long tradition of long term, fundamental analysis. That experience convinces us that taking account of structural trends such as climate change does not have to mean compromising shorter term performance. In fact, we are not going to be able to help our clients meet their goals, which are typically far longer than investment cycles, unless we establish long term views of critical structural trends such as climate change.

4. Environmental disclosure is a fast evolving field, how is better data, disclosure and research affecting investor decision-making?

OA: Better data is definitely improving our possibilities to make informed investments optimising return and climate risk. We supported a government bid in Sweden to standardise disclosure of carbon foot printing of mutual funds. We also support data development and availability in other areas, such as water or political instability where we in fact have developed our own system to predict a coup d'état in different countries.

PD: In 2015, with the help of a specialized organization' services, ERAFP have extended its perimeter and reported on the carbon footprint of 87% of its total assets. Beyond its carbon footprint, ERAFP made also a comparison of the energy mix attributable to ERAFP's equity portfolio with an energy generation breakdown for the International Energy Agency's '2°C' scenarios between 2030 and 2050. The fast evolving environmental disclosure tools allow ERAFP to expand and deepen its analyses in order to develop the most efficient de-carbonization strategies.

PH: Good investment decisions rely on analysis and analysis needs data. While climate science is awash with data, most of it of little use in helping us choose one investment over another. Rigorous, relevant and consistent data at company and asset levels – like that the CDP promotes and collates – is critical to our ability to get past quantifying the scale of the problem and into deciding how to navigate it.

5. What would you like to see from companies with regards to improved transparency on climate change relevant issues?

OA: We would like to see an increase in regulation when it comes to climate reporting, and higher taxes based on polluters pays principle. The real costs of operation have to be brought to the surface, so that we as investors better can adapt our investments to this.

PD: As a member of the Institutional Investors Group on Climate Change (IIGCC), ERAFP takes part in engagement initiatives towards regulatory authorities but also companies in the most exposed sectors in order to improve their climate reporting. ERAFP is also involved into the extractive industries transparency initiative (EITI). ERAFP would like companies, especially the most exposed to climate change risks,

communicate on strategic resilience and their efforts to manage environmental impacts.

PH: Ours is a forward looking industry and information that provides more insight into companies' future planning will be vital; how companies assess changes in their industries, the assumptions they make, the strategies they form and the products they develop. No one has all the answers and more frank discussion on how companies approach the challenge is more important than holding on for definitive answers.

6. **What role can engagement play in driving corporate behavioural change in the climate change context and how do you measure its success?**

OA: Engagement plays an important role as a complement to divestment and portfolio tilting. We focus engagement within the climate areas to group activities within PRI, often initiated by CDP. In this way we want to increase availability of data, which is our target of engagement. We can then use it to make decision on tilting and divestment.

PD: ERAFP is an extremely engaged asset owner, maintaining dialogue with many of the companies the Scheme invested in. Through its asset managers, in 2016, ERAFP supported more than 10 shareholder resolutions on climate change. ERAFP is also involved in engagement initiatives through Institutional Investors Group on Climate Change (IIGCC), ShareAction/RE100, Carbon Disclosure Project or alongside Mirova on oil exploration's themes. Forcing companies to discuss and think with a long term approach, ERAFP is convinced that asset owners' union, followed by their asset managers, will allow the acceleration of companies' change, among which the most advanced already oriented their development towards the energy transition.

PH: Engagement is a key part of our responsibilities as responsible, active investors. We regularly talk to management teams about why we think climate change is an important issue, as well as our expectations for disclosure and transparency. That work is intrinsically tied up with how we approach investing and the benefits are evident in the decisions we make and the changes we see in companies.

7. **If we were to have a similar conversation in 3 years' time, what do you think would be some of the key successes for an investor in managing climate change risks and opportunities?**

OA: Integration. Integration of competence, and tools. Managing climate risk must be at the core of the investment strategy covering all assets in all assets classes and not seen as a side activity for certain SRI funds. The global pension capital consists of the 40 000 billion USD – that is the money we need to get to work if we want to create a better, more sustainable future.

PD: Because you can't manage what you don't measure, ERAFP thinks that a crucial key of success consists in good measures of its investment climate related risks. ERAFP is working on it using and questioning current carbon foot-printing methodologies. Working with its asset managers on portfolio de-carbonization approaches, disclosing the results of its work on these areas and engaging with companies on carbon disclosure are other keys that ERAFP use to manage climate risks and opportunities.

PH: We have to build better tools to measure, quantify and analyse the risks and opportunities climate changes represents to companies and portfolios. Unless we can do that, we are going to struggle to know if we are on the right track. Progress has been made with things like carbon footprinting, but we are in the foothills of what needs to be done.

8. **How are you engaging with the Sustainable Development Goals 2030 agenda?**

OA: SDG sets a clear direction on what the focus should be to reach a more sustainable future. We now work to integrate the SDGs in our strategy and targets, so that we ensure that the company's strategy is in line with the goals of the world. Already in 2016 we will as a group start to report on our contribution to the SDGs.

PD: In line with its socially responsible investor's status since its beginning, ERAFP has developed a best in class strategy. This approach has had positive results since ERAFP's portfolio is globally more carbon efficient than its benchmark. By selecting the most sustainable players but also being a strongly engaged investor on ESG issues, ERAFP aims to contribute to the Sustainable Development Goals agenda 2030. Its recent signing of the Energy Efficiency Investor Statement at COP 21 and of the 2016 global investor letter to the G20 are examples of its ongoing efforts to limit climate change and promote a Sustainable Development.

PH: The Sustainable Development Goals highlight the changes we are seeing in social and political awareness of the challenges facing many of the world's poorest countries and people. This backdrop of growing awareness and commitment will have direct implications for how we manage money. We are working hard to build an understanding of the potential changes into our decision making.

Custom questions

- **Storebrand is in the unique position of facing the risk of increased claims from climate change as well as the risks of decreased portfolio returns from it. How do your investment activities reduce the risk of increased claims from climate change?**

OA: Companies with significant greenhouse gas emissions often make for poor financial investments. In order to make it easier to identify the companies we wish to invest in, we rate potential companies according to how sustainable they are. The environmental impact is a decisive factor when we make our assessment, which makes it easier to pinpoint which companies we do not wish to invest in. We also have an exclusion policy on negative environmental impact, with exclusion of for example more than 60 companies based on their poor climate record.

We also work in the area of financial innovation, and have launched a number of products recently. They are important not only to our customers, but also as examples to inspire and show our sector what is really possible. SPP/Storebrand presently have the world's largest green bond fund. We have also launched a unique series of products: a near index equity mutual fund that is fossil free, and optimised for a high sustainability level of the remaining companies. We are able to deliver a low tracking error in comparison to 'standard' indices, a low fee, and a substantially lower climate related risk.

- **In ERAFP's "Combating Climate Change" approach it says that in order to meet the ambitions of the SRI charter in limiting greenhouse gas emissions investors should "provide tangible evidence of their approaches impact". What is your view on the current state of Asset Manager's ability to provide this?**

PD: ERAFP discusses with its asset managers to understand their portfolio companies' management and improves it. This year, ERAFP has entered into an agreement with Cedrus AM and amLeague to establish a framework that asset managers can use to demonstrate their know-how in the reduction of carbon intensity by applying their expertise in the management of a notional portfolio of international equities. In the coming months, with the benefit of the Cedrus AM return of experience, ERAFP will be working on ways to extend its "low carbon" management approach, either through investment in open funds or through a call for tenders to select an asset manager to create a dedicated fund.

- **Chief Economist recently published the findings of a survey of 18 Chief Economists. Its finding was pretty bleak in terms of the level of integration of climate change risk into their forecasting process. What impacts, in your opinion, do you think that this lack of macro-level analysis will have on the effective integration of climate change risks into the investment process?**

PH: Although it was disappointing that more of the City's economists don't build climate trends into their forecasts, it was not altogether surprising. The problem lies with tools and models as much as awareness; most in our industry knows the scale of the challenge and the impacts it will have, but the potential dislocation does not fit easily with models that are designed around linear trends. Unless we can come up with better ways of analysing the financial implications of climate change, we are going to find it hard to avoid being surprised down the line.

We Mean Business: Commit to Action

Companies are taking direct and ambitious action on climate change. More than 465 companies have made commitments to climate action via the We Mean Business commitments platform “Commit to Action,” representing a tenfold increase in two years.

Progress in 2016 has remained strong, suggesting a positive response to the Paris Agreement and its universal commitment to a low-carbon economy.

Companies have been adopting more aggressive targets—around emissions reductions, renewable energy, deforestation, water, and energy productivity—and improving operational or governance measures for climate risk through use a price on carbon, more responsible policy engagement mechanisms, and greater transparency on climate governance in mainstream reports.

Corporate action has grown across all of these issues. The strongest growth has been in companies committing to science-based emissions reduction targets, from 50 companies in late 2015 to nearly 190 today.

Companies in 42 countries have taken action.

At the beginning of 2015 just 3 US companies had made commitments via this platform. By Paris, this number had grown to more than 50 companies. The fastest growing issue with US companies has been science-based targets, with 33 companies making that commitment. Climate action remains popular with European companies, with 237 taking action, predominantly in mainstream reporting on climate and science-based target setting.

Setting science based targets is the right thing to do, but also makes perfect business sense. Setting a science-based target directly answered the needs of our customers, all of whom are thinking about their own carbon footprints. It is also critical for investors who need to know that we are thinking of potential risks, in the short-, medium- and long-term.

Laurel Peacock
Senior Sustainability Manager
NRG Energy

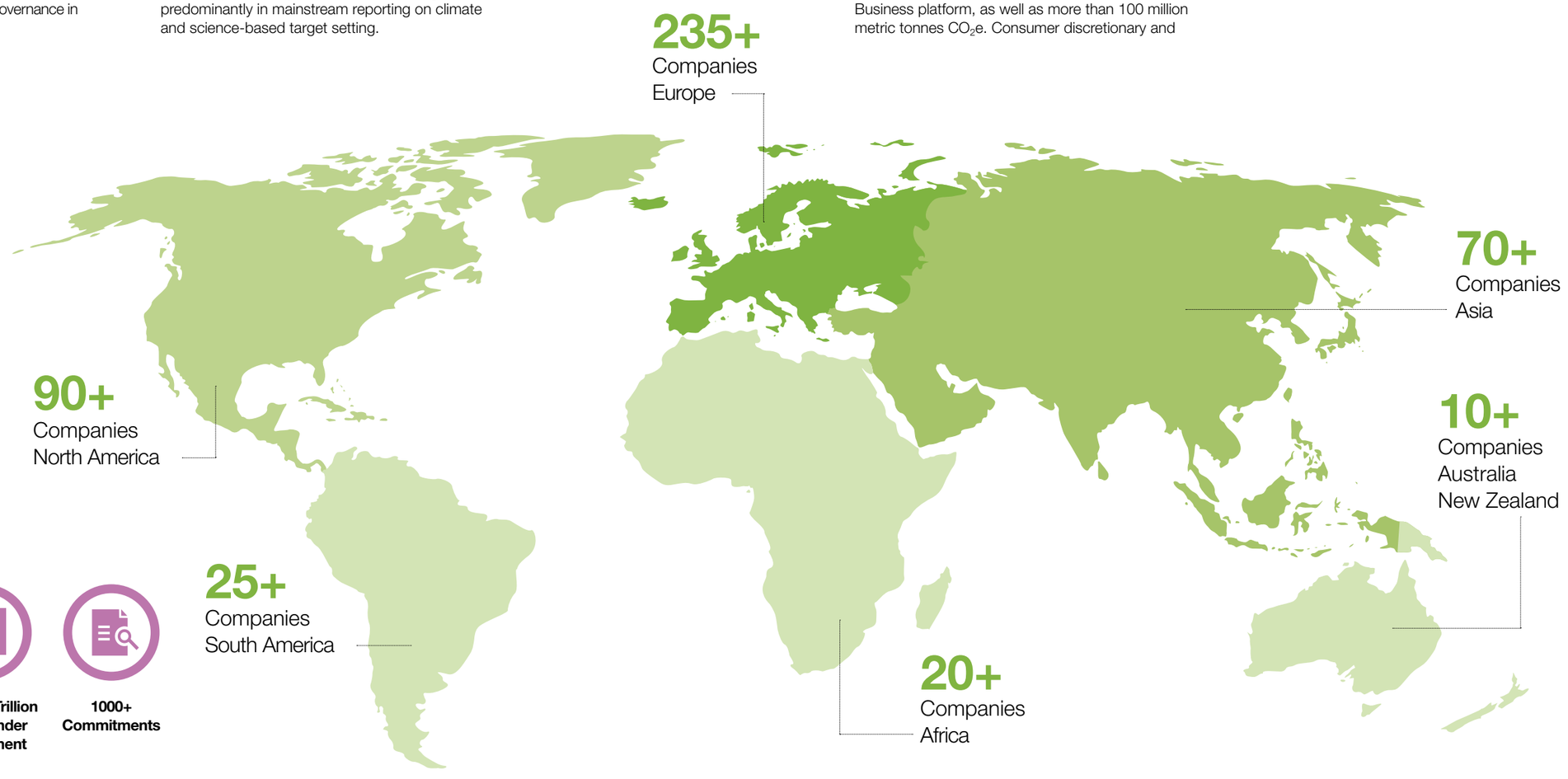
465+ Companies

+$10 Trillion USD

183 Investors

>US$20.7 Trillion Assets Under Management

1000+ Commitments



WE ME▲N BUSINESS
economic opportunity through bold climate action

Translating Paris into business strategy

Thirteen companies headquartered in Brazil have taken action, including materials company Braskem (price on carbon) and the consumer brand Natura (science-based targets, deforestation, policy engagement, and mainstream reporting on climate). In India, 17 companies, including Tata & Sons and Mahindra, have made bold commitments to renewable energy and energy productivity. Important first movers in China, like industrials company Broad Group, have made a range of commitments, importantly including setting science-based targets.

Sector trends show that companies in every industry are acting. Strongest growth in 2016 has been in the industrials sector. Together, this sector accounts for over 20% of corporate action via the We Mean Business platform, as well as more than 100 million metric tonnes CO_2e. Consumer discretionary and consumer staples companies also represent 20% of committed companies, led by major brands like Walmart, The Coca-Cola Company and Honda Motor Company. IT sector participation has accelerated post-Paris, with companies including Apple and Facebook making 100% renewable power commitments.

By acting early and decisively, these companies are better able to manage their climate risk, gain competitive edge over their peers, and reap the reputational benefits that early leadership provides.

To find out more please visit www.cdp.net/commit.

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Appendix: CEE100 sample 2016

Company	Score (Response status)	Permission
Austria		
Erste Group Bank AG	F (DP)	
Vienna Insurance Group AG	F (NR)	
Czech Republic		
Central European Media Enterprises Ltd.	F (NR)	
CEZ	D-	Not public
Fortuna Entertainment Group	F (NR)	
Komerční banka, a.s..	SA	
O2 Czech Republic	F (DP)	
Pegas Nonwovens s.r.o.	F (NR)	
Philip Morris CR AS	SA	
Pivovary Lobkowicz Group AS	F (NR)	
Unipetrol, a.s.	F (NR)	
Estonia		
AS Merko Ehitus	F (NR)	
AS Tallink Grupp	F (DP)	
AS Tallinna Vesi	F (NR)	
Olympic Entertainment Group AS	F (NR)	
Pro Kapital Grupp AS	F (NR)	
Tallinna Kaubamaja AS	F (NR)	
Hungary		
Elmü Nyrt.	F (NR)	
Émász Nyrt.	F (NR)	
FHB Mortgage Bank PLC	F (NR)	
Graphisoft Park SE	F (NR)	
Magyar Telekom Nyrt.	C	Public
MOL Nyrt.	B	Public
OTP Bank Nyrt.	F (NR)	
RABA	F (NR)	
Richter Gedeon Nyrt.	F (DP)	
Zwack Unicum Nyrt.	F (NR)	
Latvia		
AS Latvijas kuģniecība	F (NR)	
Latvijas Gaze AS	F (NR)	
Olainfarm JSC	F (NR)	
Valmieras Stikla Skiedra JSC	F (DP)	
Lithuania		
Apranga PVA	F (NR)	
City Service AS	F (NR)	
Grigiskes	F (DP)	
Klaipedos Nafta AB	F (NR)	
Linas Agro AB	F (NR)	
Pieno Zvaigzdes	F (NR)	
Rokiskio Suris	F (NR)	
Siauliu Bankas AB	F (NR)	
TEO LT AB	SA	
Netherlands		
AmRest Holding SE	F (NR)	
Poland		
Alior Bank SA	F (NR)	
Amica Wronki SA	F (NR)	
Apator SA	F (NR)	
Asseco	F (NR)	
Bank Handlowy w Warszawie SA	F (DP)	
Bank Millennium S.A.	SA	
Bank Pekao S.A.	SA	
Bank Zachodni WBK S.A.	SA	
Bioton S.A.	F (NR)	
Boryszew MAFLOW	D	Not public
Budimex S.A	C-	Public
CCC	F (NR)	
CD Projekt	F (NR)	
Ciech SA	F (NR)	
ComArch SA	F (NR)	
Cyfrowy Polsat S.A	F (NR)	
Echo Investment S.A.	F (NR)	
Emperia Holding S.A.	F (NR)	
ENEA S.A.	F (NR)	
ENERGA SA	D	Not public
Eurocash S.A.	F (NR)	
Fabryki Mebli Forte SA	F (NR)	
Getin Holding S.A.	F (NR)	
Getin Noble Bank SA	F (NR)	
Globe Trade Centre S.A.	F (NR)	
Grupa Azoty S.A.	F (NR)	
Grupa Kęty S.A.	F (NR)	
Grupa Lotos S.A.	F (DP)	
ING Bank Slaski S.A.	SA	
Integer.pl SA	F (NR)	
Inter Cars SA	F (NR)	
Jastrzebska Spolka Weglowa SA (JSW)	F (NR)	
Kernel Holding	D	Public
KGHM Polska Miedź S.A.	F (NR)	
Kruk SA	F (NR)	
LPP S.A.	F (NR)	
Lubelski Węgiel BOGDANKA S.A.	F (NR)	
mBank	F (NR)	
Medicalgorithmics SA	F (NR)	
Netia S.A	F (NR)	
Neuca SA	F (NR)	
Orange Polska SA	SA	
Orbis S.A.	SA	
PKO Bank Polski	F (NR)	
PKP Cargo SA	F (NR)	
Polska Grupa Energetyczna (PGE) SA	F (DP)	
Polski Koncern Naftowy ORLEN	F (NR)	
Polskie Górnictwo Naftowe i Gazownictwo SA	F (NR)	
Prime Car Management SA	F (NR)	
PZU Powszechny Zaklad Ubezpieczen S. A.	F (NR)	
Stalprodukt S.A.	F (NR)	
Stomil Sanok SA	F (NR)	
Synthos S.A.	C-	Not public
TAURON Polska Energia S.A.	F (NR)	
Trakcja SA	F (NR)	
Warsaw Stock Exchange	F (NR)	
Wawel SA	F (NR)	
Zespol Elektrowni Patnow Adamow	F (NR)	
United Kingdom		
Stock Spirits Group PLC	F (NR)	

To read the public company responses in full and access the leadership indices, please visit the CDP website at www.cdp.net

KEY for company responses

SA: See other company response.
NR: No response. The company did not react to CDP's information request.
DP: Declined to participate. The company decided to not report information to CDP.
Not public: The company responded privately to CDP investor signatories only.
Public: the company response can be read in full at the CDP website

KEY for scores

F: Failure to provide sufficient information to CDP to be evaluated for Climate Change. Not all companies requested to respond to CDP do so. Companies who are requested to disclose their data and fail to do so, or fail to provide sufficient information to CDP to be evaluated will receive an F. An F does not indicate a failure in environmental stewardship.
D or D-: Disclosure Level. Disclosure measures the completeness of the company's response.
C or C-: Awareness Level. Awareness considers the extent to which the company has assessed environmental issues, risks and impacts in relation to its business.
B or B-: Management Level. Management is a measure of the extent to which the company has implemented actions, policies and strategies to address environmental issues.
A or A-: Leadership Level. Leadership looks for particular steps a company has taken which represent best practice in the field of environmental management.

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