



Carbon Disclosure and Carbon Neutral Certification

September – 2020

Sustainability Report



The Abdullah Bin Hamad Al-Attiyah International Foundation for
Energy & Sustainable Development





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INTRODUCTION

CARBON DISCLOSURE AND CARBON NEUTRAL CERTIFICATION

As an increasing number of companies declare plans to reach "carbon neutrality" within the foreseeable near future, carbon disclosure has become an ever more prominent topic. It is the practice of assessing and reporting a company's greenhouse gas (GHG) emissions, its impact on climate, its strategic and risk management processes on climate, the impact on its business, and its plans and targets for improvement.

However, inconsistencies remain, particularly the different treatment of emissions throughout a company's supply chain and that of its customers. Improving standardisation and public disclosure will likely be required by regulators along with standard financial data, and will make it essential for all major companies, even non-listed ones, to comply.



Sustainability Report

This research paper is part of a 12-month series published by the Al-Attiyah Foundation every year. Each in-depth research paper focuses on a prevalent sustainable development topic that is of interest to the Foundation's members and partners. The 12 technical papers are distributed to members, partners and universities, as well as made available online to all Foundation members.



EXECUTIVE SUMMARY

- Carbon disclosure has become increasingly important because of public, investor, and government pressure.
- It is the practice of assessing and reporting a company's greenhouse gas (GHG) emissions, its impact on climate, its strategic and risk management processes on climate, the impact on its business, and its plans and targets for improvement.
- Carbon certification is a part of wider ESG (Environmental, Social and Governance) criteria, which has become favoured by sustainable investors and argued to be correlated with improved business performance.
- The Carbon Disclosure Project (CDP) has become the leading assessor of disclosure, and the Greenhouse Gas Protocol is the most widely accepted set of standards.
- Companies are increasingly adopting carbon disclosure because of pressure from shareholders, business partners, employees, and civil society. Mandatory disclosure will likely be introduced by several regulatory bodies soon.
- Companies also see carbon disclosure as a way to systematise and improve their internal management of emissions and climate risks.
- Key current trends in carbon disclosure are:
 - A widening scope by number of companies and geography (including cities, regions, and countries as well as corporations);

- Greater standardisation of methodology and reporting; and
- More use of the results by investors, and by companies themselves to drive internal performance improvements.

THE RISE OF CARBON DISCLOSURE

Carbon disclosure is quite a new feature of the corporate landscape. The first global sustainability reporting standard was launched by Ceres (the Coalition for Environmentally Responsible Economies) in 1997ⁱ, and the Greenhouse Gas Protocol was the first generation of accounting standards, released in 2001ⁱⁱ. When tracking by the CDP began in 2003, 228 companies worldwide were disclosing on carbon; this has now risen to 8,446. Between 2016 and 2019, the share of corporate GHG emissions disclosed to CDP rose from 24% to 36%ⁱⁱⁱ. While focus has been on companies, various cities, regions, and countries are also adopting carbon disclosure. This rising interest

"Every major systemic bank, the world's largest insurers, its biggest pension funds and top asset managers are calling for the disclosure of climate-related financial risk."

Mark Carney, former Bank of England Governor and United Nations Special Envoy on Climate Action and Finance.

has been driven by growing concern about the impact of climate change, increasingly strict policies, (particularly in Europe) and rising pressure from the investor community on companies, to add to longer-standing efforts from environmental groups.

Carbon disclosure has thus become an increasingly important part of the business landscape. Though not generally a statutory requirement on companies, it is increasingly demanded by financiers and business partners. It is now widely adopted not just in developed countries, but across China, India, other parts of Asia and in Latin America, in particular, while beginning to be picked up in Africa and the Middle East.

WHAT DOES CARBON DISCLOSURE INVOLVE?

Carbon disclosure includes three steps:

- Carbon accounting: measuring, recording, assessing, and analysing emissions and sinks of carbon dioxide (and other GHGs), in volume and in value, where a monetary price is set on emissions or liabilities. Carbon accounting can be an internal process within a company and not necessarily disclosed externally. A range of organisations carry out carbon accounting, for instance, standards organisations such as TÜV SÜD ^{iv}, the Carbon Trust, ^v and the leading accounting firms. Carbon accounting is not yet standardised in the same way as financial accounting ^{vi}, though several organisations do set increasingly detailed and consistent standards, as discussed below;
- Carbon reporting: reporting GHG emissions to an outside body, whether for public consumption or to a regulatory body, to approved standards (such as those of the Greenhouse Gas Protocol, the British PAS 2060 ^{vii}, or the Kyoto Protocol) ^{viii}; and

- Carbon disclosure: using the results of accounting and reporting to assess GHG risks and market opportunities for a company. This is part of corporate transparency and effective governance.



WHAT DOES CARBON DISCLOSURE INVOLVE?

While carbon disclosure involves a company's current status and a view of future risks, targets can be set for reductions in carbon footprint, intensity, or absolute emissions (defined in various ways). Companies are increasingly targeting carbon neutrality, in line with various national targets (for instance, both the EU and UK ^{ix} plan to be carbon-neutral by 2050, which presumably means that companies there would also have to be carbon-neutral by that date, if not sooner).

Carbon disclosure and certification can be divided into three categories:

- Required by law or regulatory bodies, typically under emissions trading schemes or carbon taxation;
- Required to obtain benefits, for example, carbon credits under the Clean Development Mechanism (CDM); and
- Voluntary.

The focus of this paper is primarily on voluntary disclosure.



CARBON DISCLOSURE AND CERTIFYING BODIES

CDP^x has probably emerged as the world leader for carbon disclosure. Other important bodies involved in carbon reporting and disclosure include the US-based Ceres, the GHG Protocol, the Investor Network on Climate Risk (INCR), The Climate Registry (TCR), the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), the Climate Disclosure Standards Board (CDSB), and the UN Principles for Sustainable Investment (PRI). GRI, CDSB, SASB, and others are currently cooperating to align their frameworks.

Of the S&P500 leading US-listed companies, 90% publish a sustainability report; 65% respond to CDP's survey; 51% use GRI; however, only 14% follow SASB and only 5% are so far aligned with the Financial Stability Board's Task Force (TCFD - discussed in more detail below)^{xi}.

TABLE 1 KEY FEATURES OF DISCLOSURE BODIES AND METHODOLOGIES

Organisation	Key features of disclosure
CDP ^{xii}	<ul style="list-style-type: none"> Companies complete a standard questionnaire Companies can volunteer; investors can also request companies to disclose Rating from A to F Requirements for A include verification of at least 70% of Scope 1 & 2 emissions; senior management responsibility; reporting on emissions with detailed breakdown of Scope 1, 2 and 3; economics of oil & gas production; use of CCUS; employee incentives; climate risk and opportunity management.
CERES	<ul style="list-style-type: none"> Broad focus on sustainability criteria More advocacy-based, with specific campaigns on renewable energy, electric vehicles, etc. Promotes science-based targets Emissions benchmarking

GHG Protocol ^{xiii}	<ul style="list-style-type: none"> GHG accounting standards Customised for different countries and sectors 85% of respondents to CDP use GHG Protocol to account for emissions Aligned with International Standards Organisation (ISO)
INCR	<ul style="list-style-type: none"> A project of Ceres The North American arm of GIC Network of 130 institutional investors with >\$17 trillion of assets Knowledge dissemination, advocacy
TCR ^{xiv}	<ul style="list-style-type: none"> North America-based Designs & implements voluntary and compliance GHG-reporting programmes 256 members including 200 companies All verified data reported publicly Customisable GHG reporting protocols with optional independent verification
GRI	<ul style="list-style-type: none"> Standards for reporting GHG, environmental, economic and social impacts Collaborates with CDP but less detailed on carbon
SASB	<ul style="list-style-type: none"> Develops sustainability accounting standards Unique standard for each industry, including four different segments within oil & gas Looks at the "world's impact on the company"
CDSB	<ul style="list-style-type: none"> Consortium of business and NGOs, including CDP, Ceres, TCR and others CDP provides its secretariat Rigorous framework for reporting environmental information, aligned with financial reporting



CARBON-NEUTRAL INITIATIVES UNDER THE UNFCCC

The United Nations Framework Convention on Climate Change (UNFCCC) has traditionally focused on states. In the Paris Agreement (2015), for the first time, non-state actors were specifically asked to contribute to climate change initiatives ^{xv}. These included companies, financial institutions, sub-national jurisdictions, cities, and civil society.

In 2014, as reported by the CDP, 70 of the world's publicly listed companies had emissions of 3.4 gigatonnes of CO₂ equivalent (Gt/CO₂e), about a tenth of total fossil fuel and industrial emissions in that year of 35.7 Gt ^{xvi}. Of these, 35% had set emissions reduction goals in line with the global 2°C goal, 15% had less ambitious goals, 15% had goals not expected to reduce emissions, and 35% had not set goals. These were expected to lead to 0.8 Gt/CO₂e reductions on a baseline of 4.2 Gt/CO₂e by 2030.

There is significant overlap between these goals and those reported by countries in their Nationally Determined Contributions (NDCs), as well as to other non-state goals related to cities, aviation, maritime, flaring reduction, methane leakage and other specific initiatives. However, some CDP-related reductions are additional to the NDCs. A conservative assessment suggests this to be about 20–30%. As NDCs are tightened, with the next round due to be made at the end of 2020 (see the AI-Attayah Foundation Sustainability Issue August 2020), corporate ambitions will also have to advance in order to stay ahead of government policy.



THE COMPONENTS OF CERTIFICATION

A company's GHG emissions are divided into Scope 1, 2 and 3. Scope 1 is direct emissions (for example, burning of fuel), Scope 2 is emissions from purchased heat and electricity, and Scope 3 are indirect emissions from the company's value chain. Scope 3, therefore, includes upstream emissions (i.e. from the supply chain to a company) and downstream emissions (emissions resulting from a company's products after the sale). In the case of oil companies, BP distinguishes Scope 3 into two categories: emissions from its own production, and emissions from oil and gas produced by third parties that it refines or trades.

Scope 3 emissions (and potentially Scope 2) will result in extensive double-counting. This emphasises the need for common standards or at least interoperability.

Some companies have announced ambitions to be carbon-neutral by a certain date. This may be combined with plans to, for instance, supply all their energy needs from renewable or low-carbon sources. In some cases - for instance, Microsoft - companies have committed not just to become carbon-neutral but even to offset their historical emissions.

Disclosure goes beyond simple reporting of GHG emissions and plans for reductions. It considers elements such as governance, responsibility, and staff incentives - whether senior management is sufficiently engaged. Various other forms of external certification for specific elements may be required, as well as consideration of the carbon disclosure and risks of its business partners. Then a company is expected to consider various scenarios for its climate risks and show that it has robust plans to meet them.



WHY DO COMPANIES SEEK CERTIFICATION?

Companies agree to carbon disclosure because of external pressures and internal drive for improvement.

Demands of key stakeholders: According to CDP, 515 investors with \$106 trillion of assets, and 147 large purchasers with over \$4 trillion of annual procurement, request companies to disclose environmental data. Investors themselves are under pressure from the providers of their capital both to carry out carbon disclosure themselves and to require it from companies they invest in. Adherence to carbon disclosure standards increasingly become a requirement to obtain finance, investment and insurance, and to qualify for government contracts or supply other businesses.

The Financial Stability Board, an international body, founded by the G7 countries and based in Basel, Switzerland, has established a Task Force (TCFD) on climate-related financial disclosure, because of its concerns that climate risks could pose a systemic risk to the world financial system ^{xvii}. More than ten governments have plans to introduce TCFD recommendations into reporting requirements, and in September 2020, New Zealand became the first country to introduce mandatory climate risk reporting in line with the TCFD framework ^{xviii}. The Network for Greening the Financial System, which includes 36 central banks, launched a number of recommendations in April 2019, of which one was to make climate disclosure robust, comprehensive, and internationally consistent. The Global Investor Coalition on Climate Change (GICC), launched in 2012, brings together four partner organisations in the US, Asia, Europe, and Australasia to drive change in corporate disclosure of climate risks and opportunities ^{xix}.

Some financial products now being launched are specifically tied to higher levels of carbon disclosure, such as the CPR Invest – Climate Action Fund, and New York State Commons Retirement Fund's low carbon index. Schroders and CalPERS use carbon disclosure data to evaluate the carbon footprint and exposure of their portfolios.

Civil society and environmental groups have increasingly put pressure on companies, particularly in fossil fuels. This may happen via campaigns, protests, legal action, encouraging divestment by investors, and consumer boycott. However, environmentalists are also using the tactic of buying shares in companies to be able to speak at annual general meetings, and put forward and vote on shareholder resolutions.

For instance, Ceres has supported shareholder motions requiring 2°C scenario analysis that achieved majority shareholder support at ExxonMobil, Occidental Petroleum, Anadarko (oil companies), Kinder Morgan (pipeline company), and PPL (electric utility) ^{xx}.

Employees, suppliers, and consumers are more complex and dispersed groups. However, growing environmental consciousness, particularly amongst younger people, favours companies that are more open about their environmental contribution. Though most will probably not consult a company's carbon disclosure reports, this nevertheless remains important as a way to obtain certification and to drive internal change. For suppliers, their own carbon disclosure includes the Scope 3 emissions contributed by their business partners. Therefore, both sides of a business-to-business arrangement face increasing pressure for disclosure.

Even private or state companies, which may not be exposed to much shareholder pressure, have to respond to the needs of their business partners.

Carbon reduction policies are increasingly important, including carbon taxes and caps and portfolio standards. Presently, 25 countries worldwide have a carbon tax, 38 have an emissions trading system (with some overlap), and further national and subnational systems are under consideration ^{xxi}. The EU's potential introduction of border carbon tariffs or standards could limit imports into the bloc of carbon-intensive products. This can also be an issue for companies relying on purchased carbon offsets to meet their climate goals, and for companies (typically in forestry) that generate such credits.

Carbon disclosure becomes important for a company to identify its exposure to such policies and move to reduce emissions to limit its liability. For companies covered by a carbon tax or trading scheme, they are legally required to measure and account for their GHG emissions, which have a direct financial impact. In this case, carbon disclosure becomes a part of standard financial reporting, since companies are required to assess business risks.

Internal motivations are also important. Carbon disclosure forces a rigorous assessment of a company's business against approved and consistent standards. This helps a drive for internal improvement ^{xxii}, in terms of reducing a company's emissions and identifying areas of carbon risk or exposure.

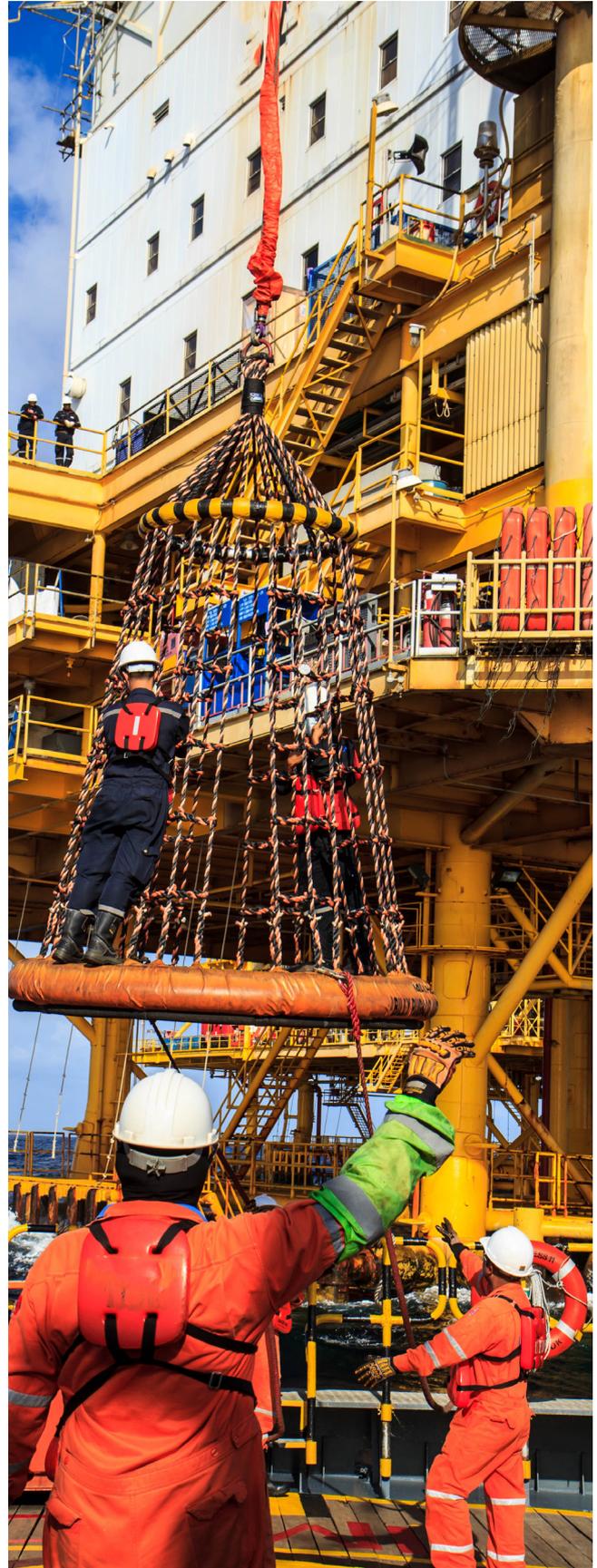


WHY DO COMPANIES SEEK CERTIFICATION?

For companies that have set goals on GHG reductions or carbon neutrality, disclosure is a way of driving change internally as well as gaining external credibility. This can be part of 'future-proofing' by anticipating future regulatory changes. This is particularly the case where carbon certificatory bodies are themselves informing and driving regulatory decisions, for instance, by drawing attention to issues such as methane leakage or deforestation.

The exact reasons why and how an individual company chooses to disclose is not always clear. Research suggests that larger companies are more likely to disclose (not surprisingly, since they have the resources and face more public scrutiny). The CDP process, for instance, covers a 226-page document, which only a big company could spare the time to complete. Companies in high-emitting and carbon-intensive industries are also more likely to disclose. The Kyoto Protocol and, in some cases, other GHG regulation are factors.

Studies identified a positive impact on emissions intensity, but (from a very limited base) no effect on company performance or stock returns ^{xxiii}. However, the CDP claims that companies identified as "climate leaders" outperformed the market by 5.3% annually during 2011-2019 ^{xxiv}. Other research suggests that companies that concentrate on financially material sustainability factors, excluding those that are non-material, outperform others ^{xxv}.

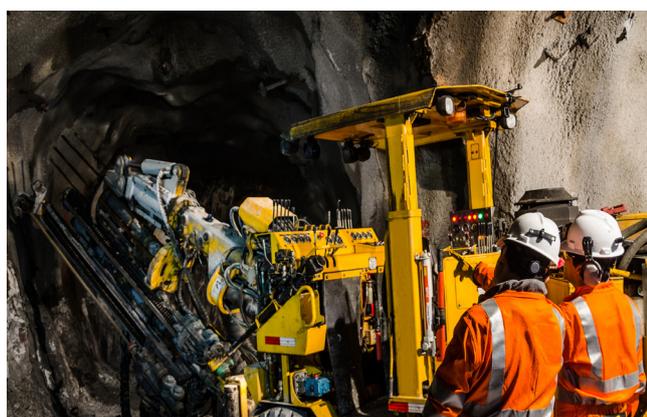


HOW GOOD IS THE CURRENT LEVEL OF DISCLOSURE?

The CDP currently assesses 6,154 companies and rates them from A to F (there is no E grade) on disclosure on climate, water, and forests. Apart from 'general' companies, electric utilities, food & beverage, oil & gas, and chemicals are the best-represented (Table 2). Along with chemicals, metals & mining, cement, transport and steel, these are likely to be high-emitting sectors.

TABLE 2 CDP BREAKDOWN OF COMPANIES BY SECTOR ^{xxvi}

Sector	Number of companies	% of companies
Agriculture	51	0.8%
Cement	56	0.9%
Chemicals	217	3.5%
Coal	69	1.1%
Electric utilities	273	4.4%
Food, beverage & tobacco	259	4.2%
General	4,145	67.4%
Metals & mining	195	3.2%
N/A	156	2.5%
Oil & gas	250	4.1%
Paper & forestry	97	1.6%
Steel	73	1.2%
Transport OEM	119	1.9%
Transport services	194	3.2%



The developed countries are best represented among assessed companies, but China also features strongly (Table 3).

TABLE 3 CDP ASSESSED COMPANIES BY COUNTRY ^{xxvii}

Country	Number of companies	% of companies
EU	1,320	21.4%
US	911	14.8%
China	600	9.7%
Japan	583	9.5%
UK	507	8.2%
Other Asia	409	6.6%
Other Europe & FSU	407	6.6%
Central & South America	304	4.9%
Oceania	257	4.2%
India	241	3.9%
Canada	236	3.8%
South Korea	214	3.5%
Africa	122	2.0%
GCC	43	0.7%

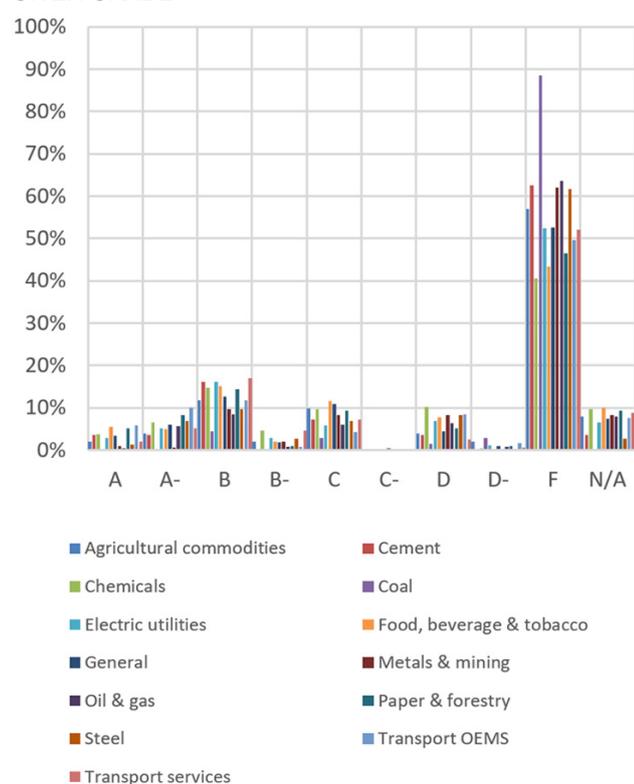
Figure 1 shows that most companies are currently assessed poorly on climate disclosure. Only 3.2% achieved A, and 51.7% achieved F; 9.8% were not assessed. The average grade was about C-. The best-performing sector, chemicals, averaged between C and C-; oil and gas averaged about D, and coal was by far the worst, averaging between D- and F.

However, companies in high-emitting sectors can achieve disclosure scores. For instance, a score of A was achieved in cement by Heidelberg Cement and Cemex; in chemicals by Air Liquide and seven others; in electric utilities by seven European and one American company; in metals by two, including a South

HOW GOOD IS THE CURRENT LEVEL OF DISCLOSURE?

African firm (Africa's only A); in oil & gas by ENAGAS of Spain; Tokyo Steel; and seven transport manufacturers including Toyota, Nissan, Hyundai, Kia and Ford. Among the major oil & gas firms, Total, ENI, and Repsol achieved A-; Shell, Equinor, ConocoPhillips, Petrobras, and Rosneft were rated B.

FIGURE 1 CDP CLIMATE RATINGS PER SECTOR - % OF COMPANIES WITHIN EACH SECTOR ACHIEVING THE GIVEN GRADE^{xxviii}



By country/region, Japan achieves the best average climate disclosure score, just above a C. The US, EU, UK, Canada, Africa, South America and other countries in Asia are all comparable around a C-. India and South Korea rate D and China around D-. No company in China, India or the GCC, and only one in Africa and one in Canada rates as an A. This shows major room for improvement in disclosure versus CDP's criteria. It also indicates that limited disclosure is a concern for developed-country companies as well as those from developing countries.

CARBON GOALS OF OIL AND GAS COMPANIES

Most leading European oil and gas companies have recently set carbon-neutrality goals, typically for around 2050 (Table 4).

TABLE 4 OIL COMPANIES' NET-ZERO TARGETS^{xxix}

Company	Scope 1 & 2	Scope 3 own production	Scope 3 3rd party
BP	0 by 2050		Intensity -50% by 2050
ENI	Net-zero upstream by 2030; net-zero all activities by 2040	80% reduction by 2050	
Total	0 by 2050	Europe 0 by 2050 Intensity -60% by 2050	
Equinor	Carbon neutral by 2030; net-zero by 2050	-50% intensity by 2050	
Repsol	0 by 2050		
Shell	Intensity -65% by 2050 + full offsets		

Nevertheless, oil companies have a long way to go to improve their carbon disclosure (Table 5). Note that some prominent national oil companies do not appear in CDP's assessment.

Oil companies are not the only ones to have zero-carbon goals. Those setting net-zero goals recently include (by 2050 if not otherwise specified): utilities (Duke Energy), steel (ThyssenKrupp), cement (Heidelberg Cement), mining (Vale), airlines (British Airways and Qantas), retail (Sainsbury's by 2040, Ikea by 2030), food and beverages (Nestlé), financial services (Barclays), professional services (EY by

TABLE 5 CARBON DISCLOSURE RATING OF
SELECTED OIL & GAS COMPANIES ^{xxx}

Rating (CDP)	Companies
A	ENAGAS (Spain)
A-	OMV, Total, ENI, Repsol, Hess
B	Petrobras, Husky, Suncor, Idemitsu, Inpex, Equinor, Rosneft, Sasol, CEPSA, Shell, ConocoPhillips,
B-	Hellenic Petroleum, Cairn Energy
C	Gazprom, Woodside, MOL, Indian Oil, Kazmunaigaz, Occidental
D	Canadian Natural Resources, Encana, CNOOC, Lukoil, Tullow, EOG
D-	Novatek, Tatneft
F	Sonatrach, Cenovus, Kinder Morgan, Ecopetrol, Hindustan Petroleum, ONGC, Oil India, Japex, Petronas, Gazprom Neft, Surgutneftegaz, Transneft, Saudi Aramco, Vitol, BP, Tupras, Apache, Chevron, ExxonMobil, Murphy, Marathon, Cheniere

2020), technology (Microsoft by 2030, including removing all historical emissions since 1975) and property (Land Securities by 2030, National Trust by 2030) ^{xxxi}. Some of these companies, notably airlines, steel and cement, are also in sectors considered "hard to abate".

Setting ambitious targets puts pressure on a company to deliver. With distant horizons, continuous progress and reporting are required, to understand internally and externally that progress is being made.

"Announcing a net-zero target without a clear strategic roadmap may well have the opposite effect to what was intended – it risks damaging your green credentials more than enhancing them."

Carbon Intelligence



WHAT ARE PROBLEMS AND CONCERNS WITH CARBON DISCLOSURE?

The main historical problem with carbon disclosure is that of inadequate rules and consistency. It is quite a new discipline, without the long experience and strict regulatory requirements of financial reporting, and yet, of course, financial reporting is often susceptible to manipulation and concealment.

There are generally no penalties for misleading or inadequate carbon disclosure. Although CDP and other bodies attempt to standardise reports and fill in missing data, this is inevitably limited. As noted, carbon disclosure may become a mandatory requirement, as in New Zealand and likely in the EU and some other jurisdictions. However, this does run the risk of raising the burdens on business and pushing carbon-intensive or poorly disclosing companies to other jurisdictions. For this reason, recent progress in widening disclosure in China and India must continue.

Reporting approaches can vary significantly. For instance, among oil companies, Shell, Total and ConocoPhillips report by operational control; Chevron and ExxonMobil by equity share; and BP by all consolidated entities and the BP share of equity affiliates, excluding Rosneft (a large emitter, in which BP holds 19.75%)^{xxxii}. Treatment and inclusion of Scope 3 is a particularly large cause of differences and non-comparability. For most companies, other than electric utilities and steel and chemicals firms, Scope 3 will be the majority of their emissions.

Averages can be misleading: for instance, a moderate average emission level can conceal some very high-emitting assets. Comparing companies even within the same sector is not straightforward; for instance, a power utility in hydro-dependent Norway versus one in coal-reliant Poland, or a utility that focuses mainly

on transmission and distribution versus one responsible for generation.

Changes in such reporting approaches make it hard to compare performance between years, even for the same company.

Confidentiality requirements from business partners and governments may prevent the release of data, particularly when disaggregated. The use of third-party certification is important in this respect, as a company can assess, for example, the carbon disclosure of a supplier without having to be privy to sensitive internal information. Alternatively, formalisation of disclosure requirements by statutory bodies such as stock exchanges can also override contractual confidentiality provisions.

While many companies consider climate risks to be material to them, 60% of those replying to the TCFD did not disclose the resilience of their strategies to such risks. There is still inadequate quantification of the business impact of climate-related issues.



WHAT ARE EMERGING TRENDS AND CHANGES IN CARBON DISCLOSURE?

Carbon disclosure shows nine key trends. These broadly cover a growing adoption of carbon disclosure; consolidation of standards and reporting; and more active and wider use of the information disclosed. These trends are:

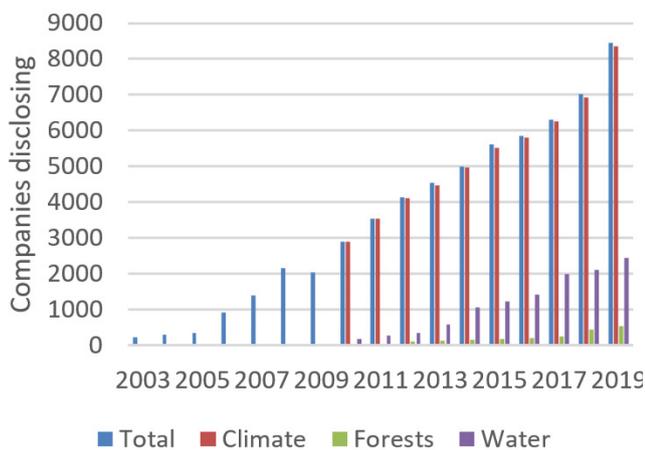
1. A growing number of disclosing companies, with a widening of their geography (more Chinese and Indian companies in particular);
2. Widening of disclosure scope beyond companies to include cities, regions, and countries;
3. Improving systematisation and standardisation of reporting, with consolidation around a small number of agencies and standards, notably GHG Protocol on accounting and CDP on disclosure ^{xxxiii};
4. Reporting on additional, related dimensions, notably water and forests;
5. Use of the results by a wider range of interested parties, particularly investors and supply chain clients;
6. Moves by regulatory bodies to make climate/carbon disclosure mandatory, in line with financial reporting;
7. Consideration of climate risks to a business, and evaluating systemic climate risk, instead of merely reporting its emissions and reduction plans ^{xxxiv};
8. Systematic consideration of the uncertainty in reporting and its implications; and
9. Use of the results to drive performance improvement.



WHAT ARE EMERGING TRENDS AND CHANGES IN CARBON DISCLOSURE?

The number of companies making climate/carbon disclosures has risen enormously in recent years (Figure 2). Disclosure on water began in 2010 and on forests in 2012 (note that a few companies disclose on water and/or forests but not climate/carbon). This addition of disclosure on other climate-related elements is a relatively new feature, and still out of the whole sample, only 6% of companies disclose on forests and 29% on water.

FIGURE 2 GLOBAL ELECTRICITY PRODUCTION BY SOURCE, NDC SCENARIO ^{xxxv}



Measurement and reporting may be valuable in itself, but it is more important for companies to use the information. CDP indicates that 38% of companies reporting for the first time have an emissions reduction target; 69% of those reporting for the third year have such a target.

Some emerging technologies may facilitate improvements to carbon disclosure. For instance, attention has been drawn to blockchain technology as a way of assessing GHG emissions accurately and securely throughout supply chains ^{xxxvi}.



IMPLICATIONS FOR MAJOR OIL AND GAS PRODUCERS

- Numerous major oil companies, mostly European, have plans for carbon neutrality by a given date, typically 2050. Carbon disclosure to recognised standards is crucial to maintaining the credibility of these targets and intermediate milestones.
- Even private (non-listed) and state-owned companies will have to disclose because it will be required for their access to capital markets, insurance, supply chains, and customers. Europe's planned carbon border tariff could make use of carbon disclosure data.
- Oil and gas companies will therefore need to build their capabilities in carbon disclosure and management. Given the nature of their business, this will then require them to advance their plans in low-emitting sectors, whether CCUS, hydrogen, petrochemicals, or entirely non-oil/gas energies.
- When added to the NDCs, voluntary emissions cuts by companies form a non-negligible amount of planned abatement. This can be expected to increase further as the NDCs themselves are tightened in 2020 and each subsequent five-year period.



CONCLUSIONS

As government action on climate change has generally been insufficient to achieve the goals of the Kyoto Protocol or Paris Agreement, pressure on investors and companies has been seen as an alternative way to achieve emissions reductions. Concurrently, the government action that has occurred or that could occur has drawn attention to the carbon risks faced by corporations, particularly those in high-emitting sectors.

Over the past two decades, carbon disclosure has thus been a fast-growing area of attention. Due to the need for standardisation, a few organisations - particularly the CDP and GHG Protocol - have gained prominence as the main standard-setters and assessors of carbon reporting and disclosure.

And because of the interlinked international nature of business, even jurisdictions without strong climate policy of their own are exposed to requirements for carbon disclosure elsewhere. This will become particularly important as major regulatory jurisdictions - likely led by the EU - begin to incorporate carbon disclosure into mandatory reporting.

However, climate disclosure is not a replacement for government action. Many of the 'climate risks' identified by investors are actually risks of government climate action, such as imposing carbon taxes or banning fossil fuel developments. Companies still have only limited visibility and influence over consumer choices. The adoption of

standardised carbon disclosure by cities, regions, and national governments naturally affects the companies that do business in and with them. High ratings on carbon disclosure could become a competitive advantage for locales. That could make it an increasingly important adjunct to top-down progress through the UNFCCC channels - and raise the interesting question of who governs the amount and direction of climate ambition certified by organisations such as CDP.



APPENDIX

- i. <https://www.ceres.org/our-work/disclosure>
- ii. <https://journals.sagepub.com/doi/pdf/10.1177/2399654417723341>
- iii. <https://www.weforum.org/agenda/2019/12/countries-companies-net-zero-carbon-emissions/>
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OUR MEMBERS

Currently, the Foundation has over fifteen corporate members from Qatar's energy, insurance and banking industries as well as several partnership agreements with business and academia.



Our partners collaborate with us on various projects and research within the themes of energy and sustainable development.





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