



# Environmental Tracking

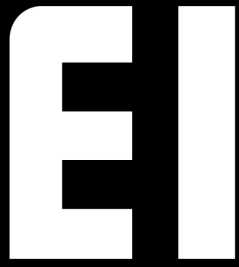
Carbon Rankings

## REPORT: ET NORTH AMERICA 300 2013 CARBON RANKINGS

**Environmental Investment Organisation**

Where the needs of the future meet the practicalities of the present





## WHO WE ARE

# ENVIRONMENTAL INVESTMENT ORGANISATION

An independent research body promoting carbon transparency and investment solutions designed to address climate change.

## WHAT WE DO

# ENVIRONMENTAL TRACKING

### ET Carbon Rankings

scoring the world's largest companies by greenhouse gas emissions & levels of transparency

### ET Index Series

mainstream index series designed to give investors broad market exposure whilst capitalising on, and driving, the shift towards a low carbon economy

### ET Engagement

engaging with companies to improve standards of disclosure & lower emissions

## WHY WE DO IT

designed specifically to **reduce**  
global corporate **Greenhouse Gas emissions**





## Foreword

Dear Reader,

Welcome to the ET North America 300 Report, examining the greenhouse gas emissions and transparency of the largest 300 companies in the region. The ET Carbon Rankings apply a uniform methodology across all sectors within a single public Ranking.

This is one in a series of ET 2013 Carbon Ranking Reports covering the world's largest 1,300 companies and being released in the week commencing 29th April.

Many companies now benefit from talented, dedicated sustainability staff and are earning top spots for their efforts, but the overall picture globally remains poor. Many companies go to great lengths to collect and analyse detailed greenhouse gas (GHG) data, only to fail at the last hurdle with simple errors in data presentation, such that a member of the public cannot decipher what the data means when set against the accepted GHG Protocol standard, the most widely used international accounting tool for GHG emissions. Unless all companies are reporting and presenting their GHG data in a clear and uniform manner, the task of cross comparing against companies becomes all but impossible.

Why is it that despite nearly two decades of major international initiatives, such as the UN Global Compact, the Global Reporting Initiative (GRI) and the Carbon Disclosure Project (CDP), we find ourselves in this situation? In the case of the GRI, its broad range of topics and lack of any specific format for GHG data presentation, even lacking specific headings for Scope 1, 2 and 3 emissions, explains itself. In the case of the CDP, operating as a private database with limited public access, the onus has been taken away from the responsibility of companies to report their own GHG emissions data in a clear, publicly accessible manner. Is it any wonder some companies are confused as to exactly what is expected of them? In simple terms, clear GHG reporting needs to be prioritised from the ever widening scope of CSR reporting if we are to have any chance of even passing the first hurdle of the climate crisis, which is to establish the reliability of the data itself.

The EIO does not usually involve itself in the scientific debate, preferring to let those with the necessary competence address such complex questions. Yet I could not help but be struck by a recent BBC Horizon Television Documentary entitled 'Global Weirding', a phrase which seems to neatly encapsulate the current facts on the ground. Of particular note was a claim by US scientist Professor Katharine Hayhoe and quoted by many other sources including the Met Office, that atmospheric humidity has increased by 4% since 1970. Given that many of the extreme weather events we are facing are moisture driven, this seemed to me to be a quite startling number. If we had been told that the global temperature had increased by 4% in the last 40 years, I think most people would realise that something quite serious was happening. Given an average is simply that and severe events will concentrate at particular times and places, given time lags are an inevitable part of the climatic process, we have not even begun to see the impact of this or many other consequences of climate change. I do find it surprising this particular number has not received greater attention. It does not require 'an Einstein' to



## Foreword

work out that the wettest (or snowiest) decade since records began might have something to do with a 4% rise in atmospheric moisture.

The term 'Denialist' has often been used to describe arguments querying the current scientific consensus. But I do not see a consensus. On the contrary, it seems to me there are a great range of predicted outcomes and only those that are relatively 'unalarmist' get any serious press.

Unfortunately, we have no real idea of the parameters of what we are triggering, being a complex interaction of social, economic and climatic forces. I fear, as is already happening, first the vulnerable will suffer and then chaos and carnage will catch up with the rest. We are in effect driving in the dark without lights, with a misplaced over-confidence in where we are heading. Nothing new there in the history of human intelligence, it is just that on this occasion a miscalculation will leave 7 billion and counting in its aftermath.

There is no historical precedent to this situation. There is no textbook answer. The real 'denial' is in failing to recognise there is no obvious solution to this problem, in this extraordinarily complex globalised world. The global economy is made up of nearly 200 individual nation states with vast gulfs of wealth, geographical size, exposure to risks, asymmetric political and social systems and multiple competing priorities. On the evidence to date, they are simply not going to suddenly a) all agree to a meaningful new global emissions regime and b) implement it even if they did all sign it.

The only immediate decentralised non-governmental solution I can see is from the activities of the investment world. Yet this will involve a fundamental and profound rethink of the purpose of the investment system and its current models, including current models of SRI and Ethical Investment, if we are to have the slightest chance of impacting this problem in any serious or rapid time frame.

Statements of intent. Fine. Statements of principle. Fine. But surely, we need to ask the long hard question, what might actually work?

Who knows how the final days of the people of Easter Island played out, but I can imagine as those involved looked around them and asked 'what have we done?', their more intelligent young offspring were less than complimentary. A modern translation might read 'thanks a tonne!'

**Michael Gill,**

Strategic Director & Founder, The Environmental Investment Organisation

April 2013

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# EXECUTIVE 5

## SUMMARY

The ET Carbon Rankings serve the twin purpose of encouraging transparency through making emissions data more publicly accessible, while also laying the foundations for the ET Index Series, a market mechanism designed to operate globally and incentivise carbon reductions within a rapid time-frame.

This latest set of Carbon Rankings build on the methodology established previously for the ET 2011 Carbon Rankings, where companies were placed into one of four Disclosure and Verification categories and then ranked by carbon intensity (tonnes of CO<sub>2</sub> equivalent per million US dollars of turnover) based on Scope 1, 2 & 3 emissions.

Where data is incomplete or not reported, companies are benchmarked against their sectoral competitors using the highest reported emissions intensity for that sector. *Please see the [EIO website methodology section](#) for a more comprehensive explanation of the four disclosure categories and the inference method.*

With the introduction of the long awaited [New Scope 3 Standard](#) from the Greenhouse Gas (GHG) Protocol in 2011, the EIO continues to take a proactive approach to incentivising companies to adopt this important new standard in GHG Reporting. It has long been the EIO's stated view that Scope 1 & 2 emissions do not in themselves provide an accurate picture of a company's carbon impact and therefore a bold approach needs to be taken to reward those companies fully reporting Scope 3 data.

Only when a company reports or explains its data across all 15 categories will that Scope 3 data be accepted. In all other cases, whilst the Scope 3 data is recorded and published, the inference method determines the actual Scope 3 intensity applied within the Ranking. The disclosure categories and inference method are essential tools to ensure that the ET Carbon Ranking is based on cross comparable information and no company is unfairly disadvantaged by disclosing fully its Scope 1, 2 and 3 emissions.

### THE RANKINGS ARE BASED ON THE FOLLOWING CORE PRINCIPLES:

- ▶ DATA USED IN THE RANKINGS MUST BE PUBLICLY AVAILABLE AND THEREFORE FULLY TRANSPARENT.
- ▶ IN ORDER TO ADDRESS THE ISSUE OF CLIMATE CHANGE, THE RANKINGS' PRIMARY OBJECTIVE MUST BE TO ENCOURAGE DISCLOSURE.
- ▶ DATA WHICH HAS BEEN VERIFIED BY AN INDEPENDENT THIRD PARTY WILL ALWAYS BE RANKED ABOVE DATA WHICH HAS NOT.
- ▶ COMPANIES HONEST ENOUGH TO DISCLOSE THEIR TOTAL EMISSIONS MUST NOT BE PENALISED FOR DOING SO RELATIVE TO THOSE WHO FAIL TO DISCLOSE.
- ▶ IN ORDER TO BE FULLY EFFECTIVE, THE RANKINGS MUST TAKE INTO ACCOUNT THE FULL SCOPE OF A COMPANY'S CARBON EMISSIONS, INCLUDING SCOPE 3.

# EXECUTIVE 6

## SUMMARY

### Key Findings

- ▶ **13% of companies publicly disclose complete and independently verified Scope 1 and 2 emissions data**
- ▶ **40% of companies do not publicly disclose their emissions data**
- ▶ **28% of companies reported one or more Scope 3 categories**
- ▶ **Only 6 out of 300 have reported 5 or more Scope 3 categories**
- ▶ **BCE tops the ET North America 300 Carbon Ranking, followed by Telus**
- ▶ **The biggest Scope 1 & 2 absolute emitter, for which information was available, was Exxon Mobil followed by American Electric Power with emissions of 143,000,000 and 136,000,000 (tCO<sub>2</sub>e), respectively**

The top three companies in the 2013 ET North America 300 Carbon Ranking are Bell Canada Enterprises, Telus and Sprint Nextel all of which are from the Telecoms sector. This is explained due to the inherently low Scope 1 & 2 Intensity within the telecoms industry, and the low inferred Scope 3 benchmark for this sector.

4th and 5th places are occupied by Technology companies Dell and Cisco.

Only 13% of the North America 300 companies fall under the Public, Complete and Verified category. 40% of companies do not make any data publicly available.

The top three spots of the Complete but Unverified category are occupied by one Telecoms company and two Health Care companies.

In a Ranking dominated by US companies it is impressive to see two Canadian companies achieve the top two spots. The top Ranked Mexican company is Femsa, which ranks 61st.

In terms of verified Scope 1 & 2 emissions data the lowest absolute emitters in the region were Prologis, Biogen Idec and McGraw-Hill with absolute Scope 1 & 2 emissions of 8,667, 101,146 and 128,826 tCO<sub>2</sub>e, respectively.

In terms of comparative country analysis of reporting trends across the region, Canada leads, with 41% of companies disclosing Complete Data followed closely by the US with 37% disclosing Complete Data, and Mexico 33%. Canada has nearly twice as many companies disclosing verified data compared to the US, whilst Mexico has none.

These Rankings highlight that carbon reporting in the North America region is still, with a few exceptions, highly inconsistent. 113 out of 300 companies publicly report complete data in accordance with the GHG protocol standard, with only 59 reporting on Scope 1, 2 and some Scope 3 emissions and only 26 companies taking the additional step of having at least their Scope 1 & 2 emissions data independently verified.

The highest performing Scope 3 discloser in the region is Baxter International. The US Health Care company disclosed the largest number of Scope 3

# EXECUTIVE 7

## SUMMARY

categories with a total of 12 out of 15, the 2nd highest globally. It ranked 13th. Had it fully accounted for or explained the remaining 3 categories, it would have topped the North America 300.

With 40% of companies not reporting any data at all, there is clearly significant room for improvement in the North America emissions reporting landscape.

The ET Carbon Rankings make up the first phase of the Environmental Tracking concept paving the way for the second stage: the ET Index Series. This will see the Rankings used to create a series of tradeable indexes, providing the investment community with a mainstream tool to encourage transparency and emission reductions on a global scale. It has already demonstrated the ability of these ET Indexes to track their conventional equivalents with minimal tracking error, through the launch of its two pilot indexes, the ET Europe 300 and the ET UK 100, based on previously published Rankings. For more information, including backtested performance data based on the 2013 ET Carbon Rankings, please refer to the [ET Index Section](#) of the EIO website.

### Key Reporting Recommendations

- ▶ **Report Scope 1, 2 & 3 emissions following GHG Protocol guidelines**
- ▶ **Ensure emissions data is publicly available in CSR/Sustainability reports/Integrated Annual report and online**
- ▶ **Have emissions data verified by an independent third party**
- ▶ **Ensure verification statements are public**

### Know your Scopes!

- ▶ **Scope 1 emissions:** All direct emissions
- ▶ **Scope 2 emissions:** Indirect emissions generated from the purchase of electricity
- ▶ **Scope 3 emissions:** All other indirect emissions, such as distribution of goods, transportation of purchased goods, transportation of waste, disposal of waste, employee commuting, business travel or investments.

# RANKING 8

## HIGHLIGHTS

### ET North America 300 Top 10

Figure 1.

ET Rank	Company Name	S1+2 emissions (tCO <sub>2</sub> e)	S1+2 Intensity	S3 Categories disclosed	S1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	<b>BCE</b>	215,029	10.98	2	46.70	Complete & Verified
2	<b>Telus</b>	371,100	35.79	1	71.51	Complete & Verified
3	<b>Sprint Nextel</b>	1,931,524	57.35	5	93.07	Complete & Verified
4	<b>AT&amp;T</b>	9,078,271	71.64	1	107.36	Complete & Verified
5	<b>Dell</b>	436,230	7.01	1	164.42	Complete & Verified
6	<b>Cisco Systems</b>	303,701	7.03	1	164.44	Complete & Verified
7	<b>Biogen Idec</b>	101,146	19.89	1	165.66	Complete & Verified
8	<b>Bristol Myers Squibb</b>	546,949	25.75	1	171.52	Complete & Verified
9	<b>Amgen</b>	402,000	25.80	1	171.57	Complete & Verified
10	<b>Symantec</b>	164,000	24.37	1	181.78	Complete & Verified

Topping the 2013 ET North America 300 Carbon Ranking are BCE and Telus, followed by Sprint Nextel.

As no company in the North America region fully disclosed its Scope 3 emissions, covering all 15 categories, ranking positions are determined by a combined Scope 1 & 2 intensity plus a 50% weighting of inferred Scope 3 emissions.

Since the telecommunications sector is the sector with the lowest Scope 3 benchmark figure and generally has a low Scope 1 & 2 emissions intensity, 4 out of the top 5

companies are from the Telecoms sector, with the remaining companies coming from the Technology and Health Care industries.

(Emissions Intensity is measured in tCO<sub>2</sub>e/\$M turnover)

# RANKING 9

## ANALYSIS

ET North America 300 Bottom 10

Figure 2.

ET Rank	Company Name	S1+2 emissions (tCO <sub>2</sub> e)	S1+2 Intensity	S3 Categories disclosed	S1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
291	CF Industries Holdings	No public data	2,412.22	-	6,472.29	No public data
292	Silver Wheaton	No public data	2,434.17	-	6,494.25	No public data
293	Southwestern Energy	No public data	3,926.62	-	7,086.52	No public data
294	Crescent Point Energy	No public data	3,926.62	-	7,086.52	No public data
295	Devon Energy	No public data	3,926.62	-	7,086.52	No public data
296	EOG Resources	No public data	3,926.62	-	7,086.52	No public data
297	Phillips 66	No public data	3,926.62	-	7,086.52	No public data
298	Anadarko Petroleum	No public data	3,926.62	-	7,086.52	No public data
299	Edison Intl.	No public data	9,036.54	-	10,342.03	No public data
300	First Energy	No public data	9,036.54	-	10,342.03	No public data

Ranking last among the largest 300 companies across the North America region is US Utilities company, First Energy, followed closely by Edison International. Both of these companies are from the Utilities sector and since they do not disclose any public data they all receive the same combined inferred intensity of 10,342.03, with the advantage being given to the smaller companies by market value. The justification for this is simple: larger companies have greater resources to both improve their reporting and realign their business towards a low carbon model.

The bottom 10 is dominated by the non-disclosing Oil and Gas Majors with two Basic Materials companies also dropping into the bottom 10.

The US dominates, with an 80% share of the bottom 10, although this can partly be explained by the fact the US companies make up 87% of the Ranking.

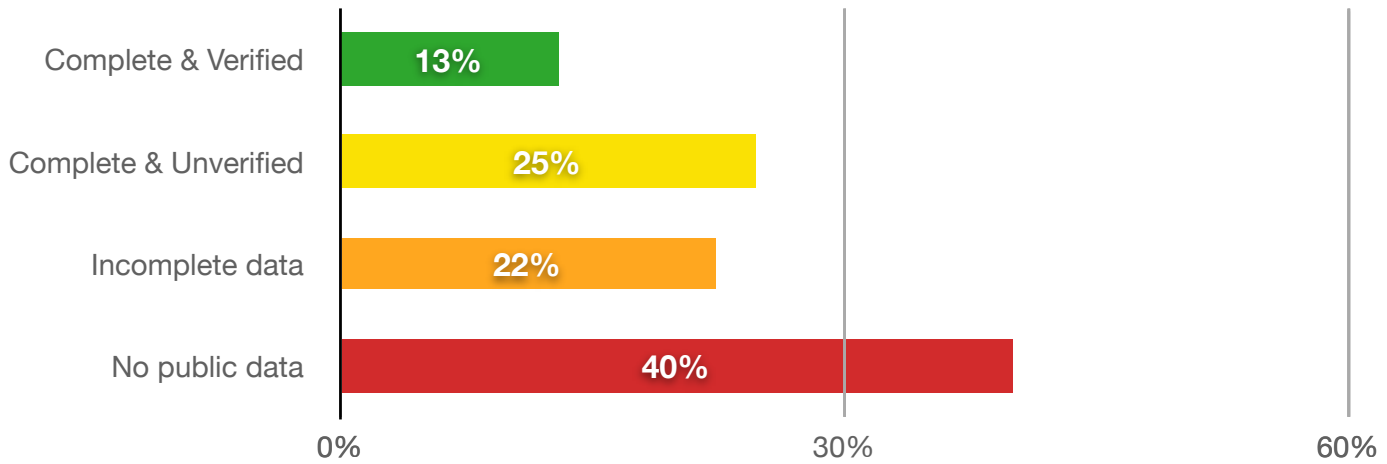
(Emissions Intensity is measured in tCO<sub>2</sub>e/\$M turnover)

# DISCLOSURE 10

## OVERVIEW

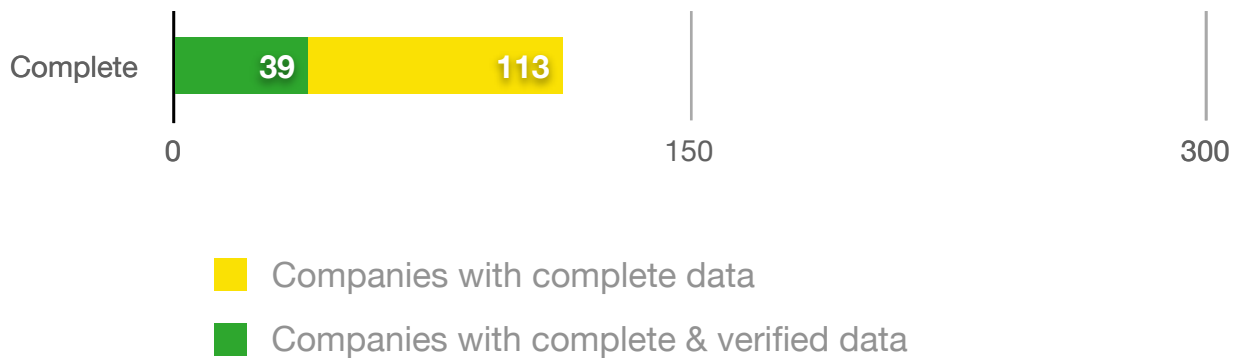
The disclosure and verification landscape of the ET North America 300

Figure 3.



Complete data versus verified data

Figure 4.







## METHODOLOGY

The ET Carbon Rankings have been designed specifically to encourage disclosure and verification, paving the way for absolute emissions reductions.

In essence, the ET Carbon Ranking methodology follows a three step process based on four information categories, as detailed below.

### Step 1: Categorisation

Companies are placed into one of **four data categories** based on Scope 1 & 2 emissions:

-  **1) Public, Complete, Verified**
-  **2) Public, Complete, Unverified**
-  **3) Public, Incomplete**
-  **4) No Public Data**

### Step 2: Inference

Wherever data is not complete, which means Scope 1 and 2 have not been reported for the company's entire operations or they have not been expressed in a sufficiently clear manner or there is simply no public data available, a worst case figure is inferred; based on the highest reported emissions intensity by any company within the same sector across the full universe of companies within the ET Carbon Rankings. This is designed specifically to encourage disclosure and to avoid penalising companies honest enough to report their emissions figures.

The same principle is applied but in a slightly different manner to Scope 3 emissions. Because of the controversial nature of Scope 3 emissions - by definition they are not under the ownership or direct control of a company, nor do they always lend themselves to easy calculation or identification, it does not appear logical to the EIO for these emissions to be given equal weight to Scope 1 and 2 emissions, which clearly are the responsibility of the company.

THE CARBON RANKINGS HAVE BEEN DESIGNED SPECIFICALLY TO ENCOURAGE DISCLOSURE AND VERIFICATION

COMPANIES WITH EXTERNALLY VERIFIED DATA WILL ALWAYS FIND THEMSELVES RANKED ABOVE THOSE WITH UNVERIFIED DATA

COMPANIES THAT DO NOT HAVE ANY PUBLICLY AVAILABLE DATA ARE BENCHMARKED AGAINST THE HIGHEST INTENSITY FROM THE WORST PERFORMING COMPANY WITHIN THEIR SECTOR

## METHODOLOGY

### Scope 3 Categories:

#### Upstream

1. Purchased goods and services
2. Capital goods
3. Fuel- and energy-related activities (not included in scope 1 or scope 2)
4. Upstream transportation and distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Upstream leased asset

#### Downstream

9. Downstream transportation and distribution
10. Processing of sold products
11. Use of sold products
12. End-of-life treatment of sold products
13. Downstream leased assets
14. Franchises
15. Investment

The EIO's current approach is to give a **50% weighting** to any **fully reported Scope 3 emissions total reported according to the 15 categories of the new Scope 3 standard**. This is then added to the Scope 1 and 2 total that has already been reported. Whenever a company does not report a complete Scope 3 total, exactly the same inference method described for Scope 1 and 2 is employed for Scope 3 emissions.

The company in the relevant sector **across the full universe of ET Rankings** with the highest reported Scope 3 figure is identified and used to infer a figure for the remaining companies, thus avoiding penalising a company for being honest enough to report a high figure. The only route by which a company can avoid having an inferred figure allocated to them is to report its own complete figure, and if that happens to be lower than the existing benchmark, then it gains the advantage of a higher ranking position by virtue of its lower emission total. If it is higher, then all the remaining non disclosing companies are benchmarked against it.

In summary, combined emissions intensity across the three Scopes is calculated according to the following formula: 100% of Scope 1 & 2 emissions intensity (disclosed or inferred) + 50% of Scope 3 emissions intensity (disclosed or inferred).

### Step 3: Ranking

First companies are categorised according to the completeness and verification of their Scope 1 & 2 data. Secondly, companies are ranked within the Disclosure Categories, according to their combined emissions intensity across Scopes 1, 2 and 3; with the exception of any company reporting complete Scope 3 data across all 15 GHG Protocol Scope 3 Standard categories in addition to having complete and verified Scope 1 & 2 data. Companies falling into the latter category will rank above all other companies in the Rankings, and will be differentiated according to combined intensity. Please refer to the inference method as described in the previous section for details on how companies not providing complete data are treated.

IT IS KEY THAT SCOPE 3 EMISSIONS ARE IDENTIFIED, REPORTED AND ULTIMATELY REDUCED

## METHODOLOGY

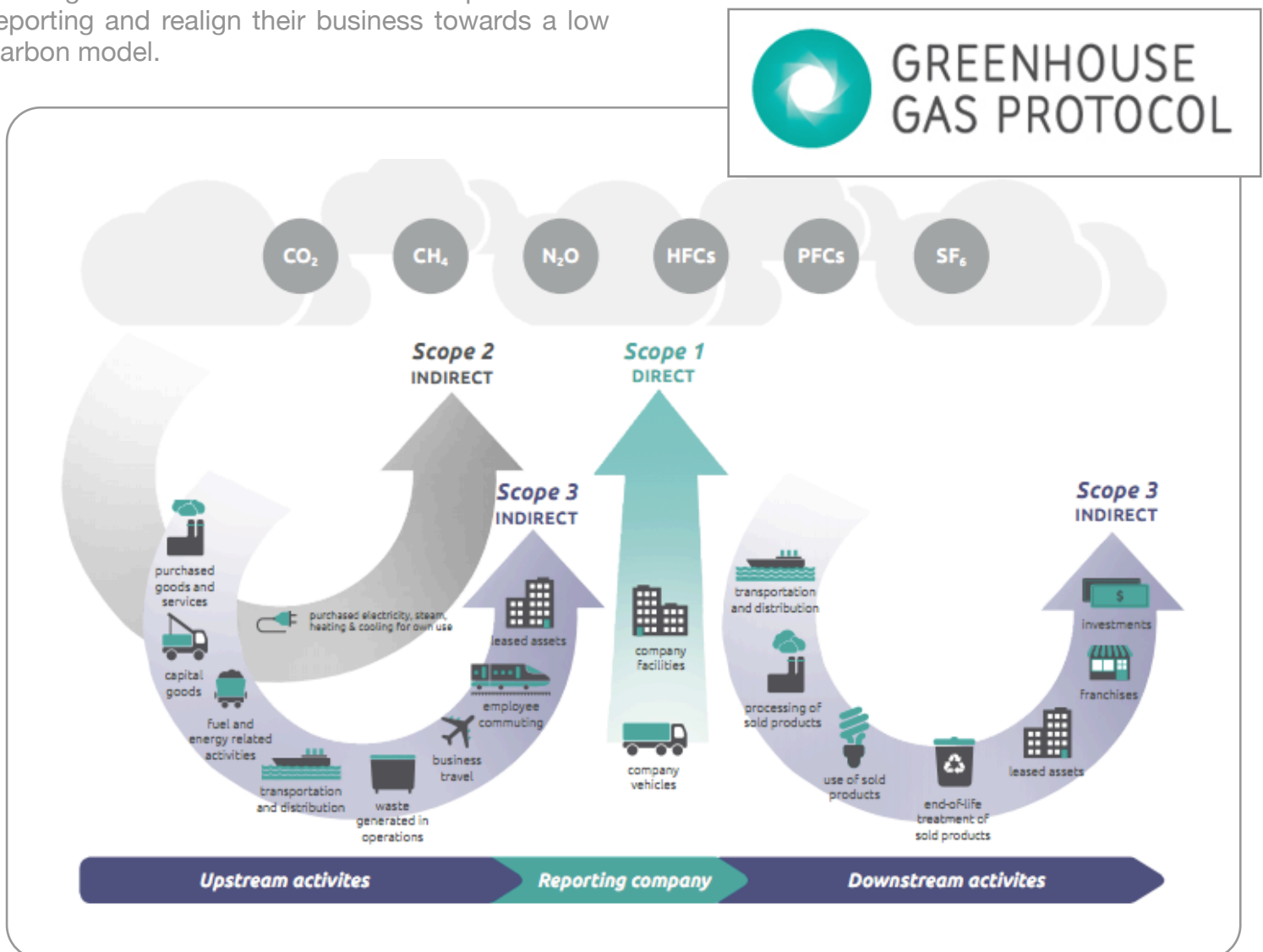
### Accounting for size

Emissions intensity is calculated using turnover figures from the same financial year as their latest publicly available (at time of publication) reported emissions.

Whilst there is no universally accepted system of establishing relative company size, turnover is generally accepted within the field of carbon accounting as a reasonable metric to determine company size.

Where one or more companies have the same emissions intensity within the Rankings, smaller market capitalisation is given an advantage. The justification for this is simple: larger companies have greater resources to both improve their reporting and realign their business towards a low carbon model.

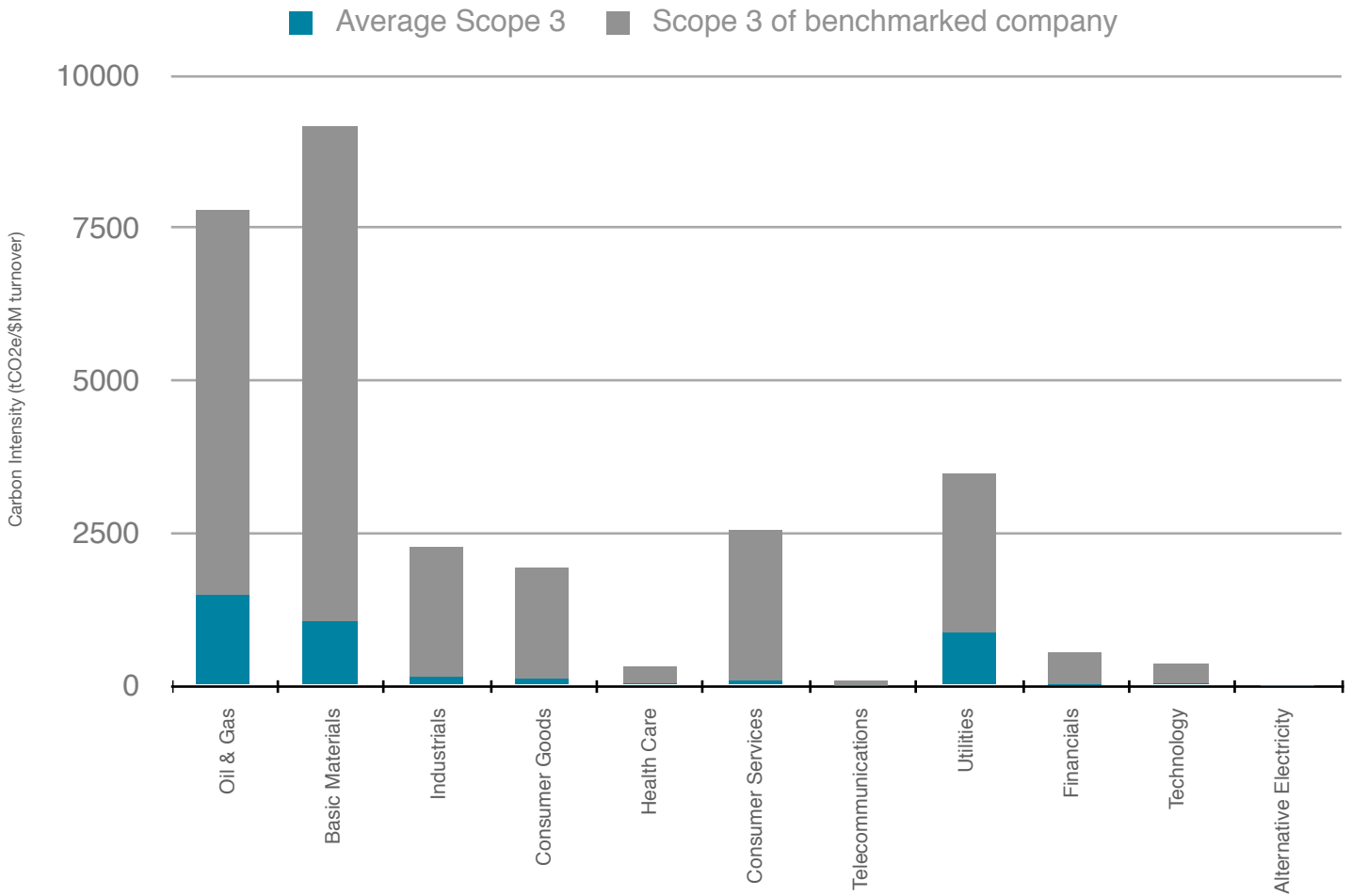
FOR A COMPLETE EXPLANATION OF THE METHODOLOGY BEHIND THE ET CARBON RANKINGS PLEASE VISIT [EIO.ORG.UK](http://EIO.ORG.UK)



## SCOPE 3

### Global Scope 3 Analysis

Figure 5.



### Global Scope 3 Benchmark companies

Figure 6.

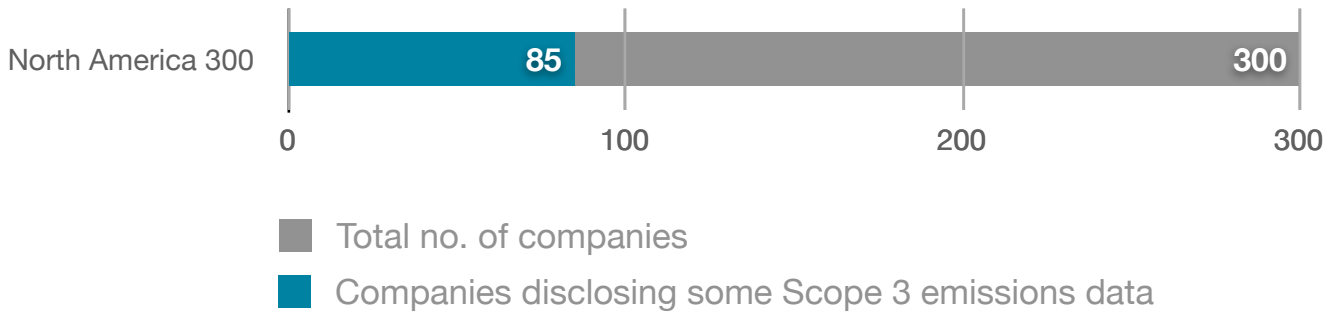
Sector	Benchmark Company Name	No. of Scope 3 Categories Disclosed	Scope 3 Intensity	Sector Scope 3 Intensity Average
Oil & Gas	Santos	1	6,319.81	1,473.57
Basic Materials	Rio Tinto	3	8,120.15	1,047.41
Industrials	Honda Motor	1	2,130.92	129.73
Consumer Goods	Panasonic	2	856.03	109.11
Health Care	Baxter Intl	12	291.54	23.43
Consumer Services	Intercontinental Hotels Gp.	2	2,475.03	72.80
Telecommunications	Sprint Nextel	5	71.44	7.35
Utilities	PG&E	1	2,610.97	861.67
Financials	British Land	3	531.72	9.96
Technology	Intel	3	314.82	36.16
Alternative Energy	Cemig	3	0.45	0.45

# SPOTLIGHT ON 15

## SCOPE 3

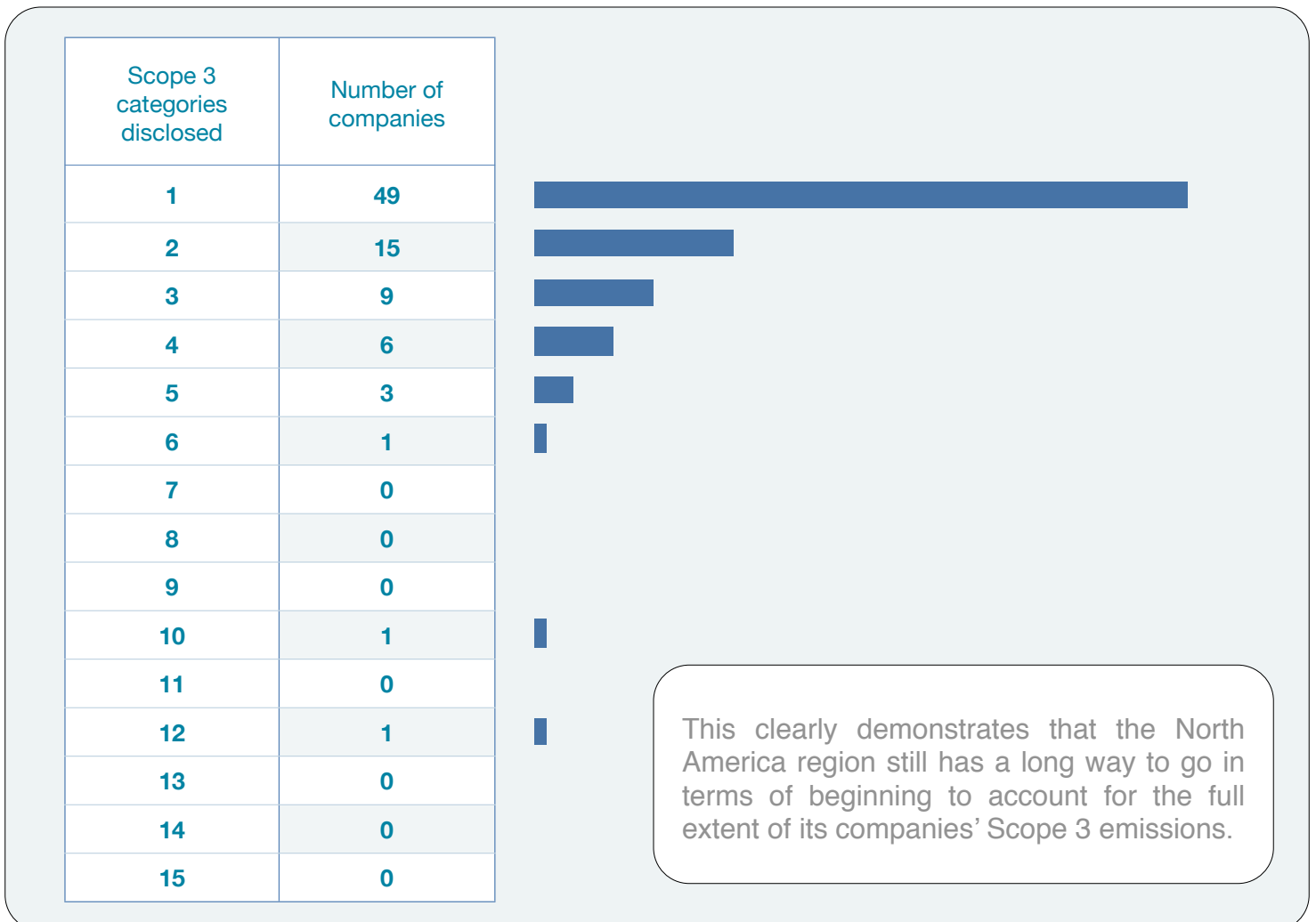
### North America 300 Scope 3 Analysis

Figure 7.



### North America 300 Extent of Scope 3 Disclosure

Figure 8.



## INFERENCE: SCOPE 3

NB. Example taken from ET Global 800

Figure 9.

As these three companies from the **Basic Materials** sector fail to disclose all 15 Scope 3 categories as defined by the GHG Protocol Corporate Value Chain (Scope 3) Standard, their disclosed Scope 3 figures are considered to be incomplete, and therefore they are **given an inferred Scope 3 figure**.

Disclosure & Verification status	Carbon Rank	Company Name	No. of S3 Categories Disclosed	Total Scope 3 Emissions	Disclosed Scope 3 Intensity	Inferred Scope 3 Intensity
No Public Data	777	Mfrisco	-	No Public Data	-	8,120.15
No Public Data	778	Silver Wheaton	-	No Public Data	-	8,120.15
No Public Data	779	China Shenhua	-	No Public Data	-	8,120.15

Rio Tinto is one of the Scope 3 benchmark companies for the **ET Global Universe**, which means it is the company with the highest disclosed Scope 3 intensity within the **Basic Materials** sector.

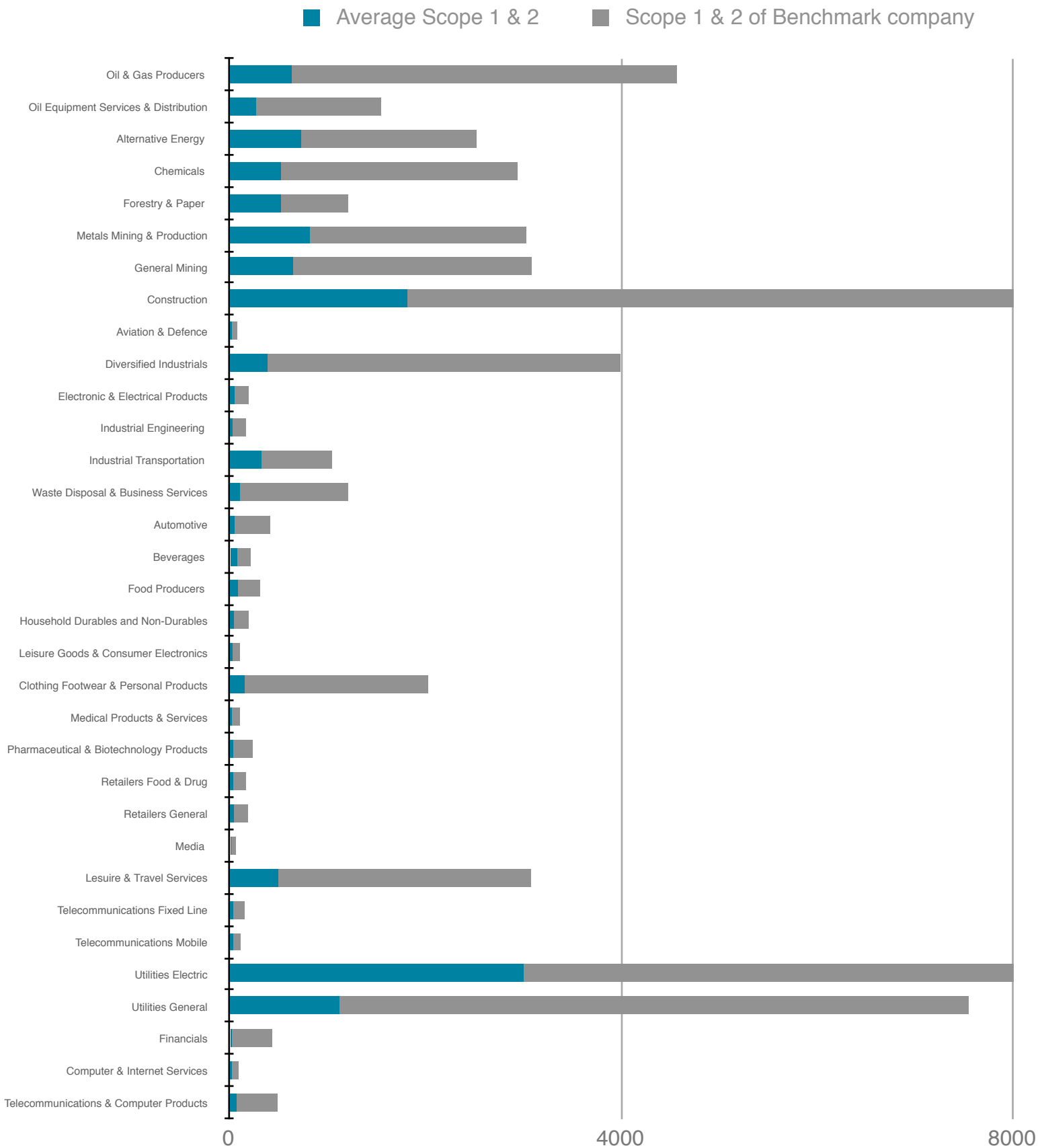
Sector	Benchmark Company Name	Scope 3 Intensity
Oil & Gas	Santos	6,319.81
<b>Basic Materials</b>	<b>Rio Tinto</b>	<b>8,120.15</b>
Industrials	Honda Motor	2,130.92
Consumer Goods	Panasonic	856.03
Health Care	Baxter Intl	291.54
Consumer Services	Int. Continental Hotels Group	2,475.03
Telecommunications	Sprint Nextel	71.44
Utilities	PG&E	2,610.97
Financials	British Land	531.72
Technology	Intel	314.82
Alternative Energy	Cemig	0.45

# SPOTLIGHT ON 17

## SCOPE 1 & 2

### Global Scope 1 & 2 Analysis

Figure 10.



# SPOTLIGHT ON 18

## SCOPE 1 & 2

### Global Scope 1 & 2 Benchmark companies

Figure 11.

Sector	Benchmark Company Name	Scope 1 & 2 Intensity	Sector Scope 1 & 2 Intensity Average
Oil & Gas Producers	Sasol	3,926.62	637.62
Oil Equipment, Services & Distribution	Transcanada	1,274.87	274.59
Alternative Energy	Tractebel	1,792.34	732.14
Chemicals	Air Prds& Chems	2,412.22	527.69
Forestry & Paper	Mondi	685.07	528.76
Metals Mining & Production	Usiminas	2,203.99	825.31
General Mining	Harmony Gold Mng	2,434.17	652.35
Construction	ACC	16,462.39	1,818.72
Aviation & Defence	Meggitt	54.67	25.31
Diversified Industrials	Swire Pacific	3,602.58	393.03
Electronic & Electrical Products	Samsung Elto.Mechanics	139.38	54.13
Industrial Engineering	Mahindra & Mahindra	130.66	33.84
Industrial Transportation	A P Moller - Maersk	720.44	328.55
Waste Disposal & Business Services	Waste Man	1,099.20	110.08
Automotive	Astra International	360.96	56.47
Beverages	Sabmiller	139.63	77.65
Food Producers	Monsanto	222.05	87.10
Household Durables and Non-Durables	Steinhoff Intl	146.90	49.53
Leisure Goods & Consumer Electronics	Samsung Electronics	73.34	34.27
Clothing, Footwear & Personal Products	Colgate-Palmolive India	1,870.83	157.14
Medical Products & Services	Mediclinic International	77.42	29.46
Pharmaceutical & Biotechnology Products	Novozymes	198.15	38.83
Retailers Food & Drug	Lawson	130.51	39.56
Retailers General	The Foschini Group	142.70	46.36
Media	Dai Nippon Printing	53.33	15.97
Lesuire & Travel Services	Int. Continental hotels gp	2,576.05	498.77
Telecommunications Fixed Line	Chunghwa Telecom	121.62	36.84
Telecommunications Mobile	Taiwan Mobile	70.96	40.01
Utilities Electric	American Elec Power	9,036.54	3,007.06
Utilities General	Duke Energy	6,421.64	1,124.00
Financials	Weyerhaeuser	418.28	22.78
Computer & Internet Services	Wipro	63.80	28.49
Telecommunications & Computer Products	United Micro Eltn	413.39	76.90

## INFERENCE: SCOPE 1 & 2

Figure 12.

American Electric Power is the company with the highest emissions intensity disclosing complete data within the Electricity Industry across the entire **ET Global Universe**.

Disclosure & Verification status	Carbon Rank	Company Name	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Emissions Intensity (tCO <sub>2</sub> e/\$M turnover)	No. of S3 Categories Disclosed
Complete & Unverified	297	Duke Energy	93,300,000.00	6,421.64	-
Complete & Unverified	298	Xcel Energy	79,300,000.00	7,446.89	-
Complete & Unverified	299	American Elec Power	136,000,000.00	9,036.54	-

Disclosure & Verification status	Carbon Rank	Company Name	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Emissions Intensity (tCO <sub>2</sub> e/\$M turnover)	No. of S3 Categories Disclosed
No Public Data	799	Edison Intl.	No Public Data	9,036.54	-
No Public Data	800	First Energy	No Public Data	9,036.54	-

NB. Example taken from ET Global 800

Here, Edison International and First Energy have been benchmarked against the highest disclosing company with complete data from the Electricity industry. This means they have been given an *inferred* intensity of 9,036.54 tCO<sub>2</sub>e/\$M turnover. This is not an approximation of their emissions but a means of making sure that the highest *disclosing* company in the sector is not penalised for being honest enough to report a large figure.

As both companies have the same *inferred* intensity figure, the company with the largest market capitalisation is placed lower down the Ranking.

## ANALYSIS

### Highest and Lowest Absolute Emitters:

#### Scope 1 & 2

Taken from the 133 Companies reporting complete data

#### Lowest Absolute Emitters (Scope 1 & 2 Only)

Figure 13.

Absolute Rank	ET Rank	Company Name	Scope 1+2 emissions (tCO2e)	Scope 1+2 Intensity	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	15	Prologis	8,667	5.65	271.51	Complete & Verified
2	45	Intuit	46,000	11.94	169.36	Complete & Unverified
3	43	Broadcom	48,179	6.52	163.93	Complete & Unverified
4	42	Allergan	72,709	13.42	159.19	Complete & Unverified
5	41	Cigna	89,877	4.08	149.85	Complete & Unverified

Figure 13 lists the five lowest absolute emitters from those disclosing complete Scope 1 & 2 emissions data. Verification status is included on the right but does not affect this ranking.

Prologis comes first when ranked by absolute intensity, and also places 15th in the main

Ranking due to its low intensity and the fact its emissions are externally verified. All of the other companies would see radical improvements in their positions if their emissions were externally verified.

#### Highest Absolute Emitters (Scope 1 & 2 Only)

Figure 14.

Absolute Rank	ET Rank	Company Name	Scope 1+2 emissions (tCO2e)	Scope 1+2 Intensity	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
129	97	Conocophillips	65,963,419	286.10	3,446.01	Complete & Unverified
130	112	Xcel Energy	79,300,000	7,446.89	8,752.38	Complete & Unverified
131	111	Duke Energy	93,300,000	6,421.64	7,727.13	Complete & Unverified
132	113	American Elec Power	136,000,000	9,036.54	10,342.03	Complete & Unverified
133	31	Exxon Mobil	143,000,000	329.85	3,489.76	Complete & Verified

Figure 14 lists the five largest absolute emitters from those disclosing complete Scope 1 & 2 emissions data, ignoring verification status.

All of these five companies operate within the carbon-intensive Utilities and Oil & Gas sectors.

Of note: despite having the largest Scope 1 & 2 total, Exxon Mobil reports Complete & Verified emissions data and thereby gains an advantage over the other companies that despite having lower absolute figures do not have their data verified.

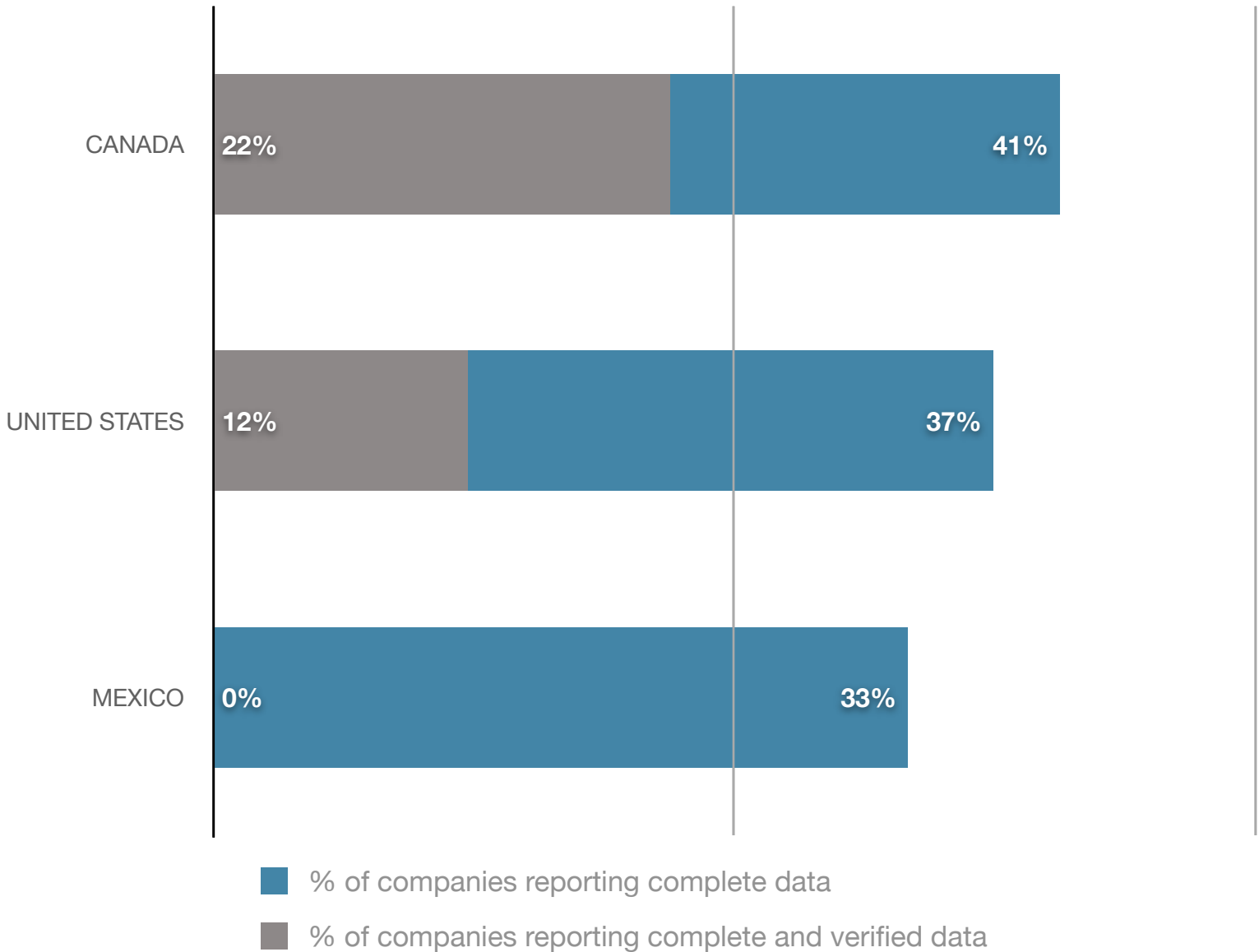
# GEOGRAPHICAL 21

## ANALYSIS

### Summary

#### Countries leading the field of disclosure

Figure 15.



It is interesting to note that the percentage of companies reporting complete data across the region is below 50%, even in the country with the highest degree of reporting. This is indicative that though North America is making progress in terms of GHG emissions reporting, there is still a long way to go. The degree to which there is verification of data by an independent source is even lower, with Mexico having no companies

verified and the US only 12%. This places Canada well in the lead in regional emissions reporting in terms of companies reporting complete and verified data.

## ANALYSIS

### Spotlight on: United States

#### Top 5

Figure 16.

Country Rank	ET Rank	Company Name	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	3	Sprint Nextel	1,931,524	57.35	5	93.07	Complete & Verified
2	4	AT&T	9,078,271	71.64	1	107.36	Complete & Verified
3	5	Dell	436,230	7.01	1	164.42	Complete & Verified
4	6	Cisco Systems	303,701	7.03	1	164.44	Complete & Verified
5	7	Biogen Idec	101,146	19.89	1	165.66	Complete & Verified

#### Bottom 5

Country Rank	ET Rank	Company Name	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
248	296	EOG Resources	No Public Data	3,926.62	-	7,086.52	No Public Data
249	297	Phillips 66	No Public Data	3,926.62	-	7,086.52	No Public Data
250	298	Anadarko Petroleum	No Public Data	3,926.62	-	7,086.52	No Public Data
251	299	Edison Intl.	No Public Data	9,036.54	-	10,342.03	No Public Data
252	300	First Energy	No Public Data	9,036.54	-	10,342.03	No Public Data

### Spotlight on: Canada

#### Top 5

Country Rank	ET Rank	Company Name	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	1	BCE	215,029	10.98	2	46.70	Complete & Verified
2	2	Telus	371,100	35.79	1	71.51	Complete & Verified
3	30	Genovus Energy	5,080,287	322.28	0	3,482.18	Complete & Verified
4	32	Suncor Energy	18,739,000	474.32	0	3,634.23	Complete & Verified
5	33	Nexen	5,820,000	910.59	0	4,070.49	Complete & Verified

#### Bottom 5

Country Rank	ET Rank	Company Name	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
41	181	Rogers Commsb	No Public Data	70.96	-	106.68	No Public Data
42	198	Valeant Pharms Intl	No Public Data	198.15	-	343.92	No Public Data
43	232	Brookfield Asset Mana	No Public Data	418.28	-	684.14	No Public Data
44	292	Silver Wheaton	No Public Data	2,434.17	-	6,494.25	No Public Data
45	294	Crescent Point Energy	No Public Data	3,926.62	-	7,086.52	No Public Data

## ANALYSIS

### Spotlight on: Mexico

#### Top 3

Figure 16. continued

Country Rank	ET Rank	Company Name	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	61	Femsa Ubd	218,675	13.99	0	442.00	Complete & Unverified
2	83	Walmex V	1,599,957	54.82	2	1,292.33	Complete & Unverified
3	170	Gmexico	3,804,700	480.85	0	4,540.93	Incomplete

#### Bottom 3

Country Rank	ET Rank	Company Name	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
6	(239)	Tlevisa CPO	No Public Data	70.96	-	106.68	No Public Data
7	(252)	Elektra	No Public Data	418.28	-	684.14	No Public Data
8	(260)	Bimbo	No Public Data	53.33	-	1,290.85	No Public Data

Intensity is measured as tCO<sub>2</sub>e/\$Million turnover

# SECTORAL 24

## ANALYSIS

### Sector: Oil & Gas

Figure 17.

Sector Rank	Company Name	Cntry	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	Hess	US	5,100,000	132.58	3	3,292.49	Complete & Verified
2	Chevron	US	61,600,000	260.42	0	3,420.33	Complete & Verified
3	Cenovus Energy	CA	5,080,287	322.28	0	3,482.18	Complete & Verified

### Sector: Basic Materials

Sector Rank	Company Name	Cntry	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	Teck Resources	CA	2,954,000	255.45	0	4,315.53	Complete & Verified
2	Goldcorp New	CA	1,411,700	265.88	1	4,325.96	Complete & Verified
3	Freeport-McMoRan	US	10,000,000	466.70	0	4,526.77	Complete & Verified

### Sector: Industrials

Sector Rank	Company Name	Cntry	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	Eaton	US	773,000	48.16	2	1,113.63	Complete & Verified
2	General Motors	US	7,639,916	50.84	6	1,116.30	Complete & Verified
3	Johnson Controls	US	2,374,236	58.15	3	1,123.61	Complete & Verified

### Sector: Consumer Goods

Sector Rank	Company Name	Cntry	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	Stanley Black & Decker	US	360,771	34.77	0	462.78	Complete & Verified
2	HJ Heinz	US	893,482	83.48	0	511.49	Complete & Verified
3	Pepsico	US	5,997,000	90.18	2	518.19	Complete & Verified

### Sector: Health Care

Sector Rank	Company Name	Cntry	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	Biogen Idec	US	101,146	19.89	1	165.66	Complete & Verified
2	Bristol Myers Squibb	US	546,949	25.75	1	171.52	Complete & Verified
3	Amgen	US	402,000	25.80	1	171.57	Complete & Verified

Intensity is measured as tCO<sub>2</sub>e/\$Million turnover

# SECTORAL 25 ANALYSIS

Figure 17. continued

## Sector: Consumer Services

Sector Rank	Company Name	Cntry	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	News Corp	US	537,585	16.40	2	1,349.05	Complete & Verified
2	Mcgraw-Hill	US	1,778,000	18.44	2	1,351.09	Complete & Verified
3	Omnicom Gp	US	859,581	46.74	2	1,379.38	Complete & Unverified

## Sector: Telecommunications

Sector Rank	Company Name	Cntry	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	BCE	CA	215,029	10.98	2	46.70	Complete & Verified
2	Telus	CA	371,100	35.79	1	71.51	Complete & Verified
3	Sprint Nextel	US	1,931,524	57.35	5	93.07	Complete & Unverified

## Sector: Utilities

Sector Rank	Company Name	Cntry	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	Consolidated Edison	US	4,513,263	348.84	0	1,654.32	Complete & Unverified
2	Exelon	US	12,142,000	641.62	2	1,947.11	Complete & Unverified
3	Public Service Entp Gp	US	17,313,952	1,593.11	0	2,898.60	Incomplete

## Sector: Financials

Sector Rank	Company Name	Cntry	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	Prologis	US	8,667	5.65	1	271.51	Complete & Verified
2	Weyerhaeuser	US	2,600,000	418.28	0	684.14	Complete & Unverified
3	Prudential Finl	US	78,375	1.54	1	267.40	Incomplete

## Sector: Technology

Sector Rank	Company Name	Cntry	Absolute Emissions tCO <sub>2</sub> e (Scope 1+2)	Scope 1+2 Intensity	Scope 3 Categories Disclosed	Scope 1+2 + 50% Inferred S3 Intensity	Disclosure & Verification status
1	Dell	US	436,230	7.01	1	164.42	Complete & Verified
2	Cisco Systems	US	303,701	7.03	1	164.44	Complete & Verified
3	Symantec	US	164,000	24.37	1	181.78	Complete & Verified

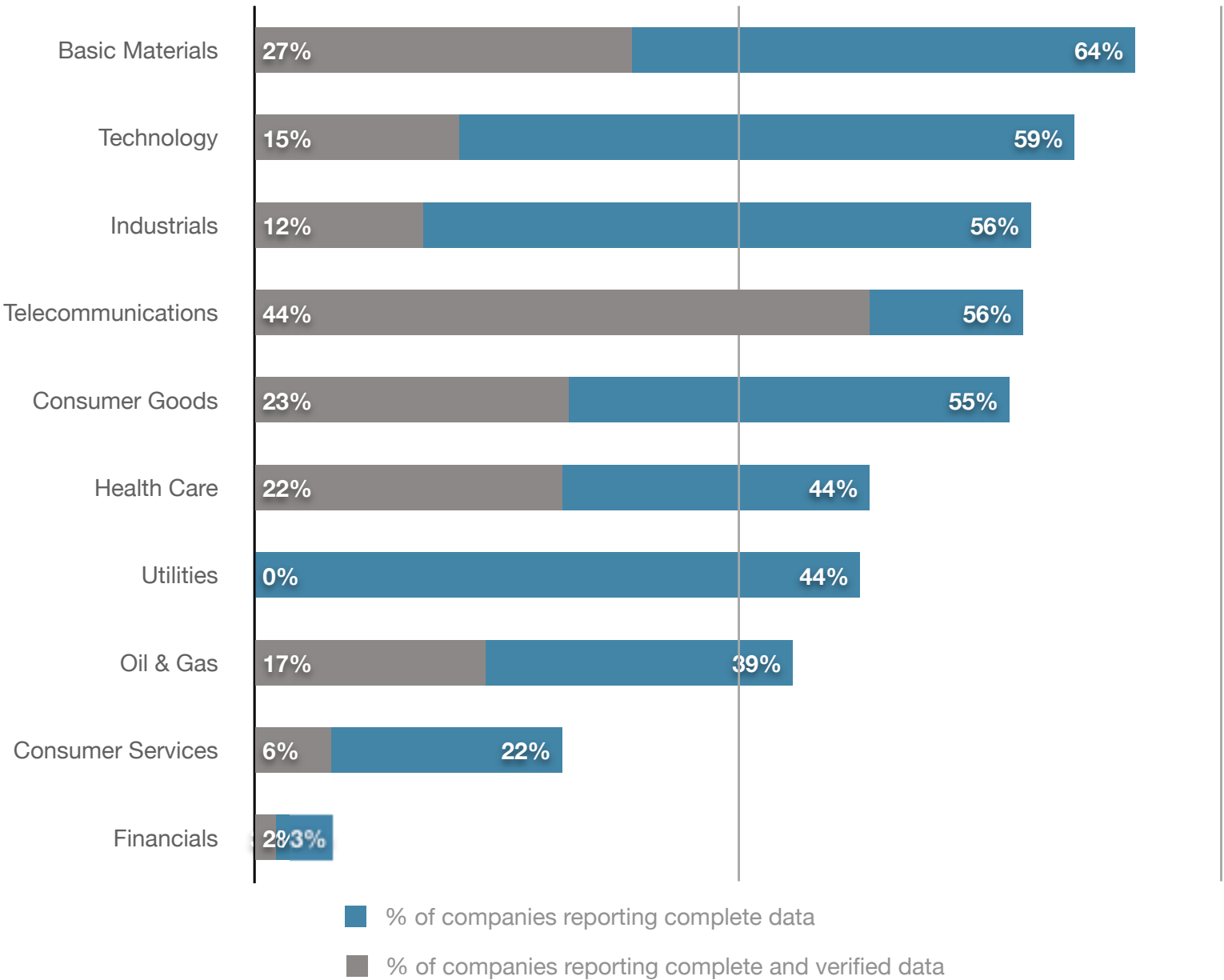
Intensity is measured as tCO<sub>2</sub>e/\$Million turnover

## ANALYSIS

### Summary

#### Sectors leading the field of disclosure

Figure 18.



The Rankings show that there is vast room for improving GHG emissions reporting and verification throughout North America and its dominant industry sectors. Basic Materials, with one of the highest carbon intensities, has the largest percentage of companies reporting Complete data and the second highest reporting

Complete and Verified data. Interestingly, the Utilities sector, one of the highest intensity sectors has no verified emissions data despite a relatively good overall disclosure level.

## KEY POINTS

WITHOUT COMPLETE AND VERIFIED DATA  
WE CANNOT ACCURATELY PAINT A PICTURE  
OF THE EMISSIONS LANDSCAPE

CONSIDERING BUSINESS' MOTIVATION TO  
PROVIDE SHAREHOLDER RETURN, WE CAN  
INCENTIVISE CHANGE THROUGH AFFECTING  
A COMPANY'S SHARE PRICE

### Non-Sectoral approach

The ET Carbon Ranking methodology is based on a non-sectoral approach as it is intended to create incentives for disclosure and emissions reduction across the board. Under this wider Environmental Tracking system, companies with higher intensities will experience greater downward pressure than those with low intensities, reflecting the science behind climate change mitigation dictating that absolute emissions have to be reduced.

### Disclosure & Verification before intensity

It could be argued that the present Ranking does not accurately reflect the emissions landscape as the key determinant of positioning is disclosure and verification before intensity. However, without complete and verified data we cannot accurately paint a picture of the emissions landscape.

### High intensity by definition

By definition some companies pollute more than others, moreover, many of these companies provide valuable and vital services to society. Yet without strong incentives to change, they will continue to carry out their activities in a way which is detrimental to the environment. Virtually all the technological advances needed to tackle climate change are already in existence, or are only a few years away with the necessary investment.

The only way we can expect these companies to invest in new technologies and employ new environmentally friendly policies is to provide them with an incentive to do so. The EIO argues that within the framework of the existing system this incentive must accord with a company's *raison d'être*: to maximise share price return. This can only be achieved by creating a system which influences share price according to the environmental costs of a company's actions.

## LANDSCAPE

### Global Reporting landscape

Despite significant action being taken in the past twenty years, we still have a long way to go. With large differences between regions, large differences between developed and developing countries as well as large differences between companies, there is vast room for improvement, innovation and collaboration. But in order to improve, we should first know where we are. That is why monitoring of and (complete) reporting on GHG emissions is crucial to taking the next steps.

### Sustainability Reporting

Sustainability reporting has grown rapidly over the past two decades as companies supplement their annual reports with issues pertaining to corporate social responsibility.

However, the lack of a universally accepted or mandatory standard concerning corporate responsibility disclosure means both reporting formats and content vary widely.

A large number of Europe's top companies follow the framework set out by the Global Reporting Initiative. This clearly defines the disclosure of environmental, social and governance indicators, including Greenhouse Gas emissions expressed as metric tonnes of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e). (See page 36 for more details). However, following GRI guidelines does not specifically require clear Scope 1 and 2 reporting.

The internationally recognised and accepted standard for Greenhouse Gas (GHG) reporting has been established by the Greenhouse Gas Protocol, and defines Greenhouse Gas emissions reporting by Scope 1, 2 and 3 emissions. However, as this report highlights companies do not always apply the standard correctly. Important issues of coverage and key calculation and reporting requirements are often not clearly stated or are hidden within the main document.

In 2000 the Carbon Disclosure Project launched an initiative to encourage corporate GHG disclosure. However, this information is not always included in sustainability reports or placed in the public domain.

SUSTAINABILITY REPORTING HAS GROWN RAPIDLY OVER THE PAST TWO DECADES AS COMPANIES SUPPLEMENT THEIR ANNUAL REPORTS WITH ISSUES PERTAINING TO CORPORATE SOCIAL RESPONSIBILITY

AS THE ET NORTH AMERICA 300 CARBON RANKING HIGHLIGHTS, THERE ARE MAJOR DISCREPANCIES BETWEEN COMPANIES IN REGARD TO THE QUALITY OF REPORTING

► **Scope 1 emissions:**

All direct emissions

► **Scope 2 emissions:**

Indirect emissions generated from the purchase of electricity

► **Scope 3 emissions:**

All other indirect emissions, such as distribution of goods, transportation of purchased goods, transportation of waste, disposal of waste, employee commuting, business travel

# REPORTING 29

## LANDSCAPE

THERE ARE CURRENTLY WIDE VARIATIONS IN INTERPRETATION OF METHODS FOR THE MAJORITY OF VOLUNTARY SCHEMES

ERM (2010) NOTES THAT THERE ARE FEW INITIATIVES PROVIDING INCENTIVES SUCH AS LEAGUE TABLES OR FINANCIAL PENALTIES/REWARDS - A GAP THE EIO SEEKS TO ADDRESS DIRECTLY THROUGH ITS ET CARBON RANKINGS AND INDEX SERIES

### Variations

As pointed out by the ERM (2010) study on GHG reporting methods and initiatives, “Voluntary methods are open to varying degrees of interpretation by the user whilst mandatory methods tend to be much more prescriptive. An example of this can be seen on the issue of boundary setting. Voluntary methods such as the WBCSD/WRI GHG Protocol, and voluntary reporting schemes such as CDP, allow the user to select the boundary based on a number of options (e.g. operational or financial control; equity share), to ensure maximum flexibility. By way of contrast, mandatory schemes and their associated calculation methods, such as those for the UK Carbon Reduction Commitment and the schemes linked to trading of emissions allowances or permits (e.g. EU ETS; JVETS), define quite precisely the boundary, to ensure consistency in reporting between organisations covered by the scheme.”

### Gaps

Interestingly, the report notes that “few methods or initiatives provide incentives such as benchmarks, league tables and financial penalties/rewards”. This is a gap the EIO seeks to address through its Environmental Tracking (ET) Carbon Rankings and Index Series.

The report also draws attention to the “lack of clear statement of a ‘mandatory minimum’ GHG reporting requirements in most of the voluntary methods and initiatives”, suggesting that “most voluntary methods have shied away from being prescriptive on key issues or have put complex arrangements in place to ensure adaptability” in order to encourage maximum uptake (ERM 2010).

Please see the Reporting guidance section for suggestions on the EIO’s recommendations for how companies can report their GHG emissions more clearly.

# EXEMPLARY 30 REPORT

## Direct, Indirect Greenhouse Gas GRI EN16

### Total direct and indirect greenhouse gas emissions by weight.

Direct and Indirect Greenhouse Gas (GHG) Emissions (in metric tonnes CO2 equivalent)	2011	2010	2009	2008	Company has targets for year:	C1
CO2 Direct	197,914	276,721	235,656	296,768		
CO2 Indirect Scope 2	2,199,564	2,125,986	2,380,946	2,381,447		
CH4 Direct						
N2O Direct	29,224	17,441	11,235	5,386		C5
HFCs Direct	65,637	42,289	14,566	13,060		C6
PFCs Direct	221,074	232,290	181,907	256,667		C7
CF6 Direct	13,960	9,549	13,291	8,452		
<b>Total Direct (Scope 1)</b>	<b>527,809</b>	<b>578,290</b>	<b>456,655</b>	<b>580,333</b>		
Scope 1 data coverage (e.g. as % of revenues, employees, etc...):	Owned and leased operations	100	100	100	100	
Scope 1 estimated total (for 100% data coverage)						
Scope 1 emissions intensity per 100K revenue						
Total direct GHG emissions factored against base figure (please specify base figure here, e.g., revenue, volume or production, floor space area, etc):						
<b>Total Indirect (Scope 2)</b>	<b>2,199,564</b>	<b>2,125,986</b>	<b>2,380,946</b>	<b>2,381,447</b>		
Scope 2 data coverage (e.g. as % of revenues, employees, etc...):	Owned and leased operations	100	100	100	100	
Scope 2 estimated total (for 100% data coverage)						
Scope 2 emissions intensity per 100K revenue						
<b>Total Direct and Indirect GHG Emissions</b>	<b>2,727,373</b>	<b>2,704,276</b>	<b>2,837,601</b>	<b>2,961,780</b>		
Subtotal Scope 3 (from GRI EN17 "GHG Scope 3 Emission")						
<b>Total GHG Emissions</b>	<b>2,727,373</b>	<b>2,704,276</b>	<b>2,837,601</b>	<b>2,961,780</b>		

Taken from IBM's website, this template clearly shows Scope 1 & 2 emissions and is easily accessible from the company's online GRI index (see next page), under the EN16 link.

IBM also provides its Scope 3 emissions information which is clearly referenced under EN17.

IBM ranks 50th in the ET North America 300 and 187th in the Global 800.

## TEMPLATE



**3.6** Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.

**3.7** State any specific limitations on the scope or boundary of the report<sup>8</sup>.

*If boundary and scope do not address the full range of material economic, environmental, and social impacts of the organization, state the strategy and projected timeline for providing complete coverage.*

**3.8** Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.

**3.9** Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.

*Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.*

### ASSURANCE

**3.13** Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).

Using a Global Reporting Initiative index helps anyone reading a report to navigate it quickly and easily.

To the left are the key indicators the EIO focuses on to determine:

- ✓ the scope of a company report
- ✓ whether or not any material elements have been excluded
- ✓ whether it has been assured by a third-party
- ✓ whether the company is reporting its Scope 1, 2 and 3 emissions.

### ASPECT: EMISSIONS, EFFLUENTS, AND WASTE

**CORE** **EN16** Total direct and indirect greenhouse gas emissions by weight.

**CORE** **EN17** Other relevant indirect greenhouse gas emissions by weight.

## EXAMPLES

### Overview of Scope 3 emissions by the BASF Group for 2012 (in accordance with the GHG Protocol)

Nr.	Category	GHG Emissions
		[CO <sub>2</sub> equivalents in millions of tons]
1	Purchased goods and services	46.7
2	Capital goods	1.4
3	Fuel- and energy-related activities	2.8
4	Upstream transportation and distribution	1.9
5	Waste generated in operations	0.6
6	Business travel	0.3
7	Employee commuting	0.3
8	Upstream leased assets	0.2
9	Downstream transportation and distribution	1.3
10	Processing of Sold Products	Undetermined*
11	Use of sold products	57.4
12	End-of-life treatment of sold products	16.4
13	Downstream leased assets	Not relevant***
14	Franchises	Not relevant***
15	Investments	0,0****

#### Explanations:

\*For a chemicals company at the beginning of the value chain, such as BASF, the effort to determine Scope 3 emissions from the further processing of our products (Category 11 Processing of Sold Products) is not reasonable.

\*\* Expert estimate. The activities of BASF as a lessee account for less than 20% of our activities in the area of Leased Assets Upstream (Category 8).

\*\*\* BASF does not engage in franchising activities.

\*\*\*\* Data from 2009.

We have summarized the procedure and assumptions in the calculation of emissions in the named categories in our emission report based on the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standards template

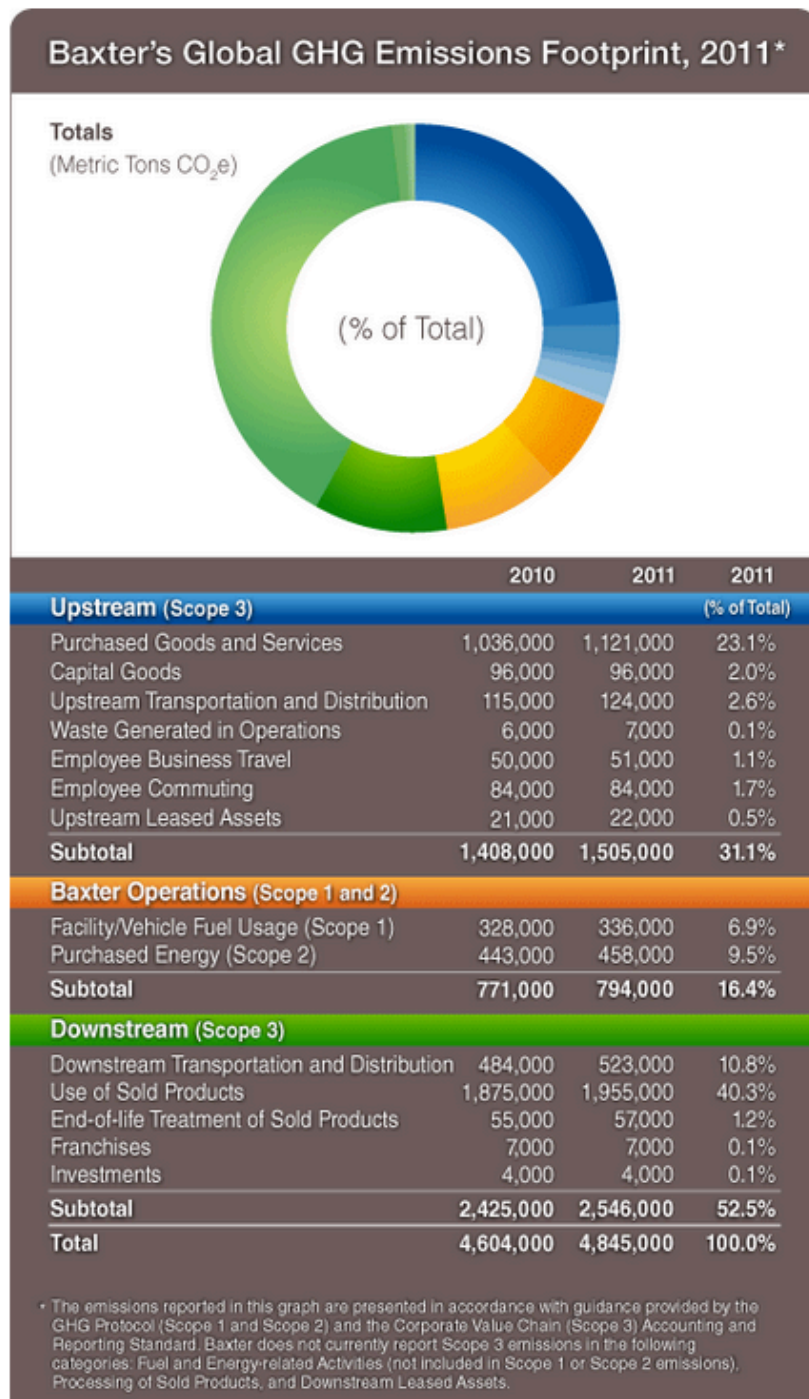
[Read more...](#) (pdf, 134 kb)

[Standards Greenhouse Gas Protocol standards](#)

In this example we see the company disclose fully on all 15 GHG Protocol Scope 3 categories. The company clearly identifies each category, reports its emissions and explains any omissions.

BASF is the only company in the ET Carbon Rankings series to report on all 15 Scope 3 categories, and therefore enjoys pole position in both the ET Global 800 and ET Europe 300 for the second time running.

## EXAMPLES



Here we see a very good example of clear reporting, across all Scopes adhering to the GHG Protocol terminology and presenting information over multiple years for ease of comparison.

Baxter International ranks 35th in the ET Global 800 and 13th in the ET North American 300.

# REPORTING 34

## GUIDANCE

- ▶ **Report Scope 1, 2 & 3 emissions following GHG protocol guidelines**
- ▶ **Ensure emissions data is publicly available in CSR/Sustainability reports/Integrated Annual report and online**
- ▶ **Have emissions data verified by an independent third party to a recognised standard**
- ▶ **Ensure verification certificates are public**

Companies can easily improve their standings within the ET Carbon Rankings by following several simple steps:

1. Publishing emissions data for Scopes 1, 2 and 3 in the public domain, in a clear and accessible manner, either on the company website or in a Sustainability Report, Annual report, Integrated Annual report or ideally, all of those that apply.
2. Ensuring this information has been externally verified to a reasonable standard of assurance, ideally against a specific GHG standard such as ISO 14064-3, but at least in accordance with a general assurance standard, such as ISAE 3000 (the International Standard on Assurance Engagement).
3. Calculate Scope 3 emissions comprehensively according to the new GHG protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The latest information on verification of Scope 3 can be found at the GHG Protocol and ISO websites.
4. Ensure that any verification statement is publicly available and included in the relevant Sustainability Report or Annual Report, as well as ensuring it can be easily found on your company's website.

One of the primary aims of the EIO's series of Rankings is to ensure that reliable GHG emissions data is publicly available and we applaud all companies making a serious effort to reach this standard.

### **Encouraging clearer reporting**

The key areas which are identified by the various bodies of research carried out in the field of GHG emissions reporting, including by the EIO, suggest that there is an urgent need for:

- ▶ Standardised reporting
- ▶ More emphasis on the verification of GHG emissions data reported by companies

The following page outlines the EIO's proposal for the ET Reporting template initiative.

# ET REPORTING 35

## TEMPLATE



The EIO, is seeking sponsorship for its forthcoming Environmental Tracking (ET) Reporting Template initiative. The ET Reporting Template will provide companies with a cloud-based, simple, straightforward and standardised way of reporting their greenhouse gas emissions in the public domain. The EIO is offering sponsors the opportunity to showcase their brand while supporting a cutting edge and urgently needed piece of infrastructure in the carbon reporting landscape.

Below is an example of the points the template will seek to cover.

### ENVIRONMENTAL TRACKING REPORTING TEMPLATE

Reporting Period:

1 January 2011 to 31 December 2012: Yes/No? \_\_\_\_\_

If other please specify \_\_\_\_\_

	Metric tonnes of CO2e (tCO2e)	
<b>Scope 1</b>		
<b>Scope 2</b>		
<b>Scope 3</b>		
<b>Scope 3 Upstream</b>		
Purchased goods and services		
Capital Goods		
Fuel - and Energy - related Activities not included in Scope 1+2		
Transportation & Distribution (Upstream)		
Waste Generation in Operations		
Business Travel		
Employee Commuting		
Leased Assets (Upstream)		
Investments		
<b>Scope 3 Downstream</b>		
Transportation & Distribution (Downstream)		
Processing of Sold Products		
Use of Sold Products		
End-of-Life Treatment of Sold products		
Leased Assets (Downstream)		
Franchises		
<b>Total gross emissions</b>		
Green tariff Energy Purchased		-
<b>Total net emissions</b>		

## TEMPLATE



While many companies disclose their greenhouse gas emissions through third party databases such as the Carbon Disclosure Project, there is currently no standardised reporting template available for companies to disclose their emissions on their websites, corporate social responsibility reports and/or annual reports. With many variations and inconsistencies in reporting styles and practices, the vast majority of information disclosed by companies on their greenhouse gas emissions is extremely difficult to interpret and makes cross comparison virtually impossible. In order to address this issue the EIO is proposing its ET Reporting Template initiative.

### ENVIRONMENTAL TRACKING REPORTING TEMPLATE (Continued)

#### Other greenhouse gases

Does your company produce any greenhouse gases which are not covered by the Kyoto basket of 6 gases? Yes/No?

If you have answered yes to the previous question what percentage do they represent of the total and have they been included in the Scope 1, 2 and 3 calculations listed above?

#### Boundary setting:

What reporting boundary method have you adopted under the terms of the GHG Protocol?

#### Scope of Reporting: Scope 1 & 2

Do the gross emissions reported for Scope 1 & 2 as defined by the GHG Protocol represent 100% of your company's emissions for these Scopes? Yes/No?

If you have answered no to the previous question, what percentage of your company's operations do they represent?

#### Scope of Reporting: Scope 3

How many Scope 3 categories does your company disclose data for?

Please attach a full breakdown with the percentage coverage for each

#### Verifications/Assurance (to be completed by an independent third party)

Name of Verifier: \_\_\_\_\_

Which standard has been used to assure the data? (E.g. ISO14064, AA1000AS etc)

Which Scopes have been verified? \_\_\_\_\_

If the company is reporting Scope 3 emissions, has it covered all of the Scopes accurately (for Scope 3 please refer to the GHG Protocol new Corporate Value Chain (Scope 3) Accounting and Reporting Standard), including any GHGs not covered by the GHG Protocol which may be material? Yes/No?

Are there any material issues with the numbers represented for the company under Scope 1, 2 or 3? Yes/No?

Is the data presented by the company representative of the company's entire scope of operations? Yes/No? If no approximately what % does it cover?

Please state any other further comments or qualifications

Please attach the verification full statement.

## LANDSCAPE

### North America Overview

North America represents a significant source of global greenhouse gas (GHG) emissions -- with the United States (US) and Canada accounting for substantially larger emissions per capita than Mexico. While Mexico stands out for its recent passage of national climate change legislation in 2012, the US continues to lag in its adoption of a comprehensive strategy to address global warming, and Canada has backtracked on several key policy issues, including its withdrawal from the Kyoto Protocol in 2011. In many cases, reduced political will stemming from economic and fiscal worries have taken precedence over aggressive action to address climate change. However, recent years have seen the implementation of sectoral initiatives across the region to reduce emissions in power generation, transportation and industry, as well as an increase in reporting initiatives, particularly in the US. North America also represents a major global energy player. The US is forecast to become the world's largest oil and gas producer by 2017[1], driven by increased production rates and abundant shale gas reserves; Canada continues to exploit of its vast oil sands regions; and Mexico is looking to enhance offshore drilling activities and develop its own shale gas potential. These trends mark a significant shift in the global energy landscape -- a shift that could have a profound impact on future emissions and that will necessitate policies to minimise further changes to the climate system.

### US Regulatory and Policy Landscape

Despite the lack of a national policy to address global warming, US emissions have seen the greatest reduction of all countries or regions -- falling 7.7% (430 Mt) between 2006 and 2011 [2]. A number of factors contributed to this trend, including reduced oil use, the economic downturn and a substantial shift from coal to gas in the power sector. While still one of the largest carbon dioxide emitters globally, efforts to adopt a national climate change strategy in the US have seen a loss of momentum in the last few years -- this can be primarily attributed to priorities shifting focus onto the financial crisis and increasingly partisan views on the issue of climate change between the two main political parties. However, after several years

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of extreme drought and severe weather events, perceptions may be shifting toward more aggressive action to address global warming - with President Obama renewing his pledge to address the issue in his second presidential term.

While the recent political and economic climate in the US has not been conducive to leadership on a national policy, progress can be seen in state and regional initiatives, as well as the implementation of new air pollution standards under existing federal regulatory authority. In 2009, the US Environmental Protection Agency (US EPA) paved the way to regulate greenhouse gases under laws to reduce air pollution that date back to 1970 – and has since tightened or proposed several key policies to reduce emissions in the transportation, power and industrial sectors.

Individual states and regional programmes are also leading the way in the absence of a national framework. California's Global Warming Solutions Act represents the first enforceable statewide emissions reduction target in the US. In addition, 27 states and the District of Columbia have renewable and alternative energy portfolio standards - requiring electricity providers to supply a portion of generated electricity from renewable energy sources; 36 states have either completed or are developing climate action plans; and, 23 states have set emissions reduction targets.[3]

Multi-state regional programmes to coordinate climate change policies, some of which include Canada and Mexico, are also evolving. They include: the Regional Greenhouse Gas Initiative, the Western Climate Initiative, the Midwest Greenhouse Gas Reduction Accord, the North America 2050 initiative, and the Transportation and Climate Initiative.

In addition to these domestic initiatives, the US announced in 2012 its membership to the Climate and Clean Air Coalition, a multilateral effort to reduce the emissions of short-lived climate pollutants other than carbon dioxide, such as black carbon, methane and ozone depleting gases.

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### Focus On: Industry

Emissions from the industrial sector accounted for 20% of total US emissions in 2010.[4] A number of measures are underway to help reduce industrial emissions, including energy efficiency standards, the phase-out of high global warming potential gases and tighter regulations to reduce air pollution. For example:

▶The US EPA Energy Star programme sets standards for energy efficient consumer products, such as computers and kitchen appliances, that generally indicate the product has a 20% to 30% lower energy consumption than required by federal standards.

▶The US EPA issued new source performance standards for the oil and gas industry in 2012 to reduce emissions of smog-forming air pollution, including methane, another potent greenhouse gas.[5]

In addition to emissions reduction measures, a number of reporting and transparency initiatives are underway. The US EPA issued mandatory annual reporting requirements at the end of 2009 for large emitters of greenhouse gases, such as fossil fuel and industrial gas suppliers and manufacturers of heavy-duty vehicles. In 2010, the US Securities and Exchange Commission issued guidance requiring all public companies to disclose to investors business risk or legal considerations related to climate change.[6] Furthermore, results from the 2012 Carbon Disclosure Project survey indicate that US companies are making significant progress towards carbon goals and improved reporting quality, including an increase in the number of companies addressing these issues.[7]

### Focus On: Electricity

In 2011, the primary fuel sources for electricity generation in the US were coal (42%), natural gas (25%) and nuclear power (19%).[8] Renewable energy production and consumption reached an all time high, growing from 11% in 2009 to 13% in 2011.[9]

A number of key policy developments in 2012 will influence the emissions trajectory for the US electricity sector. The US EPA released carbon

pollution standards for new power plants that, for the first time, set national limits on CO<sub>2</sub> emissions from fossil-fuel electricity generators. President Obama issued an executive order to increase the number of combined heat and power plants in the US by 50% by 2020, boosting energy efficiency and cutting carbon emissions by 150 million tons per year.[10] And, the US Department of Energy has proposed a number of new efficiency standards to reduce energy use (e.g. for transformers, batteries and home appliances).

The onset of US federal air regulations and low natural gas prices has prompted a shift by power generators to lower carbon fuels, particularly switching from coal to gas. For the first time since 1981, US natural gas production exceeded coal production in 2011[11] and industry analysts project that the US will surpass Russia as the world's largest natural gas producer by mid-decade.[12] This rapid growth forecast is due in large part to extensive domestic shale gas reserves and the ability to extract them using a technique known as hydraulic fracturing, or 'fracking'. 'Fracking' has spurred significant debate over potentially negative environmental impacts, including methane emissions. Methane is a GHG 56 times more potent than carbon dioxide over a 20-year time-frame [12], leading some researchers to question the GHG footprint of shale gas compared to conventional gas, which releases less methane.[13]

### Focus On: Transportation

The US is the largest consumer of oil worldwide, with the transportation sector accounting for about two thirds of that consumption and contributing 27% to total US GHG emissions in 2010.[14] A number of regulatory and voluntary programs exist to reduce emissions from the transportation sector, through improved vehicle technology, travel efficiency, and the use of renewable or lower carbon fuels. These include:

- ▶ The Corporate Average Fuel Economy standards to improve the average fuel economy of cars and light trucks took effect in the late 1970s, with the latest update in 2012 that will nearly double fuel efficiency by 2025. While the US still lags behind other countries with similar standards, the average

## LANDSCAPE

fuel efficiency in US vehicles has been steadily rising since the early 2000s.[15]

►California mandated the nation's first low-carbon fuel standard in 2011 to reduce the carbon intensity of California transportation fuels by at least 10% by 2020.[16]

### Canada Regulatory and Policy Landscape

Canada accounts for just 2% of global GHG emissions, yet its per capita emissions are among the highest in the world, according to the Organisation for Economic Co-operation and Development (OECD).[17] Industry, due in large part to the oil and gas sectors' transition toward unconventional extraction methods, accounts for 50% of Canada's 2010 emissions total of 692 megatonnes. Approximately 33% of that total can be attributed to just 350 facilities, such as those involved in bitumen production, smelting, and refining. Analysis of historical data indicates that Canada's emissions in 2010, of 20.3 tonnes CO<sub>2</sub>e per person, is at its lowest level since tracking began in 1990.[18] Canada has begun targeting its industrial, transportation, and electricity related emissions through an aggressive regulatory framework aimed at bringing Canada's regulations in line with international accords.[17]

In April of 2007, Canada unveiled its "Turning the Corner" plan, which set out to reduce GHG emissions to 17% below 2006 levels by 2020. This goal was set internationally in the Copenhagen Accord during the COP15, and Canada's Environment Minister, Peter Kent, reinforced Canada's commitment to achieving its emissions reduction target through a sector-by-sector approach during his closing remarks at COP18 in November 2012.[19] To achieve these goals, Canada created the Greenhouse Gas Emissions Reporting Program to gather and publish information on GHG emissions generated across Canada's provinces and territories; implemented new regulations on Light-Duty and Heavy-Duty vehicles; introduced new regulations aimed at phasing out all but the cleanest coal-fired electricity generators; created mandatory industrial emissions reduction targets; and invested heavily in green infrastructure, energy efficiency, and clean energy technologies. Though there is not a

significant difference in GHG emissions policy between Canadian provinces, their respective industries vary considerably as does the relative impact of regulation of GHG emissions. Canada's economy relies on \$1.8 billion of daily cross-border trade with the US; hence its sector focused emissions guidelines and regulations, such as those on passenger vehicles, are closely aligned with those of the United States. Ensuring economic parity through efforts such as the Clean Energy Dialogue (CED) and the North American Leaders Summit is critical to real progress on GHG emissions issues.[20][17]

### Focus On: Industry

In its Regulatory Framework for Air Emissions, Canada set comprehensive goals for its industrial sectors, including the electricity combustion, oil and gas, forest products, smelting and refining, iron and steel, some mining, and cement/lime/chemicals sectors. Each year, from 2007 to 2010, these sectors were mandated to reduce GHG emissions by 6% per year and 2% per year after that, which would result in emissions intensity reduction of 26% of 2006 levels by 2015.[21][22]

### Sector Spotlights:

▶ **Oil & Gas** – Responsible for 22% of total emissions as of 2010, although emissions have dropped 6% since 2005 primarily due to economic factors such as decreased demand, and production factors resulting from depleted reserves. Canada projects an emissions increase from 154 Mt to 204 megatonnes by 2020, driven by elevated bitumen production and exploitation of the Alberta Oil Sands through unconventional extraction methods. These extraction methods have a lower energy return on investment than conventional oil recovery and a corresponding higher carbon footprint.[23] This increased oil extraction will likely result in new pipeline construction, such as the proposed Keystone Pipeline, which could result in a potential 7 megatonnes emissions increase while impacting environmentally sensitive boreal forests, prairies and aquifers in Canada and the US.

▶ **Emissions Intensive Trade-Exposed Industry** – Consisting of mining, smelting, chemical

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production and refining, this sector was responsible for 16% of Canada's total emissions in 1990. Recent regulations on emissions control technologies of perfluorocarbons and nitrogen, in addition to using biomass and waste for energy needs, has resulted in a decrease to 11% of Canada's total emissions today.

► **Land Use, Land Use Change, and Forestry (LULUCF)** – This sector is of particular importance for Canada in terms of management, considering that Canada contains 10% of the world's forests. Canada's 2012 National Inventory Report is the first to include the LULUCF sector, due to the carbon accounting challenges it presents. It is estimated that the sector's carbon sink capacity will potentially make a significant contribution to reducing GHG emissions by 2020.[17]

Additionally, Canada has launched its Greenhouse Gas Reporting Program requiring companies in the aforementioned industries emitting at least 50 kilotonnes per annum to report their emissions to Environment Canada. Released in April of 2012, emissions data from 2010 show total emissions of 692 Mt, which is 52 megatonnes lower than 2005 levels and a 0.25% increase above 2009 levels, despite a 3.2% increase in GDP over the period. [18]

### Focus On: Electricity

Canada's electricity sector, which accounts for 11% of the country's total carbon emissions, is one of the least fossil fuel reliant in the world, with 60% of its generation coming from renewable sources such as hydroelectric power. However, there is ample opportunity for GHG emissions reductions in the 15% of Canada's electricity supply generated by coal-fired power plants. The proposed standards for the coal-fired electricity sector would impose stringent guidelines on emissions while mandating Carbon Capture and Storage technology implementation, such as the methods currently being tested in Alberta's oil sands region by Royal Dutch Shell.[24] Canada's efforts will be aided by the fact that by 2025, 66% of its current coal-fired facilities will have reached the end of their active life. This means that as old facilities are wound-down, they are due to be replaced by biomass, natural gas, and more

efficient coal facilities, with a cumulative reduction in GHG emissions of 214 Mt over the first 21 years of the programme, and equivalent government savings of \$7.3 billion.[20] Reductions in fossil fuel usage will vary between provinces according to relative abundance of alternatives. Alberta, for example, will continue to rely primarily on coal-fired power facilities, whereas other regions expect to increase hydroelectric, wind, natural gas, and nuclear power production. The anticipated electricity emissions trend is a decrease from 121 Mt in 2005 to 80 Mt in 2020.[17]

### **Focus on: Transportation**

Transportation is responsible for 28% of Canada's total emissions, with Heavy Duty Vehicles responsible for 7%, and Passenger vehicles and Light Trucks responsible for 21%. Alongside the US, Canada has launched its Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations, which come into force for 2011-2016. The goal of these regulations is to lower vehicular emissions by 25% compared to 2008 levels by 2016, and higher targets will be set for 2017 onward. [25] Additionally, in 2012, Canada passed its Heavy-duty Vehicle and Engine Greenhouse Gas Emission Regulations. These regulations aim to reduce emissions for years 2014-2018 by a cumulative 19 megatonnes over the life-span of the vehicles, resulting in an equivalent saving of nearly \$5.0 billion.[26]

### **Mexico Regulatory and Policy Landscape**

Following several decades of robust urban population growth and rapid industrialisation, Mexico is now home to the world's 11th-largest population and Latin America's 2nd-largest economy. As a result of its growth trajectory and historically loose GHG regulations, Mexico is ranked 12th globally in terms of carbon dioxide equivalent emissions, contributing 445.28 megatonnes as of 2010. Accounting for 1.5% of the global total and 6.9% of North American emissions, Mexico has seen a 50% increase in total emissions from its 302.16 megatonne baseline established in 1990. Three economic sectors are responsible for the majority of this sharp increase in GHG emissions; with 43% of Mexico's total emissions originating from energy sector, and a further 35% and 14% from the

## LANDSCAPE

transportation and manufacturing sectors, respectively.[27]

By signing the General Climate Change Law in April 2012, the then President Felipe Calderon set Mexico apart from other developing and many developed nations as a progressive force for the environment. This landmark piece of legislation reinforces Mexico's Copenhagen pledge to reduce emissions by 30% by 2020 and 50% by 2050 and expands upon 2008's Renewable Energy and Energetic Transition law by requiring 35% of electricity to be derived from renewables by 2024, 40% in 2030, and 50% in 2050. More importantly, this law establishes several new federal agencies to research and guide future policy decisions relating to climate change and sustainability. The law will also allow for the creation of a system for taking better inventories of GHG emissions and monitoring climate change indicators while also easing financial regulations to encourage the creation of cap and trade systems.[28] These regulatory changes have already helped pave the way for Mexico's first sustainability index, similar to FTSE4Good and the Dow Jones Sustainability Index, that consists of 23 member companies selected from the Bolsa Mexicana de Valores (BMV) 70 highest trading volume stocks.[29]

The Mexican government, in partnership with the World Business Council for Sustainable Development (WBCSD) and various other high profile sustainability organisations, created the Mexico Greenhouse Gas Programme. This voluntary reporting system provides a basis where companies across all sectors can properly identify and report their carbon emissions. As of November 2010, 150 businesses had reported with 84 actively publishing GHG data. Additionally, over 25 business sectors are represented under the programme, accounting for 140 megatonnes of Mexico's total CO<sub>2</sub> emissions.[30] The programme actively incentivises companies to reduce their emissions through publishing their GHG inventories to the global carbon markets, with 11 companies registering for projects held under the CDM framework.[31]

### Focus On: Electricity

As of 2011, Mexico was producing 2.96 million barrels of oil per day, making it a top ten producer globally and the third largest in the western hemisphere. Accordingly, the majority of Mexico's electricity production, approximately 80%, is generated by petroleum, natural gas and coal. While petroleum has historically been Mexico's primary energy source, its use was halved between 2000 and 2010.[32] Renewable resources constitute the remaining 20% of Mexico's electricity mix, with hydroelectricity providing 14% of Mexico's total generation.[33] Apart from hydroelectric sources, geothermal power is responsible for a significant share of Mexico's renewable production, with several new plants at the CFE's (Comision Federal de Electricidad) Los Azufres facility unveiled this year. Mexico possesses an insignificant wind and solar generation capability at present, but several wind power projects are due to be completed by 2014. [34] National efforts to reduce electricity consumption, such as "Luz Sustentable" (Sustainable Light), have been met with success. Luz Sustentable has reduced electricity usage by 1,400 gigawatt hours and consequently reduced GHG emissions by 700,000 tonnes. This was accomplished through the distribution of 23 million energy efficient light bulbs during 2011. They also plan to distribute a similar amount throughout 2013.[27]

### Focus On: Transportation

In line with Mexico's population growth and economic development, the transportation sector is its fastest growing in terms of energy consumption and resultant emissions. Between 1996 and 2006, Mexico's transportation fleet nearly tripled in size from 8 million to 21 million vehicles. [32] In Mexico City, vehicular emissions account for 44% of the city's GHG emissions. Mexico City has implemented schemes to promote alternatives to private transport, including an expanded Metrobus service, the Ecobici bicycle-sharing programme, and an all-electric cab initiative, which together have had the cumulative effect of removing 30,000 cars from Mexico City's streets.[35]

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### North American Carbon Markets

California held its inaugural carbon allowance auction in November 2012. Its cap-and-trade scheme forms a central part of its pioneering climate legislation, which sets an enforceable cap on greenhouse gases, to be lowered over time.[36] Permits equal to emissions allowed under the cap will be distributed both freely and through auction by the State.

The Act targets large climate polluters in all sectors, leading to California's oil and manufacturing industries attempting to delay the auction, arguing that having to purchase carbon allowances may drive companies out of the state or cause plant closures.[37][38] However, the state has pointed out that only 10% of allowances need to be bought, and argues that the scheme will benefit the economy by creating green jobs and protecting consumers against oil price spikes.[39]

California is a member of the Western Climate Initiative (WCI), a regional bilateral cap-and-trade scheme which aims to reduce regional GHG emissions to 15% below 2005 levels by 2020, while raising money through permit auctions for investment in energy efficiency, renewable energy, and other state uses. Since its inception in 2007, the WCI has lost 5 US member states, leaving California and four Canadian provinces. As it stands, only California and Quebec are moving forward with emissions auctioning, aiming to hold their first joint auction early in 2013.[40] California hopes to demonstrate a successful cap-and-trade scheme and anticipates that more areas will join the scheme once it becomes fully operational.[38] [41]

The Regional Greenhouse Gas Initiative (RGGI) is the region's most mature market, and began trading in 2008. It aims to cut CO<sub>2</sub> emissions from the power sector by 10% from 1990 levels by 2018, and is also designed so that a proportion of carbon allowances are auctioned, raising money for investment in green energy initiatives. Like the WCI, RGGI has suffered some loss of momentum due to economic concerns: New Hampshire threatened to leave, and New Jersey pulled out in May 2011, with the State's Governor Christie saying the programme would not work to reduce

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greenhouse gas emissions but only increase energy costs for consumers.[42]

However, the RGGI provides some positive evidence on the potential impacts of carbon trading. A study by the Analysis Group concluded that the initiative had actually added \$1.6 billion to the economy, created 16,000 jobs, and generated \$1.1 billion in consumer savings through implementation of energy efficiency measures.[43] A review in June 2012 announced average CO<sub>2</sub> emissions had fallen by 23% since the programme started, exceeding expectations, although this is likely due in part to reduced energy consumption during the economic downturn and the general move to natural gas.[44] Nine states are now moving forward with the second phase of the initiative.

Mexico's historic passing of national climate change legislation in April 2012 created a legislative framework for future carbon trading schemes.[45] With the election of President Pena Nieto in July, who has promised to boost Mexico's economic growth through investment in national oil company Pemex, it has become uncertain how much of this legislation will actually be delivered. [46]



**Environmental  
Tracking**  
Carbon Index Series

### **Moving forward: The ET Index Series**

The ET Carbon Rankings represent the first phase of the Environmental Tracking concept, paving the way for the ET Index Series, which will follow soon after.

The ET Index Series has been designed to provide the investment community with a tool to encourage transparency and emission reductions on a global scale. Through the creation of a mainstream financial product, in the form of a series of broad market indexes, the world's largest companies can be incentivised to cut their emissions. This is done by re-weighting companies in the index series, either positively or negatively, on a sliding scale, according to their position in the ET Carbon Ranking.

As pointed out by the recent Mercer report on Climate Change Scenarios and the Implications for Asset Allocation (Mercer 2011), the use of sustainability themed indices in passive portfolios is identified as one way investors can take action to improve their portfolio resilience to climate-related risks.

However, the key question, which the EIO seeks to address through its Index series, is how to create an investable index which can have sufficient appeal to investors, evidently concerned with the bottom line. This is why the ET Index Series has been created to mirror the risk/reward profile of their non weight-adjusted counterparts, whilst still applying pressure to companies across the board to reduce their emissions.

The potential of ET Index Series to tackle GHG emissions rests on the logic that if a significantly large pool of investors track the indexes, it will alter the supply and demand for these companies' shares based on their position in our Ranking. This effectively increases the cost of emitting Greenhouse Gases, incentivising companies to take action.

#### **NATIONAL INDEXES:**

ET UK 100

#### **REGIONAL INDEXES:**

ET EUROPE 300

ET NORTH AMERICA 300

ET ASIA-PACIFIC 300

ET BRICS 300

#### **GLOBAL INDEXES:**

ET GLOBAL 800

**THROUGH APPLYING PRESSURE TO A  
COMPANY'S SHARE PRICE, THE ET  
INDEX SERIES AIMS TO RAISE THE  
COST OF CARBON FOR COMPANIES**

# GLOSSARY 50

## OF TERMS

BAU: Business As Usual

CCC: Committee on Climate Change

CCX: Chicago Climate Exchange

CDM: Clean Development Mechanism

CED: Clean Energy Dialogue

CRC: Carbon Reduction Commitment

C(S)R: Corporate (Social) Responsibility

CO<sub>2</sub>e: Greenhouse Gas emissions expressed as Carbon Dioxide (CO<sub>2</sub>) Equivalents, meaning calculated to express their global warming potential in terms of CO<sub>2</sub>.

DECC: Department of Energy and Climate Change

EIO: Environmental Investment Organisation

EPA: Environmental Protection Agency (US)

ET: Environmental Tracking

EU ETS: EU Emissions Trading Scheme

GDP: Gross Domestic Product

GHG: Greenhouse Gas

GRI: Global Reporting Initiative

GWP: Global Warming Potential

IMF: International Monetary Fund

ISAE: International Standard on Assurance Engagements

ISO: International Organization for Standardization

JVETS: Japanese Voluntary Emissions Trading Scheme

kWh: kilowatt hours

Mt: Mega tonnes

OECD: Organisation for Economic Co-operation and Development

RGGI: Regional Greenhouse Gas Initiative

Jl: Joint Implementation

tCO<sub>2</sub>e: Metric Tonnes Carbon Dioxide Equivalent

ROC: Renewable Obligation Certificates

Scope 1 (or S1): All direct GHG emissions.

Scope 2 (or S2): Indirect GHG emissions from consumption of purchased electricity, heat or steam.

Scope 3 (or S3): Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc.

UNFCCC: United Nations Framework Convention on Climate Change

WBCSD/WRI: World Business Council for Sustainable Development / World Resources Institute

WCI: Western Climate Initiative

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