

Global Climate Disclosure Framework For Automotive Companies



An international initiative in partnership with



North America

Europe

Australia/New Zealand

About IIGCC

The Institutional Investors Group on Climate Change (IIGCC) is the leading group for collaboration between pension funds and other institutional investors in Europe and focuses on addressing investment risks and opportunities associated with climate change. The group currently has 46 members, including major pension funds and asset management companies, with combined assets of around €4 trillion. Contact: stephanie.pfeifer@iigcc.org. Web: www.iigcc.org

About Ceres and the Investor Network on Climate Risk

Founded in 1989, Ceres is the leading U.S. network of investors, environmental groups and other public interest organizations working with companies to address sustainability challenges. Ceres also directs the Investor Network on Climate Risk (INCR), comprised of over 70 institutional investors who collectively manage over \$7 trillion in assets, and are working to address the risks and opportunities associated with climate change. Contact: Chris Fox at fox@ceres.org. Web: www.ceres.org and www.incr.com

About IGCC

The Investor Group on Climate Change Australia/New Zealand (IGCC, Australia/New Zealand) represents institutional investors with total funds under management of over A\$375 billion, and others in the investment community interested in the impact of climate change on investments. The aim of the IGCC is to ensure that the risks and opportunities associated with climate change are incorporated into investment decisions for the ultimate benefit of individual investors. Contact: secretariat@igcc.org.au. Web: www.igcc.org.au

Acknowledgments

IIGCC, Ceres and IGCC Australia/New Zealand would like to acknowledge the contributions of Eric Borremans and Jacky Prudhomme, BNP Paribas Asset Management; Valéry Lucas-Leclin and Sarj Nahal, Société Générale; Eric-Jan Stork, APG Investments; Steven Heim, Boston Common Asset Management; Devin Zeller, Calvert Investments; Rory Sullivan, Insight Investment; Alexis Krajieski, F&C Management Ltd; Libby Edgerly and Alex Lamb, KLD Research & Analytics; and the Carbon Disclosure Project in developing or reviewing this framework.

Contents

	Introduction	1
1	Disclosure on Climate Change Strategy	4
1.1	Assessment of the likely implications of climate change policy	4
1.2	Strategy and targets for reducing vehicle emissions	4
2	Disclosure of Emissions Data and Other Quantitative Information	5
2.1	Sales volumes	5
2.2	CO ₂ emissions of vehicles sold	5
2.3	Clean technologies	5
	Tables	
2.1	Fleet sales data	6
2.2	CO ₂ emissions data	8
2.3	Clean technologies data	10
	Appendix	
A.	Vehicle segmentation	11
B.	Regional areas	12
C.	Conversion factors	12
	IIGCC Membership	13
	INCR Membership	14
	Australia/New Zealand IGCC Membership	15

Introduction

Climate change is a strategic issue for the auto sector

Climate change is increasingly recognised as a key issue for the automotive sector. According to figures from the International Energy Agency, transport is responsible for around 18% of all carbon emissions, with autos (light-duty vehicles) accounting for approximately 10%. The risks and opportunities for carbon reduction strategies for this sector are therefore considerable and warrant particular attention from investors.

More stringent regulations, coupled with rising energy prices and changing customer demand, will increasingly impact existing business models in the automotive sector, spurring innovation and sales of highly efficient vehicles on the one hand, while decreasing demand for heavy, less efficient vehicles on the other.

The table below provides a summary of actual and implied targets for reducing the climate impact of the auto sector in different jurisdictions.

Country	Target	Implied fuel consumption		CO ₂ emissions	
		in l/100km	in mpg (US)	g/km	g/miles
Europe	CO ₂ : 130g/km by 2012				
	Diesel	4.9	48	130	208
	Petrol	5.6	42	130	208
US	35 mpg by 2020	6.7	35	160	256
Japan	16.8 km/l by 2015	6	39.5	144	230

From an investor's perspective, key issues to be considered in the auto sector include:

- Compliance costs as a result of regulatory constraints on CO₂ emissions and and/or fuel economy.
- Changing demand and sales mix due to high fuel costs, with implications for sales volumes, operating margins and company reputation.
- Business opportunities associated with the development of cleaner technologies and potential partnerships with equipment manufacturers and energy providers (e.g. oil & gas companies, electricity producers).

Company communication remains inadequate

Experience to date shows that there are significant gaps and inconsistencies in the data that auto companies provide on climate change. Shortcomings typically seen in company communications include:

- Information provided is unrelated to core business aspects (e.g. disclosure that focuses on greenhouse gas emissions from company operations as opposed to vehicle usage).
- Lack of quantitative or comparable data.
- Company strategy and technology choices are unclear.

As a result, it is extremely difficult for investors to assess properly the risks and opportunities posed by climate change policy to individual companies, and to understand the manner in which auto companies have structured their business strategies and R&D plans to reduce greenhouse gas emissions from their vehicles.

This disclosure framework aims to facilitate company communication

The Institutional Investors Group on Climate Change (IIGCC, Europe), Ceres, which directs the Investor Network on Climate Risk (INCR, US), and the Investor Group on Climate Change (IGCC, Australia and New Zealand) have joined forces to develop a reporting framework which defines investors' disclosure expectations for auto manufacturers and equipment suppliers for the sector.

The framework was drafted by investment professionals with input from industry representatives to capture those climate change issues that are most relevant for car manufacturers and equipment manufacturers. It provides a format for presenting qualitative and quantitative issues in a coherent and consistent way.

Through the use of this framework, we want to encourage auto companies to disclose information that allows institutional investors to make informed decisions about the financial implications of climate change for their sector.

What do investors require?

In order to properly assess climate change related risks and opportunities faced by individual car manufacturers and equipment manufacturers, investors require information on two key issues:

1. Strategic overview: Companies are expected to provide a brief overview of their long-term strategy for increasing fuel economy and reducing greenhouse gas emissions. We set out the specific issues to be addressed in Section 1.

2. Emissions data and other quantitative information: Companies are requested to provide quantitative data on their sales mix, CO₂ emissions, and the development on clean technologies. We provide a format for disclosing this data in Section 2.

Where should this information be disclosed?

Companies are encouraged to use their **existing communication channels** to apply the framework, for example in GRI reporting, CDP responses, financial reports, sustainability reports, analyst briefings, and mandatory reports to securities regulators such as the U.S. Securities and Exchange Commission, which require companies to disclose information of financial importance to the company.

How does this Framework relate to the CDP and GRI?

This disclosure framework focuses on the business issues and indicators specific to the auto sector, and can be used as a reporting tool through both the Carbon Disclosure Project (CDP) and the Global Reporting Initiative (GRI). CDP has integrated this framework into its 2009 questionnaire. IIGCC, Ceres and IGCC are working closely with the Global Reporting Initiative to further integrate this framework into their work.

The Carbon Disclosure Project, founded in 2000, represents 385 global institutional investors, with more than \$57 trillion in assets under management. As an independent not-for-profit organisation, CDP collects key climate change data from more than 1550 major corporations around the globe and has assembled the largest corporate greenhouse gas emissions database in the world.

The Global Reporting Initiative is a network of thousands of experts from business, civil society, labour, and professional institutions in more than 60 countries. GRI pioneered the development of the world's most widely used sustainability reporting framework, and is committed to its continuous improvement and application worldwide.

1 Disclosure on Climate Change Strategy

Given the strategic nature of climate change for auto manufacturers and equipment suppliers, we believe it is essential for companies to disclose how these factors are likely to impact their operations and long-term development plans. Specifically, companies should disclose the following:

1.1 Assessment of the likely implications of climate change policy

Companies should discuss the financial and strategic implications of current and planned, national, regional, and international policies for reducing CO₂ emissions, increasing fuel economy and developing clean engines for each of the markets in which they operate. Specifically, companies should disclose their views and perspectives on how climate change policy could impact them in terms of sales and additional costs, and how such costs could be passed on along the value chain.

Companies should also discuss how other related environmental policies, such as regulations and standards related to air quality, use of alternative fuels and sustainable mobility, could further impact the business.

1.2 Strategy and targets for reducing vehicle emissions

Companies should describe the actions that they are taking to reduce the CO₂ emissions of their vehicles. This may include, but is not limited to:

- R&D investments
- Timeline for mass production of cleaner technologies (e.g. hybrids, electric car, fuel cells)
- Alternative business models (eg. car rental, car sharing, 2/3-wheelers)
- Partnerships between car manufacturers, equipment manufacturers and energy providers (e.g. oil & gas companies, electricity producers)

More specifically, companies should clearly disclose their CO₂ and/or fuel economy targets at group level – and where relevant for specific markets. Targets should be expressed in gCO₂/km and/or miles per gallon and include a reference to the baseline against which performance is being measured.

2 Disclosure of Emissions Data and Other Quantitative Information

2.1 Sales volumes (not applicable to equipment suppliers)

Auto manufacturers should provide an overview of their historic, current and planned sales volumes by fuel type / engine technology and if possible by region/segment.

We provide a suggested format for disclosing sales volumes in Table 2.1. Standard definitions of car segmentation and regions are included in Appendix A and B.

2.2 CO₂ emissions of vehicles sold (not applicable to equipment suppliers)

Investors realise that indicators may vary from country to country, but expect auto manufacturers to provide the following information:

- Historical and projected CO₂ emissions (in gCO₂/Km or gCO₂/mile) explanations for any changes in their CO₂ emissions profile (e.g. clean technologies, sales mix).

Companies should explain the methodology used to calculate CO₂ emissions of vehicles sold. They should explain any differences with data published by industry associations or governmental agencies.

We provide a suggested format for CO₂ emissions in Table 2.2. Please refer to Appendix C for conversion factors between fuel economy and CO₂ emissions.

2.3 Clean technologies

Companies should provide the following details about existing and projected sales of different types of clean technologies:

- Auto manufacturers should provide the % or number of new vehicles equipped with the technology.
- Equipment suppliers should provide the % of sales for each technology.

We provide a suggested reporting format in Table 2.3.

Table 2.1 Fleet sales data

a. Fleet sales: global gas/petrol sales by segment

(000 vehicles sold)

Region	Type	2001	2002	2003	2004	2005	2006	2007	2008e	2009e	2010e
US	Total										
of which	Passenger cars total										
of which	Two-seaters										
	Sedans mini-compact										
	Sub-compact										
	compact										
	Mid-size										
	Large										
	Station wagons small										
	Mid-size										
	Large										
of which	Light trucks & SUVs total										
of which	Pick-up										
	Van										
	SUV										
	Others										
W. Europe	Total										
of which	Segment A-B										
	Segment C										
	Segment D										
	Segment E-F										
	Others										
Japan	Total										
of which	Large										
	Standard										
	Small										
	Mini										
China	Total										
India	Total										
Brazil	Total										
Russia	Total										
CEE	Total										
Other	Total										
TOTAL	Total										

b. Fleet sales: global diesel sales by segment

(000 vehicles sold)

Region	Type	2001	2002	2003	2004	2005	2006	2007	2008e	2009e	2010e
US	Total										
of which	Passenger cars										
	Light trucks & SUVs										
W. Europe	Total										
of which	Segment A-B										
	Segment C										
	Segment D										
	Segment E-F										
	Others										
Japan	Total										
China	Total										
India	Total										
Brazil	Total										
Russia	Total										
CEE	Total										
Other	Total										
TOTAL	TOTAL										

c. Fleet sales: Other alternatively-fuelled vehicle sales

(000 vehicles sold) – includes hybrids, electric vehicle (EV), LPG, CNG, fuel cell, air-compressed, etc.

Region	Type	2001	2002	2003	2004	2005	2006	2007	2008	2009e	2010e
US	Total										
W. Europe	Total										
Japan	Total										
China	Total										
India	Total										
Brazil	Total										
Russia	Total										
CEE	Total										
Other	Total										
TOTAL	TOTAL										

Table 2.2 CO₂ emissions data

a. CO₂ emissions for gas/petrol fleet

Sales-weighted CO₂ emissions in gCO₂/km or gCO₂/mile

Region	Type	Unit	2001	2002	2003	2004	2005	2006	2007	2008e	2010e	2012e
US	Total											
of which	Passenger cars total											
of which	Two-seaters											
	Sedans mini-compact											
	Sub-compact											
	compact											
	Mid-size											
	Large											
	Station wagons small											
	Mid-size											
	Large											
	Light trucks & SUVs total											
of which	Pick-up											
	Van											
	SUV											
	Others											
W. Europe	Total											
of which	Segment A-B											
	Segment C											
	Segment D											
	Segment E-F											
	Others											
Japan	Total											
of which	Large											
	Standard											
	Small											
	Mini											
China	Total											
India	Total											
Brazil	Total											
Russia	Total											
CEE	Total											
Other	Total											
TOTAL	TOTAL											

b. CO₂ emissions for diesel fleet

Sales-weighted CO₂ emissions in gCO₂/km or gCO₂/mile

Region	Type	unit	2001	2002	2003	2004	2005	2006	2007	2008e	2010e	2012e
US	Total											
of which	Passenger cars											
	Light trucks & SUVs											
W. Europe	Total											
of which	Segment A-B											
	Segment C											
	Segment D											
	Segment E-F											
	Others											
Japan	Total											
China	Total											
India	Total											
Brazil	Total											
Russia	Total											
CEE	Total											
Other	Total											
TOTAL	TOTAL											

Table 2.3 Clean technologies data

- For car manufacturers, % or number of new vehicles equipped with each technology.
- For equipment manufacturers, % of sales for each technology.

Category	Type	2007	2012e
ICE	Reduced friction loss		
	Improving Direct Injection		
	Downsizing with turbo charge		
	Variable valve timing / control		
	Optimised / Advanced cooling circuit		
	Exhaust heat recovery		
	Flexfuel (>B20: > E30)		
	Other (specify)		
	Other (specify)		
Hybrids	Start-& Stop		
	Start & stop & regenerative braking		
	Mild hybrid (motor assisted)		
	Full hybrid (electric drive)		
	Other (specify)		
ZERO Emissions	Full electric		
	Hydrogen fuel cell		
	Compressed air		
	Other (specify)		
Transmission	Optimised gearbox ratios		
	Piloted gearbox		
	Dual-clutch		
	Other (specify)		
	Other (specify)		
Body	Improved aerodynamic efficiency		
	Weight reduction		
	Other (specify)		
	Other (specify)		
Others	Low rolling resistance tyres		
	Advanced after-treatment		
	Other (specify)		
	Other (specify)		

Appendix

A. Vehicle segmentation

Vehicles considered for the purpose of this framework are “non-commercial vehicles”. The scope encompasses all passenger cars, as well as light trucks and SUVs to the extent that they can be sold and used for individual passenger transport.

We suggest that companies use generally accepted nomenclatures of vehicle segmentation. Companies should provide an explanation if different vehicle segmentation is used or if data cannot be provided according to the proposed nomenclature, for example because data is not available or commercially sensitive.

US segmentation

For the US market, we refer to the official nomenclature established by US EPA and NHTSA.

PASSENGER CARS		
Class	Passenger & Cargo Volume (Cu. Ft.)	
Two-Seaters	Any (cars designed to seat only two adults)	
Sedans		
Minicompact	< 85	
Subcompact	85 - 99	
Compact	100 - 109	
Mid-Size	110 - 119	
Large	120 or more	
Station Wagons		
Small	<130	
Mid-Size	130 - 159	
Large	160 or more	
LIGHT TRUCKS		
Class	Gross Vehicle Weight Rating (GVWR)*	
Pickup Trucks	Through Model Year 2007	Beginning Model Year 2008
Small	< 4,500 pounds	< 6,000 pounds
Standard	4,500 - 8,500 pounds	6,000 - 8,500 pounds
Vans		
Passenger	< 8,500 pounds	
Cargo	< 8,500 pounds	
Minivans	< 8,500 pounds	
Sport Utility Vehicles (SUVs)	< 8,500 pounds	
Special Purpose Vehicles	< 8,500 pound	

European segmentation

The nomenclature is derived from the ACEA/AAA nomenclature currently used:

- Segment A-B: Small cars
- Segment C (or M1): Lower Medium
- Segment D (or M2): Upper-Medium
- Segment E-F: Executives

Japanese segmentation

Sales of passenger cars should be segmented on the basis of the Japanese Automotive Manufacturers Association (JAMA) nomenclature.

B. Regional areas

Western Europe is defined as countries from former EU-15 and EFTA (Iceland, Norway, and Switzerland).

CEE is defined as Central and Eastern Europe and includes all other European countries except Russia and Turkey. Where companies use another scope they should provide an explanation.

C. Conversion factors

The conversion factors used for converting fuel economy in CO₂ emissions are detailed in the table below:

Fuel Used	Units	Kg CO ₂ per unit
Gas / Petrol	Litres	2.3154
	Gallons	8.8741
Diesel	Litres	2.6304
	Gallons	10.153
Compressed Natural Gas	Kg	2.7278
Liquid Petroleum Gas	Litres	1.4975
	Gallons	5.8082

Source: UK DEFRA (2007), US Energy Information Administration – DOE (2008)

Companies using different conversion factors should indicate those factors and provide an explanation.

As US EPA adapted its driving cycles after 2007, companies should indicate if and when historical data for average CAFE have been recalculated using the new driving cycles (Reformed CAFE). More generally, companies are encouraged to provide comparable data over time and indicate changing methods.

IIGCC Membership, November 2008

APG Investments
Aviva Investors
Baptist Union of Great Britain*
BBC Pension Trust
Bedfordshire County Council Pension Fund
BlackRock
BNP Paribas Asset Management
CB Richard Ellis Investors
CCLA Investment Management
Central Finance Board of the Methodist Church
Church Commissioners for England
Co-operative Insurance Society
Cowen Asset Management
Climate Change Capital
Corporation of London Pension Fund
Credit Agricole Asset Management
DWS Investments
Environment Agency Pension Fund
Ethos Foundation
F&C Management Ltd
Generation Investment Management LLP
Greater Manchester Pension Fund
Grosvenor Fund Management
Henderson Global Investors
Hermes
HSBC Investments
Impax Asset Management
Insight Investment
Joseph Rowntree Charitable Trust*
Kent County Council Pension Fund
London Borough of Hounslow Pension Fund
London Borough of Islington Pension Fund
London Borough of Newham Pension Fund
London Pensions Fund Authority
Merseyside Pension Fund
Northern Trust
PGGM
Prudential Property Investment Managers
Schroders
The Church in Wales*
The Roman Catholic Diocese of Portsmouth*
United Reformed Church*
Universities Superannuation Scheme
West Midlands Metropolitan Authorities Pension Fund
West Yorkshire Pension Fund
William Leech Charitable Trust*

*part of the Church Investors Group

INCR Membership, November 2008

British Columbia Investment Management Corporation
Brown University
Bullitt Foundation
California Public Employees' Retirement System
California State Controller
California State Teachers' Retirement System
California State Treasurer
Calvert Group
Christian Brothers Investment Services
Connecticut State Treasurer
CWA/ITU Negotiated Pension Plan
Deutsche Asset Management
Domini Social Investments LLC
Doris Duke Charitable Foundation
Ethical Funds Company
Evangelical Lutheran Church in America
F & C Asset Management
Florida State Board of Administration
Florida State Treasury
Fred Alger Management
Green Century Funds
Illinois State Board of Investment
Illinois State Treasurer
International Brother of Teamsters, Affiliates Pension Plan
Kentucky State Treasurer
Kolibri Capital LLC
Laird Norton Family Foundation
Lemelson Foundation
Maine State Treasurer
Maryland State Retirement Agency
Maryland State Treasurer
Massachusetts State Treasurer
Nathan Cummings Foundation
Needmor Fund
New Jersey State Investment Council
New Jersey State Treasurer
New York City Comptroller's Office
New York City Employees Retirement System
New York State Comptroller
New York State Teachers' Retirement System
North Carolina State Treasurer
Oregon State Treasurer
Parnassus Investments
Pax World Funds
Pennsylvania State Treasurer
Portfolio 21 Investments
Presbyterian Church (USA)
Province of St. Joseph of the Capuchin Order
Rhode Island State Treasurer
Rockefeller & Co., Inc.
Rockefeller Brothers Fund
Service Employees International Union
Sheet Metal Workers Pension Fund
Sisters of St. Dominic of Caldwell, NJ
Stark Investments
State Street Global Advisors
TIAA-CREF
Trillium Asset Management
Unitarian Universalist Association
UNITE HERE
United Methodist Church General Board of Pension & Health Benefits
University of Vermont
Vermont Community Foundation
Vermont State Treasurer
Walden Asset Management
Winslow Management Company
XShares Securities LLC

Australia/New Zealand IGCC Membership, November 2008

AIG Investments
American Federation of State, County and Municipal Employees
BlackRock Financial
Boston Common Asset Management
AMP Capital Investors
ARIA
Arkx Carbon Fund
Aviva Investors Australia
Babcock & Brown Limited
Blackrock Investment Management (Australia)
BT Financial Group
Catholic Super
Cbus
Citi Investment Research
Cleantech Ventures
Colonial First State Global Asset Management
Emergency Services and State Super
Eureka Funds Management
Five Oceans Asset Management
Goldman Sachs JBWere
Guardians of New Zealand Superannuation
The GPT Group
HESTA Super Fund
IAG
Industry Funds Management
Mercer Investment Consulting
Merrill Lynch
Rei Super
Starfish Ventures
Statewide Superannuation Trust
Stockland
Souls Funds Management
Suncorp Investment Management
Victoria Funds Management Corporation
VicSuper
Vision Super

Contacts

Carol Lee Rawn

Ceres

Senior Manager, Auto Programs

email: rawn@ceres.org

www.ceres.org and www.incr.com

Jim Coburn

Ceres

Senior Manager, Investor Programs

email: coburn@ceres.org

www.ceres.org and www.incr.com

Stephanie Pfeifer

IIGCC

Programme Director

email: stephanie.pfeifer@iigcc.org

www.iigcc.org

Joanne Saleeba

IGCC Australia/N

Executive Director

email: secretariat@igcc.org.au

www.igcc.org.au