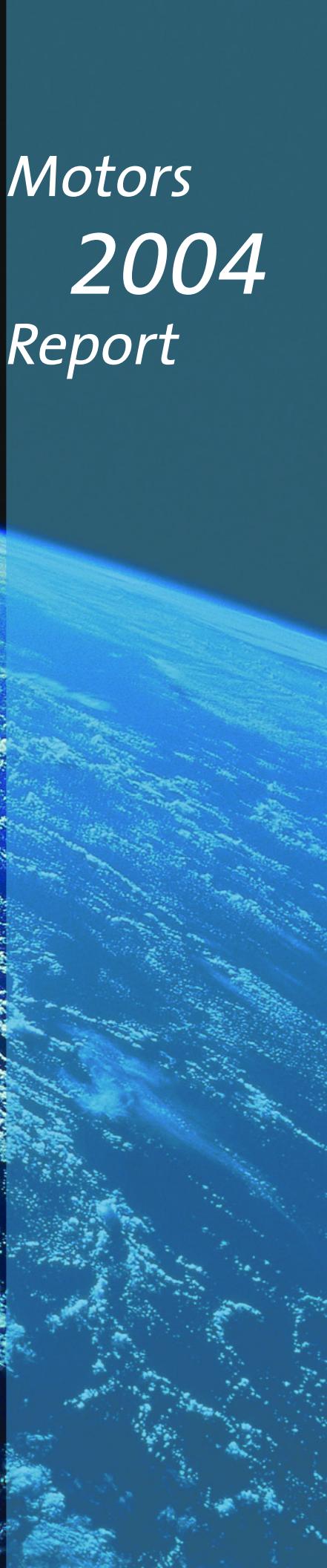
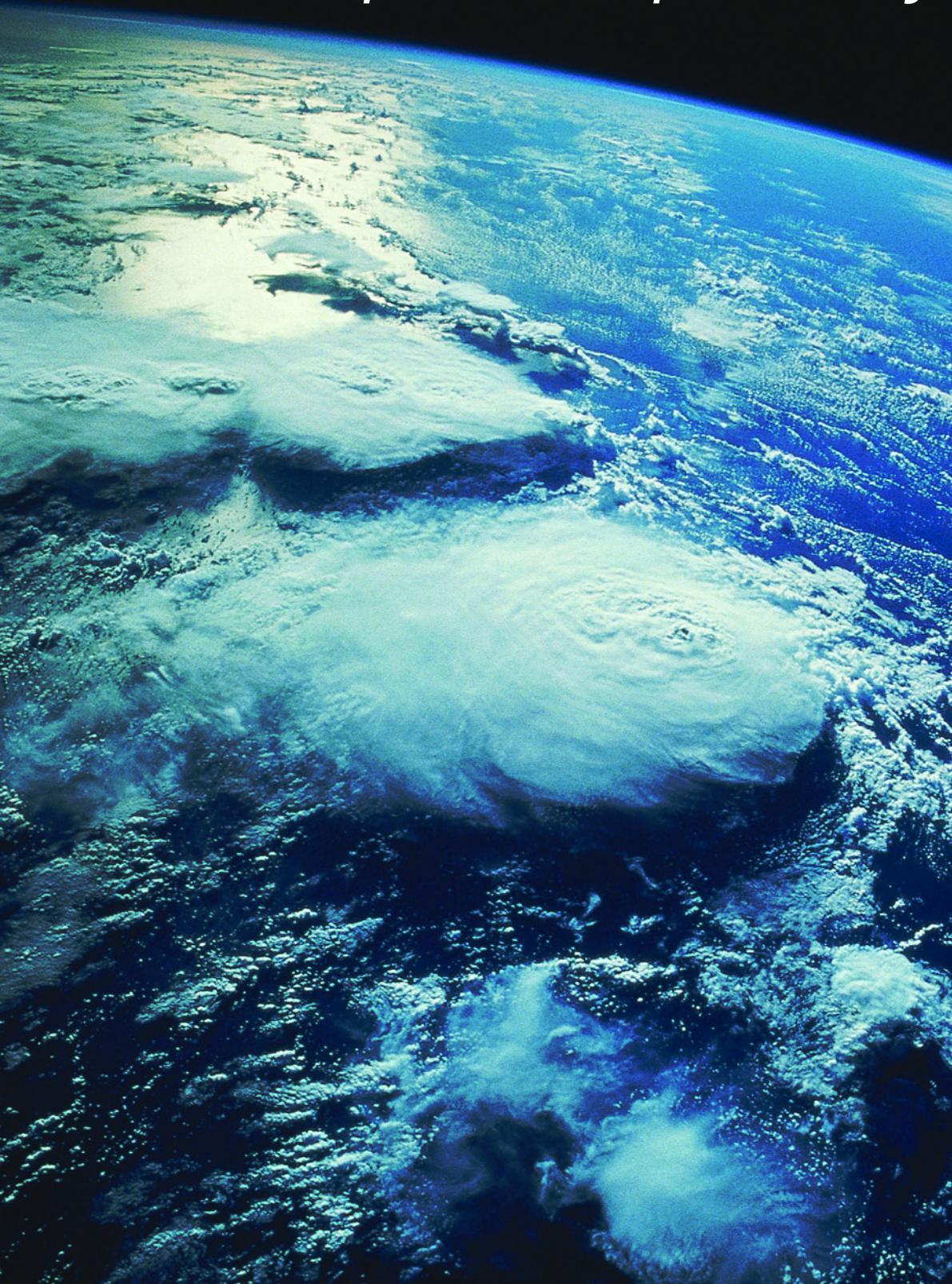




*General Motors*  
**2004**  
*Corporate Responsibility Report*





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# Our Message

## Overview

At General Motors we are deeply committed to being responsible corporate citizens and to making a difference in the world. This pledge is fully supported and reinforced by our latest **executive statement** and through a series of **organizational commitments** that we run our business by, and through partnerships that we have developed with organizations such as Harvard's Kennedy School of Government. We believe that, when coupled with strong performance, reporting creates unique value for our business and for all of our stakeholders. Our 2003/4 Corporate Responsibility Report has been designed from the outset to represent a learning platform for best practices, achieving a balance between being both innovative and informative. Further information about the structure and content of this report can be found in the section, [About this Report](#).



We hope that this report provides you with a valuable insight into General Motors, our performance, culture and values. If you would like to provide comments, please [contact us](#).



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GMAC  
FINANCIAL  
SERVICES

OnStar



# Our Message

## Executive Statements

### Chairman's Message (GRI 1.2)

The global auto business grows more competitive every year. To succeed, to continue leading the industry as we have for the last 73 years, we at General Motors must work to be the best in every facet of our business, including the way we conduct our business. At GM, we're committed to leading not only with our products and business results, but economically, socially, and environmentally, as well.

Economically, we believe in participating as a good corporate citizen in every market where we do business - creating jobs, seeding technology, contributing tax revenues, improving standards of living, supporting sustainable economic development. In 1977, we were proud to become the first company to adopt Rev. Leon Sullivan's "Sullivan Principles" and help hasten the end of apartheid in South Africa. Now, in 2004, we are thrilled to be returning full-time to South Africa to help build the nation's auto industry and the promise it represents for the citizens of South Africa.

Socially, GM has a long history of supporting the communities where we do business, including minority communities. In 1968, GM established the auto industry's first supplier diversity program. Since then, we have purchased more than \$44 billion in goods and services from minority suppliers, including \$7.2 billion in 2003 alone. In 1972, we were the first domestic automaker to institute a minority dealer development program. Today, we're proud to have more than 400 minority-owned dealerships, more than any other company in the business.

Environmentally, we continue to minimize the impact of the automobile on the world around us. In the U.S., we've launched a hybrid propulsion program focused on larger vehicles, like full-size trucks and SUV's, because that's where most of the fuel is consumed in the U.S.

We're currently conducting pilot programs in nine U.S. cities with our innovative GM hybrid transit buses, and in May 2004, delivered the first of 235 of these buses to King County, Washington. Our hybrid buses can deliver up to 60 percent better fuel economy than

traditional transit buses, and could save as much as 750,000 gallons of fuel every year for King County. We continue to invest heavily in the development of hydrogen fuel cells. In June 2004, our HydroGen3 demonstration vehicle established a new distance record for fuel-cell technology, traveling more than 6,000 miles in a 38-day marathon drive across Europe. And we continue to improve the environmental performance at our plants and facilities by increasing recycling and reducing waste generation, water and energy use, and emissions. We have established a goal of reducing our global greenhouse-gas emissions from our facilities by eight percent between 2000 and 2005, and we are making steady progress toward that target.

At GM, we will continue to work toward innovative solutions to our society's economic, social, and environmental challenges. We invite you to review our progress in this report, and to join us as we extend our practice of doing business the right way.

**Rick Wagoner**  
Chairman and Chief Executive Officer



**Rick Wagoner**  
Chairman

# Our Message

## Executive Statements

### Public Policy Center Welcome

Automakers, like all consumer product companies which compete on a global scale, flourish when economies are growing, societies are progressing, and people are constructively engaged in finding solutions to our present and future challenges. As people find work and live in stable, peaceful societies, there are increased opportunities for education and personal betterment. The rule of law is more likely to advance and prevail. Society, as a consequence, is better able to organize and address the wide range of inevitable challenges that require farsighted action.

It is in our interest to work toward that type of world. There is much cooperation and effort required from all sectors of our world, national and local communities, to achieve and sustain this vision.

Four elements comprise General Motors' commitment to being a constructive corporate citizen globally, wherever we have operations or market our products and services.

The first is **our values and policies**. We gladly subscribe to the Global Sullivan Principles for corporate conduct and encourage our business partners to do likewise. Our core values beckon us to match our words with our deeds. Our guidelines for employee conduct, called *Winning With Integrity*, inform our actions as we strive to conduct our business honestly, responsibly, and successfully.

The second element is our **conduct** - our deeds, since we know we will be measured by what we do, and often the perception of what we do, much more than by what we say. Given our scale of operations, there is much to review in this area. But, a report on our behavior must start with delivery on our promise to design, build and offer great cars and trucks that meet the full range of consumer needs and preferences in the

markets where we compete. Great cars and trucks mean vehicles which offer outstanding value in terms of quality, reliability, performance, convenience and other attributes valued by our customers. General Motors is delivering on its promise, as evidenced by increasingly high marks being accorded for its product leadership.



**Tom Gottschalk**  
Executive VP  
Law & Public Policy

There are many other very important aspects of our business conduct that bear on our performance in the areas of corporate social responsibility and sustainable development. We monitor and measure the productivity and efficiency of our plants, what they emit into the environment, and how well we are doing in eliminating waste from our processes and products. We challenge ourselves to innovate and are an industry leader in emissions technologies, safety enhancements, and future propulsion systems, including hybrids and fuel cells. Our record in protecting the health and safety of our workers is the best in the industry and among the best in the world.

We also try to enrich the communities of which we are a part through investments in facilities, participation in civic projects, and support for philanthropic and humanitarian causes, especially ones that are related to our business or which affect the vitality of these communities. These and other aspects of our performance are summarized in this report.

A third element of our program is **engagement** - with business partners, other corporations, NGOs, civic and charitable groups, and, of course, governments. Our recent joint activities and projects range from participation



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# Our Message

## Executive Statements

as a co-chair of the Sustainable Mobility Project of the World Business Council for Sustainable Mobility, to participation in many safe driving initiatives such as National Safe Kids and MADD, to regular dialogues with organizations such as the Coalition for Environmentally Responsible Economies (CERES) and the Global Reporting Initiative (GRI).

These engagements influence our conduct. This 2004 Corporate Responsibility Report of General Motors has been prepared in accordance with the 2002 GRI guidelines. It represents a balanced and reasonable presentation of our organization's economic, environmental, and social performance. By cooperating with others to develop a common framework for balanced corporate reporting and selecting the guidelines under which we report through dialogue with various stakeholders, we become **more transparent** to the world which is the fourth element of our work in this area.

I know General Motors and its many employees strive to be constructive influences in the community and to act responsibly in ways that consider the interests not only of our shareholders and employees, but the interests of all those impacted by what we do and say. This report provides our assessment of our progress and will enable the reader to be more informed of GM's record of performance in being a force for a better world.

**Tom Gottschalk**  
Executive Vice President - Law & Public Policy

### Overview

At General Motors we are committed to responsibility. Not because it represents the latest business trend, but rather because we believe that it is only by acting responsibly that we can continue to be economically successful. This is reflected in our core values and our commitment to the Global Sullivan Principles.

Our attitude toward responsibility and sustainability encompasses the mitigation of risk, but it also focuses on capturing and creating value for all of our stakeholders. Over the years we have developed a reputation for being a responsible employer and partner, this is something that we have worked hard to achieve, are proud of and intend to grow.

### Internal Commitments

The GM Public Policy Center (PPC) deals centrally with all of our government relations, energy and environmental, economics, and community relations functions. The Center operates through a series of global cross-sector teams, focused on specific policy issues. These teams are led by:

[Elizabeth Lowery](#), Vice President, Environment and Energy

[Roderick Gillum](#), Vice President, Corporate Responsibility and Diversity

[Ken W. Cole](#), Vice President, Government Relations

[G. Mustafa Mohatarem](#), GM's Chief Economist

These individuals report directly to Tom Gottschalk, GM's Executive Vice President - Law and Public Policy who is a member of GM's Automotive Strategy Board in turn reporting directly to Rick Wagoner, our Chairman and Chief Executive Officer.

The PPC also periodically reports out to the Public Policy Committee of the [GM Board of Directors](#), which is charged with ensuring that we operate our business worldwide in a manner consistent with the rapidly changing demands of society. Matters reviewed by this Committee include research and development, automotive safety, environment, diversity, health care, trade, corporate responsibility, and economic development. The Committee provides public policy guidance to management in order to support GM's progress in growing the business globally within the framework of [GM's Core Values](#).

#### Our core values include:

- Continuous Improvement
- Customer Enthusiasm
- Innovation
- Integrity
- Teamwork
- Individual Respect and Responsibility

These values are the basis upon which all GM employees conduct their day-to-day business, and are the foundation of GM's guidelines for employee conduct, "Winning with Integrity - Our Values and Guidelines for Employee Conduct." These guidelines, which demonstrate GM's commitment to integrity, include personal integrity, integrity in the workplace, integrity in the marketplace, integrity in society, and in our communities.

In certain areas we have individual policies or sets of principles that guide the way we work. We have a set of [environmental principles](#) that are applicable globally and guide our approach to all environmental matters. Other policies include [health and safety](#) and [equal opportunity](#). In many areas we set targets to improve our performance, which are discussed in the individual sections of the report.



### Global Sullivan Principles

(GRI 3.14, SO4, PR6)

In May 1999, we announced our support for the Global Sullivan Principles. The Global Sullivan principles are aspirational guidelines, which we incorporate into our daily business operations; the principles serve as criteria to assess the focus and scope of GM's global activities. The principles, developed by the late Rev. Leon H. Sullivan, are rooted in the 1977 Sullivan Principles for South Africa, and guide companies worldwide on core issues such as human rights, worker treatment, the environment, safety, community relations, supplier relations and fair competition.

We remain committed to the Global Sullivan Principles ideals by endorsing and participating in the Global Sullivan Principles Core Group Committee.

*"The objectives of the Global Sullivan Principles are to support economic, social and political justice by companies where they do business; to support human rights and encourage equal opportunity at all levels of employment including racial or gender diversity on decision-making committees and boards; to train and advance disadvantaged workers for technical, supervisory and management opportunities; and to assist with greater tolerance and understanding among peoples; thereby, helping to improve the quality of life for communities, workers and children with dignity and equality."*

The Rev. Leon H. Sullivan

Visit [www.globalsullivanprinciples.org](http://www.globalsullivanprinciples.org)



### Overview (GRI 2.10, 2.13, 2.15-6, 3.18)

In the spirit of innovation, conservation and the preservation of natural resources, this report is now fully internet-based.

Inside you can find detailed and comprehensive information about our environmental, social and economic performance in 2003-04. We have also highlighted how we are responding with innovative solutions to challenges both in terms of our operations and our products.

The report is global in scope and covers performance for reporting year 2003/4. Performance data covers calendar year 2003 and management progress and individual initiatives are included up to time of publication.

We are grateful to **Sd3** ([www.sd3.co.uk](http://www.sd3.co.uk)), our sustainability advisers, for having helped us envision and create this document and to the Coalition of Environmentally Responsible Economies (**CERES**) for having reviewed and offered their comments on it.

In response to feedback, we have redesigned and refocused the report. We believe that this new format offers our stakeholders a more accurate and transparent picture of our performance. We have also fully integrated this report into GM's innovative and interactive web portal called **GMability.com**. Information about our ethics and values - demonstrated by our emphasis on workplace diversity, vehicle safety and environmental stewardship - is readily available and continuously refreshed for the public to view on **GMability.com**. We strongly encourage you to explore both this report and **GMability.com** to learn more about GM's initiatives in these important areas.

### GRI Reporting (GRI 2.12)

This report follows the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines, as issued in 2002, which were developed for voluntary use by organizations reporting on the economic, environmental, and social dimensions of their activities, products and services. The guidelines were the result of a multi-stakeholder, international collaboration. We have been closely associated with their development, since their inception in 1997, as a member of the GRI Steering Committee, a pilot company, and as a member of various GRI working groups.

GM also is a member of the GRI Charter Group and the Stakeholder Council. For further details, see [www.globalreporting.org](http://www.globalreporting.org).

### Approach and Structure

#### (GRI 2.14, 2.19)

If you are a frequent reader of our sustainability reports, you will notice that this report represents a departure from our traditional structure. For the first time, this year we have focused on presenting a global picture. All specific regional and country/local level activity can be found according to our business unit structure: GMNA (U.S., Canada, Mexico), GME (Europe, U.K., Sweden etc.), GMAP (Asia Pacific Rim, including India, and Australia) and GMLAAM (Latin America, Africa and the Middle East).

Due to the geographical extent of our operations, we are continuing to work toward a process that provides immediate access to regional information for each indicator. Hence, our coverage year-to-year will improve over time. Where it is currently available, regional information is provided in the relevant section. In addition to the underlying regional framework, the report is also ordered according to the Global Reporting Initiative Guidelines. To view the report in this format, please see the **GRI Index**. Also, notice that the GRI Index element is

# Our Message About this Report

noted at the top of every page, where applicable. This report includes information and data contributed by employees of GM. Unless noted, it presents data for the 2003 calendar year and all data are normalized by production. Data reported may change due to updated information received after publication. As a result, variances may appear in year-to-year comparisons.

In preparing this report, we have fully reviewed and updated our 2002/3 data. Many aspects of our business remain unchanged from year-to-year. Therefore, sections from previous reports may still be valid. However, these sections have been thoroughly reviewed and verified by our experts and edited accordingly. All data and related explanations of performance have been updated for calendar year 2003. All financial data are reported in U.S. dollars (US\$) and are extracted from GM's Annual Report.

## Contact Us (GRI 2.10, 2.22)

We welcome your feedback on our approach to corporate responsibility and sustainability reporting. Contact us with your comments and questions online, by e-mail, mail or by fax.

Online:

[www.gm.com/gmcomjsp/contactus/gmcorpcit\\_comment.html](http://www.gm.com/gmcomjsp/contactus/gmcorpcit_comment.html)

Mail:

ATTN: GM Corporate Responsibility Report  
General Motors Corporation  
300 Renaissance Center  
MC 482-C27-B22  
Detroit MI 48265-3000  
U.S.A.

Facsimile:

313.665.0746



# Performance at a Glance

## Performance Scorecard



Chevy SSR

- Our Invitation to Corporate Responsibility is a printable PDF, and convenient summary of this report. Access it at [>>](http://www.gmresponsibility.com)
- Our Scorecard (see below) reviews key responsibility indicators, comparing 2003 versus 2004.
- Our **GRI Index** provides links directly into the report (as applicable) for each GRI reporting item.

GM is committed to continuous improvement in our environmental, social and economic performance. The following table presents a series of key performance indicators (KPIs), which we believe present a fair and representative picture of our overall responsibility performance. In line with our continuous improvement ideology, we plan to increase the number of indicators that we present here year-on-year.

These KPIs are supported by comprehensive performance information within each relevant chapter. To access this information, follow the links in the table. Unless otherwise indicated, data are from our operations worldwide.

### Performance Scorecard

Economic Indicators	2003	2002	Performance	
<b>Net Sales and Revenue (US\$)*</b>	\$185.5 billion	\$177.3 billion	+ 4.4%	For more see <a href="#">5-3 &amp; Anual Report<sup>1</sup></a>
<b>Net Income (US\$)*</b>	\$3.8 billion	\$1.7 billion	+ 55%	For more see <a href="#">5-3 &amp; Anual Report<sup>1</sup></a>
<b>Earnings per share (U.S.\$/share)*</b>	\$7.14	\$3.35	+ 53%	For more see <a href="#">5-3 &amp; Anual Report<sup>1</sup></a>
<b>Vehicle sales (cars and trucks)</b>	8.1 million	8.4 million	- 3.6%	For more see <a href="#">3-4 &amp; Anual Report<sup>1</sup></a>
<b>Vehicle market share (%)</b>	14.7	15.0	- 2%	For more see <a href="#">5-1 &amp; Anual Report<sup>1</sup></a>

<sup>1</sup>[www.gm.com/company/investor\\_information/stockholder\\_info/index.html](http://www.gm.com/company/investor_information/stockholder_info/index.html)

# Performance at a Glance

## Performance Scorecard

Environmental Indicators	2003	2002	2004-5 Target	Performance	Page
Energy use (GWh)**	34,146	35,447	- 10%	- 9.1% since 2000	<a href="#">6-14</a>
Carbon dioxide emissions (metric tons)	13.44 million	13.81 million	- 8%	- 7.1% since 2000	<a href="#">6-38</a>
Total waste generated (metric tons)***	4.08 million	4.25 million	- 15%	- 11.4%	<a href="#">6-23</a>
Total recycling rate	85.0%	84.4%	-15%	+ 2.9%	<a href="#">6-23</a>
Water consumption (m <sup>3</sup> )	59.4 million	64.3 million	- 10%	-20.8% Surpassed Target	<a href="#">6-20</a>
Sites certified to ISO 14001	97.5%	95.8%	100% of manufacturing facilities	116 of 119 manufacturing facilities have implemented an EMS	<a href="#">6-4</a>

1 metric ton = 1,000 kilograms = 2,200 pounds

Social Indicators	2003	2002	Performance	Page
Community donations/sponsorships (US\$)*	\$73 million	\$80.5 million	Focused more on targeted giving	<a href="#">5-14</a>
Employees	326,000	338,000	- 3.5%	<a href="#">5-7</a>
Diversity: % female employees (U.S. workforce)	20.7%	20.7%	Stabilized	<a href="#">7-8</a>
Diversity: % minority employees (U.S. workforce)	23%	23%	Stabilized	<a href="#">7-8</a>
Discrimination charges	207	245	15.5%	<a href="#">7-8</a>
Employee Satisfaction (% of employees satisfied with their organization as a place to work at the present time)	68% satisfied	Global census in progress	Compared to 58% in 2000 representing an increase of 10% in employee satisfaction over two years.	<a href="#">7-16</a>
Recordable injury rate (per 100 employees)	2.95	3.8	- 22.4%	<a href="#">7-13</a>
Lost time accident rate (per 100 employees)	0.29	0.33	12.1%	<a href="#">7-13</a>

\* See currency converter at [www.oanda.com](http://www.oanda.com)

\*\*\* See unit conversion factors at [ts.nist.gov](http://ts.nist.gov)

\*\* See energy conversion factors at [physics.nist.gov](http://physics.nist.gov)

These are non-GM sites, please check privacy policy.



# Our Company Overview

## (GRI 2.1, 2.3)

At General Motors, we design, build and market cars and trucks worldwide. In 2003, we sold nearly 8.1 million cars and trucks, accounting for about 15 percent of the global vehicle market. This unrivaled market share makes us the world's largest vehicle manufacturer - a position that we have held since 1931.

Read more on our [financial performance](#).



At GM, we have a long tradition of success and innovation within the automotive business. Our roots can be traced all the way back to 1897, although we were officially founded in 1908. Today our global headquarters are at the GM Renaissance Center in Detroit. We employ about 325,000 people worldwide, have manufacturing operations in 32 countries and our vehicles are sold in 192 countries. Our major markets are North America (GMNA), Europe (GME), Asia-Pacific (GMAP), and Latin America, Africa and the Middle East (GMLAAM), and our [global presence](#) includes GMAC Financial Services, OnStar, and our Global Alliance partners.

- [Vision and Values](#)
- [Global Presence](#)
- [Corporate Governance](#)
- [Managing Responsibility](#)
- [Consulting Stakeholders](#)



## Overview (GRI 3.7)

At General Motors, we have been left an important legacy by those who went before us - a legacy of doing business the right way. This tradition represents a great asset for our company ... but it also brings with it a tremendous responsibility.

## Vision

GM's vision is to be the world leader in transportation products and related services. We will earn our customers' enthusiasm through continuous improvement driven by the integrity, teamwork and innovation of GM people.

Becoming the best is an unending journey, a constantly changing destination. But that's where we're determined to drive - one car, one truck, one customer at a time.

## Values

We have defined six core values to guide our global business conduct:

1. Customer enthusiasm
2. Integrity
3. Teamwork
4. Innovation
5. Continuous improvement
6. Individual respect and responsibility

Our employees conduct their day-to-day business with the strong foundation of our core values.

Integrity is one of our core values; we live it every day, with each decision we make and each action we take. Integrity transcends borders, language and culture; it's all about creating an environment that supports, and demands, proper business conduct. Doing the right thing is not

always convenient, but it's essential to sustaining our culture of integrity and our leadership position in corporate responsibility. It means honest and accurate reporting of our performance, both internally and externally. It means competing - and succeeding - by the rules, whether they are laws, regulations, or simply GM policy. It means making our actions match our words.

## Communicating Values Internally

All six core values are outlined in a series of information booklets that we have circulated to all of our staff called 'Winning with Integrity - Our Values and Guidelines for Employee Conduct.' These guidelines demonstrate our global commitment to achieving business success with integrity, and cover personal integrity, integrity in the workplace, marketplace, society and its communities. We publish the guidelines in nine languages and also deploy them electronically via the GMability website. Each booklet discusses aspects of 'Winning with Integrity,' explaining our policies and expectations, with examples of situations employees might face, and suggestions of how they ought to deal with them. 'Winning with integrity' also describes four cultural priorities that we consider to be critical to the success of our business, they are:

1. Enhance product and customer focus
2. Act as one company
3. Embrace stretch targets
4. Move with a sense of urgency

See the '**Winning with Integrity**' guidelines (only available online in English).



## Responsibility Vision (GRI 1.1)

At General Motors, we have long recognized the importance of government policies, international relations, environmental performance and labor and community responsibilities to our business. Recently, these issues have increased in visibility as the public, government, and non-governmental organizations (NGOs) have looked to corporations and the private sector to play a leading role in addressing the impact of globalization on living standards, economic development and environmental improvement.

This makes our commitment to corporate responsibility more important than ever. Our values are clear and reflected in our Guidelines for Employee Conduct, as well as our commitment to the **Global Sullivan Principles**. The principles, developed under the guidance of the late Rev. Leon H. Sullivan, are a guide for responsible corporate behavior, emphasizing the common goals of human rights, social justice and economic opportunity. We use the principles as the foundation for our corporate responsibility initiatives and measure our performance against the principles using the Global Reporting Initiative guidelines.

Innovation is a long-standing priority at GM, and our renewed commitment, our drive, is to build on that heritage. We've led in introducing innovative new technologies to the mass market. We focus on thinking beyond "the way it's always been done" to new ways - better ways - it can be done. Working as a team, building a collective passion for new ideas, we strive for automotive innovation that stands out from the competition and results in great cars and trucks.

We are also using innovation to reduce the environmental impacts of our plants. GM has **reduced energy consumption** from our facilities, eliminated the use of many materials in our

production processes and developed innovative new approaches for **reducing waste**. We have also reduced the amount of material going to landfill in our North American operations by increasing the recycling and reuse of our waste materials as new useable products. In addition, we have initiated **land-management initiatives** in partnership with local governments to redevelop former GM manufacturing facilities and sites. Our goal is to convert these sites into productive, job-creating complexes that benefit local communities.

We continue our focus on **health and safety initiatives**, and on **developing the skills** and capabilities globally of our workforce. We also are expanding our **education initiatives** at the community level.

Our long history of building strong partnerships with our employees, customers, investors, governments, communities, our dealers and others helps us to be responsive to the needs of our various stakeholders. By working with other businesses, governments and NGOs, we are making significant progress toward a responsible and sustainable future.

GM realizes its vision of industry leadership by operating our business the right way worldwide. Our responsibility lies in building great cars and trucks, and in balancing the environmental, social and economic impacts of our industry.



## Overview

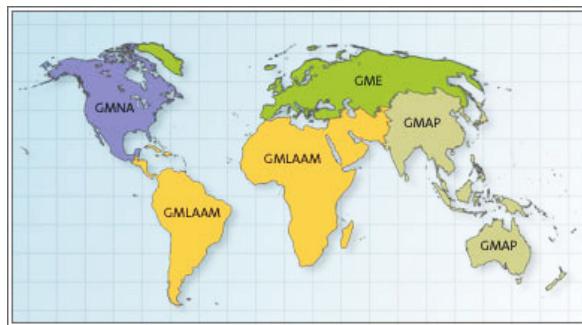
GM is a truly global company. We sell our products in 192 countries and design and manufacture our products in 32 countries. But today we are working together globally as never before, leveraging our considerable resources - most importantly the talent of our people all around the world - to develop exciting new products. And we are getting those new cars and trucks to market faster and at the highest levels of quality in our history.

We are a publicly traded company, listing our stock on the following exchanges:

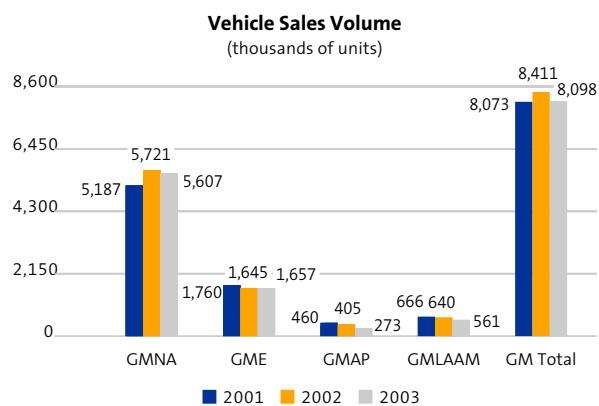
- New York Stock Exchange, Inc.
- Chicago Stock Exchange, Inc.
- Pacific Stock Exchange, Inc.
- Philadelphia Stock Exchange, Inc.
- Montreal Stock Exchange
- Toronto Stock Exchange
- Borse Frankfurt am Main (Frankfurt on the Main, Germany)
- Borse Dusseldorf (Dusseldorf, Germany)
- Bourse de Bruxelles (Brussels, Belgium)
- Courtiers en Valeurs Mobilières (Paris, France)
- The London Stock Exchange

In today's increasingly global auto industry, we believe that the winners will be those companies that best combine the efficiencies of global scale with a clear focus on local markets. In both regards, we are well positioned for future success.

## Locations (GRI EC2)



Our operations around the world are divided into four regions. GM North America (GMNA) contains our largest market, the United States, as well as Canada and Mexico. Our other regions are GM Europe (GME); GM Asia Pacific (GMAP), which includes the Asia Pacific rim, including Australia and India; and GM Latin America, Africa and the Middle East (GMLAAM)



### Brands and Partners (GRI 2.2, 2.4-7)

GM brought brand differentiation to the world back in the 1920s, when Alfred Sloan created the price ladder of GM marques that offered "a car for every purse and purpose." As the decades passed and our product portfolio expanded, we slowly drifted away from that simple but effective strategy.

Today, the GM product revolution again is strengthening our brands with more, innovative customer focused marketing. Witness the renaissance of Cadillac, led by all-new cars and trucks that have gone in a unique design direction, and by marketing that really connects with potential buyers. In short, develop distinctively designed, high-quality vehicles that truly delight the customer; create an ownership experience that reflects and reinforces the brand's image; support this with strong and innovative advertising; and the buyers will come.

### Our Brands

Our cars and trucks are sold under the following brands:



Buick



Cadillac



Chevrolet



GMC



Holden



Hummer



Oldsmobile



Opel



Pontiac



Saab



Saturn



Vauxhall

GM parts and accessories are sold under the GM, GM Goodwrench and ACDelco brands through GM Service and Parts Operations (SPO). GM engines and transmissions are marketed through GM Powertrain.

GM operates one of the world's leading financial services companies, **GMAC Financial Services** ([www.gmacfs.com](http://www.gmacfs.com)), which offers automotive and commercial financing along with an array of mortgage and insurance products. GM's **OnStar** ([www.onstar.com](http://www.onstar.com)) is the industry leader in vehicle safety, security and information services. **GM Electro-Motive Division** ([www.gmemd.com/en/home](http://www.gmemd.com/en/home)) manufactures diesel-electric locomotives and commercial diesel engines.

Additional information on our brands is available on our corporate web site, [www.gm.com](http://www.gm.com), and in our [2004 annual report](#).

### Our Automotive Partners

The GM Group of global partners includes Fiat Auto SpA of Italy, Fuji Heavy Industries Ltd., Isuzu Motors Ltd. and Suzuki Motor Corp. of Japan, which are involved in various product, powertrain and purchasing collaborations. In addition, GM is the largest shareholder in GM Daewoo Auto & Technology Co. of South Korea. GM also has technology collaborations with BMW AG of Germany and Toyota Motor Corp. of Japan, and vehicle manufacturing ventures with several automakers around the world, including Toyota, Suzuki, Shanghai Automotive Industry Corp. of China, AVTOVAZ of Russia and Renault SA of France.



### Overview (GRI 3.1, 3.8, LA13)

General Motors has long been recognized as being an industry leader in strong corporate governance practices. As our Chairman and Chief Executive Officer Rick Wagoner frequently points out, "We have to earn investor confidence day in and day out by running our business with integrity and honesty."

We have worked hard over the years at General Motors to develop strong corporate governance practices. We have a healthy system of appropriate checks and balances, and we've placed a priority on clear, consistent and truthful communication about our performance.

### An External Viewpoint

The following excerpt gives an external viewpoint on our Governance practices and policy. It is quoted from a case study in a recently published book, *Profits with Principles*, written by Jane Nelson and Ira Jackson of Harvard's Kennedy School of Business.

*In 1994, the GM Board of Directors was one of the first in Corporate America to voluntarily write and adopt a set of corporate governance guidelines. Since then, this influential twenty-eight point set of guidelines has been studied and emulated by companies around the world, influencing good practice far beyond the GM boardroom. Revised in 1997 and again in 2003, GM's guidelines provide a clear mission statement and cover a range of practical issues in the following areas (details that can be found within GM's web-based annual report):*

- Selection and composition of the board*
- Board leadership*
- Board composition and performance*
- Board relationship to senior management*
- Meeting procedures*
- Committee matters*
- Leadership development*

*Independence and diversity of board directors is also a long-standing tradition at the company. In 1971, the pioneering civil rights crusader the Reverend Leon Sullivan made history by becoming the first African-American ever elected to the board of a major corporation. The board was GM's and he served on it for over twenty years. Today the board is composed of eleven members, of whom ten are independent directors and two are non-American, which is still rare in corporate America. The audit committee, executive compensation committee, and committee on director affairs are composed solely of independent directors. GM stockholders are asked annually to ratify its external auditors. The board also has an investment funds committee, which acts in a fiduciary capacity for employee retirement benefits, and a public policy committee.*

*Some 53,000 GM employees worldwide hold stock options, and the company started to expense them in 2003. These structures and guidelines, among others, set the framework for GM's corporate governance, but as Rick Wagoner has commented in reference to the corporate governance challenge faced by companies, "No single action is enough to restore investor confidence in the current climate of concern over corporate accountability. We have to earn our investor confidence day in and day out by running with integrity and honesty."*

*Earning the confidence of investors and other stakeholders also depends on increased disclosure and transparency from the company. As Wagoner states, "We place a high value on communicating clear, consistent, and truthful information about our performance to our employees, suppliers, dealers, investors and customers." This is reflected in the fact that GM has one of the most comprehensive corporate websites of any company, including not only copies of its governance guidelines, but also details of the purpose and meeting frequency of all of its board committees and copies of its SEC filings.*

# Our Company

## Corporate Governance

*Communicating with small investors is also seen as important, in addition to the more common focus by companies on their large institutional shareholders. GM has some one million individual investors and communicates with them via a biannual newsletter, a dedicated investor website, and regional forums. As a reflection of the practices, in 2003, for the second year in a row and during a period of enormous investor distrust in corporate America - GM was awarded top honors for communications with retail stockholders in the internationally recognized Investor Relations Magazine Awards. The company has recently launched another dedicated stakeholder communications website, called GMability, to increase transparency on its broader economic, social, and environmental performance. This forms part of its growing emphasis on sustainability governance.*

### **Sustainable Governance**

*GM has also played a pioneering role in the area of sustainable governance, although like most companies it remains challenged to keep up with growing public and investor demands for greater disclosure and many activists question its commitment to tackling climate change. Back in 1977, Dr. Sullivan's combined experience as a member of the GM board and a civil rights activist led to his creating the influential Sullivan Principles for American companies operating in South Africa. These played an important role in raising standards of corporate responsibility and providing parameters for institutional investors during South Africa's apartheid years. In 1999, GM was one of the first major companies to announce its support for the Global Sullivan Principles, which provide guidance for businesses on issues such as human rights, the environment, community relations, supplier relations, and fair competition.*

*In 1994, GM was the first Fortune 50 manufacturing company in America to formally endorse the Coalition for Environmentally Responsible Enterprises (CERES) Principles for*

*Environmental Performance, developed by a coalition of investor, environmental, and advocacy organizations. Among other things, these principles require participating companies to publicly report on their environmental progress on an annual basis. Since 1994, GM has set performance targets and reported publicly, initially on its environmental performance and now more broadly. A few years ago, GM was one of the companies that helped to establish the Global Reporting Initiative (GRI). The GRI is becoming an international framework for non-financial reporting by companies, and GM is one of the pioneers in testing and refining this methodology.*

*In addition to endorsing and publicly reporting on these principles and guidelines, GM underpins its sustainability governance with input from external advisory committees such as the Science Advisory Committee, European Advisory Council, Asia Advisory Council, and Supplier Environmental Advisory (SEA) Team. The company's executives also get exposure to a diversity of opinions, including critiques, by engaging in other industry and multi-sector initiatives such as the EPA Climate Leaders Program and the World Business Council for Sustainable Development (WBCSD) Sustainable Mobility Project, which GM has co-chaired with Toyota and Shell.*

*GM is also a member of the World Resources Institute (WRI) Green Power Market Development Group. The Group is a unique commercial and industrial partnership aimed at building viable corporate markets for green power. Other participants include Alcoa, Dow, DuPont, IBM, Interface, J&J, Kinkos and Staples. All of these activities provide a framework for increased accountability and transparency on the part of GM, but also for increased exposure to new ideas. These activities have the potential to not only improve the company's governance standards, but also to be a source of product innovation and business development.*



# Our Company

## Corporate Governance

*GM's management team knows that it must do all of the usual things well: cut costs, eliminate inefficiencies, ban bureaucracy, increase teamwork and productivity, revamp aging plants, revitalize innovation, reenergize employee creativity, and refocus on customer trends. The company must do all this to generate the cash needed to fund legacy health care and pension benefits, let alone be the leader in delivering high quality and safety, more appealing and more reliable products.*

*Added to all of the above is the growing pressure from governments and consumers alike to ensure that these products are safer and cleaner than ever in terms of their impact on the environment. Together with big oil, "big auto" sits at the heart of the evolving debates on global climate change and national security. No other industry faced the almost surreal activist campaigns that targeted the American auto sector during 2002-2003. These ranged from television advertisements asking drivers "What is your SUV doing to our national security?" to an internet campaign that swept many of the church halls of America, asking the questions "What Would Jesus Drive?" In both cases, the campaigns urged consumers to stop buying SUVs and to opt instead for more fuel-efficient vehicles. There is debate about how effective these campaigns have actually been in influencing consumer attitudes and purchasing choices, but regardless of the immediate outcome, these are issues that are unlikely to go away.*

*In short, GM and most of its industry peers face a daunting set of economic, social, and environmental challenges. If GM overcomes these challenges, then they stand ready not only to achieve impressive and profitable growth, but also to make an important contribution to addressing one of the greatest sustainable development issues the world faces: how to increase access to mobility, bearing in mind that less than 15 percent of the world's population*

*currently owns a vehicle, while doing so in a way that takes into account risks of increased air pollution, global climate change, and road safety.*

*GM, together with other leading auto companies, is determined to demonstrate that it can be part of the solution to these challenges, rather than a cause of the problem. Rick Wagoner speaks of "our commitment to integrate economic, environmental and social objectives into our long-term strategic planning, as well as our daily business decisions. We believe this can be a competitive advantage for us if we move fast and take a leadership role."*

*<sup>1</sup> Profits with Principles, Jane Nelson and Ira Jackson, Currency Doubleday, June 2004.*

In August 2002, GM announced that it would conform to the new Securities and Exchange Commission (SEC) requirement for key officers to certify financial reporting. In January 2003, GM began to expense options granted to employees (in the past employee options have been shown on the ledger as an asset). Additionally, we have endorsed the new Corporate Accountability and Listing Standards approved by the New York Stock Exchange (NYSE) and have expressed support for the Sarbanes/Oxley Act.



### Leadership (GRI 3.2-4)

Chairman & Chief Executive Officer

**G. Richard Wagoner, Jr.**

Vice Chairmen

**John M. Devine**, Chief Financial Officer

**Robert A. Lutz**, Product Development; Chairman, GM North America; and Interim President, GM Europe

The GM Board of Directors represents our owners' interest in perpetuating a successful business, including optimizing long-term financial returns. The Board is responsible for seeing that the Corporation is managed in such a way to ensure this result. This responsibility is active, not passive. The Board operates under the corporation laws of the State of Delaware (where we are incorporated) bylaws and our Corporate Governance Guidelines, which were adopted by the Board in 1994 and are periodically updated.

In addition to fulfilling its obligations for increased stockholder value, the Board has responsibility to other stakeholders - our customers, employees, suppliers and the communities where we operate - all of which are essential to a successful business. All of these responsibilities, however, are founded upon the successful perpetuation of our business.

There are currently 11 Board members, including 10 non-employee members and 1 management member. The Board manages the Corporation's business and accomplishes work through a number of committees. The six standing committees are Audit, Capital Stock, Director Affairs, Executive Compensation, Investment Funds, and Public Policy. Except for the Investment Funds Committee, committee membership consists of independent directors only as defined in Bylaw 2.12.

Read more on GM's Corporate Governance

[internal guidelines >>](#)

[http://www.gm.com/company/investor\\_information/corp\\_gov](http://www.gm.com/company/investor_information/corp_gov)

Read more on GM's [Board of Directors >>](#)

[http://www.gm.com/company/investor\\_information/corp\\_gov/board.html](http://www.gm.com/company/investor_information/corp_gov/board.html)

The Automotive Strategy Board (ASB) is responsible for the global strategic direction of our automotive business, which accounted for approximately 83% of our sales and revenues in 2003. Feeding into the Automotive Strategy Board are regional strategy boards that coordinate operations in each of our major regions:

- North America
- Europe
- Latin America, Africa and Middle East
- Asia Pacific

Learn more about our

[executive and non-executive leadership >>](#)

[http://www.gm.com/company/investor\\_information/corp\\_gov](http://www.gm.com/company/investor_information/corp_gov)



# Our Company

## Managing Responsibility

### Overview (GRI 3.16, 3.19)

Amid all the change at GM over the past decade, one thing that has remained constant is our commitment to strong corporate citizenship, a commitment that the men and women of General Motors have demonstrated daily around the world for nearly a century.

In June 2004, GM's commitment was recognized by the U.S. Committee for Economic Development. They presented their Corporate Citizenship Award to General Motors and retired GM Chairman Jack Smith for our dedication to strong corporate ethics and international citizenship.

Our citizenship today takes many forms, not the least of which is our commitment to maintain a financially healthy company that can continue to provide for the well-being of hundreds of thousands of active and retired employees. There's our commitment toward building a sustainable future, through programs such as SafeKids ([www.safekids.org](http://www.safekids.org)) and our research to develop affordable, pollution-free, fuel-cell vehicles that could one day take the automobile's emissions out of the environmental debate. And there are our employees' countless efforts to be good citizens through donations of time and money that improve daily life in the hundreds of communities we call home all over the world.

More on [community investment >>](#)

### Management Structure (GRI 3.6)

Our Public Policy Committee was created to ensure that we operate our global business in a manner consistent with the rapidly changing demands of society.

The main issues reviewed by the Committee include corporate responsibility, automotive safety, energy, environment, diversity, health care, research and development, trade, sustainability, privacy, and economic development. The role of the Committee is to provide public policy guidance to management. This supports our pursuit of business growth within the framework of our core values and our sustainability goals.

Internally, corporate responsibility, government relations, energy and environment, sustainability, economics, diversity, and philanthropy and community relations issues are managed by our Public Policy Center (PPC). The vision for the PPC is to be a lean, globally integrated network that advances our position on issues of public policy. To help achieve this vision, the mission of the PPC is to:

- Anticipate external trends and changes that could impact our business decisions
- Support corporate business and cultural objectives
- Develop and execute coordinated public policy strategies
- Ensure that our strategic plans and operating practices take into account the changing public policy environment

# Our Company

## Managing Responsibility

The Global Coordination Team manages the overall operations and direction of the PPC. Within the Global Coordination Team there are members who represent our four operating regions and the respective regional strategy boards. This management structure provides the Global Coordination Team with a direct link to the strategy and business decisions taken by the Automotive Strategy Board and the regional strategy boards. PPC leadership is provided by our Vice President of Environment and Energy, Vice President of Corporate Responsibility and Diversity, Vice President of Government Relations, and our Chief Economist, who report directly to the Executive Vice President of Law & Public Policy. These individuals are also part of the Global Coordination Team.

Building on the approach used throughout our businesses, the Public Policy Center promotes a cross-functional team concept, working with a series of teams, organized around specific policy issues. The PPC is aligned around four centers of expertise (Environment and Energy, Corporate Responsibility and Diversity, Government Relations, and Economics), each of which is responsible for several issues.

The work of the Public Policy Center is reported through the annual production of this report and through the GMability web site, which was launched in February 2001.

The management approaches adopted for specific environmental and social and community issues are discussed in the respective sections of this report.

# Our Company Consulting Stakeholders

## Overview (GRI 2.9, 3.9-12)

Consulting with stakeholders is an important part of doing business and a good way to learn more about other diverse views. We consult with stakeholders via periodic meetings, advisory council forums, written correspondence and surveys.

This information offers us a balanced perspective of our position on societal issues and helps us continuously improve in various areas. To date, our stakeholder engagement work has resulted in a number of important improvements, including:

- Development of best practices
- Benchmarking for continual improvement of various processes
- Research
- Regular reporting on progress toward established goals
- Formal and informal agreements with unions and other stakeholder groups
- Feedback used in the design of new products, machinery, equipment and tooling

## Ongoing Partners (GRI 3.15)

We have established memberships, sponsorships and partnerships with organizations that advance common goals on societal issues affecting public policy.

### Governmental

- **Voluntary Initiatives on Energy and Greenhouse Gas Emissions**
- **FreedomCAR** (Cooperative Automotive Research) is a partnership between the USCAR auto industry partners, of which GM is a member, and the U.S. Department of Energy. Announced in early 2002, the partnership is designed to focus primarily on transforming the transportation sector to run on renewable resources - namely hydrogen fuel cells.

### Non-governmental

- **Coalition for Environmentally Responsible Economies (CERES)** - see below.
- **The Nature Conservancy**
- **America's Promise**
- **Automotive and Body Service Educational Programs (ASEP/BSEP)**
- **Automotive Youth Educational Systems (AYES)**
- **National Safe Kids and Safe Kids Worldwide**
- **Youth Service America**
- **SPACE: A Journey to Our Future**
- **Corporate Social Responsibility Initiative: Kennedy School, Harvard University**

### Business

- **World Business Council for Sustainable Development (WBCSD)**
- **U.S. Council for International Business (USCIB)**
- **The Business Roundtable (BRT)**
- **The Conference Board**
- **Additional partnerships**

### Non-governmental partners in detail

#### **Coalition for Environmentally Responsible Economies (CERES), [www.ceres.org](http://www.ceres.org)**

GM's Environmental Principles have been endorsed by the Coalition for Environmentally Responsible Economics (CERES). GM was the first Fortune 50 manufacturing company to endorse the CERES Principles in 1994. The Principles, developed by the Coalition for Environmentally Responsible Economics (CERES), are a 10-point code of environmental conduct promoting continuous environmental improvement. We engage with CERES and their members in dialogues of mutual interest and concern. We appreciate their input, including their annual review of this Corporate Responsibility Report.



# Our Company Consulting Stakeholders

## **The Nature Conservancy, <http://nature.org>**

GM's relationship with The Nature Conservancy was unprecedented for both organizations when it was launched in 1994, not only because of its size (a five-year program pledging \$1 million annually) and scope, but also by the very nature of its purpose. The agreement was renewed in February 1999 for another five years and has been expanded with new initiatives such as The GM Card Program, which allows employee payroll deductions for charitable contributions, the Adopt an Acre GM Challenge Grant [600/683.html#adopt], and the Pontiac Aztek Adventure Auction. All cash and vehicle donations are dedicated to preserving biodiversity and habitats around the world.

More on the [GM/TNC relationship >>](#)

## **America's Promise, [www.americaspromise.org](http://www.americaspromise.org)**

As part of its three-year, \$5 million commitment to America's Promise, GM is partnering with the United Auto Workers to donate child safety seats to low-income families. GM and the UAW are working with the National SAFE KIDS Campaign®, the NAACP and the National Council of La Raza to distribute the seats. Rick Wagoner also encourages employees, dealers, and other members of the GM family to support the initiative.

More on [GM and America's Promise >>](#)

## **ASEP/BSEP (Automotive Service Educational Program/Body Service Educational Program)**

In 1979, General Motors recognized that the technology incorporated into the next generation of automobiles was going to change dramatically. GM's responded to the need by developing the GM's Automotive Service Educational Program (ASEP) and GM Body Service Educational Program (BSEP). These technical education programs were designed to educate qualified service & body shop technicians on advance vehicle technology in a school/work setting. GM ASEP and BSEP currently participate in 68 schools in the United States and Canadian.

In this 2-year program students earn an Associate Degree and participate in an 8 to 10 week rotations between school and a dealership allowing students to apply skills while earning an hourly wage. This partnership between GM, GM dealerships, colleges/universities and communities incorporates advanced automotive technical and body training with a strong academic foundation. By the end of the 2004 graduating year, the ASEP/BSEP program will have reached almost 12,000 Graduates since its inception. Students have intern opportunities at GM dealerships - Chevrolet, Pontiac, GMC, Cadillac, Oldsmobile, Buick, Saturn, Saab and Hummer. These programs offer students outstanding career opportunities, economic development for the community, and improve our customer satisfaction.

## **AYES (Automotive Youth Educational Systems), [www.ayes.org](http://www.ayes.org)**

The success of GM's college-level ASEP/BSEP increased its desire to help students develop their technical skills - essential to future technology growth. In 1995, Jack Smith launched the General Motors Youth Educational Systems (GM YES), the first large-scale effort to integrate high school classroom studies with on-the-job experiences. In 1996, the organization evolved to become an independent group with participation from other automakers. Today, called Automotive Youth Educational Systems (AYES), businesses, schools and educators teamed up to place 4,400 students in automotive technician internships in 44 states.

AYES is a dynamic partnership between participating automotive manufacturers, participating local dealers, and selected local high schools/technical prep schools to encourage awareness of and participation in careers as automotive technicians. GM was the initiator of this innovative industry-wide program in 1995, which has since grown to include the participation of over 330 schools nationwide.

More on [GM's education initiatives >>](#)



# Our Company Consulting Stakeholders

## National Safe Kids and Safe Kids Worldwide, [www.safekids.org](http://www.safekids.org)

More than 7.5 million people have attended our Safe Kids Buckle Up events. Safety education plays a critical role in preventing injury and death, and our partnership with Safe Kids is at the forefront of this effort. Access to affordable child safety seats is often difficult for low-income families. Through our partnerships with the UAW, the NAACP, the National Urban League, and the National Council of La Raza, more than 200,000 child safety seats have been distributed without charge to families who might not otherwise be able to afford them.

## Youth Service America, [www.ysa.org](http://www.ysa.org)

A resource center and premier alliance of more than 300 organizations committed to increasing the quantity and quality of opportunities for young people to serve locally, nationally, or globally. Founded in 1986, YSA's mission is to strengthen the effectiveness, sustainability, and scale of the youth service and service-learning fields. YSA envisions a powerful network of organizations committed to making service and service-learning the common expectation and common experience of all young people in America. A strong youth service network will create healthy communities and foster citizenship, knowledge, and the personal development of young people. GM's support of Youth Service America will expand and improve [www.SERVEnet.org](http://www.SERVEnet.org), an award-winning program that leverages cutting-edge technology through the most comprehensive service and volunteering website on the Internet. Home to an expansive talent bank of potential volunteers, as well as an international database of more than 35,000 volunteer opportunities, SERVEnet matches the skills, experience, and enthusiasm of volunteers of all ages with organizations that need their participation.

## SPACE: A Journey to Our Future, [www.spaceevent.com](http://www.spaceevent.com)

GM is partnering with NASA on a five-year exhibition on space exploration. This is one of the most comprehensive interactive presentations ever developed. The purpose is to ignite the desire for discovery, spark imaginations and inspire a new generation of innovators and explorers. In the past, GM innovation helped put a lunar rover on the moon and space-related innovation remains important today in the development of future clean and safe vehicle power systems like the fuel cell, as well as automotive safety and service systems like OnStar.

Read more on [GM's technology >>](#)

Read more on [GM's education initiatives >>](#)

## Corporate Social Responsibility Initiative: Kennedy School, Harvard University, [www.ksg.harvard.edu/cbg/CSRI/home.htm](http://www.ksg.harvard.edu/cbg/CSRI/home.htm)

As Founding Supporters of the Corporate Social Responsibility Initiative GM have worked closely with the faculty steering group and the program director on defining the challenges faced by companies that seek to embed corporate social responsibility within the mainstream of corporate strategy. We have shared insights into our successes, failures and lessons-learned, which have been instrumental in helping to inform some of the key questions addressed by the CSR Initiative.

## Business partners in detail

### World Business Council for Sustainable Development (WBCSD), [www.wbcsd.org](http://www.wbcsd.org)

GM has been a member of this global organization since 1995. The WBCSD is a coalition of multi-national companies that share a commitment to environmental protection, economic growth, and social equity. GM has been actively involved in several WBCSD projects and is currently the co-chair of the WBCSD Sustainable Mobility project.



# Our Company Consulting Stakeholders

## **U.S. Council for International Business (USCIB), [www.uscib.org](http://www.uscib.org)**

GM was a founding member in 1945 to the USCIB, which is an important link to the International Chamber of Commerce, European industry and international trade and environmental negotiations. The Council addresses a broad range of policy issues with the objective of promoting an open system of world trade, finance, and investment in which business can flourish and contribute to economic growth, human welfare, and protection of the environment. Membership provides an interface with the United Nations Environment Programme, the United Nations Commission on Sustainable Development, and the Organization for Economic Cooperation and Development.

## **The Business Roundtable (BRT), [www.businessroundtable.org](http://www.businessroundtable.org)**

The Business Roundtable is an association of chief executive officers of leading U.S. corporations with a combined workforce of more than 10 million employees in the United States. The Roundtable is committed to advocating public policies that ensure vigorous economic growth, a dynamic global economy, and the well-trained and productive U.S. workforce essential for future competitiveness.

## **The Conference Board, [www.conference-board.org](http://www.conference-board.org)**

GM is a member of The Conference Board: an organization that creates and disseminates knowledge about management and the marketplace to help businesses strengthen their performance and better serve society. Working as a global, independent membership organization in the public interest, they conduct research, convene conferences, make forecasts, assess trends, publish information and analysis, and bring executives together to learn from one another.

## **Additional partnerships:**

We are convinced that balanced public policy solutions to societal issues are important to our business. Therefore, in addition to our partnerships, we have an established set of alliances with organizations that help us to develop strategic solutions. We are members of the Alliance of Automobile Manufacturers in the U.S., the CVMA in Canada, the ACEA in Europe, the JAMA and KAMA in Asia, and the FCAI in Australia, among many other organizations.

## **Community Impact Team**

This team identifies internal and external issues that could affect GM and the communities in which we operate. The team's goal is to cross-functionally manage strategic processes while considering community initiatives. These issues include labor relations, facilities, community relations, philanthropy, communications, government relations, economic development, tax, real estate, manufacturing planning and purchasing.

## **Customer Diversity**

Diversity in the marketplace is a key priority. We are intensifying the way we market our divisions and vehicle brands to our customers. In the past, we emphasized our individual brands. Currently, the corporate brand communicates our overall quality, safety and innovations before directing customers to the individual vehicle divisions our customers have known for decades.

Read more on [diversity >>](#)



### Customer Privacy (GRI PR3)

On Sept. 30, 2003, GM implemented a 'GM Privacy Statement for U.S. Consumers' that applies to most GM consumer data collection points, both online and offline. Available on [www.gm.com](http://www.gm.com), it describes GM's privacy practices and discloses to consumers how their personal information is handled. It explains that GM will share their personal information with GM dealers, affiliates and businesses that participate in joint marketing programs with GM and that it may also be shared with suppliers exclusively to provide services to GM. The privacy statement provides a toll free number - 1-866-MY-PRIVACY (1-866-697-7482) - that consumers may use to listen to a short message on GM's consumer privacy practices (available in Spanish also) or to ask questions about GM's privacy statement or privacy practices. You can review the GM Consumer Privacy Statement at [www.gm.com](http://www.gm.com) under the Privacy tab.

In addition to the GM Privacy Statement for U.S. consumers, GM has other consumer privacy statements (e.g., GMAC Financial Services, OnStar) because of different services provided, different laws that may apply, and unique personal data handling processes. For example, Saturn's consumer privacy statement is available at [saturn.com](http://saturn.com). Saab's consumer privacy statement is available at [saabusa.com](http://saabusa.com).

# Our Products

## Overview

At GM, we are committed to providing our customers with "gotta have" products that are high quality and visually appealing, and to being leaders in fuel economy and safety. Every day our employees are looking for new and innovative ways to improve the products we manufacture.



Whether it is using fuel cells to virtually eliminate emissions, or developing safety systems that can help drivers avoid crashes, GM is working to provide products that meet the needs of both our customers and society as a whole.

- [Our Future Vehicles](#)
- [Alternative Propulsion](#)
- [Sustainable Mobility](#)
- [Vehicle Design](#)
- [Vehicle Quality](#)
- [Vehicle Safety](#)
- [Efficiency & Emissions](#)
- [Responsible Vehicle Use](#)
- [Vehicle Recycling](#)

# Our Products

## Our Future Vehicles

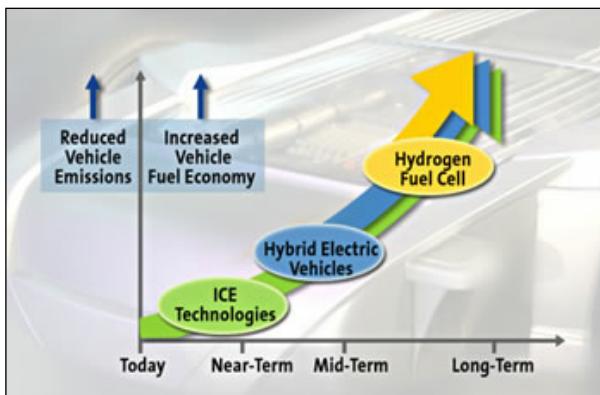
### Overview (GRI 3.16)

#### GM Global Technology Strategy

Automotive leadership is demonstrated by companies that have applied and continue to apply the most innovative and appropriate technologies in ways that define and meet local customer and societal needs around the world. At GM, we approach the application of new technology to our vehicles with three simple and direct principles in mind:

- GM needs to offer vehicles that people want to buy. If no one buys the product, the new technology has no real impact.
- GM must meet basic business objectives. Technology cannot be sustained if automakers must heavily subsidize it. In today's competitive market - with razor-thin profit margins - success only comes from selling vehicles at a price customers will pay and by keeping production costs in line with those prices.
- GM has a responsibility to continue improving vehicle emissions and fuel economy.

In keeping with these principles, we have adopted a three-pronged strategic approach to advanced technology:



- **Near-term** - we will continue to refine and improve today's technology to provide better efficiency and performance.
- **Mid-term** - from now into the next decade, we will focus considerable resources in bringing more hybrid technologies to market.
- **Long-term** - we will continue our efforts to develop and bring to market vehicles powered by hydrogen fuel cells.

#### FUTURE VEHICLES TIMELINE

##### 2001



HydroGen1 sets world record

##### 2003



AUTOnomy: fuel cell concept vehicle introduced at North American International Auto Show

##### 2004 2005



Fleet sales of Hybrid Chevrolet Silverado and GMC Sierra pickups



Retail sales of Hybrid Chevrolet Silverado and GMC Sierra pickups

##### 2006

BAS Hybrids for sale in car & light truck fleet  
e.g. Saturn VUE, Chevrolet Malibu

##### 2007

AHS II Hybrid Version of the Chevrolet Tahoe and the GMC Yukon

##### 2010

Target to make fuel cells commercially viable

##### THE FUTURE

First manufacturer to profitably sell 1 million fuel cell vehicles



# Our Products

## Our Future Vehicles

### Near-Term

In the near-term, GM already sells a range of vehicles with cleaner, more efficient technology and is committed to continuing and accelerating this progress while at the same time developing mid- and long-term technologies, such as fuel cells. These near-term 'interim technologies' focus on improving the internal combustion engine and ensuring that we continue to provide consumers with fuel-efficient cars and trucks. Some of these vehicles include:

- **Displacement on Demand** - boosts gasoline engine efficiency by up to eight percent
- **Alternative fuel vehicles** - running on plant-based fuels such as E85 or clean-burning LPG and CNG. With over 1 million E85-capable vehicles on the road in the U.S. and a five-year leadership in LPG/gasoline dual-fuel vehicle sales in the U.K., we see alternative fuels making an important contribution to reducing emissions.
- **Diesels** - GM's new range of advanced diesel engines are already popular in Europe. With far greater efficiency than gasoline equivalents and recent breakthroughs in performance and exhaust emissions, we expect this technology to play an increasingly important role in reducing greenhouse gases.
- **Hybrids** - GM is offering the industry's first hybrid pickup truck, - which utilizes flywheel starter technology and improves fuel efficiency up to 10%. Our hybrid buses are already operating in several U.S. cities, reducing exhaust emissions by up to 90% and improving fuel economy by up to 60% over conventional mass transit buses, based on various test cycles.

### Mid-Term

In the mid-term, hybrid-electric powertrains provide a commercial opportunity. And importantly, the advances we will make in

electric drive components and controls in hybrids will help us develop commercially viable fuel cell vehicles.

We already have hybrid trucks and buses on the road, and we believe that hybrids will play an increasingly important, but evolving, role in the coming years. While the specific mass market potential of these technologies is not yet clear, we are working to set an industry standard, providing practical, cost-effective, highly efficient systems that are available across a broad spectrum of vehicles.

GM plans to offer three different hybrid propulsion systems on three vehicle architectures, representing several of GM's most popular models. GM's hybrid systems vary in complexity and cost, giving GM the opportunity to determine how to most effectively implement the hybrid systems to meet our customer needs. We have developed and integrated hybrid systems that do not require customers to sacrifice performance or utility for fuel savings. We have focused application of these systems where they will achieve the greatest fuel consumption savings: on popular, high-volume cars and trucks.

- AHSII (Advanced Hybrid System II) is based on the currently available hybrid bus drives. In the mid-term, this will be combined with other fuel-saving technologies such as Displacement on Demand in cars and trucks to achieve projected fuel savings of up to 35%.
- FAS (flywheel-alternator-starter) hybrid system is in production on the 2004 model year GM Hybrid Truck.
- BAS (Belt Alternator System) is slated for introduction into both our car and light truck fleets in the 2007 model year timeframe.

More on [hybrids >>](#)

# Our Products

## Our Future Vehicles

### Long-Term

At GM, we believe that **fuel cell**-powered vehicles will ultimately lead to truly sustainable transportation and are striving for such vehicles to be commercially viable by 2010.

We are a leading company in developing fuel cells, and plan to be the first manufacturer to sell one million vehicles. As the technology matures over decades, incremental improvements will move vehicles ever closer to zero emissions. The quicker we can get high volumes of zero emission and higher efficiency vehicles on the road, the faster we will realize the positive environmental potential of fuel cells.

General Motors has several concept vehicles that utilize this technology.

- The **Zafira-based HydroGen3** demonstrates how fuel cell propulsion can be adapted to today's vehicles.
- **AUTOnomy** takes a completely different approach based on an 11-inch skateboard chassis and drive-by-wire technology, essentially re-inventing the automobile.
- The **Hy-wire** took the Autonomy concept a step further as the world's first drivable fuel cell and by-wire concept vehicle.

We also have a partnership with Dow Chemical to provide fuel cells to generate electricity for one of their facilities in Texas. The agreement enables the hydrogen by-product from its largest chemical plant to be run through GM fuel cells to generate competitively priced clean electricity.

Read more on [stationary fuel cells >>](#)

### Overview

We are committed to increasing vehicle fuel economy and reducing emissions. Our comprehensive advanced technology plan includes advanced internal combustion engines, new transmissions and hybrids that will form the bridge to our long-term vision for hydrogen fuel cell vehicles. We currently offer a wide variety of vehicles that deliver low emissions and world-class fuel economy. These include a range of 'interim technologies' such as alternative fuel vehicles and clean diesels.

Alternative propulsion is a key part of our long-term strategy and includes:

- **Hybrid vehicles** - we are focusing considerable resources on producing affordable and effective gas-electric and diesel-electric hybrid technologies.
- **Fuel Cell vehicles** - with several prototypes on the road, our goal is to be the first manufacturer to sell 1 million vehicles.
- **Key Initiatives** - some examples of how GM is working with others to make the hydrogen economy a reality.

### Hybrids

We have developed hybrid power systems capable of powering many of our vehicles. Hybrid electric propulsion systems combine internal combustion engines and electric drives to dramatically increase fuel efficiency. Current production vehicles include **buses** (Allison Electric Drive Hybrid System, referred to as the EP parallel system) and **full-size pickups** (flywheel alternator starter system). The biggest gains in fuel savings from hybrid technology are in the largest vehicles with the highest fuel consumption. By focusing on these vehicles first, we can make a greater impact on reducing fuel consumption.

In addition to the **EP parallel system** in our hybrid buses and the **flywheel alternator starter system** in our full-size pickups, we are

developing other hybrid propulsion system architectures:

- **BAS (Belt Alternator Starter)**
- **AHSII (Advanced Hybrid System II)**

### Hybrid Trucks

The hybrid powertrain is one of a wide range of technologies we are using to maintain our progress in light truck fuel efficiency. We are currently offering the industry's first hybrid pickup truck, which features a conventional powertrain and driveline with an electric motor integrated between the engine and transmission.



These Chevrolet Silverado trucks are equipped with hybrid technology.

The engine provides the same performance as today's V-8 Vortec engines, but improves fuel efficiency by 10%. These full-size Chevrolet Silverado and GMC Sierra pickups can be equipped with flywheel alternator starter technology and are currently available to our fleet customers. Retail customers in California, Oregon, Washington State, Nevada, Alaska and Florida can place orders at their local dealers now.

Along with our **FAS** (flywheel-alternator-starter) system we offer the **BAS** (belt-alternator-system).

# Our Products

## Alternative Propulsion

### Flywheel Alternator Starter (FAS) System

GM hybrid pickup trucks get more miles from each gallon of gasoline mainly because of the engine start/stop function and regenerative braking, which turn the motor into a generator as the truck decelerates. Extra fuel savings come from quickly shutting off fuel any time the truck is coasting or braking, using the electric motor to make the transition seamless to the driver.

Instead of a conventional starter motor and alternator, the hybrid truck features a compact electric motor integrated between the engine and transmission, known as a flywheel alternator starter system. The 14,000-watt electric motor provides fast, quiet starting power, the ability to generate up to 2,400 watts of continuous electric power, and 10% fuel savings.

The electricity generated by the system has many uses. It may be stored in a 42-volt lead-acid battery pack for future use, used to support on-board electric accessories, operate power tools, or even run essential home appliances during power outages using the pair of 120-volt, 20-amp outlets in the cab and bed. This technology is currently available to fleet and commercial customers throughout the country and is available to retail consumers in Alaska, Washington, Oregon, California, Nevada and Florida.

The FAS system is in production on the 2004 model year Chevrolet Silverado hybrid and **GMC Sierra hybrid trucks**. The hybrid trucks are available as an extended-cab pickup truck on the Chevrolet Silverado and GMC Sierra. It is equipped with a 42-volt lead-acid battery pack, a modified 4-speed automatic transmission, 5.3L V8 engine, and is available in both 2WD and 4WD.

### Hybrid Buses

GM is also applying hybrid technology to mass transit operations across North America.



The GM Hybrid Bus

The state-of-the-art buses, powered by an advanced hybrid-electric powertrain developed by our **Allison Transmission** ([www.allisontransmission.com](http://www.allisontransmission.com)) division, dramatically reduce emissions from the diesel engine - an environmental plus in Southern California and other metropolitan locations across the United States. Referred to as the **EP System**, the hybrid-electric powertrain is a "strong" parallel hybrid architecture that is scaleable for various medium- to heavy-duty vehicle platforms.

The EP System can offer up to a 60% improvement in fuel economy and reduction in carbon dioxide over a conventional diesel system in a transit bus application. The technology also can reduce soot particulates by 90%, hydrocarbons by 90%, and nitrous oxide by 50%. These results are based on the Central Business District-14 (CBD-14) operating cycle.

There are 230 GM hybrid-powered buses on the road today in: Seattle/King County, Washington; Philadelphia; Minneapolis; Portland, Oregon; Salt Lake City; Austin and Houston, Texas; Orange



# Our Products

## Alternative Propulsion

County, California; Newark, New Jersey; and Hartford, Connecticut.

There are about 13,000 transit buses in service in the nine largest U.S. cities. If these buses were replaced with those featuring the hybrid system, the United States would use nearly 40 million fewer gallons of diesel fuel every year - the equivalent fuel savings of almost 500,000 small cars with hybrid propulsion systems.

[Hybrid bus fact sheet >>](#)

### EP System - Parallel Hybrid

The EP hybrid system uses two sources of power: an internal combustion engine and battery-powered electric motors. In the parallel hybrid system, the engine and the electric drive work in concert to provide power to the wheels at different times, depending on speeds and loads.

When the bus accelerates from a stop, the battery-powered electric motors supply powerful acceleration.

Once under way, the parallel hybrid bus (see above) uses the diesel engine to maintain speed. At the same time, the engine-generator charges the batteries, giving the vehicle self-sustaining mobility. In addition, the vehicle's regenerative braking captures energy normally lost as brake heat and returns it to the vehicle's energy storage system (battery) for reuse. Buses utilizing this technology are currently on the road in major cities across the U.S.

### Belt Alternator Starter (BAS) System

GM engineers developed the belt alternator starter (BAS) system to provide improved fuel economy in stop-and-go driving by shutting off the engine at idle and by enabling early fuel cutoff to the engine during decelerations.

The system combines sophisticated engine controls with a precision electric motor/

generator. Regenerative braking and efficient charging are also part of this system. The estimated fuel economy savings are about 12%. A single, 36-volt battery provides power, augmenting the existing 12-volt electrical system.

All vehicle accessories and passenger comfort systems, such as air conditioning, function even during the periods when the engine is automatically stopped. Other benefits of the belt alternator starter system include the flexibility to use the system on four and six-cylinder engines, with minimal impact on engine and transmission architectures. It is scheduled to debut in both our car and light truck fleets in 2006.

### Advanced Hybrid System II (AHSII)

The Advanced Hybrid System II (AHSII) is a strong hybrid that builds on knowledge from the development of the GM parallel hybrid system for buses. The AHS II versions of the Chevrolet Tahoe and GMC Yukon are scheduled to debut in 2007, and also will feature our [Displacement on Demand](#) cylinder deactivation technology.

Used together, these technologies will achieve fuel economy improvement of up to 35%. Using this system on full-size SUVs and pickups is part of GM's strategy to apply advanced technologies on high-volume, higher fuel-consuming vehicle segments first. Installing a strong hybrid system on a full-size truck will save twice as much fuel per mile as a comparable small hybrid vehicle, with no compromise in performance or utility.

The AHSII uses two sources of power: an internal combustion engine and battery-powered electric motors. In the parallel hybrid system, the engine and the electric drive work in concert to provide power to the wheels at different times, depending on speeds and loads in much the same way as the parallel hybrid.



### Fuel Cells

At GM, we believe the ultimate vision for an environmentally sustainable future is the hydrogen economy and fuel cell-based transportation. We are committing our resources to developing commercially viable fuel cell vehicles and have already produced a number of prototypes that point the way, including:

- [HydroGen3 \(see right\)](#)
- [AUTOnomy](#)
- [Hy-wire](#)

However, there are many challenges that no company can overcome on its own. We are continuing to develop a range of partnerships and alliances to bring fuel cell vehicles to market as quickly and efficiently as possible.

### The Benefit of Fuel Cells

Fuel cell propulsion is inherently much more efficient than all other propulsion systems. New and important societal benefits can be realized from this concept such as the use of renewable energy and minimal emissions. Hydrogen can be produced from a variety of feedstocks, increasing the diversity of energy supply.

The fuel cell uses the reaction between hydrogen from a fuel and oxygen from the air to produce electricity. Hydrogen and oxygen combine in the reaction, with the end products being electricity and water. The electricity can be used for running an electric motor that propels the car.

More on [how fuel cells work >>](#)

Hydrogen can be derived from a mix of sources, including hydrocarbons, and from any source of electricity. In the first case, hydrogen is extracted from petroleum, natural gas, or a renewable hydrocarbon, such as ethanol, via a reformer that catalytically decomposes the hydrocarbons into hydrogen and carbon dioxide. Electricity can

come from conventional power plants or renewable power such as hydro, wind or solar sources.

Our vision is to produce hydrogen from renewable sources.



The HydroGen3 recently set a distance record in Europe in June 2004.

### HydroGen3

Building on the success of GM's HydroGen1 fuel cell prototype, we are currently demonstrating the HydroGen3, our next-generation fuel cell prototype, also based on the Opel Zafira minivan. With more power, a simpler start-up procedure, and a more compact fuel cell stack, the HydroGen3 demonstrates how fuel cell propulsion can be adapted to today's vehicles and packaged as a single unit. With a range of about 250 miles, the car has the same load space as the conventional Zafira in 5-seater mode and a top speed of 100 mph.

[Hydrogen 3 fact sheet >>](#)



# Our Products

## Alternative Propulsion



Rick Wagoner and Larry Burns pose with the AUTOnomy at its unveiling



The Hy-wire makes a stop at the GM Tech Tour in Los Angeles in 2003.

### AUTOnomy

The AUTOnomy concept vehicle, first shown at the North American International Auto Show in 2002, was the first vehicle designed from the ground up around a fuel cell propulsion system and the first to combine fuel cells with by-wire technology. Discarding the restrictions of conventional vehicle design based around the internal combustion engine, the vehicle consists of an innovative, skateboard-like chassis that contains the fuel cell, electric drive, hydrogen storage system, computer control module, heat exchangers, and wheel motors.

The flexibility of the chassis accommodates multiple interchangeable 'snap-on' body styles that can be customized to meet customers' various lifestyles, from a two-seater sports car to an SUV or minivan.

An international jury of 41 automotive writers voted the AUTOnomy "Engine of the Year - Best Concept" in the prestigious Engine Technology International Awards. Graham Johnson, jury president and editor of the publication, said of AUTOnomy: "At last a purpose-design fuel cell car, AUTOnomy shows that the space-age propulsion system can be attractive."

[AUTOnomy fact sheet >>](#)

### Hy-wire

Building on the AUTOnomy concept, the GM Hy-wire, the world's first drivable fuel cell and by-wire concept vehicle, was introduced to international press at the Paris Motor Show in 2002. All of the touring sedan's propulsion and control systems are contained within an 11-inch-thick skateboard-like chassis, maximizing the interior space for five occupants and their cargo. There is no engine to see over, no pedals to operate - merely a single driver-control unit that is easily set to either a left or right driving position.

[Hy-wire fact sheet >>](#)

### Key Initiatives

The challenges faced in developing and introducing new breakthrough technologies - and the infrastructure to support them - are enormous. We believe the quickest, most effective way to overcome these challenges is to work with others in our industry, with those in associated industries such as energy companies, and with government and society. Significant resources are being devoted for collaborative research and development programs - to date, GM has spent more than \$1 billion on fuel cell research worldwide.



# Our Products

## Alternative Propulsion

To further fuel cell development, we have established equity partnerships with leading companies, including General Hydrogen Corp., Giner Electrochemical Systems, L.L.C., Hydrogenics Corp., and QUANTUMTechnologies Worldwide, Inc. We are also collaborating with Suzuki Motor Corp. and Toyota Motor Corp. on fuel cell technology development, and BP Amoco, ExxonMobil, ChevronTexaco and Shell on fuels research.

In March 2003, GM and Shell Hydrogen announced a joint demonstration program in Washington D.C., designed to be a real-world test of GM's HydroGen3 fuel cell vehicles and hydrogen fueling infrastructure technology in the Washington, D.C. area. The demonstration will feature America's first hydrogen pump at a Shell retail gas station to support a GM fleet of HydroGen3 fuel cell vehicles.

GM is also working with the California Fuel Cell Partnership, a collaboration of auto companies, fuel providers, fuel cell technology companies, and government agencies, placing fuel cell electric vehicles on the road in California.

### FreedomCAR

FreedomCAR (Cooperative Automotive Research) is a partnership between the U.S. Council on Automotive Research (USCAR), automotive companies (GM, Ford and DaimlerChrysler) and the U.S. Department of Energy. The focus of the partnership is to aggressively advance the timing of research on the scientific breakthroughs needed to ensure technical feasibility and broad affordability of energy-efficient powertrains and lightweight vehicle structures. FreedomCAR focuses on a broad portfolio of technologies, but with the primary emphasis on enabling the transition to hydrogen fuel and fuel cell vehicles.

### Stationary Fuel Cells

In the near term, we are working toward improving fuel cell efficiency, reliability and durability with real-world experiences that we can apply toward our longer-term goal of mass-producing fuel cell vehicles.

In a recent arrangement between [GM and Dow Chemical](#), a GM fuel cell power system has been installed at Dow's largest chemical manufacturing plant where hydrogen is a natural byproduct of Dow's chemical processes. Dow Chemical will use 500 GM hydrogen fuel cells to help power its Freeport, Texas, operations. The fuel cell package is designed to generate up to 35 megawatts for Dow. This equates to enough electricity to power 25,000 homes for a year and more than 15 times larger than any other known fuel cell transaction. The test will run through 2005, with plans to commercialize starting in 2006.

By taking our vehicle fuel cell technology to the stationary power market, we are learning how to reduce costs, manufacture key components, and accelerate the development of a hydrogen infrastructure.

One of the best aspects of this partnership is that we are using natural byproduct hydrogen that is generated by the chemical manufacturing processes and running it through a GM fuel cell to generate competitively priced electricity that is being used to power the plant. At the same time, carbon dioxide emissions are reduced. Not only does this make good business sense, but it moves us closer to a sustainable future.

More on [GM's stationary fuel cells >>](#)

### Other Fuel Cell Initiatives

- The streets of Japan now feature the HydroGen3 fuel cell vehicle. In June 2003, FedEx began operating HydroGen3 several days a week on its regular Tokyo delivery route. GM will collect data from FedEx and will provide all vehicle engineering and maintenance.
- Scandinavia kicked off the hydrogen age for road transportation by opening its first public hydrogen filling station in the Swedish city of Malmo, and the first vehicle at the pump was GM/Opel's HydroGen3 prototype with a fuel-cell propulsion system. The HydroGen3 has a range of 400 kilometers. An on-board fuel-cell stack of 200 individual cells provides energy for the 60-kW/82 hp electric engine.
- GM, along with the U.S. Department of Energy and other industry organizations, will co-sponsor a new competition series to challenge college engineering students throughout North America to re-engineer crossover vehicles to achieve better fuel economy and lower emissions. This Challenge X competition launches in the 2004-2005 academic year as a three-year program and will closely follow current real-world automotive design and engineering practices and better equip students with the tools to improve vehicle designs. GM will partner with MathWorks and National Instruments to provide teams with the hardware, software and technical support they need to find solutions to this engineering challenge.

More on [government partnerships >>](#)

# Our Products

## Sustainable Mobility

### The Mobility Dilemma (GRI EN14)

Mobility, including the movement of both people and goods, is an indispensable element in our daily lives. The mobility we have become accustomed to at the start of the 21st Century enables us to conduct our individual relationships and transactions. On a broader scale, at the regional and international levels, it is essential to commercial activities, economic development and security. The mobility we enjoy today has become so integral to our way of living that it is largely taken for granted.

However, there is also a growing realization that the way we move ourselves, and our goods can have unintended consequences, potentially affecting the environment, human health, and our communities. While we have made much progress in many areas, mobility today still presents specific challenges in some areas, including:

- Emissions of conventional pollutants
- Greenhouse gas emissions, especially CO2
- Traffic-related deaths and serious injuries every year
- Noise
- Congestion
- Unequal and often inadequate access to mobility

These challenges pose a dilemma for mobility that must be resolved.

### Growing Demand for Mobility

Today, only about 12% of the world's people have access to motor vehicles and over 60% of passenger and commercial vehicles are registered in North America or Western Europe. Over the next thirty years, this picture is likely to change significantly. Global demand for the benefits of mobility is expected to continue growing rapidly for the foreseeable future, particularly in developing countries. Already, the eight fastest growing motor vehicle markets are

all in the developing world. By 2030, it is estimated, half the world's people will live in urban areas of developing countries, and their needs and demands for mobility will grow accordingly.

### Sustainable Mobility Project

This mobility dilemma and the clear signs of growing vehicle demand worldwide led to a collaborative project to investigate applying the concept of sustainability to mobility on a global basis. In early 2000, we turned to the World Business Council for Sustainable Development (WBCSD), headquartered in Geneva, Switzerland, to propose that it be the locus for this project. The Sustainable Mobility Project is the WBCSD's largest and most comprehensive member-led project, involving some of the world's largest corporations. Co-chaired by GM, Shell and Toyota, the project's other member companies include BP, DaimlerChrysler, Ford, Honda, Nissan, Norsk Hydro, Michelin, Renault and Volkswagen. In addition to drawing expertise from several of the world's top consulting organizations, the project has convened 'stakeholder dialogues' in Manila, Cape Town, Beijing, Prague, Sao Paulo, Washington D.C., Brussels, and Tokyo with 'Workshops' in Mexico City, Delhi, Shanghai, Paris and Nagoya to draw on the views of mobility and transport experts, including representatives of government agencies, industry, academia, and labor, consumer and non-governmental organizations.

The project defines sustainable mobility as "the ability to meet society's desires and needs to move freely, gain access, communicate, trade and establish relationships, without sacrificing other essential human or ecological values, today or in the future."

- **Project Objectives**
- **Indicators of Sustainable Mobility**
- **Goals for Sustainable Mobility**
- **Outcomes of Project**

# Our Products

## Sustainable Mobility

### Project Objectives

The objectives of the project are to advance understanding of the complex issues surrounding mobility, to assess the current state of mobility, and to project what the situation is likely to be in the future based on current trends. Most importantly, the project is trying to envision what mobility needs to look like decades from now if it is to be sustainable and identify the pathways, which might move us in the right directions.

### Indicators of Sustainable Mobility

The first couple of objectives were met with the publishing of Mobility 2001, a report developed by a 40-person arm's-length team, consisting mostly of researchers associated with the Massachusetts Institute of Technology and Charles River Associates. Published in October 2001, this report explores the current state of mobility and its sustainability worldwide at the end of the 20th Century. At its conclusion, the report outlines several "grand challenges" that were adopted as the baseline for the project's further work. By definition, successfully resolving these challenges would make mobility more sustainable. However, the task of meeting them requires a range of stakeholders extending well beyond the twelve companies in the project and the industries we represent. In order to better judge what strategies might facilitate sustainability, the project interpreted the grand challenges in terms of 12 specific indicators chosen to reflect the most important dimensions of sustainable mobility. Building on existing work, these indicators were discussed in depth with 25 key stakeholders and reflect the perspectives of 1) users of mobility, 2) providers of mobility, and 3) society - represented by governments.

The indicators include:

- Accessibility to means of transport
- Financial outlay required of users
- Travel time (in part, a measure of congestion)
- Reliability (a second measure of congestion)
- Safety (both persons and goods)
- Security
- Greenhouse gas emissions
- Impact on the environment and public well-being (conventional emissions / eco-systems /noise)
- Resource use (energy /land /materials)
- Equity implications
- Impact on public revenues and expenditures
- Prospective rate of return to private business.

The project forecast the evolution of these indicators to 2050, assuming no changes in current policies. Based on these projections, it was concluded that current mobility is not sustainable and will not become sustainable if present trends continue.

### Goals for Sustainable Mobility

The project then identified seven goals that, if achieved, would contribute significantly to the sustainability of mobility. The project outlined how these goals were addressed in the project's final report Mobility 2030: Meeting the Challenges to Sustainability, published in July 2004. The goals are:

- Ensuring that the emissions of transport-related conventional pollutants do not constitute a significant public health concern anywhere in the world
- Limit worldwide transport-related GHG emissions to sustainable levels
- Significantly reduce the total number of road vehicle-related deaths and serious injuries from current levels in both the developed and the developing worlds

# Our Products

## Sustainable Mobility

- Reduce transport-related noise
- Mitigate congestion
- Narrow “the mobility opportunity divides” that inhibit 1) the inhabitants of the poorest countries, and 2) members of economically and socially disadvantaged groups within nearly all countries from achieving better lives for themselves and their families
- Preserve and enhance mobility opportunities for the general population of both developed and developing world countries

### Outcomes of Project

Far from being a prescription for the future, the report analyzes a range of “building blocks,” including automotive fuels technologies, and “levers” (usually public policies) that, if applied, could help to minimize mobility’s harmful effects over time. Working with experts in scenario development, the Sustainable Mobility Project has explored how potential future changes in values and institutions could influence important choices that would affect the nature of mobility. We have found already that what the twelve member companies choose to do will be important, but significant progress in making mobility sustainable will also require complementary choices by many others, including other companies, industries, governments and consumers.

The project’s emphasis on the potential of different pathways to the future has been critical, because the member companies involved in the project are themselves pursuing different technologies to achieve common sustainability goals. For example, at GM, our vehicles achieve high levels of energy efficiency, very low levels of emissions and high recyclability, while meeting customer expectations in terms of comfort, style, performance, handling and safety. We believe the future holds promise of even more important innovations from us.

This highly competitive “portfolio approach” to innovation across the global automotive industry is likely to yield the most effective and durable solutions to mobility’s challenges worldwide. Nevertheless, the collaborative effort of these companies through this project is testament to our joint recognition that mobility’s challenges are among the key business imperatives of our organizations.

Through the publishing of *Mobility 2001* and *Mobility 2030*, the Sustainable Mobility Project has made a major contribution to the understanding of the complex challenges and opportunities involved in meeting the mobility needs of people today and in the future on a sustainable basis. At General Motors, we are proud to share this global vision of sustainable mobility with our stakeholders, including our own internal audience- our employees.

For updates on the results of the Sustainable Mobility Project or to download the reports, go to [www.wbcsd.org](http://www.wbcsd.org)

### Overview

The rate of innovation and change within the motor vehicle industry is accelerating. This is driven partly by changing customer needs. Customers are more demanding in what they expect from their vehicles and how they meet their needs. Our customers, however, are not the only agents behind change. A myriad of government regulations present additional challenges that must be addressed. New technology allows designers to challenge every aspect of car design from styling through body construction. Intense industry competition has led to a search for new winning vehicle concepts, resulting in the development of new vehicles. At GM, we are committed to providing our consumers with "gotta have" products that are high in quality, visually appealing, and leaders in fuel economy and safety.

- Our life cycle approach (below) is ensuring we build in maximum environmental consideration, right from the start
- **Concept vehicles** show how innovative ideas can be transformed into reality
- **Leadership in Design** emphasizes GM's long and distinguished history of vehicle design

### Life Cycle Approach

At GM, we have long believed that a design done right the first time helps improve the environmental performance of a vehicle during its lifecycle. This philosophy influences the entire chain, from development and production to regular use and recycling. Environmental thinking cuts costs and encourages efficient resource use.

We factor in environmental and recycling requirements from the earliest stages of vehicle development and have created a common global template to establish these requirements. As the vehicle moves through the development process, we track our progress to confirm we are achieving our goals. These requirements include

specifying vehicle recyclability and recoverability and compliance with GM restricted and reportable materials requirements.

As a support for these processes, Design for Environment (DfE) utilizes tools such as Life Cycle Analysis and DfE Assessments to determine the best-fit solutions. We encourage our suppliers to integrate lean environmental principles in managing their enterprise through the Supplier Partnership for the Environment initiatives.

We have formed a global life cycle analysis sub-committee to better use our capabilities. We also adopted GaBi 3 Professional as a common software tool for life cycle analysis studies and utilize one of the largest databases of automotive life cycle inventory data. Analysis takes place at GM operations all over the world. At Opel, for example, internal studies are being conducted through joint projects with Advanced Engineering, Product Engineering, and Powertrain. One study compared magnesium and steel as materials for the cross car beam, and the life cycle for an entire vehicle was done on the Astra G. In North America, employees have completed studies on aluminum casting, painting and fuel cell components.

- **Designing to reduce fuel consumption and emissions**
- **Designing for safety**
- **Design for recycling**
- Oil life monitoring will save 70 million gallons of oil (see below)
- Headlamps from bottle tops (see below)

### Oil Life Monitoring

It is easy to forget to change the oil on time, and, while essential for a vehicle, frequent oil changes can waste valuable resources. That's why GM has installed its Oil Life System on nearly every new North American vehicle. The system gives motorists an accurate, reliable way to determine exactly when the oil needs to be changed based

on vehicle use and road conditions. In some instances, it will double or triple the oil change interval. Since 1995, GM has produced 18 million vehicles with the system. It is estimated these vehicles will save 70 million gallons of oil over their lifetimes and more than \$1 billion in unnecessary oil change charges.

More on [GM's Oil Life System >>](#)

### Headlamps from Bottle Tops

Headlamps from Bottle Tops As part of the Vauxhall/Opel recycling initiatives to promote the use of recycled material in vehicle manufacture, engineers have been investigating the ways in which drink container tops can be recycled to make high performance headlight housings for Vauxhall/Opel cars.

The real challenge has been to make sure that the recycled material fulfils the same quality standards as new goods. In order to meet these high quality requirements, the raw materials have to be carefully selected: in this case, mainly genuine production waste or contamination-free, post-consumer materials such as tops of returnable deposit beverage bottles were used.

The plastic goes through a thorough separation procedure and is then further treated using additives to supply reinforcement, stabilization and coloring. Finally, it is turned into a granulate material ready for processing and injection molding into new headlight housings. Stringent testing has shown that the new housings are as good at protecting the sensitive and hi-tech electrical components as those made from virgin materials. The headlight housing is a good example of just how complex the 'recycling' of materials for vehicles can be.

Recycled bottle top material is now the standard used as the housing for the front headlights in the Corsa Sport models, the GSi and with xenon light equipment. The housings of the fog lights on various models, including the Vectra GTS, are also made from this material.

### Concept Vehicles



Click the picture above to see key concept cars that have impacted GM design

GM's designers have a long history of creating vehicles with cutting edge designs. From the innovative styling of Harley Earl in the mid-twentieth century to AUTOnomy, which revolutionized the way cars can be designed, our designers have created vehicles that have changed the automotive landscape.

Some examples of GM's concept vehicles include:

- [Buick Y-job](#)
- [Firebird I, II & III](#)
- [AUTOnomy](#)
- [Hy-wire](#)
- [Opel Trixx](#)
- [Kappa architecture](#)
- [More GM concept cars](#)

### GM Invents the Concept Car

Nobody before GM had ever created a car that was not for sale. Nobody had explored and proposed innovations in a design exercise that helped determine what automobiles could be like in the future. GM was the first in 1938 with the Buick Y-Job. At that time, GM people did not call it a concept car, but a Dream Car.





The Buick Y-Job launched the world of vehicle design

Styling and technical innovations contained in the Y-Job were too advanced and expensive to be transferred to production cars in 1938, but they became extremely popular in the 1950's. However, the idea of exploring the future using outstanding cars was born. Each and every concept car admired today at motor shows around the world follows the creativity of GM and the Buick Y-Job.

### The Buick Y-Job - revolutionary styling and technology

- Horizontal lines rounded, sleek shapes, integrated wings, lower profile concealed headlamps, instrument panel announcing the 1950's
- Electrical door opening, powered hood mechanism, powered windows, novel braking system, "Dynaflow" automatic transmission

### Leadership in Design

In 1927, General Motors revolutionized the automotive industry by recognizing the growing importance of a car's styling and emotional appeal among the burgeoning consumer market for automobiles. GM subsequently established the industry's first department devoted to

automotive design. This newly formed GM Art and Color Section - the forerunner of GM Design - would soon establish GM as the undisputed design leader in the U.S.

Our leadership in design is not limited to only our U.S. design team. Design is a major part of GM's global operations product development approach. Employees are working on new design concepts on every continent, except Antarctica.

### GM supports *Eyes on Design* charity event

*Eyes on Design* is a three-day charity event, which culminates with the *Eyes on Design* Automotive Exhibit. This exhibit features more than 300 of the world's finest automobiles and the largest collection of concept vehicles ever assembled in one place. The 2003 *Eyes on Design* Automotive Exhibit was co-chaired by Robert A. Lutz, vice chairman of Product Development and chairman, GM North America; and Gary Cowger, Group vice president and president of GM North America. Proceeds from this event benefit the Detroit Institute of Ophthalmology (DIO).

"Hosting *Eyes on Design* is a great way to celebrate the fantastic history of automotive design, which has its roots as a discipline right here in Michigan," said Ed Welburn, GM vice president of Design. "And, of course, all this fun benefits a very worthy cause."

More on design at:

- [Opel](#)
- [Vauxhall](#)



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### Overview (GRI PR8)

GM North America (GMNA) is committed to be the industry leader in initial, long-term and perceived quality. In order to develop this position, we all need to take an active role and make quality part of everything we do by focusing on the details.

GMNA is continuing to focus on robust problem solving, flawless launches and rigorous production control to eliminate potential road-blocks and are increasing our focus on quality in the design phase. Collectively, this results in reduced warranty costs and increased customer satisfaction, as measured by the J.D. Power Initial Quality Survey.

We are also working with our suppliers to ensure world-class parts and with dealers to improve customer experience and perception. We will succeed as a company by engaging all people, all of the time, with a focus on quality that must be on our minds every day, every hour, every minute, every second.

This approach is reflected globally:

- The Automotive Quality Task Team is **driving quality improvement globally**, achieving substantial improvements in warranty cost reduction, external quality survey results and direct run rates in all regions.
- The **Automotive Quality Task Team (AQTT)** is developing and implementing an integrated, global system to deliver segment-leading quality in our products and services.
- **Performance** results show a 10% improvement in J.D. Power Initial Quality Survey results in GMNA and a 29% drop in warranty cases in Opel.

### Global Quality Improvement

The **Automotive Quality Task Team (AQTT)** has a series of global common processes that are being implemented throughout the manufacturing systems of all of our regions. Common processes cover areas such as continuous improvement, people improvement, standardization and product development. Some of these processes have already been fully implemented and the focus in this work is to share best practices globally and implement what works globally.

As the result of a global focus on quality by the AQTT, we have seen substantial improvements in warranty cost reduction, external quality survey results, and direct run rates in all regions.

See [Quality Performance >>](#)

### Quality Task Team

The Automotive Quality Task Team (AQTT) is responsible for supporting General Motor's vision, core values and priorities by developing and implementing an integrated, global system to deliver segment-leading quality in our products and services.

The AQTT's guiding principles are:

- Operate as one team
- Go fast
- Promote open and timely communications
- Follow through on commitments and agreements
- Promote innovation and continuous improvement
- Set stretch targets with clear accountability and responsibility
- Quality expectations are clear and understood
- Decisions are customer driven
- Proper tools, methods and processes are clearly defined and used with discipline
- Share knowledge, copy shamelessly, recognize and celebrate global success stories.

### The AQTT's roles and responsibilities are to:

- Lead internal and external benchmarking of best quality processes, set priorities
- Identify and sanction new quality strategies
- Identify global process owners and assign resources for each strategy
- Provide leadership and responsibility for disciplined common execution in all regions and across all functions
- Monitor and maintain global agreements and timing
- Resolve differences and disagreements in the execution of common global quality processes
- Lead a change management process which assures continuous improvement and reduces variation of common processes
- Ensure the development of capable quality professionals and lead by example
- Develop and maintain:
  - A quality policy
  - A definition of common
  - Responsibility for quality
  - The role of quality

### Performance (GRI PR6)

GM's global focus on quality by the AQTT has netted substantial improvements in warranty cost reduction, external quality survey results and direct run rates in all regions. Read case studies in our regional data sections for GM North America and GM Europe.

GMNA has seen substantial improvement over time in many of our metrics, including J.D. Power Initial Quality Study and Consumer Report's reliability ratings listed below.

### Regional Performance

#### GM North America

##### Quality Leadership Strategy

In 2004, GMNA will continue its primary strategy of reaching industry leadership in initial, long term and perceived quality.

We remain committed to our initial quality improvement strategy which has delivered a solid 10% improvement in the J.D. Power Initial Quality Study during a significant launch year, meeting our 120 PPH target (Problems per Hundred Vehicles).

Despite improvements, GMNA continues to focus on the competitive climate shown by significant improvement in **J.D. Power initial quality ratings** by other industry leading manufacturers.

##### 2004 J.D. Power Initial Quality Study (IQS) Results

The 2004 J.D. Power IQS Performance Report shows GMNA at 120 PPH (Problems per Hundred Vehicles), an improvement of 10% on our 2003 results. Overall, the automotive industry improved by 11%. GMNA had several significant wins including:

- GMNA had three of the top 10 models in the industry with Buick Century and Cadillac CTS and XLR
- All GMNA brands improved quality performance over 2003
- GMNA and Toyota were tied with 14 models ranked in the top three of their respective segments
- The Buick Century and Chevrolet Suburban each received Best in Segment awards in the Premium Midsize Car and Full-size SUV segments

Launch performance improved as evidenced by the Chevrolet Malibu, Cadillac XLR and Escalade ESV ranking in the top three in their respective segments. In addition, the GMC Envoy XUV and



# Our Products

## Vehicle Quality

Buick Rainier performed better than the segment average. GMNA Lansing, Grand River and Hamtramck plants all received gold and silver awards with GMNA having seven of the top 15 plants in North America. Sixteen of our plants showed double digit quality improvements with seven improving over 20%.

### **GMNA Consumer Reports Performance**

In the April 2004 Consumer Report's Annual Automotive Issue, GMNA had 24 models with average or better than average reliability, representing a 14% improvement over 2003. These 24 models account for 64% of GMNA production, but represent only 47% of all 51 GM models.

### **Case study: GMNA 2004 Warranty Cost Performance and Calendar Year Forecast**

Currently, GMNA warranty cost is \$88.95 per vehicle for vehicles built through September 2003, compared to a stretch target of \$75.00. A 10-13% improvement by the April 2004 month of build is forecasted.

Given recent performance, base-level warranty is still too high. To reach industry leadership in this area, we need a minimum of 15% improvement year-to-year. To achieve this improvement, we are aggressively targeting 33 specific vehicle and powertrain subsystems that are responsible for 75% of warranty costs.

### **GM Europe**

#### **Case Study: Opel Quality Performance**

Opel's consistent quality management has yielded measurable results. The number of warranty cases fell by 49% between 1999 and 2002, then by an additional 29% in 2003. This has direct correlation to warranty costs, which fell by 32% between 1999 and 2002 and 9% in 2003. Another indicator of improved quality is the very high satisfaction rate among Opel dealers. In 2003, 95% expressed satisfaction or full satisfaction with the quality of Opel cars.

Similarly, the European motoring press confirms Opel's outstanding quality. In 2003, for example, the magazine "Auto Motor und Sport" named the Corsa 1.2 ECOTEC best car in its class.

Authorized dealers and service partners also operate Opel's proprietary quality management system, the Opel ISO Plus norm. Most of them are certified according to this norm, which goes beyond usual ISO standards and is carefully audited by a neutral organization at regular intervals. Opel's quality improvements are a good example of GM's common global quality process being applied locally.



### Overview

GM is proud to be a leader in research, engineering, product innovation and public policy initiatives to improve motor vehicle safety and reduce the societal harm caused by vehicle collisions.

In industrialized nations, motor vehicle crashes are one of the most frequent causes of accidental death and injury. In developing economies, with limited road traffic safety laws and law enforcement, and inadequate infrastructure, it is often the most vulnerable users - pedestrians and cyclists - who are at greatest risk. The science of motor vehicle safety is a search for:

- Understanding the nature of the public health challenge - in magnitude and by problem type
- Prioritizing specific problem types as a function of societal harm - the human and economic cost of collision injury
- The invention, development and implementation of effective countermeasures.

Road traffic safety is a function of a number of interrelated factors, including the condition of the road infrastructure, the legal framework, cultural norms and vehicle and other technologies.

Helping drivers avoid crashes and making vehicles safer is a priority for GM.

Motor vehicle safety involves not only the design of the vehicle, but the manner in which it is driven, and the driving environment as well. We are committed to research and to the implementation of programs and technologies that enhance the safety of vehicles. We want to assist drivers in the operation of their vehicles to **avoid hazards**, and help to **protect occupants** in the event of a vehicle crash.

Our vehicle safety priorities are guided by a analysis of the real-world experience customers have with motor vehicles. An understanding of injury risk and potential ways to reduce it are the main factors that help us set safety policies, undertake advanced safety research, and implement **product safety systems and features**. We also encourage governments, policy leaders and individuals to pursue safety policies, initiatives and responsible behaviors that are based on science and the real-world potential to reduce societal harm.

[More policies on safety and public health >>](#)

### Avoiding Crashes (GRI PR1)

Safer driving makes for safer roadways:

- Countries with high safety belt and child restraint use generally have lower fatality rates than those with lower use rates.
- Countries with strong drunk driving laws and effective enforcement have fewer alcohol-related fatalities.
- Graduated licensing laws, that allow teenagers and adult novice drivers to learn to drive over time, help reduce the disproportionately high fatality rates of inexperienced drivers.
- We support initiatives and programs encouraging safe driving behaviors, including reduced driver distraction.

### Public Policy

We also support community and policy initiatives aimed at educating the public about ways to assure their safety when driving:

- **Encouraging safety belt usage**
- **National SAFE KIDS Campaign**
- **Mothers Against Drunk Driving**
- **Avoiding driver distraction**
- **Distraction research**

# Our Products

## Vehicle Safety

### Encouraging safety belt use

General Motors has been in the forefront of supporting awareness and technological initiatives to help increase safety belt use.

### U.S. Initiatives

In August 2003, the National Safety Council presented an award to GM recognizing GM's "ongoing leadership and support increasing seat belt use nationwide." In 1996, we helped create the Council's Air Bag & Seat Belt Safety Campaign and continue to play a leading role in its activities. The Campaign has helped to pass primary enforcement safety belt laws, now enacted in 21 U.S. states, which generally result in higher restraint use rates. In support of national efforts to increase seat belt use during May 2003 and 2004, **OnStar** advisors reminded subscribers to buckle up and Chevrolet conducted a print, broadcast and electronic advertising campaign supporting "Buckle Up America!". Finally, the Campaign, the National Highway Traffic Safety Administration (NHTSA), and law enforcement nationwide have conducted national "Click It or Ticket" safety belt use enforcement mobilizations. These mobilizations, which combine comprehensive public awareness with focused law enforcement activity, have helped increase the national safety belt use rate from 61% in 1996 to the 2003 rate of 79% - the highest ever.

### GM Launches First-Ever Driver Safety Campaign in China

The campaign, tailored to the needs and interests of Chinese drivers, includes educational messages about the life-saving benefits of wearing safety belts, following traffic regulations, safe driving practices and an explanation of how various vehicle safety features work to help protect drivers and their passengers. According to a GM poll conducted earlier this year, 48% of motorists in Shanghai admit that they do not always wear safety belts, despite local laws requiring their use.

China is the fastest-growing vehicle market in the world and is expected to grow dramatically for some time. Driver behavior safety programs will play an important role in helping to reduce crashes as vehicles become more abundant on China's roads. As the world's largest vehicle manufacturer, and a safety and technology leader, we believe we can help educate our customers in China - many of whom are buying a vehicle for the first time in their lives - about how to use our products safely. Chinese officials estimate that 77% of traffic deaths in China result from drivers ignoring traffic rules, and anticipate that this program will help reduce crashes significantly.

### SAFE KIDS

In 1996, the National SAFE KIDS Campaign and General Motors recognized an opportunity for automakers to play a valuable role in promoting correct child safety seat and safety belt use. Together, we created the SAFE KIDS BUCKLE UP program – a five-year, multi million dollar partnership. The goal of this unprecedented collaboration is to make child passenger safety educational materials and hands-on assistance available to families throughout America.

[Watch a video on child seat safety >>](#)

In 1999, the GM-SAFE KIDS alliance was extended to include the UAW, the National Council of La Raza and NAACP. In support of the America's Promise initiative, these partnerships facilitated the distribution of free child safety seats to Hispanic and African-American families in need.

As of 2004, we have donated over 90 customized Chevrolet minivans and vans to SAFE KIDS coalitions nationwide – there is at least one in each state and the District of Columbia. These Chevy Venture and Chevy Express vans contain everything coalitions need to host car seat checks in convenient locations for parents, such



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## Vehicle Safety

as malls and childcare facilities. To date, SAFE KIDS coalitions, with our support, have checked more than 500,000 child safety seats and trained thousands of individuals in child passenger safety.

Our focus on child safety is reflected in activities worldwide, for example:

- In Thailand, GM and Chevrolet have been focusing on child passenger safety since 2000, promoting child safety seat installation education and distribution programs as well as safety belt use in general. The program has been recognized as a key part of the Thailand Global Road Safety Partnership.
- In South Korea, GM Daewoo has donated child safety seats to the Seoul National Children's Hospital and SAFE KIDS Korea, and provides child safety seats at a 50% discount at all domestic GM Daewoo dealerships and service centers.
- In Australia, Holden's child passenger safety program is targeting the 70% of parents and caregivers who incorrectly install child restraints. Holden distributes brochures and videos to community groups and the general public to help raise awareness about the risks of incorrectly fitted restraints, complemented by a free mobile child restraint inspection program.
- GM do Brazil has been working with SAFE KIDS on child passenger safety activities since 2001 and will be joined by GM Chile later this year. GM Argentina will begin a 'Safety for Kids' pilot program this year. GM Colmotores promotes a number of child safety programs, including one that promotes safety belt use on school buses.
- In the United Arab Emirates, GM is partnering with the American University of Sharja, American Hospital in Dubai, Dubai police and a major Dubai shopping mall to raise awareness of the importance of child safety seats and teach people how to use them correctly.

- The GM-sponsored Beterem SAFE KIDS Israeli Buckle-Up campaign combines a variety of programs in local elementary schools, baby care and other medical centers to raise awareness about the proper use of child restraint systems.

### Mothers Against Drunk Driving (MADD)

We continue to support efforts to help rid America's highways of drunk drivers - the leading cause of traffic fatalities. GM is one of several auto manufacturers that support Mothers Against Drunk Driving (MADD). This year, GM's support for MADD helps fund victim support services. To allow employees the opportunity to provide direct financial support to MADD, the GM Charitable Giving Campaign includes MADD as a possible payroll deduction selection.

### Avoiding driver distraction

GM leads the automotive industry in the effort to study and address the important issue of driver distraction. In October 2000, GM launched a \$10 million safety initiative called 'SenseAble Driving'. This initiative combines research, education and technology, to address driver distraction.

As part of the technology initiative, GM was the first to announce a set of common-sense principles that govern the design and use of telematics technology in future vehicles. GM's communication systems are designed to:

1. Keep drivers' eyes on the road and hands on the wheel.
2. Minimize the number of steps required to perform a task.
3. Create a common interface in how consumers interact with the system.
4. Utilize a lock-out protocol to prevent the use of systems that create unnecessary and excessive attention demands on the driver.

# Our Products

## Vehicle Safety

### Distraction research

GM also conducts research in real world, simulated and laboratory environments to better understand driver workload and distraction. Research findings are used in the design of new in-vehicle communications technologies to help reduce their potential to distract the driver. GM experts are currently doing work internally and in partnership with educational institutions including the Beckman Institute for Advanced Science and Technology - University of Illinois at Urbana-Champaign, Carnegie Mellon University, the University of Iowa and Virginia Tech Transportation Institute.

Read more about our other [community initiatives >>](#)

### Traffic Safety Partnership with U.S. Army

In 2004, we began a partnership to help the Army reduce privately-owned vehicle (POV) crashes involving servicemen and women. The program includes a video, advanced driver training, and assistance on addressing the major factors contributing to Army POV traffic deaths: not wearing safety belts, impaired driving, fatigue and excess speed. These tactics will join an aggressive crash-reduction system that the Army already is implementing.

### Making Vehicles Safer (GRI PR6)

At GM, we strive to make each new model safer than the one it replaces.

Vehicle-based safety strategies generally fall into two categories:

- Crashworthiness - designs and technologies that help mitigate the injury potential of a crash (sometimes called "passive safety"), and
- Collision avoidance - technologies designed to help the driver in avoiding potential crashes (sometimes called "active safety" technologies).

### Crashworthiness

Vehicle crashworthiness is measured by analysis of real-world collision data and the likelihood of injury in a collision. Crashworthiness comes from an optimized vehicle structure and by vehicle restraint technologies.

In every collision, the kinetic energy of the vehicle (a function of vehicle weight and speed) must be dissipated. Energy dissipation comes primarily from the deformation of the vehicle or by friction, usually through the tires. How a vehicle responds to the forces, along with human tolerance levels, will determine occupant injury.

Read more about [GM's Latest Safety Features below](#)

### Crash Avoidance

Crash avoidance technologies are intended to assist road users to avoid potential collisions under various adverse environmental or operating conditions (e.g., lighting conditions, limited handling or braking).

### Latest Safety Features

#### Crashworthiness

- [Design for Crash Compatibility](#)
- [Automatic Air Bag Suppression Systems](#)
- [Saab Active Head Restraint System](#)

#### Crash Avoidance

- [GM Vehicle Stability Enhancement System](#)
- [Daytime Running Lamps](#)
- [Night Vision and Thermal Imaging](#)
- [Tire Pressure Monitoring Systems](#)
- [OnStar](#)

#### Design for Crash Compatibility

Since the mid-1990s, we have been designing many of our light trucks and vans to be less damaging to passenger cars in the event of a crash. Aligning light trucks' front structural components with the equivalent structures on



# Our Products

## Vehicle Safety

cars can help reduce the likelihood of override and underride in a collision. In 2003, we announced our support for a new, voluntary commitment by the auto industry and the Insurance Institute for Highway Safety to improve compatibility in crashes between light trucks and passenger cars. By September 1st, 2007, 50% of all vehicles offered in the U.S. and Canada, by participating manufacturers, will be designed to meet the new voluntary criteria. By September 1st, 2009, 100% of participating manufacturers' vehicles must meet the criteria.

Vehicles representing about 39% of our 2004 model year pickup, sport utility vehicle and full-size van sales meet the guidelines covering front-to-front crashes between light trucks and vans and passenger cars. All of our 2004 minivans and crossover vehicles meet the guidelines.

To meet the voluntary safety criteria in front-to-side crashes, we will continue to enhance side impact protection for occupants. GM will expand the application of side impact air bag technologies such as seat-mounted and side curtain air bags.

### Automatic Air Bag Suppression Systems

In 2002 we achieved another major safety milestone by becoming the first automaker to implement an advanced passenger frontal air bag sensing system that automatically turns off the front passenger air bag under certain conditions.

The result of nearly a decade of research, development and testing, our passenger sensing system collects information that helps the vehicle's air bag computer determine whether the right front passenger air bag should inflate in a frontal crash. Sensors gather information on the occupant's weight and the type of pressure placed on the seat to help determine whether there is a greater or lesser injury risk to the occupant from a deploying air bag.

The system also uses a sensor in the passenger-side seat belt to measure how much tension is exerted by the seat belt during a frontal crash, another means for determining whether the airbag should deploy.

The passenger sensing system is designed to prevent the passenger frontal air bag from deploying when a rear-facing infant seat, a forward-facing child restraint or a booster seat is detected. It also is designed to turn off the air bag if no occupant is detected.

The passenger sensing system is standard on most 2004 full-size pickups and sport utility vehicles, including the Chevrolet Silverado and GMC Sierra pickups (except commercial models or chassis-cabs); and Chevrolet Suburban, Tahoe and Avalanche; GMC Yukon XL, Yukon and Denali; and Cadillac Escalade and Escalade EXT. The system met the Federal advanced air bag specifications a year early.

Despite this new technology we still recommend that children who are 12 years-old and under should ride in a rear seat, properly restrained. Crash statistics show that children are safer if they are restrained in a rear seat. Even in vehicles equipped with the passenger sensing system, this recommendation applies to an infant riding in a rear-facing infant seat, a child riding in a forward-facing child seat, an older child riding in a booster seat, and children large enough to wear a safety belt. For further information on how to properly secure children in a motor vehicle, please visit [www.ourpreciouscargo.com](http://www.ourpreciouscargo.com).

We have also created a new web site, <http://gmairbags.com>, which provides extensive information, including videos, about GM's air bag leadership, the importance of air bags in vehicle safety, and how they work. The site is located within our [www.gmability.com](http://www.gmability.com) web site.

### Saab Active Head Restraint System 2

The Saab Active Head Restraints (SAHR) system was introduced in 1997 as the world's first active, anti-whiplash head restraint and is standard equipment in all Saab models. SAHR 2, introduced in 2004, has an improved activation mechanism in low-speed rear-end impacts. The system provides multiple adjustment points to allow the head restraint to be ideally positioned for most front-seat occupants. A study of actual rear-end collisions on public roads shows that the first generation SAHR gave a remarkable 75% reduction in serious neck injuries.

The system is entirely mechanical and is based on the lever principle. An upper padded support is connected to a pressure plate in the backrest of the seat. In some rear collisions, the occupant's body will be forced by the crash pulse into the backrest, which moves the pressure plate towards the rear. Subsequently, the head restraint is moved up and forward to 'catch' the occupant's head before the whiplash movement can start. The precise activation of the system is determined by the force with which the occupant's back is thrown against the backrest, the magnitude of the collision and by the occupant's weight.

A benefit of the mechanical SAHR system is that in most crashes it needs no repairs to restore it to operational condition after it has been activated. The head restraint automatically reverts to its initial position and is immediately ready to operate again. As whiplash injuries usually occur in low-speed collisions in which the vehicle may sustain only limited damage, the active head restraint does not increase the cost of the repairs needed after the crash.

Saab Active Head Restraints and Saab car seats have received high praise in a new doctoral thesis. In a comparison study, Saab seats were proven to provide highly effective protection against whiplash injuries. Astrid Linder, collision safety researcher at Chalmers University of

Technology, Gothenburg, recently defended her thesis, which compared crash safety among different car seats by introducing a completely new test procedure. Her study has received much international attention, including a report in the respected U.S. periodical, *The Journal of Trauma*.

### GM Vehicle Stability Enhancement System

StabiliTrak is GM's vehicle stability enhancement system (VSES), which enhances vehicle stability on a variety of road surfaces, particularly on slick surfaces or during emergency maneuvers.

The system:

- Maximizes handling and braking dynamics by using a combination of systems and sensors including ABS, traction control and electronic suspension
- Continually monitors the driver's intended vehicle path, measuring steering angle, wheel speed, brake pressure, lateral acceleration, longitudinal acceleration and yaw rate. This information is provided to an electronic control module that continually monitors vehicle dynamics
- Intervenes when it senses one or more of the wheels slipping, loss of lateral traction (side slip), or detects under-steer (snow-plowing) or over-steer (fish-tailing). Although the system cannot overcome the laws of physics, it automatically adjusts engine torque or brake pressure at individual wheels to help to steer the vehicle in the intended path.

VSES can assist the driver by:

- Helping move the vehicle where the driver intends it
- Helping control or minimize fishtailing on snowy or wet roads
- Assisting the driver in maintaining control while cornering on wet roads or uneven road surfaces, such as puddles or snow piles
- Improving the stability and steering ability of the vehicle while driving on snowy or wet roads



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FINANCIAL  
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- Helping the vehicle respond more naturally and predictably to the driver's steering commands, even in avoidance maneuvers

More than two million GM vehicles have been sold in North America with VSES. We have produced more vehicles in more different market segments with VSES than any other manufacturer. GM was the first automaker in the segment to add StabiliTrak as standard equipment on its Savana and Express 15-passenger 3500 155-inch extended wheel-base vans. By the 2006 model year, this feature will be available on many more of the vehicles in GM's portfolio.

### Daytime Running Lamps

Daylight running lamps (DRLs) are exterior front lamps that automatically illuminate when a vehicle is started. DRLs increase vehicle visibility for other drivers and pedestrians in a variety of daytime conditions including fog, rain, dusk and bright sunlight. In 1995, we decided to include DRLs in all of our new vehicles. Research now shows that this safety feature reduces daytime, multi-vehicle crashes up to 12.5% and car-to-pedestrian crashes by up to 15%. Statistically, our customers have probably avoided well over 37,000 collisions since 1995. To date, we have sold more than 30 million vehicles in the United States and Canada with DRLs as standard equipment.

In December 2001, GM asked NHTSA to adopt a rulemaking requiring all automakers to install DRLs on new vehicles sold in the U.S. The petition covered passenger vehicles, multipurpose passenger vehicles, trucks and buses. Daytime running lamps are already mandatory in Canada and in several European countries including Finland, Sweden, Norway, Iceland and Denmark.

### Night Vision and Thermal Imaging

Infrared technology enables military forces to operate effectively at night. GM has become the first automaker to bring the safety benefit of

this technology to drivers with the introduction of night vision, in the 2000 Cadillac DeVille. Improving vision at night is an important safety advancement. While night time driving represents only 28% of total driving, 55% of all traffic fatalities occur after dark according to data from NHTSA. Of all pedestrian fatalities, 62% occur at night. In addition, U.S. highway safety authorities recorded more than 300,000 vehicle-deer collisions in 1997, many of which could have been avoided with more time to react to the hazard.

While night vision is not meant to replace a driver's view through the windshield, it gives drivers additional visual information beyond what their eyes may be capable of seeing. The extra vision extends the range of low-beam headlights by three to five times and doubles the range of high-beam headlights. At 60 miles per hour, normal headlights allow 3.5 seconds reaction time. With night vision, the driver may have up to 15 seconds to react. The system also can help drivers see beyond the headlight glare from oncoming vehicles.

In addition, night vision can help enhance personal security. For example, the system can help detect a person hidden by roadside trees or bushes or out of the range of the headlights.

Cadillac's night vision is based on technology developed by Raytheon Systems Co. Night vision uses thermal imaging, or infrared, technology to create pictures based on heat energy emitted by objects in the viewed scene. The virtual image that is produced looks something like a black and white photographic negative - hotter objects appear white and cooler objects appear black. Objects such as people, animals and running vehicles stand out from the black background of the night. In the Cadillac DeVille for example, night vision is a heads up display that projects onto the windshield. The display is at the bottom of the windshield just above the dash-board.



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# Our Products

## Vehicle Safety

### Tire Pressure Monitoring System

Tire maintenance and proper use are important. Overloading tires can cause overheating as a result of too much friction and may result in an air-out. Under inflated tires pose the same danger as overloaded tires.

Currently, there are more than 2 million GM cars that have tire pressure monitors (TPMs) - more than any other manufacturer. The system uses either the antilock brake system (ABS) or separate sensors mounted in each wheel. A warning light on the instrument panel or message displayed on the driver information center, along with an audible warning, alerts the driver to check air pressure. A survey of GM vehicles equipped with TPM showed significantly better tire pressure levels than in those not equipped. Correct inflation reduces tire wear and maintains performance characteristics.

In 1968, GM opened a Tire and Wheel Systems Laboratory at the Milford (Michigan) Proving Ground. The research lab helps to ensure the original equipment tires on our vehicles perform safely and effectively. Our focus on tire safety also includes a bumper-to-bumper warranty protection, and our exclusive Tire Performance Criteria (TPC) system.

### OnStar

OnStar is a unique blend of cutting-edge technology and attentive personal service that provides an unparalleled level of safety, security and information. With this innovative service, an OnStar advisor is available at the touch of a button to contact emergency assistance. In a crash where the air bags deploy, OnStar will automatically send a call for help with the exact location of the vehicle to an OnStar Center, where trained advisors will immediately contact emergency services if necessary. If a vehicle is reported stolen, OnStar will assist the police in attempting to track it. This feature was used to track roughly 700 stolen cars per month in 2003.

OnStar uses the Global Positioning System (GPS) satellite network and cellular technology to link vehicle and driver to the OnStar Center, where advisors are available 24 hours a day, 365 days a year. OnStar is a completely embedded system that relies on voice recognition and audio-based services and content. There are no screens or displays. OnStar also provides a personal calling service; a hands free cell phone with access to voicemail systems and other pre-programmed information.

GM and OnStar have an ongoing commitment to motor vehicle safety. We have developed common-sense principles to help guide how information delivery systems are designed into our vehicles. The goal is to design systems that limit unnecessary or excessive attention demands on the driver while operating the vehicle.

Currently, OnStar is active on about 2.5 million vehicles. Most of GM's 54 U.S. models will offer OnStar as either standard equipment or as part of a preferred equipment package. OnStar is also offered by Audi and Acura.

### Advanced Automatic Crash Notification (AACN) on 12 New Models

The first automaker to offer this technology, GM is now adding an AACN system to a dozen 2005 models equipped with OnStar. The AACN system automatically notifies the OnStar center and provides crash information after a vehicle collision occurs. AACN takes safety and security communications beyond air bag deployment-notifications, using additional strategically located sensors to detect rear and side impacts, even if the air bags do deploy. OnStar Advisors can relay severity information to 911, helping them to quickly determine the necessary emergency personnel, equipment, and medical facilities.

Read more at [www.onstar.com](http://www.onstar.com) >>



# Our Products

## Efficiency & Emissions

### Overview

From saving fuel by making engines work smarter to smoothing transmission function for better performance and efficiency, GM is using technology to improve the internal combustion engine (ICE) while working toward the **hydrogen future**.

Greenhouse gas emissions and fuel economy are directly related. Carbon dioxide (CO<sub>2</sub>), a greenhouse gas, is emitted by the clean combustion of gasoline or diesel fuel in an engine. The primary means of reducing CO<sub>2</sub> emissions from vehicles is through improved vehicle fuel economy/efficiency.

While our **future vehicle strategy** has ambitious plans for improving emissions and fuel economy in the future, we are continually introducing innovations that make a difference today.

### Objectives

Improving exhaust emissions and fuel economy are key objectives of our current and **future vehicle strategy**. Ultimately our goal is to produce vehicles with zero exhaust emissions and higher fuel economy. In the meantime, we are continuing to introduce a range of technologies that reduce the exhaust emissions of today's engines, improve fuel economy and reduce fuel costs.

### Actions (GRI PR2)

We are continually introducing new engine technologies that help us to meet challenging regulations. The recent introduction of Displacement on Demand technology is just one example of the improvements in gasoline engines. Alternative fuels offer benefits too, so we are continuing our commitment to alternative fuel vehicles. Meanwhile, diesel engines are becoming increasingly popular in Europe and the latest high-tech versions offer enhanced fuel economy and excellent

performance. And while engines are a key area, we are developing and incorporating many other fuel economy technologies into our new vehicles.

We also provide information to encourage drivers to choose cleaner, more fuel-efficient vehicles and to drive responsibly, which can significantly reduce emissions and fuel consumption.

### Displacement on Demand

Displacement on Demand allows a vehicle to run on half its cylinders when full power is not needed. When engine loads demand full power, the system shifts seamlessly without any input from the driver and without any compromise in vehicle performance. Displacement on Demand will appear on the 2005 model year GMC Envoy XL and XUV, and on the Chevrolet TrailBlazer EXT sport utility vehicles. By 2008, more than 2 million GM vehicles with V-8 and V-6 engines will have this feature, which boosts engine efficiency by up to 8% (based on the EPA testing procedure).

### Diesels

Diesel engines have been dramatically re-engineered to be cleaner and quieter and more environmentally friendly. Diesel engines use about 30% less fuel than gasoline engines. That's because the diesel engine operates more efficiently, and diesel fuel provides more power than gasoline, compressed natural gas or ethanol.

Today's new diesel engines use electronic, high-pressure fuel injection to monitor engine performance and vehicle activity, while at the same time optimizing the mix of air and fuel in the combustion chamber. When used with variable injection timing, a redesigned combustion chamber and turbocharging, clean diesels optimize fuel combustion, reducing the amount of particulates and nitrogen oxide emitted.



# Our Products

## Efficiency & Emissions

These vehicles produce fewer greenhouse gas emissions than comparable gasoline engine models and get significantly better fuel economy.

Globally, diesel engines are available in many different displacements and can be integrated into the smallest car or the largest truck. GM, including Opel, Saab and Isuzu, currently offers more than 25 diesel-powered vehicles around the world and has the manufacturing capacity to build 1.9 million diesels worldwide.

Fundamentally, however, diesel usage in the U.S. will depend on how diesel-equipped vehicles will comply with future emissions requirements, customer acceptance, and the price of diesel fuel.

We see advanced diesel engines as complementary to gasoline-powered engines. Concerns over emissions regulations, market acceptance, taxation based on engine displacement, fuel consumption, and the price of fuel largely dictate in which markets diesels are popular today. Fuel quality (i.e. low sulfur) is another important factor for modern, high-performance diesel engines. GM strives to make its vehicles compatible with both the customer's transportation needs and society's interest in a clean, healthy environment. GM's efforts in developing advanced emissions technology has resulted in a diesel engine that emits 70% less particulates and 90% less oxides of nitrogen (NOx) than a diesel engine 10 years ago.

The stunning Opel ECO Speedster concept car demonstrates the abilities of GM Europe's new generation of diesel engines, powering the car to 17 new world records after a 24 hour session around a test track in Germany attaining:

- An average speed of 140.7mph over the 24-hour period (breaking the previous class record by 61.4 mph)



Diesel-fueled Opel ECO Speedster

- A top speed of 160.2mph

### Alternative Fuel Vehicles

#### E85

GM is the largest producer of E85 flexible fuel vehicles (FFVs) in the U.S. with more than 1 million E85 FFVs on the road. E85 technology is available in some of our most popular full-size pickup trucks and SUVs.

E85, a part-renewable, alternative fuel composed of 85% ethanol and 15% gasoline, is a clean alternative to petroleum based fuels and helps reduce greenhouse gas emissions.



Chevrolet's E85 Tahoe



HUMMER



GMAC  
FINANCIAL  
SERVICES

OnStar



# Our Products

## Efficiency & Emissions

Because E85 is a renewable fuel made primarily from corn, the supply is virtually unlimited, giving it the capability to reduce America's use of petroleum. GM's "Wells-to-Wheels" energy use and greenhouse gas emissions study shows that ethanol is the most effective near-term pathway to reducing automotive greenhouse gas emissions. When processes are fully developed to produce ethanol from bio-mass, greenhouse gases from automobiles are virtually eliminated.

### [Chevrolet Tahoe E85 Fact Sheet](#)

#### **CNG and Dual Fuel Vehicles**

In the United States, we continue to make available full-size pickups and Chevrolet Cavaliers that are capable of dual fuel compressed natural gas (CNG)/gasoline operation, as well as dedicated CNG full-size vans. In Europe, Opel builds versions of its Zafira and Astra models powered solely by CNG.

Opel Special Vehicles (OSV), which produces the Astra station wagon 1.6 CNG (Compressed Natural Gas) and Zafira 1.6 CNG, is Europe's biggest manufacturer of natural-gas powered vehicles and the market leader in Germany. Almost 60% of all natural gas vehicles sold in Germany in 2003 were produced by Opel. Opel's natural gas vehicles are also leading the way in Italy, which has been one of Europe's largest markets for natural gas vehicles for many years.

#### **Dual Fuel Gasoline/LPG Powered Vehicles**

In the U.K., Vauxhall Dual Fuel vehicles can use Liquefied Petroleum Gas (LPG) or conventional gasoline fuels. With LPG, emissions of CO<sub>2</sub>, oxides of nitrogen (NO<sub>x</sub>) and particulates are much lower than standard gasoline vehicles. Vauxhall registered 4,134 Dual Fuel vehicles in 2003 up 72.8% from 2002, representing 49.5% of the factory-supplied market, further demonstrating Vauxhall's six-year leadership in promoting the use of cleaner-burning LPG.

#### [Fuel Economy Technologies](#)

GM vehicles are sold in a wide range of sizes and drivetrains. The basic vehicle attributes are derived from functional requirements of our customers. Vehicles are purchased to carry passengers, cargo, or tow a trailer. Vehicle designs must address customers' peak uses not the frequency of such uses. For example, a customer may only tow a trailer twice a year, but the vehicle must be equipped to handle such a task at all times.

Where feasible and applicable, efficiency improvements are utilized across our car and light truck fleets. For example, four-speed automatic transmissions and locking torque converters are now used in all GM vehicles sold with automatic transmissions, and many are moving to 5-speed and 6-speed automatics. Many of our engines have incorporated low friction elements, variable valve timing, and soon will offer [Displacement on Demand](#) technology. Electric power steering, and high-efficiency alternators, and lower rolling resistance tires are used in most applications and sequential port fuel injection has been applied across the board in all engines. GM's aerodynamics laboratory works to reduce the aerodynamic drag of GM cars and trucks as new products are introduced.

#### [Regional Regulatory Pressures](#)

##### **United States**

In 2003, the U.S. Department of Transportation raised fuel economy standards (Corporate Average Fuel Economy standards-CAFE) for light trucks by more than 7%, the largest increase in truck standards in 20 years. Since CAFE is an average fuel economy of the vehicles sold, a company's CAFE reflects which products its customers choose. In recent years, consumer trends for larger models, higher performance engines, and more features have offset much of the fuel economy increases from technologies we've implemented. Higher standards will be even more of a challenge. Other regulatory



# Our Products

## Efficiency & Emissions

challenges include California's attempt to regulate fuel economy through CO2 emissions.

### European Union

ACEA (the European auto manufacturer association) has committed to a 25% reduction in average CO2 emissions per kilometer over 1995 levels by 2008, reaching 140g CO2/km or approximately 40 mpg for gasoline engines on the European test cycle. Interim targets have been set for 2003, with a review scheduled to determine if additional measures are necessary. The EU has also adopted vehicle fuel economy labels, publishes fuel economy guides, and monitors industry performance. Government pressure exists for further reductions to 120g CO2/km (47 mpg) by 2012.

### Asia-Pacific

In the Asia-Pacific region, the Japanese government established fuel economy standards for various vehicle weight classes for the 2010 model year and is considering even more stringent requirements. The 2010 requirement calls for an 11-30% increase in fuel economy from 1995 depending on the vehicle's weight.

China is developing fuel economy standards for light trucks that would require 5%-10% fuel economy reductions in the first stage, and 15% improvement in the second stage.

### Australia

In Australia, the auto industry has set a voluntary target under the National Average Fuel Consumption-NAFC of an 18% reduction in fuel consumption from 2000 to 2010. This translates into a reduction from 8.3 liters/100 km to 6.8 liters/100 km. The NAFC will be reported each year but there are no interim goals.

### Cleaner Fuels Mean Reduced Emissions

We need cleaner fuels to meet the more stringent 2004 Tier 2 and LEV II emissions standards and to realize the full potential of our powertrain emissions control technologies. We continue to be an industry leader in encouraging governments worldwide to adopt regulations for low-sulfur and improved quality gasoline and diesel fuels. Sulfur in fuel reduces the effectiveness of the three-way catalytic converter even in today's vehicles, and improved fuel quality is essential in meeting the new Tier 2 and LEV II emission standards. We've also teamed up with companies like British Petroleum, ExxonMobil and Shell. Through our joint efforts, we'll develop advanced engine/fuel systems for improved vehicle efficiencies and lower emissions while meeting the performance expectations of our customers.



# Our Products

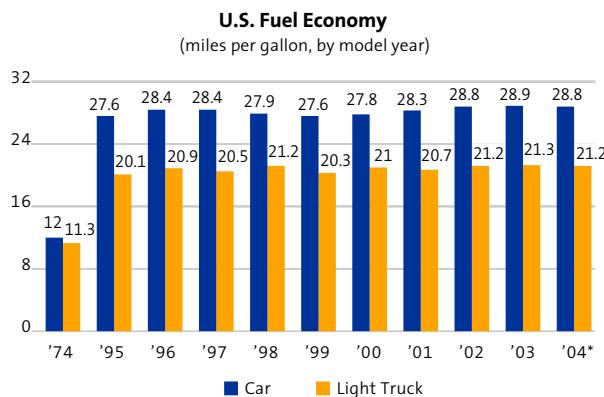
## Efficiency & Emissions

### Performance

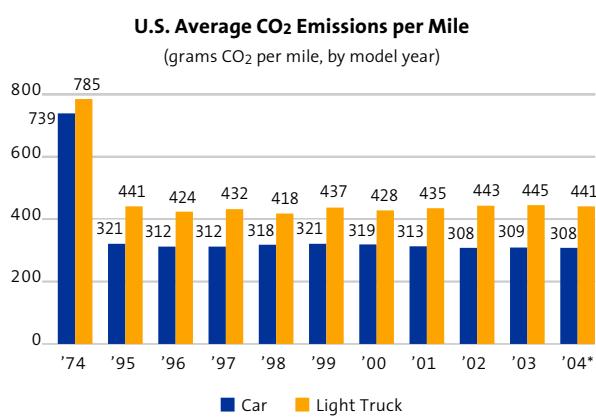
#### U.S. and Canada

##### Fuel Economy and CO2 Emissions

In the United States, the average fuel economy of our new cars and light trucks has increased over 130% and 75%, respectively, since 1974 (see graph). Since 1990, new vehicle fuel economy has been relatively constant as consumers, reflecting increased disposable income and relatively low fuel prices, have not emphasized vehicles with high fuel economy.



Includes imported & domestic U.S. car sales, based on GM's CAFE.  
\* 2004 is forecast, includes E85 credits.



Includes imported & domestic U.S. car sales.  
CO<sub>2</sub> emissions based on 8,865 grams of CO<sub>2</sub> per gallon of gasoline.  
\* 2004 is forecast.

Greenhouse gas emissions and fuel economy are directly related. Carbon dioxide (CO<sub>2</sub>), a greenhouse gas, is emitted by the clean combustion of gasoline or diesel fuel in an engine. The primary means of reducing CO<sub>2</sub> emissions from vehicles is through improved vehicle fuel economy/efficiency.

Fleets of vehicles from which our 2004 Corporate Average Fuel Economy (CAFE) is calculated are meeting the U.S. CAFE standards of 27.5 miles per gallon (mpg) for cars and 20.7 mpg for trucks. Since CAFE is a sales-weighted average of the fuel economy of the models customers purchase, CAFE is not a good measure of whether manufacturers are improving the individual fuel economy of their various models. With consumers choosing larger models, the fuel-saving technology improvements on individual models are being offset, resulting in little change in CAFE averages. However, on a comparable model-to-model comparison, GM's trucks lead the industry in fuel economy. GM's light truck CAFE is lower than that of other automakers because we sell more large SUVs than our competitors.

We conducted model-to-model fuel economy comparisons for 2004 Model Year vehicles available for sale in the U.S. by all manufacturers. There are 89 unique comparisons for cars and 83 unique comparisons for light trucks (including vans and sport utility vehicles). This analysis shows:

- For cars, GM outperforms the competition in 40 out of 62 (65%) model-to-model fuel economy comparisons where we have a product competing. The next nearest competitor leads in 15 of 60 comparisons in which it competes.
- For light trucks, GM has the best model-to-model fuel economy in 50 out of 75 (67%) comparisons where it has a product competing. The next nearest competitor leads in 13 of 36 comparisons.

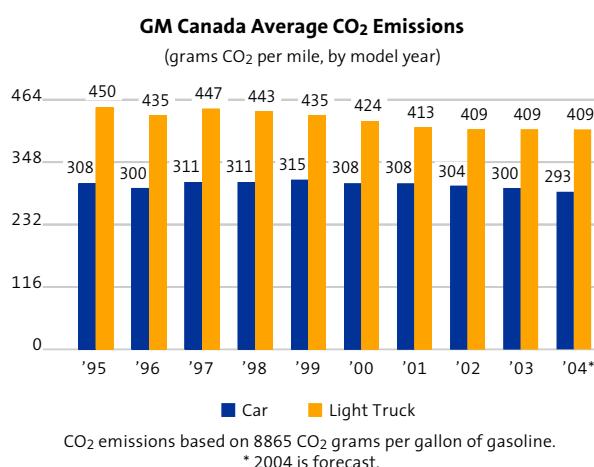
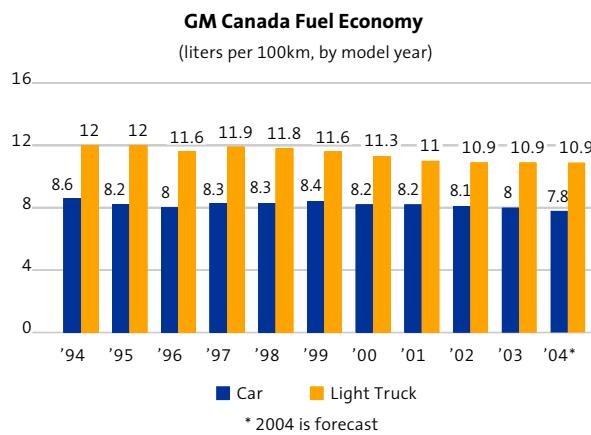


# Our Products

## Efficiency & Emissions

Compare GM's model-to-model fuel economy to other manufacturers.

In Canada, the fuel consumption (measured in liters per 100 kilometers or l/100 kilometer) of GM's passenger cars and light trucks has followed similar trends as the U.S. fleets. GM Canada's car and truck fleets are meeting their Company Average Fuel Consumption (CAFC) targets of 8.6 l/100 km and 11.4 l/100 km, respectively.

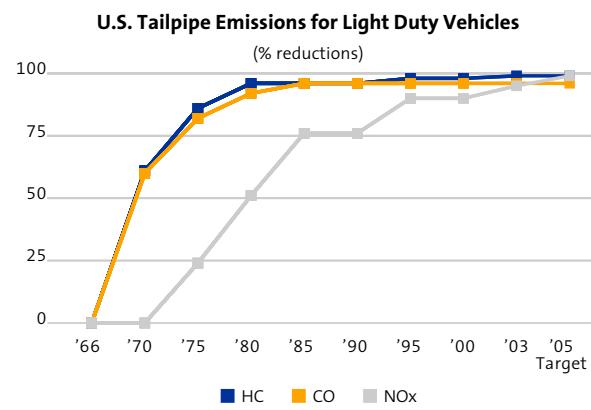


### Reducing exhaust emissions

Exhaust emissions such as nitrogen oxides (NOx), particulates, unburned hydrocarbons (HC) and carbon monoxide (CO) can cause environmental impacts. Since the mid-1960s, emissions of hydrocarbons, carbon monoxide and nitrogen oxides have significantly decreased. In the United States and Canada, HC, CO, and NOx of passenger cars have fallen by 99%, 96%, and 95% respectively (see chart below). We are achieving this by producing Low Emission Vehicles (LEVs) in the United States and Canada as part of the National Low Emission Vehicle (NLEV) program we initiated.

We will begin meeting stringent Federal Tier 2 and California LEV II standards in the 2004 model year. Once fully phased-in, all GM cars and light trucks will meet these standards, which cut smog-forming emissions (HC + NOx) by 99% relative to mid-1960's models.

Offering LEVs nationwide could have put a severe strain on the availability and pricing of the required platinum group metals needed to produce the very efficient catalytic converters. However, through technological improvements in our powertrain controls, we were able to meet these standards while maintaining a cost-effective supply of platinum, palladium and rhodium thereby helping to ensure a sustainable supply for the future.



# Our Products

## Efficiency & Emissions

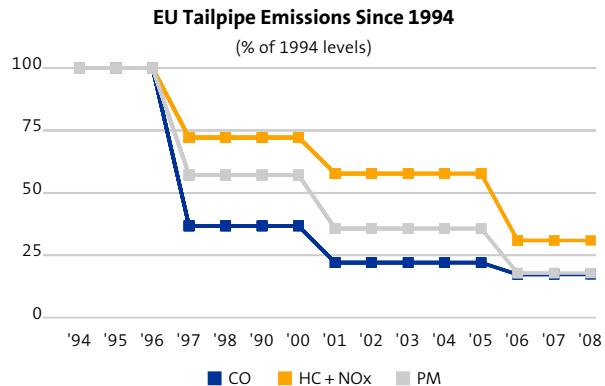
### Europe

#### Reducing exhaust emissions

Like the United States, Europe has come a long way in reducing exhaust emissions. When the latest Euro 4 standards take effect in 2005, emission levels of carbon monoxide and combined emissions of hydrocarbons and nitrogen oxides will have been reduced by 97% since 1970, when emission standards were first introduced. The most significant reductions will be achieved between 1993-2005, with CO emissions reduced by 83%, combined HC + NOx by 69% and particulate matter (PM - from diesel engines) by 82%.

Our commitment to environmental protection was already documented in 1989, when we became the first automobile manufacturer in Europe to supply all passenger cars with standard closed-loop, three-way catalytic converters. Since then we have complied with Euro 2, Euro 3 and Euro 4 emissions standards long before they became mandatory. Today, new gasoline engines of the Ecotec engine family, which was first introduced in 1993, meet stringent Euro 4 emission standards that don't come into force until 2005.

- The new Opel/Vauxhall Astra 1.7 CDTI is the first diesel car in the world to fully comply with the Euro 4 emissions standard. The 4-cylinder Ecotec turbo diesel offers higher performance and lower emissions.
- The standard becomes mandatory for all vehicles in 2005, and calls for 50% lower emissions than the Euro 3 regulation. Opel will launch three more all-new diesel models intended to top their market segments.



# Our Products

## Responsible Vehicle Use

### Overview (GRI PR1)

Our vehicles are designed to reduce resource use. When drivers act responsibly, they can reap the benefits of fuel efficiency and lower emissions. Fuel consumption is dependent in large part on the choices drivers make. A smooth and defensive driving style is easier on the environment and on the driver's wallet, and helps extend vehicle life. Conversely, a hectic driving style with frequent starts, stops, rapid acceleration and braking, leads to substantially higher fuel consumption. The intelligent on-board computer in many of our models enables drivers to check fuel consumption with the touch of a button. We also provide detailed information in the operating manual regarding fuel-efficient driving habits.

- Brief tips on how to drive responsibly (see below)
- Details of some key initiatives to encourage responsible vehicle use (see right)
- Information to help drivers **choose the most economical vehicle**

### GM Tips

#### Tips for reducing fuel consumption and CO2 emissions:

- Begin driving as soon as you start the engine. Don't let the engine idle until warm, but drive at moderate engine speed until it warms up
- Maintain constant speed
- Avoid unnecessary acceleration and braking
- Shift into higher gears early
- In each gear, stay in the lower engine speed range, from 2,000 to 3,000 rpm
- Avoid idling. Cutting the engine pays off for waits of as little as one minute
- While in coasting mode, don't step on the gas and don't disengage the clutch
- Avoid driving at full acceleration
- Check tire pressure regularly
- Switch off devices that consume additional energy, such as air conditioning, heated windows, or fog lights, when not needed

- Remove roof luggage racks when not in use
- Give your vehicle regular maintenance and tune-ups
- Avoid unnecessary short trips

### Key Initiatives

As responsible citizens, we are proud to be involved with the following vehicle safety initiatives and programs:

- **Encouraging safety belt use**
- **National SAFE KIDS Campaign**
- **Safe driver research**
- **Avoiding driver distraction**
- Supporting car sharing clubs (below)
- **Traffic Safety Partnership with U.S. Army**

GM is also active in multiple environmental partnerships and dialogues, which help to move society toward sustainable mobility.

More on [GM's environmental partnerships >>](#)

### Car Sharing Clubs in the UK

Vauxhall promotes responsible vehicle use in the UK by supporting car clubs. These clubs benefit society and the environment by reducing unnecessary car travel. They also increase use of alternative modes of transportation where appropriate and provide access to personal transportation for those currently excluded. The program uses well-maintained vehicles with the best environmental performance in their class, minimizing emissions per mile traveled. Vauxhall supports CarPlus and car share programs in several UK cities. For more information, visit the UK car clubs website at [www.carclubs.org.uk](http://www.carclubs.org.uk) (non-GM website).



### Overview (GRI EN1, EN15)

Vehicles are among the most recycled products. Since 1994, vehicle manufacturers around the world, through automotive trade associations, have participated in a series of vehicle recycling workshops to promote responsible treatment of end-of-life vehicles (ELV) regardless of where they are used and retired. In our North American, European and Asia/Pacific regions, our goal is to improve the ELV vehicle infrastructure through appropriate partnerships. For example, across North America we continue to develop new technologies through the Vehicle Recycling Partnership and its recycling infrastructure partners.

We continue to design our vehicles to be as recyclable and recoverable as possible and to implement these designs on vehicles around the world. We have developed global standards also in order to gain common benefits across regions. And, as we develop our expertise in regions at the forefront of increasing the recycling of vehicles, we aim to apply this knowledge in those regions as their recycling markets develop.

### Regional Approach

#### North America

GM is first among U.S. automakers to provide access to vehicle recycling information by posting our **dismantling manuals** on GMability.com. The manuals provide dismantlers with information on which parts of a vehicle can be recycled and how to remove the part from the vehicle. Currently, more than 75% of a car, principally metals, is recycled. With ELV dismantling manuals now easily accessible, there is potential to significantly increase non-metal recycling, increasing the overall percentage of the vehicle that is recycled.

In addition to dismantling manuals, pre-treatment manuals that provide detail for removing automotive fluids such as HFCs and

other substances of concern, are available, for North American vehicles. GM is committed to reducing the use of substances of concern in vehicles. Our global standard, GMW 3059, is used in all vehicle programs worldwide for handling restricted and reportable substances.

Environmental features brochures are developed for new vehicle programs. The brochures highlight examples of environmental performance of the vehicle as well as the plant in which it was assembled. For example, the Cadillac SRX, assembled at the Lansing Grand River Michigan Assembly Plant, uses 50% recycled tire rubber in the radiator side baffles. For the 2004 model year, over 27,000 pounds of recycled tire rubber were used for this application, which equates to 2,000 scrap tires being diverted from the landfill. In the plant, over 90% of the purge solvent used for paint line cleaning is recycled. For the Malibu - Fairfax facility, in 2003 GM avoided 105,000 tons of CO<sub>2</sub> equivalent emissions due to recycling reuse practices in the production of the Malibu.

GMability.com details **environmental features** for several GM vehicles.

Valuable recycled materials are used in the manufacture of new vehicles and other applications. On average the following materials are recycled/recovered from end of life vehicles in North America on an annual basis:

- 14 million tons of steel
- 800,000 tons of non-ferrous metals (aluminum, magnesium, copper, brass, zinc)
- 40 million tires

#### Europe

In Europe, Opel, Vauxhall and Saab provide all interested dismantlers with a manual containing information for all removable plastic components including weight, composition, and the time it takes to dismantle. It is important for mechanical recycling that incompatible types of

# Our Products

## Vehicle Recycling

plastic are not mixed after shredding, as different materials can only be separated afterwards with great difficulty.

These data are now available on DVD, a result of the International Dismantling Information System (IDIS) to which Opel, Vauxhall, Saab and GM North America contributed. The IDIS consortium, originally a development project of European vehicle manufacturers, now comprises 23 vehicle producers from around the world.

The latest release of the DVD, containing information in eight languages on environmentally sound pre-treatment and dismantling of more than 360 different vehicle models from the world's largest manufacturers, is distributed free to European dismantlers annually, with interim updates via the internet.

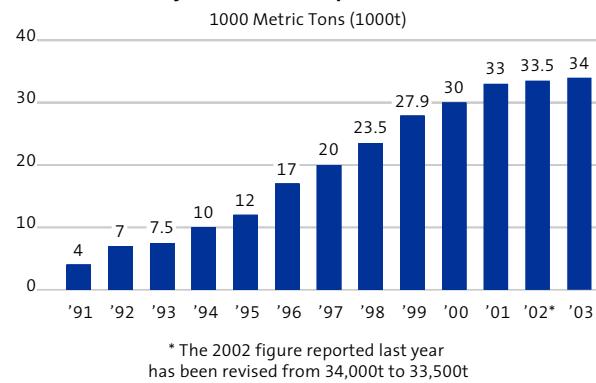
### Japan

In Japan, the End-of Life Vehicle Recycling Law is effective as of January 1st, 2005. The law is unique in that it imposes responsibility on the manufacturers/importers to recover and recycle three designated recovery items rather than the whole vehicle, which are CFC/HFC, pyrotechnical devices, and Automotive Shredder Residue. The Law is enacted based on the Japan situation where landfill capacity is shrinking rapidly and waste handling is becoming a serious issue. In compliance with the Japanese End-of-Life Vehicle Recycling Law, General Motors Asia Pacific (Japan) has established the process and system required for handling end-of-life vehicle recycling. For the appropriate recovering and recycling of pyrotechnical devices, General Motors Asia Pacific (Japan) prepared the Japanese vehicle dismantling information based on the dismantling manual of those vehicles imported from United States and Europe. The recycling fee for GM vehicles sold in Japan will be publicized soon.

### Creating a Market for Recycled Materials

To optimize dismantling, we address issues early in the vehicle development cycle. We are also making a significant contribution to creating a market for recycled materials, which helps stimulate demand for recycled plastics, encouraging greater levels of recycling in the future. Use of recycled plastic materials in Opel/Vauxhall vehicles rose to 34,000 metric tons in 2003. Opel/Vauxhall have continuously increased the number of parts in each car line that can be manufactured from recycled plastic materials. In 2003, new parts were identified for production from recycled plastic in each Opel/Vauxhall principal car line. Following extensive research, Vauxhall's plastics experts listed 70 recycled plastics grades for use in new vehicle production.

Use of Recycled Plastics in Opel/Vauxhall Vehicles



Use of recycled and recyclable materials in the Vectra



HUMMER



# Our Products

## Vehicle Recycling

In September 2000, the European Parliament passed a directive that comprehensively addresses costs, recycling and recovery targets and substance bans for ELVs. To meet these requirements, GM operates a dedicated group to coordinate the take back and recycling of GM's European ELVs. The group is working with Product Engineering to step up efforts under way in each part of the company to increase the use of recycled materials across our entire product range and to establish markets for recycled material. GM has adopted the Design for Recycling (DFR) concept for all newly designed vehicles. DFR includes, for example, reduced complexity of materials and improved fastening technology (easy to dismantle). All plastic components are marked to identify the material content. DFR concepts are conveyed to design engineers and suppliers through global specification GMW 3116.

Opel, Vauxhall and Saab are developing effective partnerships with businesses involved in taking back, treating and recycling ELVs to reduce automotive waste going to landfill to five percent of a vehicle's weight over the next 15 years. The clear way forward for achieving this target is via post shredding technology (PST). PST enables the separation of organic (plastic) fractions, as well as additional metal recovery, from other fractions (i.e. inert fractions). One of many uses for the organic fraction is in blast furnaces, where it can serve as a substitute for coal or heavy oil as a reducing agent for the production of iron. From an environmental and economical point of view, such "feedstock" recycling is expected to play an increasingly important role in comparison to mechanical recycling.

Since additional national legislation, or voluntary agreements, on handling ELVs exist in some countries, we are building on these models, in Denmark, Germany, Sweden and the Netherlands. In countries without programs, we

are creating collection systems with other interested economic operators.

GM continues to support sustainable solutions to the treatment of ELVs. Research into new recycling techniques is focused on technical capability and economic viability.

More on [GM Europe's recycling approach >>](#)

### Materials (GRI EN1)

Selecting the right material is vital for product quality and protecting the environment. Our designers seek to:

- use non-toxic material,
- increase the use of easy to recycle materials, and
- choose recycled over virgin material whenever possible.

We use various complementary information systems and guides for relevant information and ideas about environmentally responsible product design. Product specifications list industry and GM standards with references to further data sources. GM specifications such as the "GMW3059 Restricted and Reportable Substances for Parts Specification" give engineers and suppliers information on material inputs that are prohibited or subject to declaration requirements.

### Health and Environmental Impact Assessments

The materials recommended for use in our products and manufacturing processes are assessed for potential health and environmental impacts prior to approval using several processes. Materials are assessed according to the Productive Material Review Process (PMRV), which supports the release and material engineering community and is part of the Design for the Environment process (DfE) process. If a material is approved, the

# Our Products

## Vehicle Recycling

information is then sent to the plant Hazardous Materials Control Committee (HMCC) for local approval and implementation. The HMCC assesses potential health and environmental impacts of those materials that support the manufacturing process (indirect materials), but do not actually become part of our products.

Read more on [chemicals management in our facilities >>](#)

The PMRV team continues to provide critical support during assessment of the materials proposed for use at our facilities. Timely review and communication to material and designing engineers and local HMCCs assist our plants in meeting start-up deadlines and material needs. For example, a silicone sealant that provided improved performance at reduced cost was reviewed for use at the Tonawanda Engine plant. Employee health and safety concerns were also alleviated by the PMRV process, and production was not affected. The timeliness of these PMRV reviews ensures a smooth transition for all new production systems.

**Manufacturing Planning Studies and DfE**  
Assessments take a proactive look at our processes and materials in conjunction with the PMRV process. These early assessments analyze systems planned for use in our facilities, incorporating the DfE principles - prevent, reduce and recycle. The process considers a wide variety of items ranging from how the material is brought into the facility, stored and transported, to correct ventilation and recycling of any waste that may be created.

### [International Material Data System](#)

Details about the materials that suppliers use in parts and components are essential. This information is harmonized and made available to the auto industry in the form of an International Material Data System.

GM has been using this information to assist our engineering community in designing-in products

and processes that benefit vehicle recycling at end-of-life as well as reducing the environmental footprint at our suppliers. It has also been a key information source to ensure compliance with the European Union ban on certain heavy metals.

We operate a specialist website to provide information to suppliers on how to help us become best in class for environmental product and process development and improvement. For details, visit [www.gmsupplypower.com](http://www.gmsupplypower.com).

# Economic Performance

## Overview

With hundreds of thousands of employees and thousands of suppliers, General Motors creates a significant positive economic benefit around the world. GM today has manufacturing operations in 32 countries and its vehicles are sold in 192 countries. In 2003, GM sold nearly 8.1 million cars and trucks, about 15% of the global vehicle market. This means that



GM is an important and valuable employer in many countries. Our goal is to be a positive force in the communities where we operate and to work constructively with stakeholders to continuously improve the environmental and social dimensions of our business and do all that we can to enable equal access to mobility.

- **Financial Information**
- **Competitiveness**
- **Labor Force**
- **Regional Economic Contribution**
- **Community Investment**

# Economic Performance

## Financial Information

### Overview (GRI 2.8)

In 2003, GM earned \$3.8 billion on record revenue of \$185.5 billion, or \$7.14 earnings per share of GM common stock. Excluding our former Hughes Electronics subsidiary and special items, earnings totaled \$3.2 billion or \$5.62 per share. These results, achieved despite a generally challenging economic environment around the world, are in large part due to strong earnings in Asia and another exceptional performance by GMAC Financial Services, proof of the merits of GM's diverse earnings base.

This section of the report is designed to give you an overview of our financial performance in 2003/04. If you require more detailed financial performance information, please visit our [2003 Annual Report](#).

*\* In U.S. dollars. See currency converter at [www.oanda.com](#), which is a non-GM site; please check privacy policy.*

### Objectives

We are very positive about GM's future. The competition is certainly tough and the challenges are many. But we believe that opportunities abound for those quick enough, smart enough and passionate enough to recognize and seize them.

At GM, we have six focus areas for the future. They are:

1. Drive: **Great Products**
2. Drive: **Design**
3. Drive: **Growth** - pursuing growth in emerging markets
4. Drive: **Further** - by providing people around the world with the best transportation products and related services
5. Drive: **Choices** - through embracing diversity and consumer choices
6. Drive: **Commitment** - a commitment to improving peoples lives by providing them with mobility

### Actions (GRI EC2)

We began the year with a focus on improving our balance sheet and made progress well in excess of our plan. Through a combination of generating more than \$10 billion from automotive operations, the sale of non-core assets, particularly Hughes, and global debt offerings, cash proceeds totaled \$32 billion, about three times our original target.

That allowed us to fully fund our U.S. salaried and hourly employee pension plans, a move that few would have predicted possible at the start of 2003, when these plans were nearly \$18 billion underfunded.

While we are pleased with this progress, we still have many challenges to achieve our performance goals.

We understand our job is to drive stronger results - making consumers truly excited about our cars and trucks, driving up our sales and market share, improving our quality and strengthening our finances.

While our market share increased in Asia Pacific, Europe, and Latin America, Africa and Middle East (LAAM) regions, we fell short of our goal to have a third consecutive annual share increase in the United States, our largest market. A weak first quarter gave us a slow start in 2003, and even though our share was up significantly in the second half, it wasn't enough. This year we are refocusing on performing more consistently throughout the year.

*We face some significant challenges in the coming year:*

- We are determined to improve profitability in our core business and further strengthen our balance sheet, fund our future products and growth plan, and create shareholder value. We plan to do this by sticking to our strategy: introducing great cars and trucks; staying



# Economic Performance

## Financial Information

aggressive in the marketplace; reducing costs and improving quality; and generating more cash.

- Our earnings continue to be affected by substantial and rising pension and healthcare obligations for our large U.S. retiree plus employee base. Spiraling health care costs remain a significant competitive issue in the U.S. for all industries and especially for long-standing ones like the automotive business. While we have done a better job than many companies in proactively managing health care cost increases, solving this issue is going to require efforts on a range of fronts: providing employees with cost-effective health care benefit plans; improving the cost and quality of the health care delivery system; enhancing our health care funding plan; and supporting appropriate governmental actions. With regard to the last item, the Medicare drug benefit enacted by the U.S. Congress last year was a good first step, but much more needs to be done. Health care expenses in the U.S. last year added about \$1,400 to the cost of each car and truck we produced – a real competitive disadvantage.
- The continued interventions by the Japanese government in foreign exchange markets to hold down the value of the yen and thereby make their exports more competitive in the U.S., is a practice that is inconsistent with principles of free and fair trade and which puts us and other U.S. manufacturers at a competitive disadvantage. With the yen trading in the 110 range, it is undervalued by an estimated 20%. This equates to an unearned cost advantage of approximately \$2,000 on a \$20,000 vehicle produced in Japan. This advantage means extra resources for Japanese-based producers for investment in R & D, new facilities and equipment, additional advertising and dividends to shareholders. In first quarter 2004 alone, Japan's intervention expenditures to weaken the yen totaled \$138 billion.
- While we made progress in Europe last year,

we were slowed by a stagnant economy and increased competition. Our market share increased slightly on the strength of new products, but we fell well short of our goal to break even. Our Latin America, Africa, and Middle East region also was unprofitable, as continued economic weakness suppressed demand in Brazil and the rest of Latin America.

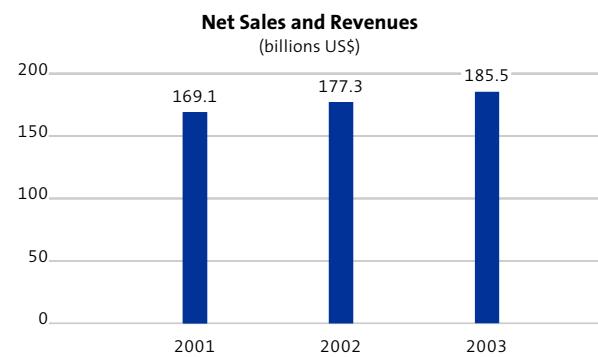
### Performance (GRI EC1, EC6-7)

#### 2003 highlights included:

- Market share increased in three of four automotive regions
- Strong cash flow was generated
- Fully funded the U.S. hourly and salaried pension plans with \$18.5 billion in total contributions
- Pension plans earned an approximate 22% return on assets
- Completed the split off of Hughes Electronics
- GMAC Financial Services and GM Asia Pacific each generated strong net income
- Completed the sale of GM's defense business

#### Net Sales and Revenues

Net Sales and Revenues were \$185.5 billion, up 4.6%.

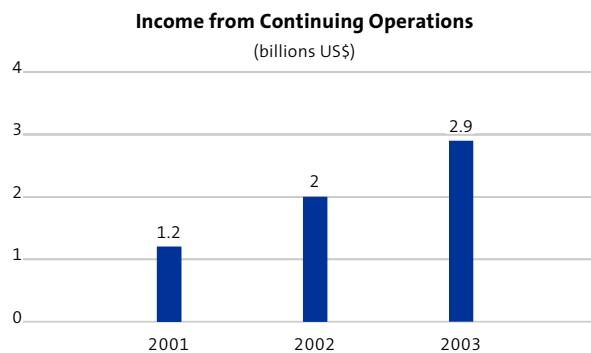


# Economic Performance

## Financial Information

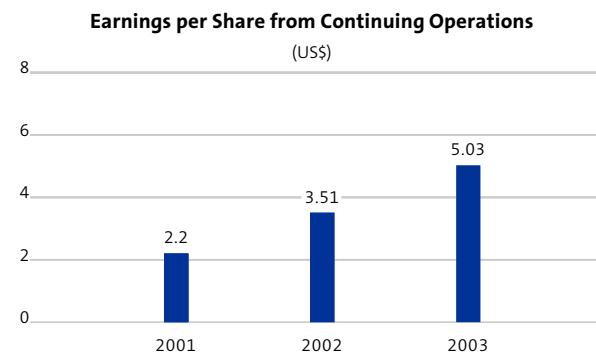
### Income from Continuing Operations

Income from continuing operations was \$2.9 billion, up \$0.9 billion.



### Earnings per Share from Continuing Operations

Earnings per share from continuing operations increased to \$5.03 from \$3.51.



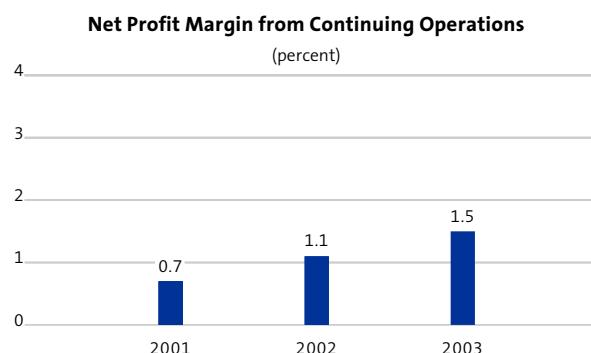
### Net Income (US\$ in millions):

2001	2002	2003
601	1,736	3,822

Note: Geographic distribution not available

### Net Profit Margin from Continuing Operations

Net profit margin from continuing operations was 1.5%, up from 1.1%.



### Sales and revenues by product type (US\$ in millions):

	2003	2002	2001
Automotive and Other Operations	143,200	143,200	143,200
Financing and Insurance Operations	25,900	25,900	25,900
Other			
Total Net Sales and Revenues	169,100	169,100	169,100

# Economic Performance

## Financial Information

### Debt/equity ratio:

	2003	2002*	2001
<b>Automotive, Communications and Other Operations</b>			
Long-term debt to the total of this debt and equity	<b>85.2%</b>	433.2%	72.6%
Long-term debt and short-term loans payable to the total of this debt and equity	<b>86.4%</b>	307.5%	76.5%
<b>Financing and Insurance Operations</b>			
Total Debt to Total Stockholder's Equity	<b>11.8:1</b>	10.3:1	9.4:1
Dividends (US\$)	<b>\$2/Share</b>	\$2/Share	\$2/Share

\*2002 data has been restated to reflect Hughes as discontinued operations. The Hughes debt numbers are not included in the above data for 2002. Hughes was split-off on December 22, 2003

# Economic Performance

## Competitiveness

### Overview (GRI S07)

We are working hard to improve our own competitiveness by focusing on the factors within our own control. In the areas of purchasing, manufacturing, powertrain, vehicle development and capital efficiency, we have begun to reap the benefits of leveraging global resources while remaining responsive to local market needs.

Our overall productivity in the U.S., based on the Harbour Report, has improved by 22% over the last five years and we are now the most productive domestic manufacturer. Similarly, GM's initial quality has improved by 25% over the past five years, and three GM divisions - Cadillac, Buick and Chevrolet - are among the top 5 brands in J.D. Power's Initial Quality Study (read more on our [vehicle quality](#)). Around the globe, GM is bringing to market more new products each year than any other manufacturer and these new product offerings are being received with wide acclaim.

But, we also face a number of important competitive challenges - many of them caused by public policy frameworks in countries where we have significant operations. In the U.S., the domestic automakers carry escalating pension and health care costs, which foreign companies do not bear. Manipulation of exchange rates by countries such as Japan gives foreign producers significant unearned cost advantages.

We remain committed to strong governance practices and transparency in reporting. This enables stakeholders to appreciate our strong performance toward meeting internal measures of competitiveness.

Externally we work with governments at all levels in the countries in which we do business to encourage them to understand how their policy decisions impact the competitiveness of their manufacturers. In the same way we encourage stakeholders to understand the

various factors impacting our competitiveness and to work with us in identifying measures that will enhance our ability to continue to make strong progress financially, economically, environmentally and socially.

# Economic Performance

## Labor Force

### Overview (GRI EC13)

We are proud of our compensation policies and practices around the globe. Jobs at our facilities are highly sought wherever we operate as they typically provide total remuneration (cash compensation and benefits) exceeding that of most other local employers.

In essence, we believe support for human rights begins by treating each other with respect and dignity. We are responsible for respecting each other in our business relationships and in the communities in which we operate. We believe our fairness and respect policies demonstrate our support for employees' rights.

### Wages and Benefits

#### (GRI EC5, LA1-3, LA12)

Our policy is to provide competitive, market based compensation that meets or exceeds all legal requirements. Health care is provided in accordance with local laws, customs and competitive practice. Outside the U.S., health care is typically provided as a social benefit through governmental institutions.

Compensation and benefit practices vary widely around the world according to local customs, competitive markets, and local regulations.

#### Wages

In 2003, our worldwide payrolls from continuing operations totaled \$20.9 billion, up from \$20.4 billion in 2002. In the United States, hourly payroll totaled \$8.9 billion. The average labor cost per hour for the U.S. hourly work force, which includes both wages and benefits, was \$78.39 in 2003.

	At December 31		
Worldwide employment (in thousands)	<b>2003</b>	2002	2001
GMNA	<b>190</b>	198	207
GME	<b>62</b>	66	73
GMLAAM	<b>23</b>	24	24
GMAP	<b>14</b>	11	11
GMAC	<b>32</b>	32	29
Other	<b>5</b>	7	8
<b>Total Employees</b>	<b>326</b>	<b>338</b>	<b>352</b>
Worldwide payrolls (in billions)	<b>\$20.9</b>	\$20.4	\$19.1
U.S. hourly payrolls (in billions)*	<b>\$8.9</b>	\$9.1	\$8.5

\*Includes employees 'at work' (excludes laid-off employees receiving benefits)

### Pensions

#### 2003 Highlights:

- GM fully funded the combined U.S. hourly and salaried pension plans with \$18.5 billion in total contributions
- Pension plans earned an approximate 22% return on assets

Our philosophy with respect to discretionary benefits is to provide them whenever it is customary to do so in the specific country of operation. While in many countries it is customary to provide discretionary pensions in addition to government mandated social pensions, in some countries where we operate it is not. For example, Poland, Colombia and Hungary. However, in those locations where we

# Economic Performance

## Labor Force

do not provide a company discretionary pension, the government social pension and/or other legally required benefits are deemed to provide a sufficient benefit, based on a wage or salary replacement basis. Company discretionary pensions are funded according to local legal standards, which include insured, trustee and book reserve arrangements.

### Legal compliance

Labor issues, such as wages, benefits, hours worked, and other working conditions comply with the relevant legislation and are managed through the collective bargaining process, where applicable. Internal employee representation systems are established in all countries in which we operate.

Our compensation and benefit plans meet or exceed all relevant legal requirements.

### Health care

Health care is a major discretionary cost for the company in the U.S., but not in other countries largely because employees in most other countries where we operate receive health care benefits directly through government programs, to which GM contributes as appropriate. In the U.S., GM provides its employees with various health care options, including HMO's, PPO's and Indemnity plans.

## Human Rights

### (GRI HR1, HR5-7, HR9-10, HR12)

At GM, we believe that support for human rights begins by treating each other with respect and dignity. We are responsible for respecting each other in our business relationships and in the communities in which we operate. We believe our fairness and respect policies demonstrate our support for employees' rights.

We honor all local laws, respect local customs and adhere to the Global Sullivan Principles (GSP) throughout our global operations.

According to the GSP Principles we will:

- Express our support for universal human rights and, particularly, those of our employees, the communities within which we operate, and parties with whom we do business.
- Promote equal opportunity for our employees at all levels of the company with respect to issues such as color, race, gender, age, ethnicity or religious beliefs, and operate without unacceptable worker treatment such as the exploitation of children, physical punishment, female abuse, involuntary servitude, or other forms of abuse.
- Respect our employees' voluntary freedom of association.
- Compensate our employees to enable them to meet at least their basic needs and provide the opportunity to improve their skill and capability in order to raise their social and economic opportunities.
- Provide a safe and healthy workplace; protect human health and the environment; and promote sustainable development.
- Promote fair competition including respect for intellectual and other property rights, and not offer, pay or accept bribes.
- Work with governments and communities in which we do business to improve the quality of life in those communities - their educational, cultural, economic and social well being - and seek to provide training and opportunities for workers from disadvantaged backgrounds.
- Promote the application of the Principles by those with whom we do business.
- We will be transparent in our implementation of the principles and provide information and demonstrate publicly our commitment to them.



# Economic Performance

## Labor Force

### Policies:

#### Child Labor

We believe a child's primary objective should be education. We therefore respect all local laws regarding compulsory school attendance and do not hire children under the legal age for employment in any location. Our Worldwide Purchasing Policy [700/740.html] prohibits our suppliers and their subcontractors from using child labor in the supply of goods or provision of services when under contract with GM.

#### Forced Labor

The decision to seek employment is voluntary, and we do not condone involuntary servitude in any form. Our Worldwide Purchasing Policy prohibits the purchase of goods produced with the use of forced or slave labor. This policy applies to our global operations and to all of our joint ventures.

#### Freedom of Association

As part of our corporate policy, we respect the right of all employees to choose union membership. This concept is outlined in the Global Sullivan Principles, and we have specifically endorsed respect for the voluntary freedom of association. We comply with all laws covering the right of employees to organize for purposes of collective bargaining and encourage employees to support or oppose union membership without fear of coercion or retaliation from GM, any individual, or external organization.

#### Grievances and Complaints

Grievances or complaints by represented employees (generally hourly but may also include non-managerial salaried in some countries) are handled according to the procedures specified in the applicable national and/or local collective bargaining agreements. Procedures for non-represented (typically salaried) employees generally differ from those established for represented employees. For U.S. salaried employees, we manage complaints

according to the Open Door Policy, detailed in 'Working with GM'. This helps ensure open communication with management when employees have a question, concern or complaint about any aspect of their employment.

In 2003, there were a total of 87 Open Door cases. In 86 of the cases, management's initial position was upheld while in the remaining case management's position was overturned. The table below provides a breakdown of the 87 cases by issue:

2003 Open Door Cases by Issue	
Issue	No. of Cases
Discharge/Final Release	53
Performance	4
Discipline	5
Demotion	2
Compensation	4
Job Transfer	3
Harassment	7
Miscellaneous	9

#### Compliance with Policies

Within GM, local management representatives are ultimately responsible for compliance with GM policies and the benefits of being recognized as a good corporate citizen are well understood. GM's internal 'Winning with Integrity' document and the Global Sullivan Principles have been communicated throughout GM globally and serve as a guidelines for conduct. We have a number of initiatives in place to address challenges including supporting indigenous rights and the GM AwareLine.



# Economic Performance

## Labor Force

### Indigenous Rights

GM employs the most qualified individuals for the position to be filled, which includes indigenous executives in decision-making capacities.

### GM AwareLine

We have a 24-hour toll-free telephone line available globally seven days a week. The GM AwareLine allows employees to anonymously report concerns such as possible criminal wrongdoing by the company, management, supervisors, employees or agents; actions believed to be contrary to corporate policy; emergency or life-threatening situations; or allegations of harassment. Our business units worldwide have customized this reporting process to meet local language and cultural needs. Operations that choose not to use AwareLine because of legal or cultural reasons must implement an alternate, approved process. Currently the GM Awareline, or an alternative process, is available in 53 countries worldwide.

All Awareline complaints are investigated and closed as appropriate. Based on the type of complaint, global security or the local human resource representative is responsible for conducting follow-up activities. This closure normally occurs within 60 days from the date of the complaint.

The Awareline receives a high-level of attention within GM Management. Complaint statistics and trends are reviewed quarterly with the Individual Respect and Responsibility (IRR) team and annually with the IRR Governance Board and the GM Board of Directors.

During the past two years, Awareline complaints have decreased within each of the complaint types, as set out in the table below. It is felt that the reduction in numbers is attributable to a corresponding decrease in incident occurrence. This decline has been validated by concurrent decreases in related complaints, such as grievances and complaints to outside agencies.

Complaint Type	2003	2002
Discrimination	17	46
Employee Workplace Issues	534	806
Harassment	33	61
Personal Threats	36	39
Safety	23	49
Sexual Harassment	22	23

# Economic Performance

## Regional Contribution

### Overview (GRI 3.17, EC13)

Around the world, the auto industry is a powerful engine of economic growth. It employs large numbers of skilled people. It creates significant numbers of supplier jobs and has a large economic multiplier effect. It invests in state-of-the-art capital equipment, is a significant developer of new technologies and is a large consumer of innovations from other sectors. For these reasons, many countries endeavor to create public policy frameworks to attract automotive jobs and investment and position their domestic manufacturers favorably.

### Selected Auto Industry Facts:

- Transportation in total supports 1 in 12 U.S. jobs (U.S. Department of Transportation)
- Together with DaimlerChrysler and Ford, we spend over \$16 billion on research & development each year, more than any other U.S. industry (Wards Motor Vehicle Facts & Figures 2001, National Science Foundation)
- In Western Europe, the auto industry contributes about 6% to total manufacturing employment and 7% of manufacturing output
- Currently in Brazil, for every one job in auto assembly there are 3 jobs upstream in supplier industries and 15 jobs downstream in sales and servicing, a total of 19 jobs in the economy.

### Our Priority

In our view, our first priority is to build and maintain a healthy and sustainable business. In so doing, we not only benefit our direct stakeholders – our shareholders, employees, dealers, suppliers and retirees - but we also create value in the community with respect to job creation, an enhanced tax base, increased consumer spending, and the ability to finance and support environmental, educational and social initiatives. As a general rule, businesses, in their pursuit of profit, make many important contributions that

benefit society and that contribute to improved standards of living, including:

- Job creation and promotion of economic growth
- Development of new technologies
- Education and skills training
- Infrastructure support
- Support of community initiatives (through philanthropy and volunteerism).

General Motors is an economic and technological leader around the globe. In both developed and developing economies, we are working on a full range of important issues including improving automotive safety, reducing emissions, enhancing the skills and the education and training of workers, and generally contributing to economic growth and development.

### A Role Model

In our operations around the world, GM promotes ethical and responsible business behavior, as well as integrity, diversity, teamwork, trust, mutual respect, open communications and innovation. In addition, GM has identified defined principles to govern our worldwide operations and establish fundamental standards of corporate responsibility. These include both the Global Sullivan Principles (GSP), which call on the company to obey all laws, protect the environment, pursue pollution prevention and promote sustainable development in all facilities and activities around the globe, as well as GM's own "Winning With Integrity" and Environmental Principles. Using our values and principles as our guide, GM endeavors to lead by example. For example:

- We believe our strict compliance with local laws promotes the rule of law in developing regions such as Latin America and Asia. Over the past year, GM sponsored a seminar on the rule of law in Shanghai, China to help build knowledge in this area.

# Economic Performance

## Regional Contribution

- Around the world, in the U.S., Germany, Brazil, China and every other country, GM relies on employees' input as a source for new and improved business practices and improved quality.
- GM requires suppliers to comply with GM policies and local law relating to environmental practices and prohibits suppliers from using slave and forced labor.
- GM refuses to purchase goods produced with slave or forced labor, and we include in our contracts a clause requiring the seller to declare that goods purchased by GM have not been produced with forced labor - either by the seller or by the seller's supplier.
- GM promotes high environmental, health and safety standards around the world. For example, GM Argentina has developed an Air Bag Safety program to educate rescue workers, police, and public safety officials in Rosario, Argentina. In addition, GM North America provides employee training in 'Safety Practices at Home' and conducts a safe driving campaign to promote the use of seatbelts and defensive driving practices.
- In many areas of the world, GM benefits go far beyond the norms of the local area. For example, in Mexico, GM provides additional benefits that include funeral benefits, a pension program, a food allowance, life and medical insurance and vacation and Christmas bonuses. In Venezuela, GM offers scholarships and textbook support for employees' children, as well as a summer vacation program that includes activities for mothers.
- GM promotes volunteerism, charitable giving and community activism. For example, GM do Brazil provides disadvantaged children with food, school supplies, tutors and after-school programs in computer science, art, music and other subjects. GM do Brazil also donates personal computers, engines and auto parts and business machines to technical schools and charitable organizations.
- On June 28, 2004 The United States and Mexico announced the inaugural Partnership for Prosperity (P4P) Good Partner Award winners at an Award Ceremony and Gala. The 2004 winners are General Motors Mexico and Comercial Mexicana de Pinturas (Consorcio COMEX). The Good Partner Award recognizes the role of the private sector in both countries in advancing social and economic development in Mexico. The Good Partner Awards were presented by U.S. Secretary of Commerce Donald Evans and Mexico's Secretary for Social Development Josefina Vazquez Mota with remarks by Presidents Bush and Fox. GM North America President Gary Cowger and GM de Mexico President and Managing Director Arturo Elias accepted the Award for General Motors.
- General Motors has operated in Mexico for nearly 70 years and GM de Mexico has spearheaded a number of initiatives including The Regional Engineering Centers (TREC), contributing millions of dollars to state-of-the~ art technologies to universities, and it's Technical Education Program that provides distance-learning opportunities. GM received recognition for its efforts to support the development of its supplier chain, special programs for small and minority firms (especially the COMPITE program), and commitments to environmental stewardship.

# Economic Performance

## Regional Contribution

### Investing in China

In 1994, GM first started negotiating with the Chinese government. When we began to see the market potential, the decision to proceed was not a difficult one. China, with 1.3 billion people, could potentially become the world's largest vehicle market. With the Japanese market virtually closed, China was the key to the Asia Pacific region for us - just as Brazil had been in Latin America.

We agreed to build a joint venture technical development center. This was the first time any automaker had invested in vehicle development capability in China. We promoted a regulatory, tax and competition system that allowed the market to determine the winners and losers and the mix of vehicles sold. And, very importantly, we worked with the Chinese government to address enterprises' environmental challenges. We also worked with the Chinese regulatory and safety communities to develop and implement safety standards using the best available technology. All of these efforts helped in the development of a market economy in China, with economic growth now bordering on 10% per year. China's growth has helped generate a resurgence of balanced and sustainable worldwide growth during the past year. Increasing imports, exports of low-priced consumer and manufacturing goods, and rising agricultural and commodities prices are benefiting many resource-rich developing economies. These elements are also a major factor in Japan's recent emergence from a 10-year recession.

### Selected China Facts:

- China is the world's fastest growing economy and the world's third largest and fastest growing vehicle market. Last year, vehicle sales totaled 4.5 million units
- GM expects industry sales to approach seven million units by 2007 - surpassing Japan to become the second largest vehicle market

- Today, GM China has 11,000 employees and operates six joint ventures and two wholly owned enterprises
- Since 1995, GM has participated in investments of more than \$2 billion
- GM has four assembly plants producing Buick, Chevrolet and other nameplates, including Chinese ones such as Wuling. Cadillac will soon follow
- GM's sales grew by 70 percent in the first quarter of 2004 and market share grew to more than 10 percent.

# Economic Performance

## Community Investment

### Overview (GRI EC12-13, HR14, SO1)

At GM, we have a long history of giving back to the communities in which we live and work.

We are committed to fulfilling our role as a responsible corporate citizen through support of charitable, educational, scientific and community organizations, primarily in areas where we operate. This is reflected in our corporate relations vision, through our GM business units, and GM employee volunteer activities.

We recognize the importance of enhancing our corporate reputation and relationships in our many communities around the world. We aim to do this by providing employees and non-profit organizations with sustainable philanthropic tools that measurably impact people's needs in GM's communities. Our reputation is impacted every day by what our employees say and do as representatives of the Corporation. As we compete in the global marketplace, managing GM's image at the local level is a responsibility shared by all GM employees. As a result, we promote employee involvement in the community and support these activities.

To ensure continuity of our philanthropic efforts in economic downturns, we established the General Motors Foundation in 1976.

### Objectives

A thriving community is the heartbeat of society. That's why we invest in cultural, economic, educational, environmental and social organizations and projects in the communities where we operate. We support numerous philanthropic causes through the GM Foundation and corporate contributions in the form of cash donations, as well as in-kind gifts and participation in various charity and volunteer events.

Our philanthropic and community relations mission is to ensure that we maintain our position as a valued and responsible corporate citizen through activities that improve the quality of life in our communities and are consistent with our business goals and objectives.

### Actions

Our economic success is inextricably linked with the health and vitality of the communities where we operate. Our decisions about plant sites, employment levels and supplier selection create our most measurable impact on a community. Taxes also support important public services and investments. We also contribute to community life through philanthropic contributions and volunteer efforts.

GM contributes to our communities in a number of different ways:

- [Philanthropy \(see below\)](#)
- [Employee contributions \(see below\)](#)
- [Employee volunteering](#)

### Philanthropy

The GM Foundation was organized exclusively for receiving and administering funds for charitable, educational, scientific purposes and, include the making of distributions to organizations that qualify as exempt organizations under section 501(c)(3) of the U.S. Internal Revenue Code.

The GM Foundation supports many plant-city activities. These initiatives help establish us as a preferred employer and facilitate awareness of local governmental and community matters.

Read the [GM Philanthropic Guidelines >>](#)

# Economic Performance

## Community Investment

### Employee Contributions

Our employees in the U.S. and other countries can make direct payroll contributions to the United Way or other not-for-profit organizations, such as The Nature Conservancy, Mothers Against Drunk Driving (MADD), or The Marrow Foundation.

We are at the forefront of applying modern technology to philanthropy. We have provided web-based applications for employee contributions for the annual U.S. GM/UAW Charitable Giving Campaign, as well as the GM Matching Contributions Program. In addition, employees and others outside of GM can make donations for disaster relief efforts through our GM Global Aid website.

### Employee Volunteering

GM employees can feel proud of helping others while raising valuable money for their organizations of choice, thanks to GM's Volunteer PLUS International program. Through a philosophy of "personal time, personal choice," the program actively encourages and supports employee volunteerism in GM communities around the world. When GM employees volunteer 50 or more hours with a non-profit group, the GM Foundation makes a community contribution of \$250 to the non-profit charity on behalf of the employee through a strategic partnership with United Way International.

By investing personal time and talent through generous, extraordinary gifts of service, GM employees have generated grants exceeding more than \$1 million over the past five years. This year, the program is being targeted to expand from existing locations in Canada, Colombia and the United States. New locations will include Argentina, Brazil, Chile, Germany, Kenya, Poland, South Korea, the United Kingdom, and Venezuela.

### Performance (GRI EC10, LA8)

In 2003, GM and the GM Foundation contributed nearly \$73 million to charitable causes through cash contributions, in-kind donations and participation in charity events. We typically donate products, components and other equipment to a variety of universities, colleges, vocational schools, secondary schools and correctional institutions with automotive service or engineering programs. We also donate non-product equipment and real estate to selected non-profit charitable institutions in the communities in which we operate. In addition, we participate in numerous charity events benefiting a diverse group of philanthropic causes and organizations. These contributions reach their target group through the GM Foundation and GM corporate contributions (See table overleaf).

In addition to corporate and Foundation support, the continued outpouring of support from our entire GM family in times of great need is considerable. GM's employees are a diverse group of people who bring a wide array of unique and special talents to our company.

# Economic Performance

## Community Investment

### 2003 Contributions Worldwide

Cash Contributions (US\$ in millions)	GM Corporation	GM Foundation*	Total
Health & Human Services	\$6.3	\$9.2	\$15.5
Education	\$8.5	\$3.0	\$11.5
Civic & Community	\$2.2	\$1.9	\$4.1
Public Policy	\$2.8	\$1.7	\$4.5
Environmental & Energy	\$1.9	\$1.1	\$3.0
Arts & Culture	\$3.9	\$0.9	\$4.8
Other	\$3.5	\$2.9	\$6.4
Total Cash Contributions	\$29.1	\$20.7	\$49.8
In-Kind Donations	-	\$15.1	\$15.1
Total Contributions	\$29.1	\$35.8	\$64.9
Charitable Events	-	\$8.0	\$8.0
<b>TOTAL</b>	<b>\$29.1</b>	<b>\$43.8</b>	<b>\$72.9</b>

\* Includes North American Operations, Europe, Latin America, Africa and Middle East, Asia Pacific, Hughes Electronics Corporation and GMAC Financial Services.

**Note:** Contribution focus area categories may overlap and hence appear to underestimate others, since contributions can only be reported in one category. For example, our environmental education program may be categorized as "education," when it also clearly represents an "environmental" contribution.

This year's initiatives have focused on:

- **Disaster relief (see below)**
- **Civic and community support**
- **Support for education**
- **Support for arts and culture**
- **Support for health**

### Disaster Relief

In times of crises, a community's needs spike sharply, and the response must be swift. Since its inception in 2000, GM Global Aid has facilitated more than \$4 million in donations. The program quickly directs funds from the GM Foundation to those in need and benefits from our national and international units contributing vehicles, supplies and volunteers. An essential component is the **Global Aid** web site, which allows not only our employees, but also others worldwide, to contribute funds to disaster relief efforts, many of which are matched by the GM Foundation.

In 2003, GM Global Aid facilitated the donation of more than \$433,000 to organizations worldwide. These donations included:

- \$200,000 to assist in relief efforts as a result of tornadoes that struck the Kansas City and Oklahoma City areas
- \$100,000 to assist in relief efforts as a result of the extraordinary California wildfires. This contribution included providing support to local food banks and shelters, community foundations, Humane Society chapters, and others actively involved in the relief efforts. In addition to monetary support, a number of Los Angeles-based employees from our Service Parts Operations volunteered their time. Our Western Region also donated two Chevrolet Suburban sport utility vehicles, with a combined value of \$75,000, outfitted with communications equipment, to be used in continuing relief and rebuilding efforts
- \$75,000 to assist with disaster relief efforts in three states and the District of Columbia as a result of damage by Hurricane Isabel



HUMMER



# Economic Performance

## Community Investment

- \$35,000 to assist with flood-relief efforts in Guanajuato, Mexico. This included contributions to assist with re-supplying local schools with needed educational materials and supplies

### Civic and Community Support

The GM Foundation supports organizations that strengthen community awareness and improvement. In 2003, the combined contributions from the GM Foundation and GM totaled over \$4 million for civic and community efforts.

In 2003, Habitat for Humanity International and GMAC Financial Services partnered to build affordable homes for families in 17 states and four Canadian provinces. GMAC regularly works with GM in supporting habitat builds such as townhouses in Gliwice, Poland, in 2000, and a "Spouses of the Executive Branch" build in Washington, D.C.

More than 30 employees from GM Indonesia joined Habitat for Humanity to build four houses for flood victims. Some 50 houses were to be built in the village of Sukatani using funds provided by GM Indonesia and Habitat for Humanity New Zealand. This contribution by GM Indonesia is part of a \$50,000 agreement with Yayasan Mitra Mandiri to implement GM Cares, a community program created to assist underprivileged residents living in the vicinity of GM Indonesia in Bekasi.

### Support for Education

During 2003, we continued relationships with universities through our Key Institution Program, which is made up of schools selected primarily for the quality of their engineering and business programs. Educational contributions totaled more than \$11.5 million in 2003, with approximately 80% directed to science and engineering and much of the remainder supporting business education. This support has been primarily in the form of cash grants and equipment donations.

GM has consistently been a leader among contributors to education, both in terms of financial support and the quality of the programs receiving support.

The GM Matching Contributions Program continues GM's support for education and learning by matching employees' contributions to a variety of eligible institutions. Within Program guidelines, the GM match doubles employee gifts, significantly increasing the impact on the recipients. In 2003, we matched more than \$750,000, representing more than 2,702 employee contributions to 426 accredited degree-granting institutions and libraries.

We also provide direct support to students. In 2003, we granted 1,000 scholarships, totaling more than \$2.1 million to outstanding engineering, environmental, public policy and business students. In addition, many participating students completed summer internships at our facilities.

The PACE Partnership links GM, EDS, Sun Microsystems, and UGS in the support of strategically selected academic institutions worldwide, to develop the automotive product life-cycle management skills of the future. In PACE's expansion of its commitment to education, these companies are joined by six other hardware, software and service companies to provide products and services that support the integration of math-based technologies into higher education curricula. As of the end of 2003, the program had provided a combination of in-kind and cash contributions with a total commercial value exceeding \$2.1 billion to 26 PACE institutions globally.

### Support for the Arts and Culture

For many years, the GM Foundation has been a major contributor to a variety of arts and cultural institutions. The GM Foundation continues to support these organizations to promote appreciation of the arts, recognition of diverse cultures

# Economic Performance

## Community Investment

and awareness of arts in education programs. In 2003, GM and the GM Foundation contributed more than \$4.8 million to a diverse group of these organizations.

Few people ever get a glimpse of the GM Design Center in Warren, Michigan. But now, GM has opened the center to the public for the sake of art. The GM Design Center Gallery welcomed local artists and their work with an exhibit of fashion and architecture photography and abstract furniture designs. The exhibit demonstrates GM's commitment to the arts and gives design employees a more creative working atmosphere. It is open by appointment only.

### Support for Health

#### Cancer Research

Cancer research remains one of our key philanthropic priorities, and this year marks the 26th anniversary of the GM Cancer Research Foundation (GMCRF) Awards. We established the GMCRF in 1978 to honor scientists worldwide who have been selected by their peers for hallmark achievements in research on the causes, prevention and treatment of cancer. The awards, valued at \$250,000 each, are considered among the most prestigious in medicine. Eleven of the GMCRF award winners have subsequently won Nobel Prizes for medicine. The GM Foundation contributed more than \$2 million to the GMCRF program in 2003 and has contributed more than \$50 million to cancer-related endeavors since its inception. The program is open to members of the 36 Comprehensive Cancer Centers designated by the National Cancer Institute.

#### HIV/AIDS

In 2003 GM continued its sponsorship of an HIV/AIDS awareness and education campaign in support of "A Closer Walk," a powerful documentary film that explores the global implications of the HIV/AIDS epidemic. This film represented an historic opportunity to engage the general public in the battle against AIDS. The

film reveals the devastation AIDS has caused around the globe, including in Africa, the Ukraine, the Caribbean, India and in the U.S. heartland. In the awareness and education campaign promoting the film, GM partnered with the William and Melinda Gates Foundation, the Elizabeth Glaser Pediatric AIDS Foundation, the American Foundation for AIDS Research (AMFAR), the Academy of Friends, the Asia Society, UNDP, UNAIDS, and the Global Health Council.

- Theatrical premieres and previews were held in Los Angeles, Kansas City, Washington, Pittsburgh, New York, Johannesburg, New Delhi and Kiev. The Asian premiere was held on July 14, 2004 at the XVth International AIDS Conference in Bangkok with GM as a sponsor. Over 30,000 people participated in this important event.
- Hundreds of grassroots screenings have also been held globally, sponsored by AIDS organizations and NGOs in more than 30 countries, involving community, church and civic groups, United Nations and related agencies, US Embassies and consulates. The UNDP distributed 5,000 copies of the film (with Ukrainian subtitles) in the Ukraine as the basis for a large-scale education and information program.
- Pilot screenings have also been held on college campuses and high schools in the U.S., India, South Africa and Ukraine.
- The film also has been shared with government officials in the U.S., South Africa, India, Ukraine, Nigeria and China, as well as with five thousand political and business leaders through Global Business Coalition on HIV/AIDS.
- More information is available on [GMability>>](#)

Supporting "A Closer Walk" is just one of the ways GM is working to educate, and prevent the spread of HIV/AIDS globally. In addition:



# Economic Performance

## Community Investment

- Our Asia Pacific (GMAP) operations are in the process of implementing a program that will ensure a policy of nondiscrimination and support for employees living with HIV/AIDS as well as invest significant resources in prevention to reduce the incidence of HIV/AIDS in employees, their families and the communities in which GM operates and sells its products. Locations, which have, or soon will have, programs include: Halo, India, which employs 600 people; Jakarta, Indonesia, which employs 500 people; and China, which employs 9,000 people.  
Read more on the official [World Economic Forum web site >>](#)

Our Thailand operations will shortly be presented with the ASO Award Gold Certificate - the highest award to be presented, for our work and support of HIV/AIDS.

- We operate employee and community outreach programs in South Africa, Kenya, Thailand and India and are rolling out this program throughout the rest of its Asian operations, providing employees with education, counseling, access to medical services, and treatment tailored to national and cultural sensitivities
- We support community initiatives such as HIV/AIDS awareness training at health centers and high schools in India
- We have provided HIV/AIDS awareness training for 3 high schools in Chonburi Province, Thailand, in 2003
- We support an orphanage in Thailand that takes care of over 500 children of AIDS patients and those that have succumbed to the disease
- We have donated five new trucks that allow the Nelson Mandela Children's Fund in South Africa to help HIV-positive children
- We fund an AIDS Hotline and educational initiatives in Thailand. GM Thailand was honored for its HIV/AIDS program by the Red Cross of Thailand and the Thai Royal Family

# Environmental Performance

## Overview

Protecting the environment is one of our most important priorities. Our formal commitment to a safe and healthy environment dates back more than three decades. In 1991, we strengthened our commitment with the adoption of the [GM Environmental Principles](#), which apply worldwide.



The GM Powertrain plant in Massena, New York.

This section has been developed according to the guidelines for reporting environmental information under the global reporting initiative (GRI). It includes information regarding how we manage the environmental dimensions of our business and how we shape our approaches for maintaining leadership as an environmentally responsible corporation. You will also find information relating to our operations around the world, including manufacturing, administrative functions and parts operations.

Specific to the data cited throughout the sections, energy and water cover all manufacturing and non-manufacturing operations, totaling 155 facilities. The environmental management information (i.e. ISO 14001) relates to our 119 manufacturing facilities, for which we require a formal environmental management system. All other regional data specify the number of facilities included in their totals.

Environmental information regarding our products can be found in the [Our Products](#) section.

- [Management Systems](#)
- [Supplier Management](#)
- [Energy](#)
- [Water](#)
- [Waste and Recycling](#)
- [Emissions to Air](#)
- [Greenhouse Gases](#)
- [Land Use, Biodiversity & Cleanup](#)

# Environmental Performance Management Systems

## Overview

Managing the environmental dimensions of our business is an important priority, involving managing risks and liabilities, reducing costs, creating a safer and healthier work environment and being a responsible member of our communities. Our Environmental Principles, which apply to our operations worldwide, provide guidance to GM personnel for the integration of responsible environmental practices into our business. We require an environmental management system for all of our manufacturing facilities (119 sites) and also require our Tier-one suppliers conform to the ISO 14001 Environmental Management System standard.

This section is split into three main areas:

### Principles and policy (see below)

### Management

### Organization

## Principles and Policy (GRI 3.14)

The GM Environmental Principles, adopted in 1991, apply to our facilities, products and employees worldwide, and provide guidance in the conduct of daily business practices. Each of our plants have local environmental guidelines that build on and implement GM's Environmental Principles.

As a responsible corporate citizen, General Motors is dedicated to protecting human health, natural resources and the global environment. This dedication reaches further than compliance with the law to encompass the integration of sound environmental practices into our business decisions.

The following environmental principles provide guidance to General Motors personnel worldwide in the conduct of their daily business practices.

- *We are committed to actions to restore and preserve the environment.*
- *We are committed to reducing waste and pollutants, conserving resources, and recycling materials at every stage of the product life cycle.*
- *We will continue to participate actively in educating the public regarding environmental conservation.*
- *We will continue to pursue vigorously the development and implementation of technologies for minimizing pollutant emissions.*
- *We will continue to work with all governmental entities for the development of technically sound and financially responsible environmental laws and regulations.*
- *We will continually assess the impact of our plants and products on the environment and the communities in which we live and operate with a goal of continuous improvement.*

### Environmental Performance Criteria (EPC)

The General Motors Environmental Principles outline our commitment to responsible environmental management worldwide. We have also developed the General Motors Environmental Performance Criteria (GM EPC), which support the consistent implementation of our Environmental Principles across the globe.

The GM EPC were developed by our Global Environmental Issues Team (GEIT), to address common environmental issues that effect GM facilities worldwide and to develop common global strategies that are consistent with our Environmental Principles. The GEIT is composed of representatives from all GM regions - North America, Europe, Asia-Pacific, and the Latin America, Africa and Middle East region.



# Environmental Performance Management Systems

The GM EPC supplement applicable legal requirements by describing baseline performance with desired performance for our facilities.

Wherever possible, we take a precautionary approach to environmental issues relating to our facilities. Our Environmental Principles ensure that we consider environmental issues in all that we do, and our Environmental Performance Criteria ensure that a base level of environmental performance is achieved regardless of where our operations are located.

## CERES Principles

Our Environmental Principles have been endorsed by the Coalition for Environmentally Responsible Economics (CERES). GM was the first Fortune 50 manufacturing company to endorse the CERES Principles in 1994. The Principles, developed by CERES, are a 10-point code of environmental conduct promoting continuous environmental improvement. We engage with CERES and their members in dialogues of mutual interest and concern. We appreciate their input, including their annual review of this Corporate Responsibility Report.

CERES is a leading coalition of environmental investor and advocacy groups working together towards a sustainable future. More information on CERES and the CERES Principles is available at [www.ceres.org](http://www.ceres.org).

We are grateful to CERES for having reviewed and offered their comments on this report.

## Environmental Policy

The GM Environmental Principles form the bedrock for all individual facility environmental policies around the world. The environmental policy acts as the driving force for implementing and improving a facility's environmental management system.

Each GM plant has a set of environmental guidelines that:

- are appropriate to the nature, scale and environmental impacts of the organization's activities, products or service
- include a commitment to continual improvement and prevention of pollution
- include a commitment to comply with relevant environmental legislation and regulations and with other environmental requirements
- provide the framework for setting and reviewing environmental objectives and targets
- are documented, implemented and maintained and communicated to all employees
- are available to the public

## Measuring our Global Performance

It is our policy to assess and report our global environmental performance where possible. Our Global Environmental Metrics Team, made up of employees from operating units worldwide, and our Global Environmental Issues Team agreed on a common set of metrics for all of our facilities in 1999. The metrics cover parameters for energy use, water use, waste, and certain air and water emissions.

We publish our global performance data against four of the metrics. These are:

- **Energy use**
- **Water use**
- **Greenhouse gas (ghg) emissions**
- **Recycled and non-recycled waste**

This global reporting process involves 155 facilities in many countries with different cultural and regulatory environments, where regional differences in definitions, terminology, and calculation methods pose challenges. However, we strive to ensure the accuracy of the reported data and will continue to refine the data management processes to provide further quality assurance.



# Environmental Performance Management Systems

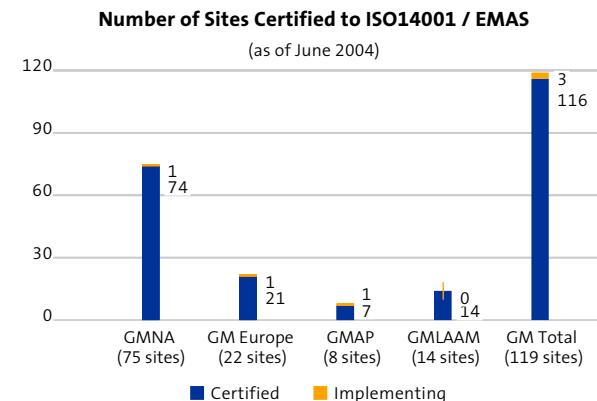
## Management

(GRI 3.16, 3.20, EN13, EN16, SO4, PR6)

**Environmental Management Systems**  
All GM manufacturing facilities around the world have implemented an environmental management system (EMS). We have developed a specific GM EMS, which combines elements specified by the environmental management standard ISO14001 and elements that are specific to GM operations. Our overarching management system is designed to drive performance in line with legal requirements, site-specific objectives and targets, and corporate and sector policies and strategies. It provides a common framework for GM units to understand how their activities interact with the environment and to improve management of these activities in an ongoing continuous improvement cycle. Once implemented, a facility's EMS is certified by a third-party accredited registrar in conformance with ISO 14001 or the EU Eco-Management and Audit Scheme (EMAS).

As of June 2004, we have certified 116 of our 119 manufacturing facilities to ISO 14001. The remaining three sites are in the process of implementing an EMS. All new GM manufacturing operations are required to implement and certify their EMS 24 months after the start of production or the date of acquisition by GM.

Maintaining environmental management systems enables us to measure our environmental performance, share knowledge, processes and technologies and to plan and target improvements across our manufacturing facilities. As a result of our commitment to environmental management practices we have improved our environmental performance and reduced emissions and costs.



## Specific Management Programs

In addition to broad environmental management systems, we also use specific management programs for certain issues, including Resource Management and Chemicals Management. Generally, these programs have been developed and widely applied in our North American region, and they are also used in other regions where appropriate.

## Chemicals Management

We continue to expand our chemicals management programs in our facilities to include all indirect chemicals used in the manufacturing process (those not directly involved in producing a vehicle such as cleaning fluids). Chemicals management uses a single supplier to provide non-product-related chemicals at each GM facility. Program activities include chemical process control, process improvements, chemical reuse and recycling. The supplier also provides the chemical data required for regulatory reporting.

These programs offer an average first-year material saving of 20%, with additional savings of three to five percent in the second and third years. Savings come from material conservation and standardization, process optimization, and environmental performance. Other benefits

# Environmental Performance Management Systems

include better quality, throughput and manufacturing efficiency. We recently requested these programs to a new specification that standardized program scopes and administration and supports our strategic environmental and manufacturing initiatives.

We also aggressively advocated the creation of the Michigan Minority Chemical Association (MMCA). This consortium of minority suppliers provides second tier chemicals management products and services. As a result, MMCA's share of Chemicals Management has increased by 67% in 2003.

## Resource Management

This program views waste as a wasted resource and aims to eliminate, reduce, and/or recycle waste as much as possible and dispose of remaining waste efficiently and safely. Under the program, a single contractor manages everything associated with waste generated at a facility. More details on our Resource Management program can be found in the [Waste and Recycling](#) section of this report.

## Employee Training

GM strives to have the best trained environmental engineers in the world. Although most environmental training is facility, country or region specific, GM periodically facilitates global environmental conferences to provide strategic training and guidance to our environmental professionals to ensure they keep pace with evolving environmental issues and best practices.

In the U.S., we have set a goal for all facilities' environmental professionals, their supervisors and managers to become Certified Hazardous Materials Managers (CHMM). The certification requires a relevant degree and three years appropriate experience, or 11 years experience without a degree, and the passing of an Institute of Hazardous Materials Management exam. In order to maintain certification, at least 24 hours

of technical environmental training are required annually. Currently 86% of GM North America environmental professionals have achieved CHMM certification. We conduct similar training programs in Canada, Mexico and China.

In Europe, environmental training is provided for engineers at our International Technical Development Center (ITDC) in Russelsheim, Germany. This training focuses on design for manufacturability and Design for the Environment (DfE), where environmental concerns are dealt with early in the development process.

## Employee Communications

We use numerous methods to communicate information and data to employees. An Internal Communications Strategy Team manages the direction and flow of information and continually evaluates the effectiveness of communications, which include plant and facility newsletters, satellite broadcasts, regional networking meetings and management meetings. The goal is for employees to have access to at least one communication channel each month.

A comprehensive [Worldwide Facilities Group](#) internal web site keeps employees informed about the group's goals and performance. The Environmental Services section offers details about organization, personnel, performance, objectives and lessons learned. Strategic business initiative updates are also available. Sites that have an environmental management system also have their site environmental manual available through their internal intranet sites.

## Legal Compliance

Statutory, regulatory and permit programs administered by various government agencies impose numerous environmental requirements on our facilities and vehicles. For example, a typical automobile/light-duty truck assembly

# Environmental Performance Management Systems

plant in Michigan, USA, is subject to approximately 1,200 such legal requirements. Given these extensive requirements, compliance issues occasionally arise through allegations by government agencies or by private parties, as well as through matters identified by our own audit programs.

	No. of resolved matters	Total value of penalties /fines paid*
Clean Air Act (CAA)	0	0
Clean Water Act (CWA)	0	0
Resource Conservation and Recovery Act (RCRA)	1	\$50,000
Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (other than Superfund)	0	0
Superfund Amendments and Reauthorization Act (SARA)	0	0
Toxic Substance Control Act (TSCA)	0	0
Atomic Energy Act (AEA)	0	0
Occupational Safety and Health Act (OSHA)	0	0
Hazardous Material Transportation	0	0
Total Value	1	\$50,000

\* Penalties or fines paid may be for matters commenced in prior year(s). These figures include payment of penalties/fines for actions under corresponding state statutes.

Each instance of alleged non-compliance is treated seriously. These actions are often settled, even though we may not agree that a violation has occurred. In these situations, we do not admit liability, but settle the matter if we determine it is preferable to litigation. Administrative and judicial matters in the U.S. resulting in the payment of a fine or penalty greater than \$25,000 in 2003 are reported in the table left.

Outside the United States, individual facilities manage compliance with local regulations, generally through their environmental management systems.

## Accidental Releases

We track oil and chemical spills and non-routine air emissions above reportable quantities. The table below shows spills and non-routine air emissions above federal reportable quantities for U.S. and Canadian plants, as defined by the Environmental Planning and Community Right to Know Act (EPCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Reportable releases from these facilities have steadily declined and have remained at zero for the third consecutive year.

Year	Land/Water	Air	Total
2000	0	1	1
2001	0	0	0
2002	0	0	0
2003	0	0	0

## Awards and accomplishments

Every year, various GM operations receive awards recognizing our commitment to environmental stewardship. It is an honor to have our hard work and our achievements recognized by others. For more information on GM's environmental awards, visit [www.GMability.com/environment](http://www.GMability.com/environment).

# Environmental Performance Management Systems

## Organization

### Energy and Environmental Strategy Board

The Energy and Environmental Strategy Board (EESB) is responsible for developing our global energy and environmental strategy. Accountable to the [Automotive Strategy Board](#), which is responsible for the global strategic direction of our automotive business, EESB members include senior leaders from Communications, Engineering, Powertrain, Worldwide Facilities/Manufacturing, Public Policy and Legal, and R&D and Planning. Specifically, the EESB:

- Establishes targets for energy and environmental objectives
- Approves energy and environmental initiatives
- Reviews environmental performance against a set of established metrics
- Manages the overall implementation of the energy and environmental strategy
- Champions actions that lead to progress toward GM's energy and environmental goals

### The Energy and Environmental Strategy Core Team

The EESB provides guidance and support to the Energy and Environmental Strategy Core Team, a team of 'subject matter' experts that support the following energy and environmental strategic initiative teams:

- Vehicle Energy
- Vehicle Emissions
- Vehicle Fuels
- Design and Manufacture for the Environment
- Facilities Environment (see below)
- Facilities Energy
- Vehicle Pass-by Noise

Subject matter experts from Communications, Public Policy and Legal functions and other staff areas as required also support these strategic initiative teams.

### Worldwide Facilities Group (WFG)

The WFG manage the operational aspects (i.e. environment, energy, other facility) of our manufacturing facilities around the world. The EESB sets our energy and environmental strategy, which the WFG then puts into practice at our sites. Working under the WFG are the Environmental Services and Energy & Utilities Services Groups.

The WFG oversees a number of other teams involved in our global environmental management. Under the coordination of the WFG Environmental Services Group are the Global Environmental Issues Team (GEIT), which is responsible for implementing common environmental policies for our operations around the globe, and the [Supplier Environmental Advisory Team](#), which works with suppliers to improve environmental performance.

The WFG Energy & Utilities Services Group coordinates the Global Energy Team (GET), which is responsible for energy and water management around the world. The GET, which meets quarterly, is made up of representatives from each of our business regions. Its objectives are to establish common goals, monitor progress and share best practices across our global operations. During 2001, the team established a global target to reduce energy use by 10% by 2005 from a 2000 baseline. More details on performance against this target can be found in the [energy section](#) of this report.



# Environmental Performance Management Systems

## GM2100

In 2003, the GET launched a new Internet-based solution for managing our worldwide utilities data. The system, called GM2100, is used to receive, validate and store data for utilities use, such as gas, electricity, water and steam. The system verifies utility billing accuracy against internal meter readings and helps GM users globally to monitor and manage utility usage and cost through a variety of common tools and reports.

In addition to the two-layered accuracy that comes from using both bill and meter reading data, the GM2100 system provides utility and related information instantly to its users through the Internet regardless of geographical, time-zone or language barriers. In addition, standardized reporting allows information to be viewed for multiple sites and be easily understood, without the need to decipher information provided in different ways from different facilities. By storing utility invoices, the system provides accuracy, certainty and facilitates enhanced decision making related to utility use.

GM is in the process of initiating this system across multiple sites around the world. Across our regions, GM's Energy and Utility Services Group is actively training all facilities to learn how to effectively populate the system. The benefit of the GM2100 system is that there are multiple levels of checks and balances on all sources of data. So in the case where one data source is not available, the other is used. This process provides a more complete picture of our global utility use.

# Environmental Performance Supplier Management

## Overview (GRI EN33)

Our environmental principles state that we are committed to reducing waste and pollutants, conserving resources, and recycling materials at every stage of the product life cycle including the parts that go into our vehicles. We encourage our suppliers to improve their environmental management systems (EMS) to help minimize the environmental impact of their parts production.

## Requirements

Our suppliers are expected to comply with all federal, provincial, state and local environmental, health and safety regulations. Development and implementation of a sound EMS should help suppliers comply with applicable legal requirements and proactively manage their environmental issues. The International Organization for Standardization (ISO) has developed a comprehensive model EMS designed to help management of environmental issues. GM requires its suppliers to conform to the ISO EMS, which is known as ISO Standard 14001.

At GM, we are seeking to extend our commitment to continual environmental improvement throughout our value chain. All of our direct product suppliers - those that supply parts for use in the vehicles we produce - are required to have EMS in place for all of their manufacturing facilities that supply GM. To reinforce the priority placed on the environment, we monitor suppliers' conformance to ISO 14001 through our sourcing process. Since December 31st 2002, suppliers must demonstrate conformance with the EMS standard in order to be included in bid lists, and must provide proof of ISO 14001 certification or a plan implementing the ISO EMS.

Our **environmental requirements of suppliers** and a number of other resources are available on our dedicated supplier website, [www.GMSupplyPower.com](http://www.GMSupplyPower.com).

## Actions

### Challenges

We require our direct product suppliers - those that provide parts that are used in the vehicles we make - to be certified to or self-declare conformance to an EMS. We encourage our suppliers to find the appropriate balance between environmental performance and other purchasing considerations such as price, quality of parts, and reliability of supply.

### Opportunities

Not only do environmental measures taken by suppliers help lower the environmental impact of vehicle production, environmental advances in vehicle parts themselves also help reduce the lifetime environmental impacts of our vehicles.

More information about how we manage the environmental impacts of our products, such as design issues or end of life vehicles, can be found in the **Product section** of this report.

To meet these challenges and realize the opportunities, we set up a Supplier Environmental Advisory (SEA) Team in 1998 and were founding members of the **Suppliers Partnership for the Environment**.

### Supplier Environmental Advisory Team

The Supplier Environmental Advisory (SEA) Team is made up of nine suppliers and representatives from Worldwide Purchasing, Research and Development, Engineering, Worldwide Facilities Environmental Services and Public Policy. The SEA Team develops joint efforts to improve environmental performance, and was instrumental in the development of the Environmental Statement of Requirements (ESOR) used during the quoting and purchasing process. This document informs suppliers of our environmental requirements related to sourcing vehicle parts. The ESOR is available to suppliers through the GMSupplyPower web site



# Environmental Performance Supplier Management

([www.gmsupplypower.com](http://www.gmsupplypower.com)) and includes the following information:

- **GM's policy on ISO 14000 for suppliers**
- **TMC 003 - MSDS (Material Safety Data Sheets)**
- **IMDS (International Material Data System)**
- **PMRv process (Productive Material Review)**
- **GM 1738 - North American Containerization Guidelines**

## Regional Performance

### GM North America

#### Suppliers Partnership for the Environment

The Suppliers Partnership for the Environment (SP) is an innovative partnership between automobile manufacturers, their suppliers and the U.S. Environmental Protection Agency (EPA). GM led the formation of SP following the success of the Greening the Supply Chain pilot with our Saturn brand. The goal of the Partnership is to improve environmental performance while providing value throughout the automotive supply chain. Membership is open to all automotive companies and provides a forum for suppliers of all sizes to work together, learn from each other and share environmental best practice.

SP has workgroups concentrating on specific tools to help suppliers improve their environmental performance. The workgroups include:

- **Design for the Environment** - Examines the range of sustainability issues within the automotive industry and how they can be translated into business value along the supply chain. The current focus is on packaging issues and life cycle methodology.
- **Environmental Performance Metrics** - Develops methods for measuring improvement in both business and environmental performance of suppliers and manufacturers.

- **Energy Optimization** - Develops recommendations for how to reduce energy consumption as well as how to improve the understanding of the possible long-term effects of economic growth and other human activities on the climate system; demonstrate that Energy Reduction = CO2 Reduction = Cost Reduction.

- **SP Technical Assistance Workshops** - Development of the National Institute for Standards and Technology - Manufacturing Extension Partnership (NIST-MEP) workshop format to train subject matter experts (SMEs) on business value integrating environmental issues into lean manufacturing and business processes. Implement workshops for SMEs in the automotive sector.

Detailed information on the Supplier Partnership for the Environment can be found at [www.supplierspartnership.org](http://www.supplierspartnership.org).

### GM Europe

Since 1998, expert teams from Opel and eight suppliers have met to analyze supplier relationships and determine ways to improve cooperation on environmental issues. Opel and Vauxhall require Europe-based suppliers to obtain certification to ISO 14001 or the EU Eco-Management and Audit Scheme (EMAS), or submit a relevant company self-declaration. Implementation of the ISO or EMAS EMS assists suppliers in reducing their environmental expenses and enhancing their ecological performance.

#### Close Cooperation Starts Early On

Opel relies on suppliers to provide top quality parts. Our suppliers have in-depth technical expertise to address customer product expectations and complex governmental product regulations. Opel's supplier partners often make valuable contributions at very early stages of development of a vehicle.



# Environmental Performance

## Supplier Management

This is the case, for instance, where Opel needs to hasten the introduction of new materials. In their endeavors to create close-looped material cycles by releasing recycled materials for use in new vehicles, Opel engineers go to supplier sites to get a realistic idea of sample material or component production. Among others items, they verify compliance with specified assembly times and make sure fluctuations in recycled material batches are minimized. It is frequently the suppliers themselves who suggest materials for recyclability testing. Opel acknowledges its suppliers' contributions at its annual "Supplier of The Year" event.

### **Supporting Smaller Suppliers at Vauxhall, U.K.**

Vauxhall recognizes that achieving ISO 14001 certification status can be a challenge for smaller companies. To assist small-to medium-sized enterprises (SMEs), Vauxhall supports a Department of Trade and Industry DTI-sponsored program called Project Acorn. Operated by the British Standards Institute (BSI), the scheme provides training and partial funding to SMEs wishing to implement environmental management systems.

The scheme has two levels, fast track and non-fast track. Vauxhall intends that fast-track suppliers achieve an EMS, equivalent to ISO 14001, within one year. This is achieved through training classes offered in "manageable steps." Non-fast track aims to achieve this level within two years, for a reduced fee.

Currently, Vauxhall has nominated 25 companies, with five signed up for the fast- track plan. This helped to achieve the objective of ensuring all suppliers have a certified EMS in place by the end of 2003.



# Environmental Performance

## Energy

### Overview (GRI EN4, EN18-19)

We use a variety of sources of energy in our operations, including electricity, natural gas, oil and coal. When fossil fuels are burned, CO2 (carbon dioxide), a greenhouse gas, is released. Our focus is to achieve energy reductions through implementing energy efficiency strategies, and we involve our employees as key contributors to GM's progress.

Energy use is also a contributing cost in vehicle manufacturing and we spend in excess of one billion U.S. dollars on energy each year. The combination of cost and environmental aspects makes energy efficiency extremely important to us, and we focus on saving energy at all levels of the organization.

The Energy and Utility Services Group (EUSG) is part of the **GM Worldwide Facilities Group** and coordinates the management of GM's global energy usage.

#### Our energy strategy is based on:

- Setting aggressive energy reduction targets
- Monitoring and obtaining accurate energy data
- Benchmarking our facilities
- Developing robust action plans to achieve energy conservation and energy efficiency
- Committing resources to energy reduction and adopting best practice
- Engaging our employee base in taking the small steps within everyone's power to conserve energy
- Recognizing significant achievements at all levels.

#### Significant global achievements in 2003 include:

- A 3.7% reduction in energy use in 2003 compared to 2002
- Our progress to meet our target to reduce energy use by 10% by 2005 from a 2000 baseline, to date we have achieved a 9.1% reduction since 2000

### Objectives

Our Global Environmental Issues Team (GEIT) is responsible for implementing our global energy strategy. This team drives strategies to reduce energy use and costs. The GEIT is composed of regional energy managers from GM North America (GMNA), GM Europe (GME), GM Latin America, Africa and the Middle East (GMLAAM) and GM Asia Pacific (GMAP). The team is coordinated by GMNA and meets on a quarterly basis.

#### Global Target

During 2001, the team established a corporate energy use target to reduce energy use by 10% globally by 2005 from a 2000 baseline, and the energy performance section outlines progress towards this target. We also have global CO2 reduction targets, which are discussed in the **greenhouse gas** section of this report.

#### GM North American Target

Our North American region maintains its own separate regional target to reduce energy use. GMNA is aiming for a 25% reduction in energy use by 2005 from a 1995 baseline. Considering that approximately 80% of our operations are located in the GMNA region, this regional target will have a significant effect on our energy reduction globally. GMNA operations also establish year-to-year targets to drive energy conservation and reductions even more aggressively. Progress against these targets is monitored at the plant level.

Read more on **GM North America's energy performance >>**



# Environmental Performance

## Energy

### Actions (GRI EN17)

#### Global Data

Collecting standardized energy data for 155 facilities around the world poses significant challenges due to regional, technical and cultural differences. We have been collecting global energy data since 1999 through various data gathering systems. To improve the quality of these data and the efficiency of its collection, we have implemented a common utility information system across all our facilities. The system, called **GM2100**, began tracking all global utility information in 2003.

#### Energy Efficiency

Strategies to reduce facility energy consumption involve optimization of manufacturing processes such as vehicle painting, and optimization of our powerhouses as well as plant-level initiatives.

#### Plant-level Initiatives

An example of plant-level action relates to our paint shops. Paint shops use more than one third of all energy at GM. Because of their complexity it has traditionally been considered too difficult to shut down paint operations for short periods, such as weekends. We have now, however, implemented weekend paint shop shutdowns at all GM facilities resulting in major energy savings. An average assembly plant is saving eight to ten percent of the energy consumed by implementing this paint shop initiative. Further examples of energy initiatives include:

- Installing common energy management and control systems for lighting, heating, ventilation and air conditioning
- Improving compressed air systems and reducing compressed air pressure
- Shutting down equipment during non-production times.

#### Plant-level Energy Sufficiency Plans

Energy sufficiency plans involve individual employees taking responsibility for energy conservation in their own work area. These plans give detailed procedures for turning off equipment, lights and other machinery, as well as identifying leaks, such as compressed air, for each area of a plant. Each entry in a sufficiency plan lists the individual who is responsible for turning off a particular piece of equipment and the expected savings. With individual operators being involved at this level, the plans are very successful in shutting down equipment and lights that are not in use and help to save energy.

The Energy and Utility Services Group (EUSG) leads the program by providing support for employee training, savings calculations and performance monitoring. Monthly meetings between the EUSG and Plant Management, reviewing performance and energy trends, ensure the success of this program. The Worldwide Facilities Group is making significant progress in establishing energy sufficiency plans for our operations with plans established for GMNA and GME by the end of 2003.

#### Voluntary Energy Programs

We believe that participation in voluntary measures with government agencies, such as the U.S. Environmental Protection Agency (EPA), is an effective way to drive change and efficiency improvements. We are involved in many voluntary energy programs aimed at reducing the environmental impact of our energy use.

Though the examples shown below focus on U.S. programs, the lessons learned are being implemented across GM's global operations.



# Environmental Performance

## Energy

### EPA Green Lights Program

As part of our participation in the U.S. EPA Green Lights Program, we have completed lighting improvements at most of our assembly plants. Ten plants received EPA Green Lights certification by the end of 2003. We expect to have ten more assembly plants certified by the end of 2004. Similar programs are being implemented in Mexico and Canada to achieve cost-effective lighting system improvements. A typical plant can save 5-10 million kilowatt hours (kWh) per year, or a 3-5% reduction in electricity usage.

### EPA Green Power Partnership

We are a founding partner of the U.S. EPA Green Power Partnership, and have committed to sourcing two percent of the electrical load at our Service Parts Operations from environmentally responsible power sources. In May 2003, greener power generated from landfill gas began flowing to SPO facilities. We receive approximately 12 million kWh of electricity from this source each year.

### EPA Energy Star Program

Since 1999, GM has been involved with the U.S. EPA Energy Star Program to develop energy benchmarks and best practices for automotive plants. GM provides leadership to the Energy Star Auto Focus Group, which is becoming a model for other industries.

### EPA Methane Outreach Program

We participate in the U.S. EPA Methane Outreach Program, a voluntary program to expand the use of landfill gas for plant heating and electrical generation. We have completed four projects to use landfill gas as boiler fuel, with another in progress. This program will result in more than 2% of our total U.S. energy supply coming from renewable energy sources in 2004.

### GLREA educational SolarSchools Program

Our partnership with the Great Lakes Renewable Energy Association (GLREA) leverages the existing GLREA educational SolarSchools Program. DTE Energy developed SolarSchools to promote renewable energy education as a two- to-four week program for grades 4-8 (targeting ages 10-13). The curriculum meets state and federal testing standards and covers several academic areas. It includes workbooks and materials for projects, energy experiments and tests to measure learning. The program has been operating in nine schools in southeast Michigan since 1998 and is in the process of installing solar panels in pre-selected schools that have already integrated the SolarSchools curriculum.

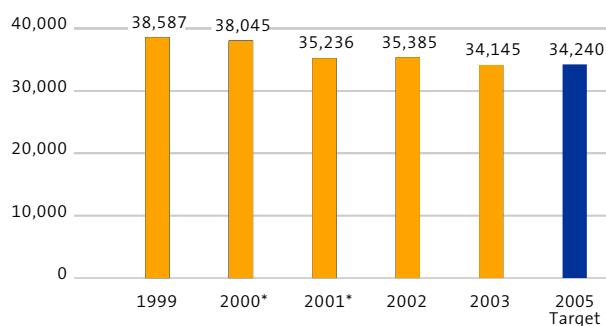
See the full list of voluntary [energy and greenhouse gas programs >>](#)

### Performance (GRI EN3)

In 2003, we consumed 34,146 gigawatt-hours (GWh) (116.51 TBTUs) of energy from various sources including electricity. This represents a 3.7% decrease over 2002 and a 9.1% decrease against 2000. **This level of performance indicates that we are making significant progress in achieving our target of a 10% reduction in energy use from a 2000 baseline by 2005.**

#### GM Global Energy Use

(Gigawatt hours, GWh)



# Environmental Performance

## Energy

### Recognition

GM has received the following awards from the Environmental Protection Agency for continued commitment to the environment:

- The EPA's Landfill Methane Outreach Program awarded GM the 2003 Energy Partner of the Year Award for the use of landfill gas at four U.S. facilities. We are the largest corporate non-utility user of landfill gas in the U.S. and use landfill gas to fuel boilers at our Toledo Powertrain, Orion Assembly, Fort Wayne Assembly and Shreveport Assembly plants. A fifth landfill gas project is underway at the Oklahoma City Assembly plant. In addition to having a positive impact on the environment, all of our landfill gas projects save money, generating annual savings greater than \$50,000 on average.
- GM also earned the EPA's 2004 ENERGY STAR Sustained Excellence Award for outstanding and continued leadership in superior energy management in 2003. ENERGY STAR is a government-backed program helping businesses and individuals protect the environment through superior energy efficiency. As an ENERGY STAR partner since 1995, GM received ENERGY STAR'S Partner of the Year Award in 2002 for outstanding commitment to energy efficiency. In 2004 the EPA again honored GM for continuing its smart energy management practices and investments throughout the company.

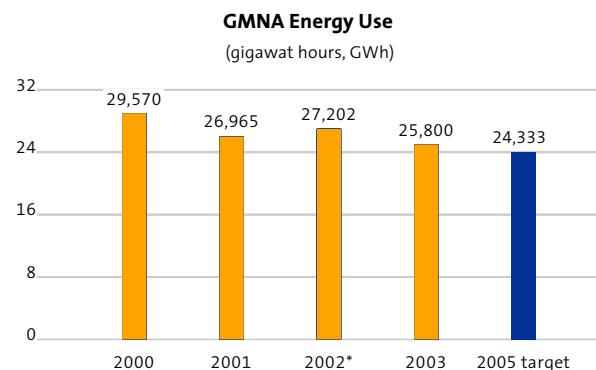
\* See energy conversion factors at [physics.nist.gov](http://physics.nist.gov), a non-GM site, please check privacy policy.

### Regional Performance

#### GM North America

##### Energy Use

We continue to work toward a 25% reduction in energy consumption by 2005 from a 1995 baseline. In 2003, GMNA consumed 25,800 GWh of energy, a 20.5% decrease compared to 1995. This reduction has been achieved during a period when our floor space has increased and process environmental controls have become more energy-intensive, and clearly shows that we are on course to meet the regional target for GMNA. Compared to 2002, overall energy use was down 5.15%, due primarily to aggressive implementation of energy efficiency strategies.



##### GMNA Energy Efficiency Progress

Some examples of our recent efforts to increase energy efficiency are outlined below.

- Our Fort Wayne, Indiana, and Shreveport, Louisiana, assembly plants started using landfill gas, replacing more than 50% of the natural gas fuel used in the boilers.
- Our Moraine, Ohio, assembly installed a new compressed air system that is 25% more efficient and provides superior quality air. Steam heating has been replaced by direct-fired gas heat.

# Environmental Performance

## Energy

- During 2003 we implemented weekend paint shop shutdowns at all GMNA facilities resulting in major energy and emissions reductions.
- We implemented an aggressive plan to shut down energy-consuming equipment during July and December holiday periods. Our 2003 July shutdown was the best ever, with complete GMNA plant participation.
- GM Energy Sufficiency Plans, which engage all employees in reducing energy use, have been implemented at all GMNA plants.
- We are installing common energy management and control systems at GMNA facilities. These monitor and control lighting and heating, ventilation and air conditioning systems for optimum operation. Installation has been completed at 40 facilities. A typical system saves about \$500,000 per year in energy costs.

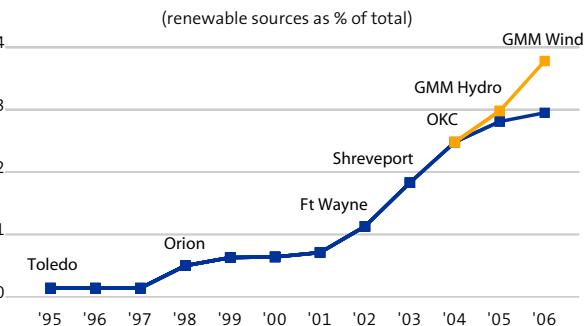
We are integrating energy-efficient practices into new plant designs and at those plants undergoing major improvements. For the Lansing Grand River Plant, Michigan, paint processes and building systems incorporated state-of-the-art best practices that conserve more energy compared to older plants. This plant opened in the first quarter of 2002. Similar efficiencies have been designed in the Flint, Michigan, L6 Engine Plant; Oklahoma City, Oklahoma, Paint Shop; and Shreveport, Louisiana, facilities.

In 2003, we initiated deployment of a common, real-time metering and data analysis tool. We will implement this initiative in all assembly plants by the 3rd quarter of 2004. The data provide real-time load analysis of electric profiles.

Through the Green Power Market Development Group, we are advancing implementation of alternative and renewable power projects. The Group, comprising leading corporations and the World Resources Institute, focuses on developing

corporate markets for 1,000 megawatts of cost-competitive, new, green power capacity by 2010. We are working with this group to develop landfill gas use, fuel cell generation and wind power projects.

**GMNA Renewable Energy Portfolio**



### GM of Canada Energy Use

Since 1990, our Canadian operations have reduced energy use by more than 45%. Energy use decreased in 2003 by 6% compared to 2002 due in part to the closure of an assembly plant in Ste Therese, although this closure was more than offset - in terms of production - by the addition of a third shift at the Oshawa, Ontario, car assembly plant. GM of Canada publishes detailed energy efficiency accomplishments annually in the Voluntary Challenge and Registry Inc. (VCR) Program and has been recognized as a Gold Level Champion Reporter by VCR.

Read more on [VCR >>](#)

### GM of Mexico Energy Use

Our Mexican operations (GMM) continue to implement a series of energy efficiency initiatives, including:

- Energy Sufficiency Plans
- The shutdown of paint shops during non-production time
- Lighting efficiency projects
- Compressed air efficiency projects, such as leak detection and pressure reductions.

# Environmental Performance

## Energy

For example, our Ramos Arizpe and Toluca complexes accomplished a unique total shutdown of their compressed air systems during the December 2003 shutdown. This accomplishment will set a model for other plants to follow.

GMM decreased total energy use in 2003 by 10.4% over 2002. Thermal energy use (liquid petroleum and natural gas) was also down by 15.1%. This outstanding effort is due to the aggressive roll-out of common GMNA initiatives in GMM facilities.

### GM Europe

#### Energy Use

Building on progress in 2002, GM Europe engaged employees in:

- Shutting down equipment during non-production periods
- Reducing lighting levels and replacing energy-inefficient fixtures
- Reducing ventilation during non-production periods
- Lowering the compressed air pressure during non-production periods.

Since early 2003, GM Europe has increased conservation efforts by implementing energy reduction initiatives through the GM Europe Energy Cost Council. One of the first successes of their efforts was the non-production shutdown of all paint shops during the 2003 Easter weekend. This practice is now continuing at all paint shops, saving energy every weekend.

#### Vauxhall Motors, U.K.

Electricity consumption during non-production periods continues to be monitored. Introduction of Unit-specific shutdown procedures at the end of shift, Friday evening means that electricity consumption is minimised. Information is shared between facilities through Bug-Me Cost Councils

which share information on individual improvements with all facilities. We are also driven to save energy under the EU Emissions Trading Scheme/Climate Change Levy. There is still a major focus on reducing compressed air leaks. The 0.3 bar pressure reduction in facility compressed air distribution, introduced in 2002, continues to help Facilities Management cut energy use during non-productive hours. Furthermore, the press shop has performed trials on press line compressed air isolations as part of their shutdown procedure. However, an extended trial is required before savings can be quantified.

#### Green Apple Awards, U.K.

Vauxhall collected two more Green Apple awards for "commendable environmental practice" at its manufacturing facility at Ellesmere Port, giving them a sixth award for the facility in as few as four years. In 2003, Vauxhall received the national runner-up prize. The Ellesmere Port facility was also the gold winner for energy management and efficiency for its V6 engine plant and its paint unit recycling and re-use program and runner up for its various other energy saving initiatives throughout the plant. The nation-wide award scheme is the brainchild of The Green Organization, a group dedicated to recognizing, rewarding and promoting environmental best practice.

### GM Latin America, Africa and Middle East

#### Energy Use

Our Latin America, Africa and Middle East (LAAM) operations decreased energy use in 2003 by 1.96% to 1,286 GWh, down from 1,311 GWh in 2002. Our LAAM operations continue their aggressive implementation of common energy conservation initiatives, in order to contribute to global energy reduction targets.



# Environmental Performance

## Energy

Examples of energy conservation measures include:

- The shutdown of paint shops and other process equipment at the Rosario, Argentina, and São Caetano do Sul, Brazil, facilities
- The shutdown of internal lighting during non-production hours at the Rosario, Argentina, and all GM Brazil facilities
- The reduction of lighting at administrative buildings during non-office hours at the Rosario, Argentina, and all GM Brazil facilities
- The installation of variable-frequency water pumps at the São José dos Campos, Brazil, facility
- The elimination of leaks on the compressed air systems at the São José dos Campos, Brazil, facility

At the São Caetano do Sul facility, in particular, the following actions were taken to reduce energy consumption:

- The shutdown of all office equipment during non-office hours.
- The deactivation of 15% of the lighting fixtures in order to maintain minimum lighting levels.

# Environmental Performance

## Water

### Overview

Water is a valuable resource and is essential for vehicle manufacturing. Our worldwide manufacturing and support operations use water from many sources including rivers, lakes and groundwater. Once the water has been used in our facilities, it is treated and returned to rivers and lakes, often through local municipal treatment facilities. All of our manufacturing operations conserve water. In Mexico, where water availability is very limited, particular attention is paid to ensuring efficient use of water. Highlights for 2003 include:

- Global water use reduced by 7.7% over 2002
- GM achieved a 20.8% reduction in global water use between 2000 and 2003.

### Objectives

Our **Environmental Principles** commit us to reducing waste and pollution and conserving resources. We work to minimize the impact of our water use on the communities where we operate, particularly where water is scarce. We use water as efficiently as possible and ensure that it is treated prior to being returned to its source.

In all of our plants, industrial wastewater is treated before being discharged to municipal treatment plants or other receiving bodies of water, meeting applicable requirements. Where there is no clear discharge criterion, we apply our own minimum requirements and guidelines as defined by our **Environmental Performance Criteria**, which apply globally.

### Global Target

In 2001, we set a global target to reduce water use by 10% between 2000 and 2005. As of December 2003, we had far surpassed our global target, and we will continue to drive reductions in water consumption by making our successful approach to water management a business

imperative and a key part of our global operations management. Progress beyond this target is discussed in the **performance section**.

### GMNA Target

Our previous GMNA target to reduce water use by 30% by 2002 was achieved in 2002 by realizing a 31.5% reduction in water use compared to the 1995 baseline. Our new GMNA water reduction target is even more aggressive, requiring an additional 15% reduction by 2005 from a 2002 base year.

### Actions

#### Water Use

Reducing water use is a challenge within large manufacturing plants where many processes rely on water, and where there are many opportunities for leaks and waste. Water reduction efforts often require capital investment and face the added economic challenge that reducing water use often does not generate significant payback from the investment. Our efforts to drive water conservation include:

- Developing a culture of conservation, involving employees, through our Quality Network and ISO14001 program
- Designing-in recycling, reuse and use of 'water cascading' in our processes
- Installing meters to track consumption in order to drive conservation efforts
- Implementing water conservation projects that also generate good economic payback.

### Recent projects

At Janesville Assembly facility in Wisconsin, we installed a cooling tower for eight large powerhouse air compressors. The anticipated reduction in water usage is 87 million U.S. gallons (329,000 m<sup>3</sup>) per year, and will result in a similar reduction in discharge volume to the Rock River.

# Environmental Performance

## Water

Similarly, at the GM Autoplex in Oshawa, Ontario, Canada a newly installed cooling tower has eliminated the need to add additional city water during the summer months. This new system allows for the conservation of approximately ten million gallons of water per year.

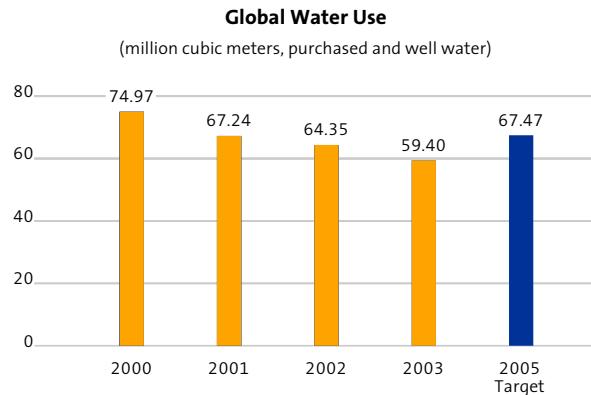
CAMI Automotive located in Ingersoll, Ontario, Canada, recently replaced their existing chemical water treatment unit in their paint shop (ion exchange) with a physical filtration system (reverse osmosis). This modification reduced annual water consumption by two million gallons.

### Wastewater

Wastewater quality is checked through multiple tests including biological oxygen demand (BOD5), total suspended solids (TSS), chemical oxygen demand (COD), nitrogen and phosphorus. Accurate data are not available at a global level for these indicators due to the diverse locations of our facilities, differing data collection systems, and variation in analytical processes. The challenge with wastewater is to ensure that our onsite water treatment facilities remain efficient and up to date so that we continue to comply with local discharge regulations in a cost-effective way. In 2003, GMNA launched a Wastewater Facility Containment program to evaluate and upgrade all wastewater facilities in order to maintain safety and reliability.

### Performance (GRI EN5)

In 2003, our global operations purchased and used 59.4 million cubic meters (15.69 billion gallons) of water, down 7.7% from 64.35 million cubic meters (17.0 billion gallons) in 2002. This performance also means we have reduced water use by 20.8% compared to 2000, far exceeding our target of 10% by 2005.



### Regional Performance

#### GM North America

##### Water Use

In 2003, we reduced water use by 10% compared to 2002, using 42 million cubic meters. Following the successful completion of our target to reduce water use by 30% between 1995 and 2002, we have set a new target to reduce water use by an additional 15% between 2002 and 2005. With the 10% reduction in 2003, we are on course to achieve this target.

##### GM of Mexico water use

GM Mexico (GMM) reduced water use in 2003 by 16.6% compared to 2002. GMM remains the benchmark for efficient water use, using only half the volume of water required per vehicle compared to average U.S. plants. The Ramos Arizpe complex has a near total water reuse process where only 15% of water used is discharged. The Silao truck plant has recently been able to expand capacity without any increase in water usage.

#### GM North America Wastewater Treatment

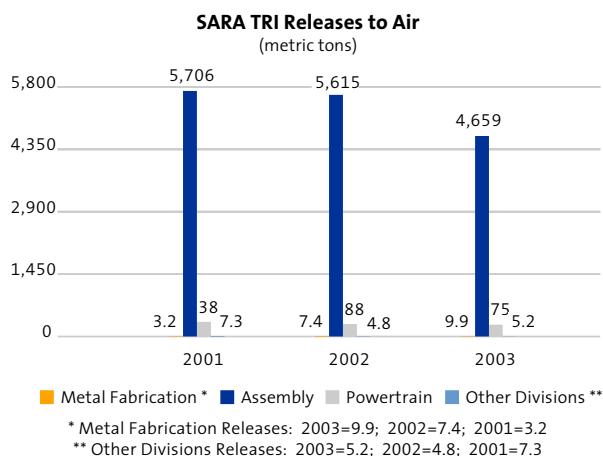
Water pollutant emissions in GMNA are tracked using U.S. TRI and Canadian NPRI data. The main contributors to these emissions are vehicle painting and coating operations and industrial wastewater treatment.

# Environmental Performance

## Water

### GM U.S.

Combined divisional TRI transfers to water are down 24% from 2002 levels and 35% from 2001 levels (see graph). Production-adjusted emissions of water pollutants decreased from 0.34 to 0.22 kg/vehicle since 2001. Production was not a significant factor. It was down 5% between 2003 and 2002, but it was up 5.6% in 2003 compared to 2001. The most significant contributions to the reductions were changes made to material formulations and improvements in the methods used to quantify and calculate emissions. Other contributing factors include elimination of materials, conversion to recycling, and process changes.

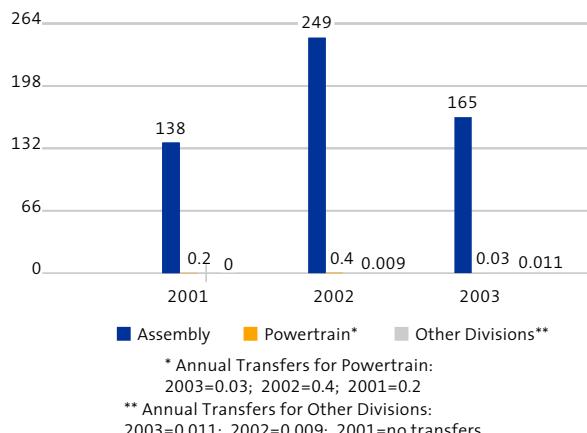


### GM of Canada

Total transfers to municipal sewage treatment plant (MSTP) for GM of Canada Limited (GMCL) decreased from about 249 metric tons in 2002 to 165 metric tons in 2003 indicating a percent decrease of 33.7% from 2002 to 2003. On a normalized, per vehicle basis, these transfers decreased from 0.28 kilograms per vehicle to 0.18 kilograms per vehicle over the same time period, a drop of 64%. Most of the reductions came from calculation changes for 2-butoxyethanol, based on new stack testing results. This decrease was partially offset by a production increase of 8.5% in 2003 and the addition of a phosphorous total to the list of NPRI reportable chemicals.

### NPRI Transfers to Water

(metric tons to Municipal Sewage Treatment Works - MSTW)



The emissions to air section of this report provides information on [TRI and NPRI releases to air](#). Click here for information on [TRI and NPRI releases and transfers per vehicle](#) and energy recovery and recycling per vehicle.

### GM Europe

GME has reduced water usage in 2003 by 1.5% through the Cost Council Initiative process. GME is reducing water use in water test booths, moist sanding, and by shutting down humidification in paint shops during non-production periods.

### GM Latin America, Africa and Middle East

#### Water Use

During 2003, our Latin America, Africa and Middle East (LAAM) operations reduced overall water use by 7.8% from 5.4 million cubic meters in 2002 to 4.9 million cubic meters in 2003. Examples of the initiatives undertaken are:

- Awareness training for all employees
- An exhaustive survey of water leaks
- The installation of automatic water faucets and sensored flush valves.

Our San Caetano do Sul facility in Brazil was also recognized in 2003 by the non-governmental organization Water & City for its successful water conservation program.



HUMMER



# Environmental Performance

## Waste and Recycling

### Overview (GRI EN2, EN11, EN31)

Wastes are generated by our production processes and support operations, such as facility maintenance, powerhouse services, wastewater treatment, and administrative and engineering offices. Our policies and management for hazardous and non-hazardous wastes are similar. Our goal is to reduce waste as much as possible at its source. Where this is not possible, we reuse or recycle as much as is technically and economically feasible.

### Objectives

The goal for all GM employees is to reduce all forms of waste. As expressed in the GM **Environmental Principles**, we are committed to reducing waste and pollutants, conserving resources, and recycling materials from our operations.

### Global Target

For all of our global manufacturing operations, we have a five-year target to reduce total waste generated by 15% from a 2000 baseline. Over the same period, we are also targeting a 15% increase in recycling rates for wastes that are currently not being recycled. Because of our expanding manufacturing presence around the world and our already high recycling rates, these are stretch targets for GM operations. GM North America, for instance, which includes the majority of our manufacturing operations, previously reduced its non-recycled waste by nearly 60% between 1997 and 2002 through waste reduction and increased recycling. As a result, further reductions in North America will be challenging but are always a target for continuous improvement.

### Actions

The most effective environmental practices focus on the sources of pollution and waste materials. It is important to reduce waste and the amount of hazardous substances, pollutants or contaminants entering any waste stream or otherwise released into the environment prior to recycling, treatment or disposal. The application and use of processes, practices, materials or products that avoid, reduce, or control pollution at its source are investigated and sought first at GM. These activities may include, for example, more efficient use of resources or material substitution.

A certain amount of waste is unavoidable with vehicle manufacturing and we have established procedures to effectively manage these wastes. Internal performance requirements are also established for a variety of waste streams that are common to automotive vehicle and component manufacturing.

We collect waste metrics data from our worldwide facilities using a combination of e-mailed surveys and a web-based reporting system. A total of 137 GM sites provided waste data in 2003, of which 111 (81%) are in North America. We continue to experience challenges with data collection across such a broad range of sites and locations, and are working to overcome global differences in waste definitions and to refine the data we report. Joint venture data is not included at this time, though it is our practice to request data from those GM facilities where we have operational/management control.

### Resource Management

Our Resource Management (RM) program preserves natural resources, reduces our environmental impact and achieves cost savings. In this program, a single supplier manages all plant wastes onsite. The supplier is economically compensated to reduce waste volumes.



# Environmental Performance

## Waste and Recycling

We have designed the program to prevent waste from being created. Resource managers receive financial incentives to find innovative ways to eliminate waste created during manufacturing. Rather than paying a waste contractor simply to dispose of materials, our approach makes the supplier a partner inside the plant. Wastes previously sent to landfill, such as cardboard boxes and wooden pallets, are now reused or recycled. The U.S. Environmental Protection Agency (EPA) has recognized the program through its [WasteWise Awards](http://www.epa.gov.uk/wastewise)

([www.epa.gov.uk/wastewise](http://www.epa.gov.uk/wastewise)). Now operating, where economically feasible, in all of our GM North American manufacturing facilities, our RM program has saved more than \$9.4 million annually. GM is currently in the process of implementing the Resource Management program in Europe (five plants to date) and is piloting the process in one GM plant in South America.

Read more on Resource Management, including a [GM case study >>](http://www.epa.gov/epaoswer/non-hw/reduce/wstewise/pubs/wwupda17.pdf) ([www.epa.gov/epaoswer/non-hw/reduce/wstewise/pubs/wwupda17.pdf](http://www.epa.gov/epaoswer/non-hw/reduce/wstewise/pubs/wwupda17.pdf))

### Chemicals Management

Details on our Chemicals Management program can be found in the [Environmental Management](#) section of this report.

### Voluntary Pollution Prevention Programs

GM continues to participate in the U.S. Environmental Protection Agency (EPA) [WasteWise Program](http://www.epa.gov.uk/wastewise) ([www.epa.gov.uk/wastewise](http://www.epa.gov.uk/wastewise)), a voluntary program that helps organizations eliminate solid waste to benefit the environment. In 2003 we were awarded their 'WasteWise Partner of the Year' and 'Climate Change Partner of the Year' awards, the third consecutive year we have been honored with awards from WasteWise.

In 2003, our U.S. operations prevented 308,568 metric tons of waste and recycled two million metric tons of waste. Because waste also has an

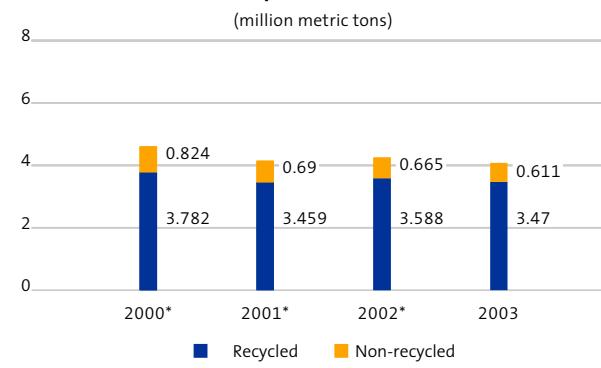
effect on greenhouse gas (GHG) emissions, these waste savings reduced our GHG emissions in 2003 by more than 4.9 million metric tons of carbon dioxide equivalents. According to the EPA's Waste Reduction Model (WARM), this is comparable to the annual emissions from power used by 642,579 households and the annual carbon dioxide stored by 40,532 acres of established, rapidly-growing trees.

### Performance

Our global facilities continue to make progress toward our goals to reduce waste by 15% and increase recycling by 15% by 2005. Total waste generation decreased by 4.05% in 2003, from 4.25 million metric tons in 2002 to 4.08 million metric tons in 2003. **Waste generation is down 11.4% since 2000** (from 4.6 million metric tons), showing we are on target to reach our goals. Due to our progress to date, we are in the process of evaluating our 2005 targets and reserve the right to make adjustments to our targets as we approach the end of 2004. GM's 2005 report will indicate if there will have been any changes made to the target.

Non-recycled waste decreased 8.1% in 2003 falling from 0.67 million metric tons in 2002 to 0.61 million metric tons in 2003, and recycled waste decreased 3.3% (from 3.6 to 3.5 million metric tons). Worldwide vehicle production was down 2% in 2003 against 2002. Production-adjusted waste amounts decreased 2.1% (2002 to 2003).

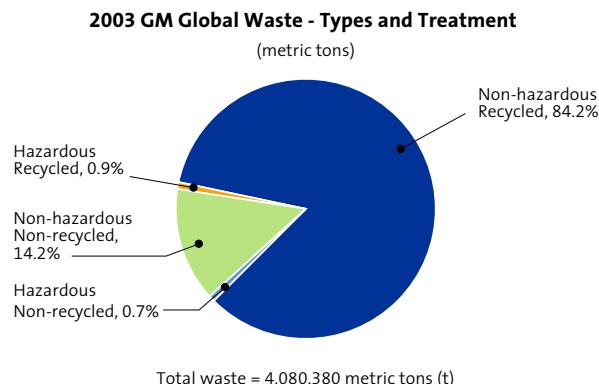
GM Global Operations - Total Waste



# Environmental Performance

## Waste and Recycling

The chart below shows the methods used to manage our waste. Our facilities report that over 84% of the waste we generate worldwide is being recycled.



### Recognition

In 2003 we were awarded the U.S. Environmental Protection Agency 'WasteWise Partner of the Year' award in the Very Large Business category for overall waste prevention achievements, recycling initiatives, efforts to purchase or manufacture recycled-content products, and activities to promote WasteWise. We were also awarded the 'Climate Change Partner of the Year' award for outstanding waste reduction efforts that reduced greenhouse gas (GHG) emissions and for our efforts to disseminate information about climate change. The WasteWise Awards Program recognizes the efforts and achievements of outstanding organizations each year. This was the third consecutive year that we have been honored with WasteWise awards, taking solitary top honors in the two 2003 categories.

### Regional Performance

#### GM North America

##### Waste Management

GMNA operations are working to achieve two goals over a five-year period to cut waste generated and increase the percentage of waste recycled by 15%. Since 2000, we have reduced total waste generated by 12.7% (from 3.7 to 3.2 million metric tons). This performance includes a waste reduction of 21.9% (from 0.229 to 0.179 million metric tons) by GM of Canada.

Note: The GMNA emissions, effluents, and waste data in this report represent the automotive operations, Service & Parts Operations, and GM Locomotive Group.

To help us achieve our goals, we use several specific management programs including Resource Management, Chemicals Management, and Industrial Oil Management, in addition to our ISO 14001 environmental management systems and WE CARE.

##### Industrial Oil Management

In 2004, we again revamped our program to improve life cycle management of industrial oils in GMNA. The program, which began in 2000, offers substantial cost savings and significant environmental benefits through waste prevention. The program focuses on cutting the level of used oil generated and increasing used oil recycling. Recent improvements include:

- Most GMNA plants have switched to GM-approved 'LS2' lubricants. The LS2 standard requires the use of high-quality lubricants, promotes consolidation in lubricant use and stresses proactive maintenance.
- We have re-tendered for oil management suppliers in the past year. Used oil from facilities that are significant oil users is sent to one of two oil recycling companies. These companies then treat and return significant volumes of recycled oil to GM facilities.



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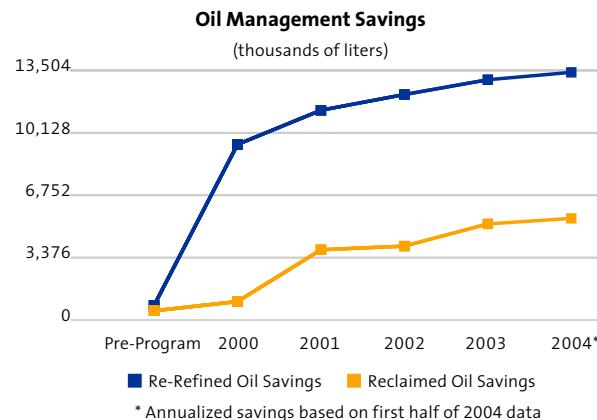
# Environmental Performance

## Waste and Recycling

Currently, we generate about six million gallons of recoverable oil and purchase back five million gallons of oil from the recyclers.

- The processing and transport costs of the program were reduced by over 50% through the tender process and the program now generates costs savings that are double the cost of the program.
- Use of reclaimed and re-refined oils is increasing significantly across GMNA. To accelerate this uptake we have set a target that all powertrain and metal fabricating facilities should be using at least 5% recycled oil this year (2004) and 10% next year (2005). These targets will soon lead to GM purchasing more recycled oil than we generate for recycling.
- Significant progress has been made in developing specifications for metal removal fluids used in GMNA machining facilities. Quality control specifications are complete and being implemented. Performance specifications are undergoing continuous improvement.
- GM expects to make even greater improvements in the future. A few remaining facilities that are large generators of used oil can be brought into the program to maximize cost saving and waste reduction benefits. GM will also review the viability of bringing smaller oil generating plants into the program, such as assembly and Service Parts Operations (SPO). While the additional volume of oil available for recycling is low, we believe that this is the right next step to engage our organization in recycling.

Oil management and Lubrication Standards can be found at [www.gmsupplypower.com](http://www.gmsupplypower.com).



### Conserve Resources/Prevent Pollution (WE CARE)

This initiative is a joint activity implemented at plants where GM partners with the United Auto Workers (UAW) union representing hourly-paid employees. It focuses on the pollution prevention hierarchy of 'Prevent, Reduce, Reuse, Recycle'. Jointly developed training materials are available for manufacturing, office operations and product and process design engineers. Materials are available to GM facilities worldwide in English and Spanish. Case studies help to share successes between facilities, and can be accessed on an internal web site. An awards program is also available to facilities located in North America.

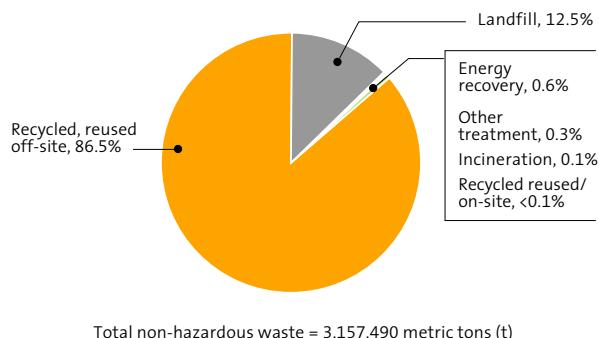
### Non-Hazardous Waste Management

Total non-hazardous waste managed in 2003 was 3,157,490 metric tons in GMNA, which represents a reduction of 7% from 2002 (3.4% on a production-adjusted basis). This waste is made up of general plant trash, used packaging, most foundry wastes, production scrap and scrap metals and most industrial process sludges and waste oils. In 2003, we recycled or reused 86.5% of our non-hazardous wastes.  
(See chart overleaf.)

# Environmental Performance

## Waste and Recycling

### 2003 GMNA Non-hazardous Solid Waste Management Methods

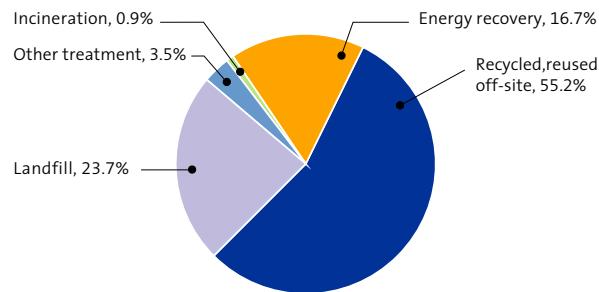


Total non-hazardous waste = 3,157,490 metric tons (t)

### Hazardous Waste Management

The total hazardous waste managed in 2003 was 40,471 metric tons, which is up slightly from 2002 (0.3% actual and 0.6% adjusted for production). Of this total, we recycled over 55%. GMNA hazardous wastes include batteries, some process solids and sludges, solvents, and some waste oils.

### 2003 GMNA Hazardous Solid Waste Management Methods



Total hazardous waste = 40,470 metric tons (t)

### Waste Reduction

Examples of ongoing activities to reduce and reuse waste (all dollars are U.S.):

- [Visit our web-based report for full details of GMNA waste reduction and reuse initiatives >>](#)

### Waste Data Accounting Adjustment

In GMNA, waste is tracked using an internal data collection and management process and an Internet-based system that allows each facility to directly input data as they become available.

In 2002, the internal group that manages the sale of our scrap metals modified its system to ensure that GM is accurately tracking and reporting the correct unit-of-weight measure. This led to adjustments in the waste data beginning in last year's report. Because metal scrap is such a large percentage of our GMNA waste stream, the adjustments increased our total GMNA numbers. Adjustments have been made to all previous years in this report so the data are proportionally similar to previous reports.

### Recycled Waste

GMNA facilities have gained significant momentum from our earlier goal to reduce non-recycled waste. The current five-year goal to increase recycling by 15% expands upon successes already realized. The amount of waste recycled in GMNA increased by 3% between 2000 and 2003.

Individual regions, such as GM of Canada, experienced a smaller increase of 1.6% total recycling due in part to the high level of recycling that was occurring in 2000 (89.5%) and the significant amount of total waste reduction that has occurred since 2000 (50,000 metric tons).

Examples of recycling activities in GMNA in 2003 (all dollars are U.S.):

- [Visit our web-based report for full details of GMNA waste recycling and reuse initiatives >>](#)



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# Environmental Performance

## Waste and Recycling

### Selected Recycling Case Studies

#### **Building construction & renovation**

Renovation of connecting buildings and construction of the new Vehicle Engineering Center tower at the Warren Technical Center began several years ago. Project managers sought to segregate and recycle as much of the construction waste as possible. In the past year, a recycling rate for construction debris of 73% was realized. This was an increase of 25% from the previous year. The materials included wood, concrete, brick, block, dirt, metal, cardboard, ceiling tiles, carpet, ballasts, smoke detectors, and exit signs. By working together and implementing these various recycling processes, the team diverted 9,480 metric tons from landfill and saved \$749,000.

#### **Battery recharge and reuse**

Goodwill Industries of Flint has partnered with GM to provide a battery recharge/reliability verification service to ensure all new vehicles leave the factory with a fully charged, reliable battery. This program has been in place for more than 20 years. Goodwill Industries provides services to many Southeast Michigan assembly facilities. They pick up batteries from facilities, recharge and check them, and return them for reuse. Batteries that can no longer be reused are reclaimed in an environmentally safe manner.

#### **Cartridge filters**

Cylindrical air filters are used extensively throughout GM assembly, metal fabricating and powertrain operations to filter particulate matter generated from production activities from the air helping to maintain indoor air quality. Our cleaning program for these industrial filters expanded to more plants since last year with just over 5,500 filters being cleaned and reused during 2003. Spent filters are changed on a regular basis as indicated by pressure differential and are refurbished using a mobile recycling unit that can clean approximately 100 filters per day. Cleaned filters are reused from three to five times before final

disposal. In some cases, metal fines are extracted during the cleaning process and are sent offsite for recycling. In 2003, landfilled filter waste was reduced by 36 metric tons and the plants saved \$135,000 in new filter purchase costs.

#### **Rolled filter media**

To produce transmission parts, machining operations are required to cut, grind and hone the metal parts before assembly. These machining systems use emulsified oils as coolants and they become mixed with metal chips and shavings in the process. Rolled filter media separates the coolants and metal scrap so the coolants can be recirculated and reused. The filter media becomes a waste byproduct, along with the metal scrap. This material has been landfilled in the past but the Warren Transmission facility now uses a supplier that cleans, shreds and recycles their rolled filter media into plastic pellets which is used in plastic products such as picnic tables, decks and park benches. As a result, the plant now recycles 80 to 90% of its filter media. Other GM Powertrain plants have begun to use this process as well.

#### **Scrap pallets and wood**

A Southeast Michigan wood processing facility receives scrap pallets and other wooden packaging from some of our facilities in Pontiac, Michigan. They chip the materials and sell them to landscape contractors as dried landscaping mulch. Some of the material is marketed in its natural state, while some is dyed into a variety of colors.

- [Visit our web-based report for a full list of wastes recycled in 2003 >>](#)



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# Environmental Performance

## Emissions to Air

### Overview (GRI EN10)

At GM we are committed to reducing ambient air emissions at every stage of our manufacturing cycle. This section highlights how we do this and gives some examples of the innovative engineering practices that we have 'designed into' our facilities.

### Actions

#### Regulated Air Emissions

GM facilities operate in accordance with local, state and federal air regulatory requirements. In addition, all GM manufacturing facilities are certified to conform with the International Organization for Standardization (ISO) Environmental Management System (EMS), this EMS is based on ISO 14001. GM also employs a number of environmental engineers that are CHMM certified (Certified Hazardous Materials Managers) with specialized training in managing the air emissions programs. These subject matter experts have a thorough knowledge of all applicable regulations and have designed programs at each of our facilities to review current emission levels and establish goals for reducing the ambient emissions output.

In the U.S. GM has also established an Air Steering Committee, which shares lessons learned across the Corporation with an emphasis on reducing facility air related emissions. The committee reviews past, current and future air management programs and adjusts them with respect to evolving regulatory demands. The committee is exposed to the Best of the Best (BOB) programs and initiatives, ultimately allowing the other committee members to take these BOB practices back to their facilities for implementation and possible air emission reductions.

The GM environmental engineers in the components and foundry operations leverage the Casting Emission Reduction Program (CERP)

to drive new core resin systems and mold making operations to reduce emissions to the atmosphere. This team meets regularly and has developed business plans with key objectives to reduce emissions from melting, pouring, cooling and shakeout operations at the GM foundries.

### Performance

#### Ozone Gases (GRI EN9)

GM has taken significant steps towards eliminating any ozone depleting impact arising from our processes, products and operations. Today none of our products contain ozone-depleting substances (ODS). We continue to maintain some stationary equipment, such as building air conditioning systems, which contain ODS. The systems will be replaced and the ODS refrigerants recovered and recycled over time as this equipment is upgraded.

#### Volatile Organic Compounds

Our assembly plant environmental engineers have developed a standardized quarterly Volatile Organic Compound (VOC) review process that includes engineers, operations staff, maintenance personnel, paint staff and chemical management team members. The quarterly VOC review meetings focus on how to achieve continuous improvements to minimize air emissions. This team approach has been successful in developing the methods for reducing purge and paint usage in the painting operations, thereby reducing air emissions from the painting operations.

Painting and coating operations at our assembly facilities are the major sources of the VOC emissions. When GM makes major renovations at its paint shops or installs new equipment, we utilize technologies that lower air contaminant emissions. Since 2000, GM has updated three paint shops and built two new paint shops with state-of-the-art technology. In the next two years, GM will build two new paint shops with similar technology in North America.



# Environmental Performance

## Emissions to Air

The technology includes:

- Low VOC emission waterborne basecoat coatings
- Abatement systems to control VOCs from the bake ovens, the ELPO dip process and portions of the spray booths
- Reduced use of cleaning and purge solvents
- Use of mostly de-ionized water for purging waterborne basecoat
- High efficiency applicators including electrostatic application of waterborne paints
- Use of powder based primer surfacer materials
- Use of lead-free ELPO material

In addition to the technology described above, GM has continued to reduce VOC emissions by designing grilles, mirror housings, cowl screens, bumper caps and door handles for minimal traditional paint operations, thereby reducing airborne and waste emissions.

GM has many success stories for improving the efficiency of its painting operations and reducing VOC emissions in its plants.

**Example: GMBOND® Core Sand Binder technology reduces VOCs:** GM Powertrain Saginaw Malleable Iron Plant is evaluating a prototype core making process using GMBOND®-coated sand. GMBOND® is the trade name for a new environmentally friendly core sand binder. It is animal protein-based, and significantly reduces VOC emissions from the core making process and the pouring, cooling and shakeout operations in foundries. Because GMBOND® is a protein-based binder, sand reclamation and reuse are additional significant environmental advantages. The U.S. Army sponsors the GMBOND® project and directs funding through its contractor, Technikon LLC, and its Casting Emission Reduction Program (CERP). The GMBOND® project mission is to improve, develop and demonstrate new products, processes and technologies for the

metal casting industry that reduce process air emissions, and encourage the foundry industry competitiveness in a global economy. Other supporters of the GMBOND® include Hormel Foods, the producer of GMBOND® resin coated sand, and the United Auto Workers.

**Example: GM Powder Primer Surfacer reduces VOC emissions by 95%:** In 2001, the GM Oklahoma City Assembly plant built a state-of-the-art paint shop in order to accommodate the production of the Chevrolet Trailblazer EXT and GMC Envoy XL. The new lead-free ELPO, waterborne basecoat, and booth and oven abatement equipment all helped minimize air contaminant emissions. In addition to these technologies, the new paint shop uses a powder material for the application of primer surfacer as compared to the traditional solvent-borne material. The use of powder primer has resulted in a reduction of over 95% VOC emissions from the primer surfacer process. In addition, the powder material is recycled and reused within the process. Furthermore, because no solvents are used in the primer process, booth cleaning and purge solvents have been eliminated from the primer surfacer operation. Currently GM uses powder primer surfacer in five paint shops in the North America. As GM continues to upgrade and build more paint shops, powder primer surfacer systems will become the standard.

## Regional Performance

### GM North America

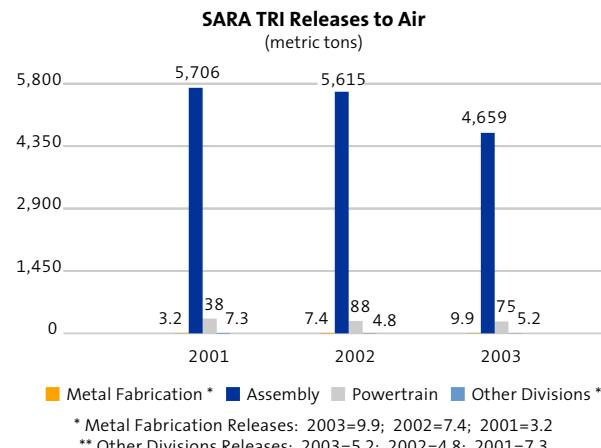
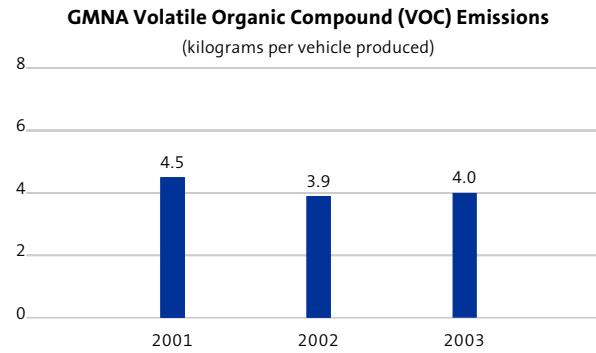
#### VOC Emissions (GRI EN9)

Production-adjusted VOC emissions from paint shop operations at North American facilities are up slightly (2.5 percent) between 2002 and 2003 and down 11% since 2001 (see chart overleaf). As with other air pollutant emissions, our facilities continue to seek reductions in VOC emissions wherever they are technically and economically feasible. Regional differences in definitions, terminology and calculation methods make it impossible to publish accurate global VOC data at this time.



# Environmental Performance

## Emissions to Air

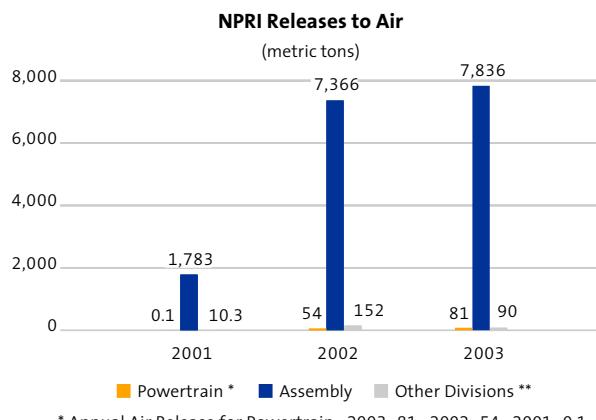


### Air Pollutant Emissions

Emissions to air are tracked in GMNA facilities using data reported to the U.S. Toxic Release Inventory (TRI) and the Canadian National Pollutant Release Inventory (NPRI).

Between 2002 and 2003, combined TRI air pollutant emissions from all U.S. facilities were down 16% (from 1.45 to 1.27 kg/vehicle) while U.S. production levels were down 5%. This represents a 12% decrease in one year on a production-adjusted basis. Since 2001, air emissions are down 18.3% overall and 22% per vehicle (from 1.63 kg/vehicle). The most significant contribution to the emissions reduction was changes made to material formulations that eliminated reportable chemicals. Additionally, improvements have been made in the methods that are used to quantify and calculate emissions. Other contributing factors include production levels (fewer vehicles painted in 2003 compared to 2002), as well as product and process changes.

GMCL NPRI 2003 air releases increased by 8.7% to 8,006 metric tons compared to 2002 releases of 7,366 metric tons. The majority of this increase can be attributed to the addition of a third shift at the Oshawa Car Assembly facility. This car assembly facility was responsible for the addition of approximately 1,000 new metric tons but this was offset by reduced emissions from the Oshawa Truck facility and Windsor Transmission facility as well as the closure of our Ste Therese Assembly facility and the sale of the armoured vehicle portion of the London Diesel facility.



# Environmental Performance

## Emissions to Air

More information on TRI and NPRI reporting:

- [Emissions to water](#)
- [Emissions and recycling \(see TRI and NPRI data section right\)](#)

### Criteria Air Pollutant Emissions

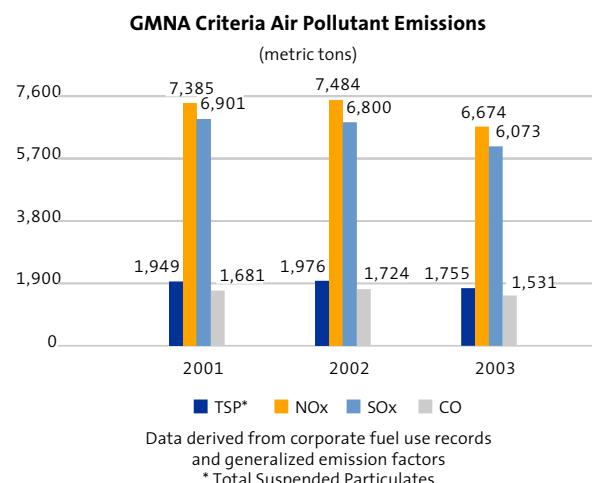
The major source of criteria air pollutant emissions (other than VOCs), are from burning fuel to supply heat and power to our facilities. During the past decade, we have decreased emissions from heating and power operations by reducing our use of coal burning systems, increasing our reliance on cleaner burning natural gas, and improving the energy efficiency of our facilities. When replacing coal-burning systems, we are often able to replace larger, less efficient units with smaller, high-efficiency systems. As a result, although we are producing record numbers of vehicles, emissions of particulate matter (TSP), nitrogen oxides (NOx), carbon monoxide (CO), and sulfur oxides (SOx) have significantly declined in the past ten years.

In addition, GM has continued to support the EPA's Landfill Methane Outreach Program by converting several coal-fired boilers to burn landfill gas. Utilizing landfill gas as a fuel source reduces criteria pollutant emissions. At GM's Orion Assembly Center, coal consumption has been reduced by 50% and boiler ash production is down from 8,000 tons to 4,000 tons per year. Between 1996 and 1998, Orion burned an average of 58,411 tons of coal each year. By using landfill gas, Orion only used 27,000 tons of coal in 1999 and 20,500 tons of coal in 2000. Some coal is still required in the winter months as a supplemental fuel to the landfill gas.

The following graph shows our emission levels of criteria air pollutants emitted from North American facilities since 2001. The data are derived from fuel usage and calculated using generalized emission factors from EPA Document A.P.-42. Combined total emissions of

TSP, NOx, CO, and SOx are down 11% since 2001. On a GMNA production-adjusted basis, these emissions dropped 9% between 2001 and 2003, and 76% since the previous year (2002).

\* See unit conversion factors at [ts.nist.gov](http://ts.nist.gov), a non-GM site, please check privacy policy.



### GM North America TRI and NPRI Data (GRI EN9)

#### TRI and NPRI Emissions and Recycling

We quantify emissions and effluents from our North American facilities with U.S. Toxic Release Inventory (TRI) data and Canadian National Pollutant Release Inventory (NPRI) data. Mexico is currently implementing a similar data tracking system.

View our [full TRI chemicals report, please visit our web-based report >>](#)

View our [full NPRI chemicals report, please visit our web-based report >>](#)

Click here for [TRI and NPRI releases to air >>](#)

Click here for information on [TRI and NPRI releases to water >>](#)

Our U.S. facilities submitted their 17th annual TRI report to the U.S. EPA in July 2004

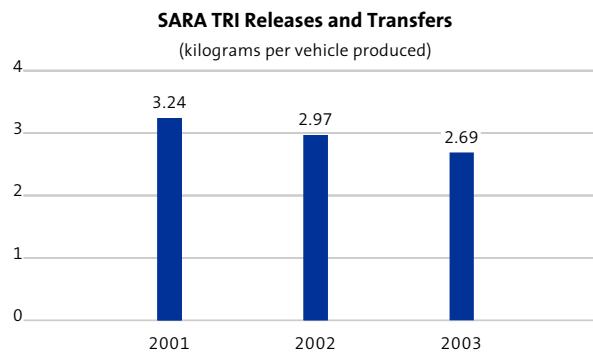


# Environmental Performance

## Emissions to Air

representing 2003 data. The report highlights 53 facilities that reported emissions for 55 of 637 chemicals. GM of Canada Limited (GMCL) presented its 11th annual NPRI report to Environment Canada for 2003. Eight facilities reported on 32 chemicals that met reporting thresholds, out of 273 chemicals listed. Normalization for production of U.S. and Canadian data is calculated using the number of vehicles produced in each country's plants.

Our combined, non-adjusted U.S. facilities' TRI on-site releases to air, water, land and treatment, and off-site transfers to publicly owned treatment works and treatment/disposal facilities dropped by 14% over the previous year (2002). Combined TRI releases and transfers are down 77% since the 1988 base year. When adjusted for production, combined TRI releases and transfers are down 70% since 1988 and 9% over the past year. U.S. 'kilograms per vehicle' figures include a large, diverse mix of assembly, metal fabrication, powertrain, foundry, and engineering facilities all reporting under the TRI. This raises overall emissions per vehicle compared to other automakers.



For the second year in a row, GMCL reported Criteria Air Contaminants (carbon monoxide, nitrogen oxides, particulate matter  $<2.5\mu\text{m}$ , particulate matter  $<10\mu\text{m}$ , total particulate matter, sulfur dioxide, and total volatile organic compounds) to NPRI. This required GMCL facilities that triggered the thresholds for these

substances, due to powerhouse or painting operations, to report emissions of these substances to air. GMCL reported about 6,127 metric tons of Criteria Air Contaminant air releases in 2003, up from 5,620 in 2002. This increase is related to the addition of a third shift at one of the Oshawa, Ontario Car Assembly plants. This addition elevated the use and therefore emissions of paints, which contain volatile organic compounds. It also required them to use more energy for their processes, which are responsible for particulate, nitrogen oxide and carbon monoxide emissions.

An analysis of emissions per vehicle indicate that GMCL saw an increase between 2002 and 2003 from 1.92 kg per vehicle in 2002 to 2.02 in 2003 because of the fact that significantly more vehicles were built in 2003 and emissions are higher for trucks than cars due to their larger surface areas, which require more paint

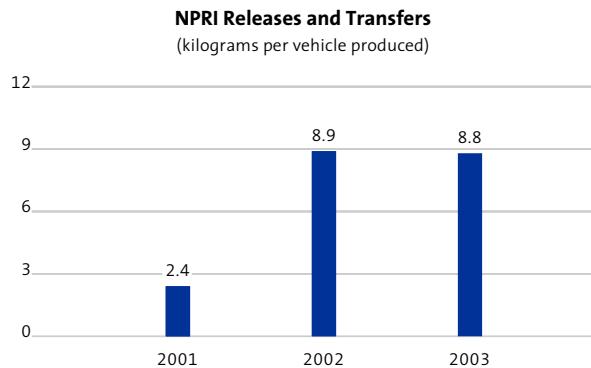
In addition to the NPRI inventory reported to the federal government, the Ontario Ministry of the Environment (MOE) introduced an extra inventory reporting requirement under O. Reg. 127 - Airborne Contaminant Discharge Monitoring and Reporting Regulation, requiring an annual report on releases to air. O. Reg. 127/01 is divided into three tables; 2A, 2B, and 2C, for a combined total of more than 358 air contaminants. Table 2A lists criteria air contaminants and greenhouse gases, Table 2B lists contaminants of specific interest to the MOE, and Table 2C refers to the NPRI list.

In 2003, GMCL reported the release of a total of 282,340 metric tons to the MOE under O. Reg. 127. The total reportable emissions can be summarized as follows:

- Over 97% - Carbon dioxide
- 1.6% - Volatile organic compounds
- 0.6% - MOE-specific substances
- Less than 1% - Other criteria air contaminants, greenhouse gases and unique NPRI substances

# Environmental Performance

## Emissions to Air

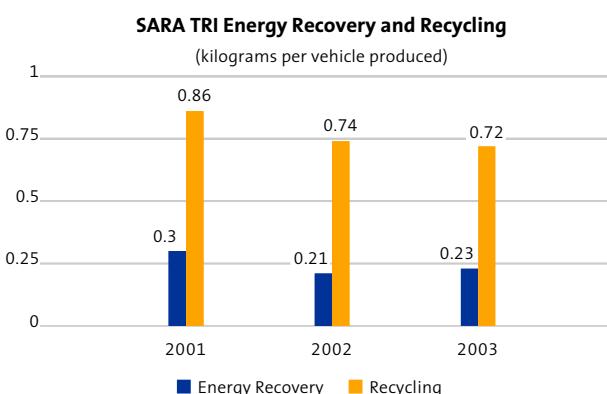
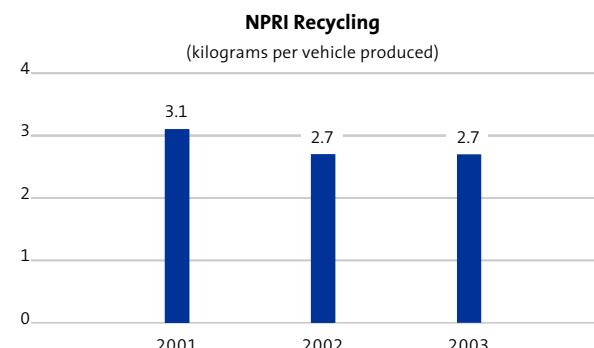


### Recycled TRI and NPRI substances

A portion of the toxic materials from U.S. and Canadian facilities are managed using recycling and energy recovery. Those amounts in kilograms, adjusted for production, are presented in the following graphs for 2001-2003 from the U.S. TRI and the Canada NPRI.

On a production-adjusted basis, recycled volumes of U.S. TRI substances decreased 16% between 2001 and 2003 and energy recovery levels were down 23%. Non-adjusted TRI recycling decreased by 12% while energy recovery decreased by 20%.

On a production-adjusted basis, the amount of GMCL-reported NPRI substances recycled (including energy recovery) remained almost unchanged between 2003 and 2002. Total non-adjusted GMCL recyclables increased by over 80 metric tons or 3.3% from 2,473 metric tons in 2002 to 2,554 metric tons in 2003. This change is attributed to increased production at the Oshawa Car Assembly plant.



# Environmental Performance

## Greenhouse Gases

### Overview (GRI EN30, EN34)

GM's leadership is working with various organizations on voluntary initiatives (see below) to reduce greenhouse gas (GHG) emissions as GM's global operations continue to grow. We are involved in various global voluntary initiatives with government agencies and independent organizations who have helped in the development of GM's global GHG reporting protocol consistent with the U.S. Department of Energy 1605(b) GHG reporting guidelines, the U.S. Environmental Protection Agency - Climate Leaders Guidelines, and the World Resources Institute's GHG Protocol. In 2001, we implemented our Global GHG Reporting Protocol and, through the development and deployment of our web-based energy data collection system, we are collecting day-to-day energy and emissions data from each of our 155 global facilities.

Global energy use and CO2 emissions have decreased by 9.1% and 7.1% respectively since 2000.

This section covers greenhouse gas emissions from our global facilities. For information on greenhouse gas emissions from our products, please see the [Products section](#).

### Objectives

#### Global Target

We began to develop our global greenhouse gas goals in 2002 after we set targets to reduce global energy and water use by 10% between 2000 and 2005. In 2003, after careful analysis, we established a global CO2 reduction target of 8% between 2000 and 2005.

The difference between our CO2 target and the energy and water targets is primarily due to the various ways the electricity we buy is generated. Different generation methods, such as coal, natural gas, nuclear and hydro, have different

emission factors due to the varying amounts of CO2 these sources emit. For example, the CO2 per unit of energy is far larger for electricity generated from the burning of coal than it is for natural gas. Therefore, dependent on the fuel mix that is used to generate electricity, if an organization manages a shift away from electricity from coal burning plants which has larger indirect CO2 emissions (these equal 62% of GM's CO2 footprint globally) then it will result in more significant reductions in CO2 emissions.

#### GM North America Target

As with many of our environmental metrics, we develop targets for our North America region (GMNA) in addition to our global targets. This is because our North American operations account for over 80% of our global operations, so if we strive for stretch targets in GMNA, the benefit will be reflected in our global impact.

We joined the Environmental Protection Agency's (EPA) Climate Leaders Program in 2001. This initiative is a voluntary program that challenges its partners to set an aggressive, corporate-wide greenhouse gas (GHG) emissions reduction goal for plants and facilities. Through the EPA's Climate Leaders Program, we are committed to reduce CO2 emissions from our North American region facilities by 10% over five years (2000 to 2005).

In 1995, GM established a target to reduce the energy consumption of its North American Operations by 25% by 2005.

#### Reporting and Measuring Our Emissions

We believe that the fundamental policy for GHG reporting should be that entities are responsible for reporting that which is under their direct ownership and/or management/operational control. Simply put, "whoever buys the energy, owns the ensuing GHG emissions and reductions."

# Environmental Performance

## Greenhouse Gases

We developed our global GHG Protocol based on the experience gained from working with programs such as the U.S. Department of Energy (DOE) 1605(b) and the World Resources Institute (WRI) GHG Protocol. It is designed specifically to monitor, measure and report GM's global GHG footprint in accordance with GM's GHG reporting policy cited above. In terms of data collection and measurement, we have developed a web based data management system, **GM2100**, which is a key enabler in allowing us to monitor and measure our energy use around the world and our related CO<sub>2</sub> emissions. To date, we are collecting energy and emissions data from 155 facilities around the globe and we review our performance quarterly to ensure that global and regional targets are being met.

We measure and report our actual, rather than estimated, GHG emissions. Our emissions data are based on direct emissions from the burning of fossil fuels, such as oil, gas and coal, as well as indirect emissions from purchased electricity.

Note: In respecting the Montreal Protocol, GM stopped using chlorofluorocarbons (CFCs) - which are ozone-depleting substances (ODSs) - in its vehicles. In 1995 we switched to using hydro-chlorofluorocarbons (HCFCs) - non-ozone depleting substances - which have a much lower global warming potential (GWP).

### Voluntary Reporting

At GM, we voluntarily report our environmental performance in accordance with guidelines developed by the Global Reporting Initiative (GRI). This includes performance metrics associated with Greenhouse Gas (GHG) emissions. Our global policy is to report GHG emissions on all of our business activities under ownership and/or management/operational control and, for joint ventures, those under management/operational control. We believe that our policy on reporting GHG emissions is an important strategic tool to accomplish a number of key public policy objectives. From GM's perspective, these objectives are to:

1. Encourage the broadest range of entity participation, including companies of all sizes, public sector bodies, not-for-profit organizations, and individuals and enable fair comparisons in the performance of competitors within each sector
2. Focus these entities on how to measure and take concrete steps to reduce GHG emissions within their direct control in the most cost-effective manner
3. Aggregate, with the greatest degree of accuracy possible, the combined reductions in GHG emissions achieved by reporting entities
4. Demonstrate that voluntary measures are highly effective in achieving GHG reductions
5. Ensure continued global competitiveness and stimulate innovation
6. Record initiatives to reduce GHG emissions by entities from around the world and ensure proper recognition for these reductions
7. Continue to build a 'common sense' framework for GHG emissions reporting which promotes market-based mechanisms, without creating undue cost or bureaucratic burdens
8. Establish as a top priority the allocation of resources to achieve GHG emission reductions.

### Actions

Our commitment to reduce greenhouse gas (GHG) emissions is illustrated in our active participation in numerous voluntary energy and environmental management programs throughout the world. We apply the experience we gain from our participation in voluntary programs to our facilities across the globe.

# Environmental Performance

## Greenhouse Gases

The table below offers a summary of a few of GM's commitments to GHG emissions reductions from its global operations.

Voluntary Program	Targets/Progress/Awards
<b>DOE 1605(b): Greenhouse Gas Reporting Guidelines and Registry</b>	We participated in the development of the 1605(b) GHG Reporting Protocol with the U.S. DOE in 1994. We have been reporting under the 1605(b) guidelines since the program's inception in 1995. Reduction in CO2 equivalent emissions from our U.S. facilities from 1990 to 2003 equals 40 million metric tons-- a 72% decrease in emissions. <a href="#">Read 2004 GHG report (pdf) &gt;&gt;</a>
<b>DOE Climate VISION Program (started in 2003)</b>	We are committed to reduce CO2 per vehicle produced by at least 10% between 2002 and 2012 for all U.S. Facilities.
<b>The Business Roundtable (BRT) Climate RESOLVE Program (started in 2003)</b>	We are committed to implementing energy and CO2 reduction programs across our global operations in support of the Business Round Table Climate RESOLVE program.
<b>US Climate Partnership Association (USCPA)</b>	We have chaired USCPA since its inception in 2001. The USCPA's mission is to use its industry leadership to promote more industry involvement in voluntary energy and environmental responsibility programs, while measuring and reporting real results.
<b>EPA Climate Leaders Program (started in 2002)</b>	We are the only automotive partner and one of two founding members to join the program with an aggressive target jointly developed with the EPA. Our goal is to reduce absolute tons of CO2 from North American Facilities by 10% between 2000 and 2005.
<b>EPA Energy Star Program</b>	We are a founding member and have set a 10% energy reduction target across our global Facility Operations from 2000-2005. In 2003, GM remained on target to meet these goals bringing the total reduction to date of 14% from 2000 levels. GM was awarded the EPA Energy Star Partner Award in 2002 and the Sustained Excellence Award in 2003. More on <a href="#">Energy</a> .
<b>EPA WasteWise</b>	Our U.S. Operations prevented 308,568 tons of waste and recycled 2 million tons of waste resulting in more than 4.9 million metric tons of avoided CO2 equivalent emissions in 2003. We were awarded EPA WasteWise Partner of the Year Award (2001 and 2003) and EPA WasteWise Climate Partner of the Year Award (2003). More on <a href="#">waste and recycling</a> .
<b>EPA Combined Heat and Power Partnership</b>	The Combined Heat and Power (CHP) Partnership is a voluntary program that seeks to reduce the environmental impact of electricity generation by fostering the development of CHP, a more efficient, clean, and reliable alternative to conventional electricity generation.
<b>EPA Green Power Partnership</b>	We are a Founding Partner of the Green Power Partnership and have made the commitment to source 2% of our Service Parts Operation (SPO) facilities electric load with green power sources. As of May 2003, green power started flowing to SPO facilities equaling 12 million kilowatt hours on an annual basis, exceeding our commitment. This is about 7% of all SPO electricity use and is enough energy to power over 1,000 homes.
<b>EPA Landfill Methane Outreach Program</b>	We are the largest corporate user of landfill gas for thermal energy in the U.S. We currently have four facilities using landfill gas as boiler fuel, and another facility is in the development phase. This effort currently provides more than 2 % of our U.S. energy usage from renewable sources. We were awarded the EPA Partner of the Year Award in 2004.

# Environmental Performance

## Greenhouse Gases

Voluntary Program	Targets/Progress/Awards
<a href="#">EPA Suppliers Partnership for the Environment (SP)</a>	We are a founding partner of this innovative program that encourages suppliers to reduce emissions from their operations and engages our supply base to share pollution prevention ideas to reduce waste and improve efficiencies in the energy and environmental arenas. More on the <a href="#">Supplier Partnership for the Environment</a> .
<a href="#">EPA Best Workplaces for Commuters (BWC)</a>	We recently registered our World Headquarters at the Renaissance Center to participate in the EPA-BWC program in June 2004. The EPA BWC program is in partnership with the US Department of Transportation. Eligibility for participation requires that 14% of your workforce is participating in the programs made available to reduce the burden on the infrastructure and reduce traffic congestion and GHG emissions.
<a href="#">World Resources Institute Green Power Market Development Group (WRI-GPMGDG)</a>	We are a founding partner of the WRI-GPMGDG and are working with team members to develop 1,000 Megawatts of new, cost competitive green power by 2010. An example is the GM/Dow announcement of a 35 Megawatt fuel cell project launched in 2003 - the largest fuel cell project in the world.
<a href="#">Great Lakes Renewable Energy Association (GLREA)</a>	In partnership with the GLREA, we have identified and implemented renewable energy opportunities. For example, the DOE, GLREA, Detroit Edison Electric (DtE) and GM SolarSchools Program, launched across Michigan, USA, in 2002, became a key enabler for the GM/GLREA partnership earning the 2003 Rebuild America Grant from the DOE. Five schools in the Lansing, Michigan School District have been selected under the program. Based on the progress made to date, the DOE has renewed the grant for the 2004 calendar year.
Other Global Activities	
<a href="#">Canadian Voluntary Challenge Registry (VCR)</a>	The Voluntary Challenge and Registry (VCR) was established in 1995 as a key element of Canada's National Action Program on Climate Change. The VCR's purpose is to encourage private and public sector organizations to voluntarily limit their net greenhouse gas emissions, as a step towards meeting Canada's climate change goals. In October 2003, GM of Canada Limited (GMCL) submitted its eighth update report to the VCR, which highlights our progress in reducing greenhouse gas emissions from our facilities.
<a href="#">Australian Greenhouse Gas Challenge</a>	The 2002/2003 period represents Holden's third year of participation in the Greenhouse Gas (GHG) Challenge. Holden has now implemented 100% of the CO2 reduction initiatives outlined in its GHG Challenge cooperative agreement, as well as a number of new initiatives across its sites. The top five action plans directly account for the reduction of 7,033 CO2 equivalent tons of GHG emissions from Holden's manufacturing facilities. In 2003, Holden was also awarded 'Waste Wise Business' certification from EcoRecycle Victoria for ongoing waste reduction initiatives in its Victoria operations.
<a href="#">Carbon Disclosure Project</a>	The Carbon Disclosure Project provides a coordinating secretariat for a group of institutional investors. This group has written to the 500 largest companies in the world by market capitalization on 31 May 2002 and 1 November 2003 asking for the disclosure of investment-relevant information concerning their greenhouse gas emissions. <a href="#">See GM's response (PDF) &gt;&gt;</a>
<a href="#">Vauxhall, UK</a>	Vauxhall, and its UK-based GM sister company IBC vehicles, took part in the first UK emissions trading in 2003 to mitigate the effects of their GHG emissions. Although Vauxhall's GHG emissions are falling, the auto sector's Climate Change Agreement with the UK government requires that Vauxhall make further reductions through emissions trading. The trading that took place covered activities during between October 2001 and September 2002, and was co-ordinated by the UK automotive trade body, the Society of Motor Manufacturers and Traders (SMMT). In January 2005, emission trading will begin on a pan-European basis and will be a mandatory system for many companies, as distinct from the current optional UK scheme.

DOE - Department of Energy

EPA - Environmental Protection Agency

General Motors 2004 Corporate Responsibility Report

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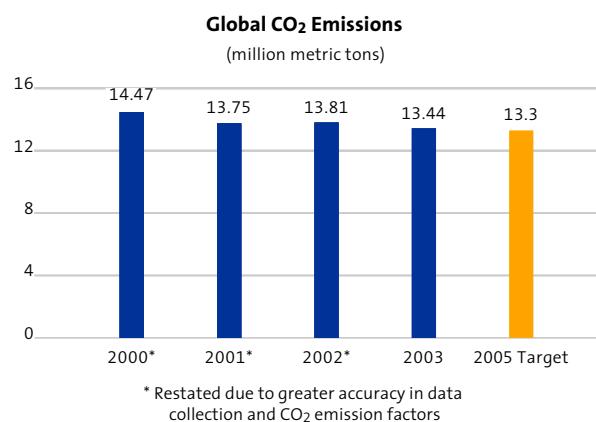


# Environmental Performance

## Greenhouse Gases

### Performance (GRI EN8)

In 2003, our global facilities emitted 13.44 million metric tons of CO2 (see graph), a 7.1% decrease compared to 2000. Our CO2 emissions are calculated from fuel and electricity use at each facility, which are the major sources of greenhouse gas emissions from our operations.



### Regional Performance

#### GM North America

Our GMNA emissions of CO2 in 2003 were 10.00 million metric tons, an 11.7% decrease from 2000 levels. These emissions equate to 74.4% of our total CO2 emissions from 81% of our global facilities.

#### GM U.S.

In 1995, we were the first automotive manufacturer to voluntarily report greenhouse gas emissions from U.S. facilities under Section 1605(b) of the Energy Policy Act of 1992 - Voluntary Reporting of Greenhouse Gases - and we continue to provide this information. In 2003, CO2 emissions from our U.S. facilities were 9.08 million metric tons, a reduction of 22.2% from 1990 levels and a reduction of 11% from 2000.

#### GM of Canada

Our GMCL operations report greenhouse gas emissions as part of the Voluntary Challenge and Registry Inc. (VCR) program. GMCL has reported to the VCR since its inception in 1994 and for the fifth consecutive year was recognized as a Gold Level Champion Reporter for its 2002 report.

Our Canadian operations have achieved a 24.4% reduction in energy consumption since 1990, resulting in a 22.2% reduction in CO2 emissions over the same time period. For more information, refer to the GMCL Action Plan for Reduction of Greenhouse Gas Emissions filed in October 2003 with Canada's Climate Change VCR Registry ([www.vcr-mvr.ca](http://www.vcr-mvr.ca)). The 2004 Report, which shows 2003 data, will be published in October 2004.

#### GM Europe

##### Vauxhall, U.K.

##### Climate Change Levy

In 2000, Vauxhall actively participated in obtaining a negotiated agreement for the U.K. motor industry (through its trade body, SMMT) in relation to the Climate Change Levy, a tax on business energy use introduced in April 2001. This was one of the first negotiated agreements to be approved by the U.K. government, and provides the motor industry with a rebate against the levy in return for agreed improvements in the energy efficiency vehicle production over the next ten years.

##### Emissions Trading

For Vauxhall and its U.K.-based GM sister company, IBC vehicles, official CO2 emissions trading began after the automotive sector's Climate Change Agreement with the U.K. government was reached. The trading that took place covered relevant activities during the period from October 2001 to September 2002, arranged through and coordinated by our sector trade body, the Society of Motor Manufacturers and Traders.



# Environmental Performance

## Greenhouse Gases

In January 2005, emission trading will begin on a pan-European basis and will be a mandatory system for many companies, as distinct from the current optional U.K. scheme.

### GM Asia Pacific

#### **Australian Government's Greenhouse Gas Challenge**

The 2002/2003 period represents Holden's third year of participation in the Australian Greenhouse Gas (GHG) Challenge. Holden has now implemented 100% of the CO2 reduction initiatives outlined in its GHG Challenge and the top five action plans directly account for the reduction of 7,033 CO2 equivalent tons of GHG emissions from Holden's manufacturing facilities.



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# Environmental Performance

## Land Use, Biodiversity and Cleanup

### Overview (EN6-7, EN23-27, EN29)

Car manufacturing is an industrial process, and many of our sites have witnessed decades of industrial activity. When a facility stops production, we ensure that the site is environmentally safe and that land is not left to degrade, but is put to good use. Site remediation and redevelopment projects can provide residential, industrial or community resources, or involve the conversion of sites back to natural habitat for the benefit of enhancing the local biodiversity. Due to the water resources required for car production, many of our sites are located near rivers or lakes. As a result, many of our site remediation projects involve waterside developments or wetland restoration.



Waterfront Development at former General Motors North Tarrytown Assembly Plant, Sleepy Hollow, New York

Our commitment to biodiversity extends further than our sites or the areas surrounding them. We support biodiversity projects globally, particularly with sensitive or endangered habitats. We also have long-standing partnerships with organizations, benefiting globally important habitats and wildlife. In addition, we support programs that educate young people on the importance of biodiversity.

### Objectives

Our goal is to return our surplus properties and sites to productive use. We consult local real estate experts, business leaders and government officials, as well as the local community in determining the most suitable re-use for our former sites.

Our Environmental Principles state that we are committed to actions to restore and preserve the environment and to reduce waste and pollutants. We follow this approach when we consider options for bringing our former industrial sites back into use. In addition to redeveloping sites for business or residential use, the process of re-using land often involves removal of environmental contamination and restoration of natural habitats, such as wetlands.

### Remediation Approaches

Environmental Remediation and Plant Decommissioning is conducted using an integrated, single-point-of-focus team responsible for all environmental remediation, plant clean-up and demolition activities. This small group of experts is responsible for the implementation of our environmental clean-up programs and timely demolition of unused GM facilities. A key focus of this team is on suitable redevelopment.

GM participates in restoration of former industrial or waste sites in conjunction with other parties such as local governments, developers and communities.

In 2002, we announced the redevelopment of the former GM assembly plant in Tarrytown, New York. Named Lighthouse Landing by the developer, it will feature residential, commercial, retail and green space. GM and the developer signed a voluntary cleanup agreement with the State of New York to address environmental issues associated with the redevelopment.



# Environmental Performance

## Land Use, Biodiversity and Cleanup

The site is situated on 96.2 acres along the Hudson River waterfront in one of the most scenic areas of the Hudson River Valley. The decommissioning process included the decontamination of all assembly and support buildings before demolition and extensive environmental investigations to confirm the site is suitable for community use.

To achieve the redevelopment, GM is working in partnership with the Roseland Property Company, who have successfully redeveloped other brownfield properties in New York and New Jersey. The development includes 1,562 homes, 185,000 square feet of retail space, 95,000 square feet of office space, a 150-room hotel, a proposed train station, and associated parking. In addition, more than 20% of the site is planned as public open space. Although the specific uses are subject to modification in response to the ongoing state environmental review process, the final project will enhance Sleepy Hollow, by connecting the village center once again with the Hudson River waterfront.

Over the past two years, GM and Roseland have been working on completing the assessment of site environmental conditions and developing a Remedial Action Plan that will mitigate any unacceptable environmental risks both during and after implementation of the redevelopment project. Extensive sampling of the historical fill and groundwater at the site, as well as sediments in the adjacent Hudson River, will soon be completed. A number of other studies are also being performed to assess other impacts of the project on the community, including traffic, socio-economics, and aesthetics. A key element of the project, the design of the open space at the development, is being performed jointly with the village of Sleepy Hollow. We expect these studies will continue into 2005.

## Performance

We take a proactive approach to the preservation and restoration of wildlife habitats and biodiversity both on land and in water. We partner with external groups with expertise in this area, such as The Nature Conservancy and Earthforce-GREEN, to undertake preservation projects and education programs relating to wildlife and biodiversity.

- [Case study: The Nature Conservancy \(see below\)](#)
- [Case study: Protecting the Brazilian Rain Forest](#)
- [Case Study: GM/TNC Adopt and Acre Challenge Grant](#)
- [Case Study: GM/Wildlife Habitat Council](#)
- [Case study: Earthforce-GREEN](#)

### Case study: The Nature Conservancy

In 1994, The Nature Conservancy and General Motors began a relationship that was unprecedented for both organizations because of its size and scope; \$10 million in cash and trucks over ten years. General Motors was drawn to the Conservancy because its collaborative approach promotes a healthy economy and a



Water pollution testing and assessment near the former General Motors North Tarrytown Assembly Plant, Sleepy Hollow, New York



# Environmental Performance

## Land Use, Biodiversity and Cleanup

healthy environment. It also generates innovative initiatives within local communities that preserve our landscapes, help local economies, and save precious places around the world.

During the past ten years, GM has donated \$8.5 million in cash and 171 trucks to aid the often-rugged conservation work of the Conservancy. GM's funding supports many different projects within the Conservancy, including five preserves in the U.S. and four abroad.

In addition, GM has provided \$10 million to the Conservancy to restore and protect about 30,000 acres of endangered land in the [Atlantic Rainforest Restoration Project in Brazil](#). At the end of 2003, GM's cumulative donations to the Conservancy reached nearly \$23 million.

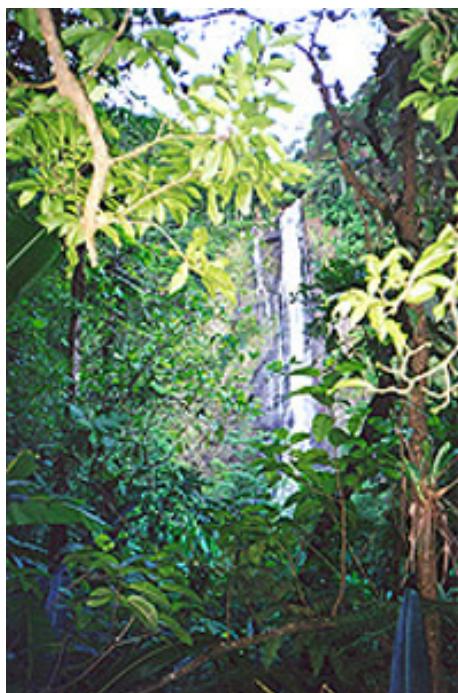
In 1999 and 2000, the GM Card Group invited its cardmembers to donate a portion of their earnings to the Conservancy through the "Cardmembers for Conservation" program. Generous cardmembers contributed 19 Chevrolet trucks, including four Chevy S-10 electric pickups, and \$175,000 in cash, for a combined donation total of \$768,000.

In 2001, The Conservancy celebrated its 50th anniversary with a photographic exhibition, "In Response to Place: Photographs from The Nature Conservancy's Last Great Places." The 4 1/2-year traveling exhibit, featuring the work of 12 internationally recognized photographers, is sponsored by GM and its Cadillac division. In the spring of 2005, GM will host the exhibit for three months at its Global Headquarters at the Renaissance Center in Detroit.

GM employees also have been very generous. Through the employee-giving program, employees are allowed to donate a portion of

their pay to The Nature Conservancy. Since 1998, GM employees have pledged and donated \$541,000.

The Nature Conservancy is a leading international, non-profit organization that preserves plants, animals and natural communities by protecting the lands and waters they need to survive. To date, the Conservancy and its more than one million members have been responsible for the protection of more than 15 million acres in the United States and have helped preserve more than 117 million acres in Latin America, the Caribbean, Asia and the Pacific.



Brazilian Rainforest



# Environmental Performance

## Land Use, Biodiversity and Cleanup

### Case study: Protecting the Brazilian Rainforest

In 2001, we launched a major initiative to restore and protect more than 30,000 acres of degraded rainforest in southern Brazil. The Brazil Atlantic Rainforest Restoration Project, a collaborative undertaking between GM, The Nature Conservancy and the Sociedade de Pesquisa em Vida Selvagem e Educação Ambiental (SPVS, a leading Brazilian conservation organization), purchases privately owned agricultural land in Brazil's Atlantic Forest and converts it into a private nature preserve owned and managed by SPVS. The \$10 million project protects this wildlife habitat in perpetuity, while stabilizing the Cachoeira River valley environment by reducing slash and burn clearances and pollution, and creating economic opportunities for nearby communities.

A primary objective of the project is creating a scientifically based model for biodiversity protection and ecosystem restoration on a large scale. Scientists quantify and document how the restored forest absorbs atmospheric carbon, to better understand the role that reforestation can play in responding to concerns over global climate change.

### Case Study: GM/TNC Adopt an Acre Challenge Grant

In December 2003, GM and The Nature Conservancy launched the Adopt an Acre Holiday Gift Package. To date, total contributions from over 250 donors have protected over 600 acres in the Atlantic Rainforest of Brazil. The targeted location of the forest to be protected is east of the GM Atlantic Rainforest Project. The intent of the program is to create a biodiversity corridor in the region between the parcels of land already with GM's Brazilian Rainforest Project.



Jaguar in Brazil's Atlantic Forest  
© Lynn M. Stone

### Case Study: GM/Wildlife Habitat Council

In 2002, General Motors began a partnership with the Wildlife Habitat Council (WHC), a non-profit group of corporations, conservation groups and individuals dedicated to enhancing and restoring wildlife habitat. WHC helps landowners, particularly companies, manage their unused lands in an ecologically sensitive manner for the benefit of wildlife. This unification has brought together volunteer-based wildlife teams of company employees and community groups such as the Boy Scouts, Girl Scouts and local schools.

With the goal of sustainable companies operating in sustainable communities, habitat programs help develop an environmentally aware workforce and public. Currently, four GM locations have attained WHC certification, with two others seeking the prestigious certification this year. In 2002, Powertrain - Saginaw Malleable Iron facility received the honor for their 'Malleable Prairie', a capped former municipal landfill which now flourishes with native wildflowers and wildlife. Also that year, Saginaw Metal Casting Operations facility was honored for their 'demonstration wetland.'



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# Environmental Performance

## Land Use, Biodiversity and Cleanup

recycles site wastewater. This wetland has been adopted by a local middle school that monitors its growth and development. In 2003, Lordstown Assembly and General Motors Canada Limited (GMCL) – Oshawa Headquarters were certified. The GMCL site, in Oshawa, Ontario, was presented with the distinctive 'Rookie of the Year' Award for their stewardship of the 105-acre McLaughlin Bay Wildlife Reserve. The Lordstown Assembly facility received certification for maintaining one of the largest Blue Heron rookeries in the State of Ohio. Currently, approximately 375 blue heron nests are established in the rookery.

### Case study: Earthforce-GREEN



Since the 1980s, GM has supported the efforts of the Global Rivers Environmental Education Network (GREEN) by providing employee mentors and financial support to watershed education efforts. GM partnered with the environmental

organization Earth Force in 1999 and expanded GREEN. The GREEN program engages GM plants, products, educators and young people across the U.S. and Canada to clean up our rivers. The program is making real contributions to education and watershed protection, while giving GM employees a meaningful way to give back to their communities.

In 2003, 171 GM employees from 47 GM facilities participated in GREEN, engaging 230 classrooms and approximately 8,500 young people in projects to improve the health of their watersheds. Four more GM facilities have joined the program in 2004.

For its leadership in the Earth Force Global Rivers Environmental Education Network (GREEN) program, GM was honored by The Conservation Fund with the 2003 CF Industries National Watershed Award. The award, presented this year to three communities and one corporation,

recognizes model programs that protect local watersheds.

Some of the ways that GM volunteers are investing their time through GM-GREEN include:

- Providing volunteer support in the classroom and on river sampling field trips
- Offering scientific expertise and connecting students to other local contacts for community research and action projects
- Arranging for videotaping and photographing of student events
- Helping to identify and research local and regional environmental issues, such as watershed management practices

## Regional Performance

### GM North America

#### Saginaw River and Bay, Michigan

As previously reported as a significant legal matter, a multi-party settlement was reached in 1999 of the lawsuit filed by the State of Michigan against GM, the City of Bay City, and the City of Saginaw. The case alleged damage to the natural resources in the Saginaw River and Bay. The settlement included our acquisition of more than 1,600 acres of important ecological habitat, including eagle nesting areas, islands in Saginaw Bay and threatened lakeside prairie and coastal wetland habitats. As part of the settlement, we transferred all of the land to the State of Michigan and the U.S. Fish and Wildlife Service. Some of these areas were threatened by proposed residential developments, and others had been degraded through past agricultural practices, including the construction of berms and drainage tiles to de-water these resources.

#### Elements of this settlement included:

- The removal of obstacles to restore the wetland habitat and re-establish hydraulic connection with Saginaw Bay. We worked in cooperation with the Wildlife Division to make this wetland restoration a reality. Restoration was completed in June 2002, ahead of schedule



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# Environmental Performance

## Land Use, Biodiversity and Cleanup

- Enhancing an important local fishery habitat by removing barriers that prevented fish from reaching critical spawning areas
- We are also planning improvements to the Tobico Marsh connection with the Saginaw Bay. This will enhance seasonal fish spawning in the marsh while reducing the potential for local flood damage
- The funding of educational initiatives at the Greenpoint.

### **Environmental Learning Center**

This Center improves access to the water resources by enhancing existing boat launches and by building new ones. The community uses the launches year-round, and they offer disabled access. The largest launch is located just north of one of our plants and includes a gazebo and ecological park on land we donated to the city. The launches and ecological park were completed in 2002.

### **Saginaw Manufacturing Facility, Saginaw, Michigan**

At our iron foundry site we teamed up with Ducks Unlimited, the U.S. Fish and Wildlife Service and North American Waterfowl Management Plan to create a 25-acre native prairie habitat on the property. Located along the Saginaw River on a waterfowl migration route, it will offer valuable habitat for grassland nesting birds and other wildlife. Native warm-season grasses provide good nesting cover and effectively absorb rainfall and slow soil run-off.

### **Mt. Morris Site, Genesee County, Michigan**

A small portion of this wooded 80-acre parcel was once used to dispose of various waste materials. Working with the state environmental agency, we conducted the clean-up of this area and re-contoured it to create a scrub-brush wetland environment. What was once a debris-strewn area that only marginally supported vegetation is now an area rich in grasses, flowers, reeds and wetland wildlife. Since then, we have developed plans to create several types

of new wetlands on the land and protect existing wetlands. The new wetlands, which may include emergent, forested and scrub environments, will provide valuable fish and wildlife habitat, as well as water resource protection.

### **Willow Run Creek Site, Wayne County, Michigan**

Several companies, including GM, teamed up with local government, the State of Michigan and the U.S. EPA in an innovative partnership to restore a river and pond habitat affected by years of wastewater discharge from local industries, businesses and residents. Before the clean-up, this urban resource had severely diminished recreational and habitat potential. The ponds were choked with excessive, contaminated sediment and the water was unable to sustain a healthy and diverse aquatic habitat. In total, we removed more than 400,000 metric tons of contaminated sediment from the waterways and improved the storm water management system to mitigate future impacts. During the clean-up, we made various infrastructure improvements to enhance an existing community park near one of the clean-up areas. In addition, we constructed a new wetland area nearby to enhance the overall habitat quality.

### **New York Superfund site: Salina Industrial Powerpark in Salina, New York**

An example of our efforts to return our surplus properties back to productive use is our former plant site in Salina, New York. When the facility ended production in December 1993, it was put on New York State's waste site list. It appeared likely that the site would be subjected to an extended remedial investigation and cleanup process. These programs often take years to implement and gain regulatory approval, making it difficult to put the facilities back into productive use for the community on a timely basis.



# Environmental Performance

## Land Use, Biodiversity and Cleanup

Our approach, where practical, is to work with various stakeholders to put these surplus properties back into active use. At the Salina site, we integrated the existing environmental studies into a preliminary Remedial Investigation and Feasibility Study report. It presented an alternative approach to the state agency to resolve outstanding environmental issues. The report also proposed to develop the site into a new industrial park, attracting new manufacturers and existing companies looking to expand. Populating the site with new companies before the investigation and cleanup work ended posed challenges for both GM and the government. By working cooperatively, GM, government agencies and community leaders overcame these difficult obstacles, allowing redevelopment to occur over the past six years, while remedial investigation and remedial work is still ongoing.

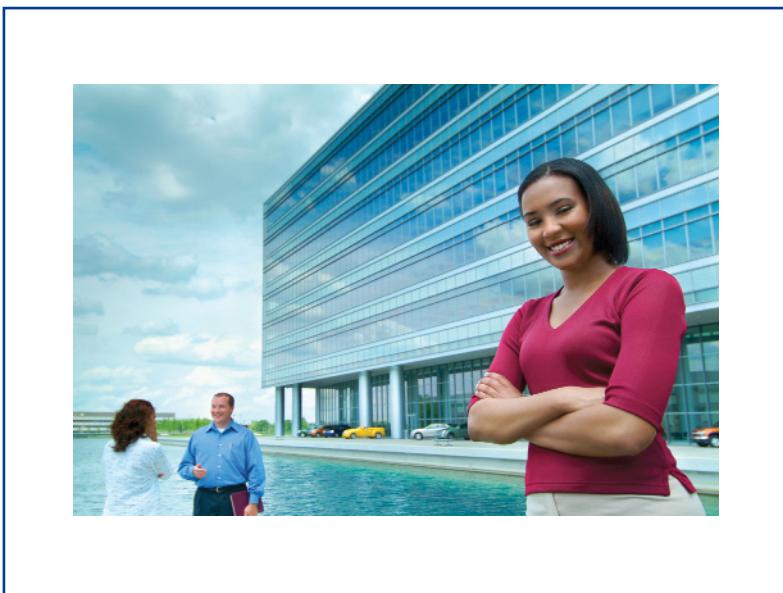
Interim remedial measures were performed in advance of final site remedy selection, addressing known environmental exposures at the site. More than 50 different cleanup projects have been performed including: cleaning of the building's interior, demolition of utilities and waste facilities, cleaning of facility storm sewers, construction of an on-site containment system, removal of contaminated soils, creation of a storm water retention basin, and a new water treatment system. Where possible, interim remedial measures have been designed with redevelopment opportunities in mind. For example, soil otherwise slated for offsite disposal has been used to build infrastructures such as loading docks for tenants. In addition, the onsite containment system was designed in such a manner that the parking lot surface will be usable by future tenants.

Shortly after the first portions of the building interior were cleaned, our first tenant took occupancy. Today over 12 additional companies have made the Salina Industrial Powerpark their new home. These companies include small to

medium manufacturing companies and a 100-person engineering firm. Each tenant could have built their new home on greenfield sites in the area, or even left the area to find suitable manufacturing facilities elsewhere. If not for the efforts and cooperation of GM, state and local leaders, valuable manufacturing jobs within the community could have been lost.

# Social Performance Overview

People are our greatest asset - without them we could not be the company we are today. GM employs 326,000 people and we purchase goods and services from more than 3,500 global suppliers. It is therefore only natural that we take our social responsibilities very seriously.



We are committed to looking after the health and well-being of our employees, giving them job satisfaction and career opportunities. This is the right thing to do, and it also makes good business sense. A happy and rewarded workforce will be more creative and efficient, helping GM to maintain its leadership position in the automotive industry.

We emphasize a performance culture at GM because it is key to creating a competitive, profitable and satisfying workplace. This section contains more about our performance culture focusing on:

- **Diversity**
- **Health, Safety & Security**
- **Employee Satisfaction**
- **Supplier Management**
- **Employee Training**
- **Education**

For information on community involvement and philanthropy, see our Economic Performance section on **Community Investment**

### Overview (GRI LA10, HR4)

"Having people of different ethnic, racial, and social backgrounds in our corporation has not slowed our pursuit of excellence - it has accelerated it."

- GM's University of Michigan Supreme Court Amicus Brief at 24,  
quoting Former GM Chairman Jack Smith

General Motors and its leadership are committed to Diversity and Equal Employment Opportunity. Our core value of **individual respect and responsibility** sets fundamental expectations for behaviors and actions that strive toward creating an environment that allows everyone to fully contribute to total customer enthusiasm. These expectations are reflected in our **diversity strategy** and our **equal opportunity policy**.

### Defining Diversity

Diversity at GM is defined as the collective mix of people's differences in the workplace, society, families and communities. It can mean race and gender and also family status, military service, ethnicity, religious beliefs, education, age, sexual orientation and physical abilities.

Diversity initiatives within GM are about overcoming the barriers of differences that get in the way of work and positive relationships, and about recognizing differences as unique perspectives and contributions that individuals bring to the organization.

Diversity differs from Affirmative Action. Affirmative Action is a U.S. federal compliance-driven initiative for all federal contractors.

### Performance Overview

We have focused on creating a global strategy and developing metrics so we can better measure our diversity performance. We have also made progress in other ways:

- The "Expanding Your Connections" training program went global
- GM brought all leaders together in June to discuss the impact of diversity internally and externally in the marketplace.

In surveys of our staff, we have found they have noticed our increasing emphasis on diversity:

- Greater perception that GM leadership is committed to diversity
- Steady improvement in global census scores related to creating an environment where all feel the opportunity to contribute.

### Objectives



Our diversity vision is to create an environment that naturally enables General Motors' employees, suppliers, dealers and communities worldwide to fully contribute to the pursuit of total customer enthusiasm. We believe creating that environment and striving to be the best is accomplished by creating a strong culture of fairness and respect.

Our objectives also include integrating and aligning diversity throughout GM globally. This means making diversity a part of everything we do as a way to enhance our organizational



# Social Performance

## Diversity

effectiveness, our success in the marketplace, and our brand and image as the automaker of choice and the employer of choice.

### Diversity Strategy

GM has a comprehensive diversity strategy that provides a global framework while allowing for local flexibility and customization (see diagram below). The strategy is driven by behaviors and actions and is based on three guiding principles:

1. Integration and alignment of diversity within all that we do - diversity is our reality and opportunity
2. Creation of a "one company" experience and a strong culture of fairness and respect for all employees
3. Approaching diversity with "Big and Fast" in mind

### GM DIVERSITY Strategy



The guiding principles of the strategy were created to support a "Big and Fast" approach to diversity. In other words, although GM is a very large company, it must be able to respond quickly in a dynamic economy.



GM executive Director of Design Anne Asensio makes her point at 'Inspiration from the Inside Out,' a GM diversity discussion at the New York Auto Show in April. Panel members Sangyup Lee, lead designer in advanced design, left, and Orlo Reed, lead color and trim designer, concept vehicles, look on.

Hence, expectations for actions by leaders driving diversity include:

- Communicating expectations
- Seeking diverse input
- Creating diversity awareness
- Managing for results

Housed in the Public Policy Center, Diversity Initiatives has a global reach and extensive network of leaders and volunteers who are involved in the Diversity Network. This network includes:

- Strategic champions
- Diversity marketing
- Diversity partners
- Affinity groups and affinity group council
- Diversity affiliates
- Employee nexus group

Consumers, dealers, employees, suppliers and communities represent our key audiences and areas of action.

### Equal Employment Opportunity Policy

GM has an Equal Employment Opportunity Policy that prohibits harassment on the basis of age, gender, race, color, religion, disability, national origin, sexual orientation or veteran status. The policy prohibits retaliation against individuals for reporting harassment.

## Actions

Diversity is a global fact and is therefore a business imperative and an opportunity. The ability to effectively recruit, lead and leverage all our diverse talent will provide us with the competitive advantage we need to win in the marketplace and be considered the employer of choice.

Our corporate Diversity Initiatives division develops the strategy, sets the tone and provides tools that enable business units and leaders - internal and external - to provide supportive environments to all who interface with GM. The five core interfaces of diversity are:

- **Consumer diversity**
- **Dealer diversity**
- **Employees and talent acquisition**
- **Supplier diversity**
- **Communities**

### Consumer Diversity

Population trends are indicating significant population growth, particularly in the developing world, with an increasingly diverse population in developed countries. For example, the Hispanic population in the United States grew 15.8% between 2000 and 2003, where U.S. car sales to Hispanics grew from 5.7% in 1999, to 7.3% in 2003.

GM recognizes that it must grow its share in diversity markets if it is to retain its overall retail

share leadership position. GM's diversity markets growth strategy includes:

- Sponsoring public policy organizations such as the U.S. Hispanic Chamber of Commerce
- Working with our dealers so they understand the changing marketplace, the business opportunity and nuances of customer service for particular minority groups
- Advertising and consumer literature aimed at minority groups. For example, in the U.S., GM **advertises in Spanish** and produces **brochures for women car buyers**.

### Dealer Diversity

For more than 30 years, we have been committed to growing a diverse and financially successful dealer network. We were the first U.S. automaker to institute a structured minority dealer initiative in the industry. Since 1972, we have offered industry-leading training opportunities to qualified minorities to help prepare them to become future dealers.

Today, 75% of our approximately 400 minority dealers own their dealerships outright. The selection process for identifying new dealerships has been standardized, and we consider factors such as size, location, demographics, complexity of operations and investment when matching candidates to dealerships. The result is that new minority-owned dealerships are more profitable than ever. For more information on the Minority Dealer Development program, please visit [www.gmminoritydealers.com](http://www.gmminoritydealers.com) and [www.identifythebest.com/GMDD/Portal/Main.asp](http://www.identifythebest.com/GMDD/Portal/Main.asp)

Additionally, GM launched the Women's Retail Initiative in January 2001. GM is the only automaker to offer this assistance to help women become dealers. This initiative mirrors the Minority Dealer Program, focusing on recruitment, training, and placement. Since the initiative was launched, we have appointed a total of 47 female dealers, bringing our total to 246 by the end of May 2004. Ninety-six percent of our female dealers own their own dealerships, and they are as profitable as our male dealers.



### Employees and Talent Acquisition and Development

The scope of our GM recruiting process encompasses our ability to make viable candidates AWARE of GM, ATTRACT them to our

AWARE > ATTRACT > CONSIDER > COMMIT > JOIN > PLACE

business, CONSIDER us as an employer of choice, COMMIT to GM's Vision, JOIN the team and be PLACED where they can be a valuable contributing member.

In the U.S., GM's recruiting efforts include campus recruiting and experienced professionals. GM recruits 80% of all new college graduates, interns and co-ops from our Key Institutions and Key Recruiting Organizations (KRO's). The remaining 20% come from local or niche schools. The teams involved in the recruiting process are made up of GM employees from various functions, positions, levels, diversity, schools and service dates.

The GM Talent Acquisition activity supports a number of Diversity Key Recruiting Organizations (for example the Hispanic Engineer National Achievement Awards Conference, Women of Color, and Black Engineer of the Year Awards) who have conducted awards competitions each year since 1990. GM employees have participated and been recognized in many ceremonies at these very prestigious national conferences.



Rafael Laguna was named Supplier of the Year by GM Mexico.

### Supplier Diversity

Rafael Laguna was named Supplier of the Year by GM Mexico.

As a national leader and the first automaker to establish a Minority Supplier Development program, GM has been at the forefront of minority business development for more than 35 years.

GM is committed to increasing spending with minority suppliers and in 2003 spent \$7.2 billion, an increase of 16% over the \$6.2 billion spent in 2002. For more than 18 years, GM's Tier 1 minority spending has been \$1 billion or more, and since 1999 it has exceeded \$2 billion annually.



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GMAC  
FINANCIAL  
SERVICES

OnStar



# Social Performance

## Diversity

GM also runs a mentoring program that currently helps 50 minority suppliers develop their leadership and business skills. In addition, minority suppliers can benefit from technical and managerial assistance as well as financial support.

In 2003, nine of the 70 suppliers who received the GM "Supplier of the Year" award were minority suppliers.



Willie O'Ree, who became the first black player in the NHL when he joined the Boston Bruins in 1958, is now director of youth development for the USA Hockey Diversity Task Force. O'Ree put on a clinic for 80 members of the Columbus Ice Hockey Club, and GM donated equipment.

### Communities

Willie O'Ree, who became the first black player in the NHL when he joined the Boston Bruins in 1958, is now director of youth development for the USA Hockey Diversity Task Force. O'Ree put on a clinic for 80 members of the Columbus Ice Hockey Club, and GM donated equipment.

Employees give back to various GM communities through their gifts of time and talent, participating with organizations, and community projects that have value for them. This form of community investment, through volunteerism, is supported by GM and respects a philosophy of 'personal time, personal choice' regarding how people choose to get involved in community needs and issues.

A global program was initiated in 1999 through the GM Foundation called GM Volunteer PLUS International, to provide additional support to these community efforts of our employees. GM employees who contribute 50 or more hours to an eligible charity in a calendar year can apply for a grant from the GM Foundation and its global program partner, United Way International, on behalf of the charity. Grants are valued at \$250 dollars (U.S.), and can be generated through individual or team participation.

## GM Volunteer PLUS International

Through the 2003 calendar year, the GM Foundation has contributed over \$1.5 million dollars (U.S.) to charities around the world in conjunction with over 500,000 hours of volunteer service provided by GM employees. At the end of the 2003 calendar year, the GM Volunteer PLUS International program began to expand from Canada, Colombia and the United States to include GM employees in Argentina, Australia, Brazil, Chile, Germany, Kenya, Poland, South Korea, the United Kingdom, and Venezuela. These new locations are targeted for completion by the end of the 2004 calendar year.

For more on community involvement, see the [Economic Responsibility](#) section.



HUMMER



# Social Performance

## Diversity

### Performance (GRI LA11)

Diversity Initiatives took great strides in 2003-2004. The strategy to integrate and align our work globally is coming to fruition as indicated by the extensive network of initiatives underway. The North American Strategy Board has made commitments to strengthen our culture with a focus on fairness and respect. Moreover, GM is now equipped with a set of diversity-specific metrics that provide a comprehensive understanding of our performance. These include the percentage of female employees, the percentage of minority ethnic employees and the number of discrimination charges brought by employees.

It is important to distinguish between diversity, and Equal Employment Opportunity (EEO), and Affirmative Action (AA). EEO and AA are minimal requirements of compliance in the United States, and legislation similar to EEO exists in Europe. Diversity, however, is focused on optimization. Also, data collected for EEO or AA, such as representation and complaint metrics, help to highlight progress on diversity initiatives. A culture of respect and fairness not only helps compliance with legislation and reducing complaints, it helps improve business performance.

#### Awards

In the United States, the National Association for the Advancement of Colored People (NAACP) publishes an annual Consumer Choice Guide and Report Card on the automotive industry. The NAACP Report Card for 2003 gave GM, DaimlerChrysler, and Ford grades of "C," the top grades for the industry.

GM scored an 86% rating in the Human Resource Council's 2003 Corporate Equality Index, and in addition, have won a number of awards in 2003-04 for our work on diversity, including:

- DiversityInc.com, Top 50 Companies for Diversity (2003)
- Div50 Award – Top 50 Corporate Buyers of Diversity Products and Services in the U.S. (2003)
- Corporation of the Year – Native American Business Alliance (April 2004)
- Top 25 Vendor Programs for Latinos - Hispanic Business Magazine (2003)
- Hispanic Business, Top 100 Latinas - Sonia Green (2003).

### Regional Performance

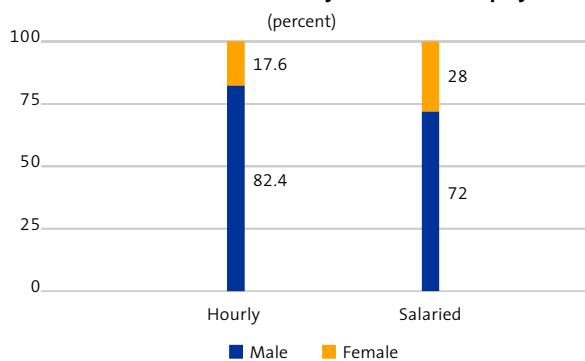
#### GM North America

##### Gender

In the United States, the ratio of male to female employees is approximately 4-to-1 with female employees making up 20.7% of the work force. Broken down by hourly and salaried employees, women make up 17.6% and 28.0%, respectively, as shown in the chart below.

In the United States (excluding GMAC Financial Services, MIC and Saturn), women occupy 19.9% of all official/management positions and 26.8% of all professional positions within GM. Including Saturn, GMAC Financial Services, and MIC, the figures are 20.6% and 28.7%, respectively.

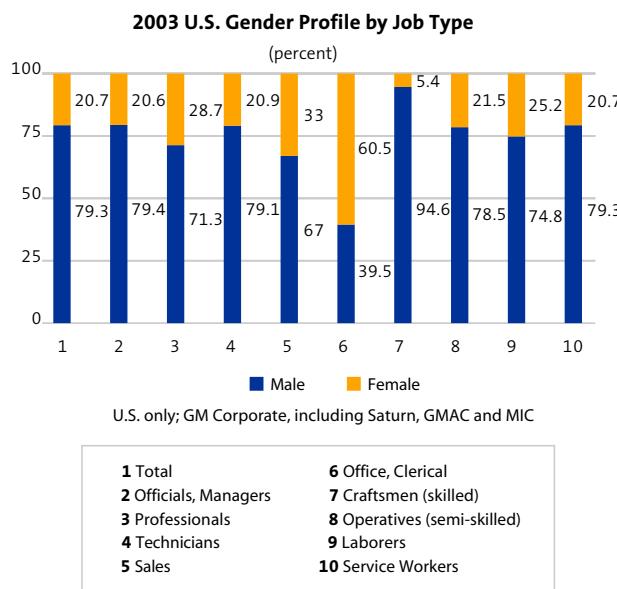
2003 U.S. Gender Profile Hourly and Salaried Employees



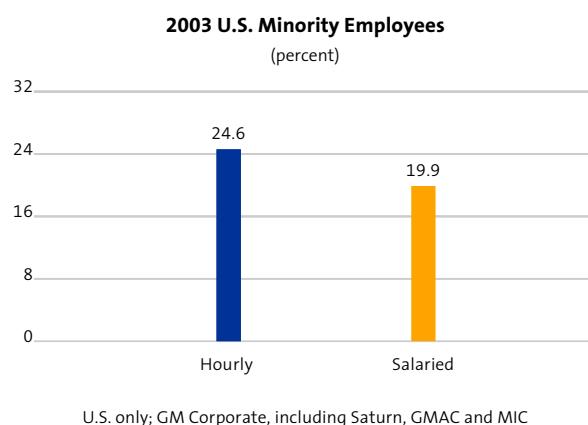
# Social Performance

## Diversity

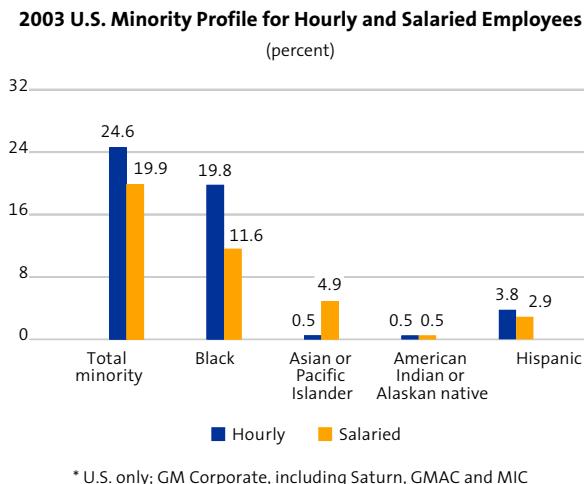
The chart below shows the gender profile for U.S. employees broken down by job type.



**Minority Employees as the Emerging Majority**  
The following chart shows the distribution of minority employees in hourly and salaried ranks in the United States (includes GMAC Financial Services, MIC & Saturn).



The chart below indicates representation of individual minority groups in the salaried and hourly workforce in the United States.



### Discrimination-Related Agency Charges

In the United States during 2003\*, GM received 207 new discrimination charges, compared to 245 new charges in 2002\*. The basis upon which these charges were filed includes race, sex, national origin, religion, retaliation, age, disability, and the Equal Pay Act. GM aims to avoid all discrimination charges, but we do consider this a low number given the greater than 165,000 GM employees in the United States reported for equal employment opportunity regulations.

In 2003, 187 charges were closed, compared with 225 closings during 2002.

Below is an analysis of the charges closed during 2003:

- 94.1% were closed without a finding of probable cause or a settlement with the respective governmental agency or employee
- 4.3% were found to have probable cause
- 1.6% were resolved through settlements with the respective governmental agency or employee.



# Social Performance

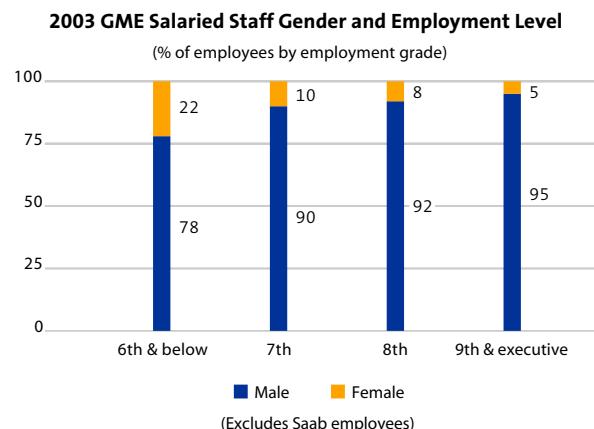
## Diversity

In 2003, the Office of Federal Contracts Compliance Programs (OFCCP) scheduled 22 GMNA facilities for Compliance Evaluations. Five facilities were found to be in-compliance. Nine of the scheduled evaluations were administratively closed. Eight facilities closed with a modified compliance letter and the issue was resolved.

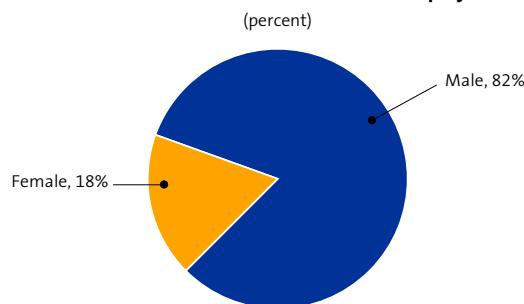
\* These figures do not reflect all open charges

### GM Europe

The following charts show the distribution of employees by gender



**2003 GME Gender Profile of Salaried Employees**



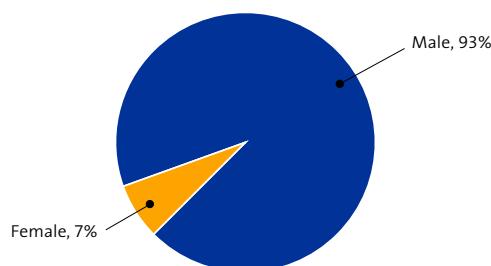
There is a wide range in the average percentage of women across units, both in the hourly and the salaried workforces. In general, representation of women is higher in the salaried workforce.

### Discrimination-Related Agency Charges

In Europe, we have signed formal agreements on racism and tolerance with GM's German Works Council (labor union leaders).

Litigation regarding discrimination is rare in Europe.

**2003 GME Gender Profile of Hourly Employees**  
(percent)



# Social Performance

## Health, Safety and Security

### Overview (GRI LA 5-6)

Safety is central to all we do at General Motors. It is a priority on every job, at all times. We have a long history of creating world-class health and safety programs and reducing risk in the workplace. Top management has demonstrated leadership and commitment to health and safety. Coupled with a strong partnership with unions and employees, this has been and will continue to be the foundation for efforts to preserve the health and well-being of GM employees.

Our efforts have resulted in dramatic improvements in employee health and safety, and GM is now the automotive industry leader. We continue to benchmark ourselves against other industry leaders like Alcoa and DuPont and seek to match their world-class performance.

### Objectives

Consistent with GM's core values, our global team continues to pursue aggressively improved safety performance for all employees. We have a clear policy and a number of initiatives in place to meet this goal. GM's Health and Safety Policy, injury/illness reduction targets, and the objectives of the health and safety process apply globally across our four business regions of North America, Europe, Asia-Pacific, and Latin America, Africa and Middle East.

GM management seeks to provide a safe, secure work environment for our employees as well as protecting property and proprietary information.

### Health and Safety Policy

Our GM Health and Safety Policy reads: *We are committed to protecting the health and safety of each employee as the overriding priority of this Corporation. There will be no compromise of an individual's well-being in anything we do. The implementation of actions to help our employees realize a healthy, injury-free environment is a leadership responsibility.*

*Continuing support of this effort is the responsibility of everyone. We will lead the General Motors team to ensure that we protect the well-being of every member.*

Recognizing that we all have a stake in helping to create and maintain a healthy, injury-free work environment, our focus is on leadership and teamwork. This policy has served as the cornerstone for the dramatic reduction in injuries and illnesses over the past nine years. Due to the potential severity of injury when performing daily tasks, we have targeted our efforts at reducing risk to skilled trades workers and contractors.

### Security Policies

There are four security policies covering Security Administration: Fire Prevention & Protection, Emergency Response, Investigations, and Security. GM standards for these have been developed to deal with changing security conditions and must be met at all GM owned or leased sites. These standards are established to ensure appropriate processes are implemented to provide quality, best in class security services in support of the Enterprise. The standards are contained in the GM Global Security Manual, which must be available at all GM sites.

### Targets

Our targets are to achieve zero fatalities, injuries and illnesses

### Actions

A major challenge is finding new ways to help skilled workers and contractors identify hazards in the workplace and ensure that proper procedures are used when performing tasks. Another major challenge is developing leading indicators to complement existing injury and illness record-keeping. Because our accident and injury rates are so low, further improvements will require other leading indicators (e.g. process related performance) to help us achieve even better results.



To meet these challenges, we have a number of initiatives in place:

- **Sharing best practice (see below)**
- **Risk assessment (see below)**
- **Management system (see right)**
- **Office safety**
- **Memberships**
- **Security**

### Sharing Best Practices

A key strategy in reducing risk is the identification and proliferation of best practices. Our experience has shown that a best practice can come from anywhere in the world. Through email, teleconferences or GM's Health and Safety website, information is shared and passed to all corners of the globe. The Global Safety Activity team facilitates development of these best practices and helps implement procedures and systems that have proved successful in other parts of the company. This team serves as the technical and administrative arm of GM top management leading the health and safety process. Global Safety assists operating divisions and plants throughout the world in meeting objectives, sharing information and providing leading edge information.

### Risk Assessment

Joint programs with trade unions and specialized employee training initiatives have helped us become the leader in health and safety performance in our industry.

We have developed a practical risk assessment and design methodology that is used during the design of machine safety features. Known as Safety 21, the system has dramatically improved machine safety resulting in reduced risk to our employees.

Safety 21 is a joint effort between our engineering and safety professionals, the United Auto Workers (UAW) union, and our employees. Using this system, the UAW, GM and its employees developed an alternative means to

locking out machine power when performing certain maintenance tasks. Known as MPS, or Monitored Power Systems, this method ensures that robot cells are in a safe mode when performing specific tasks identified in the risk assessment process.



Mariel Broadwater uses a screwgun to place screws in the rear fascia quarterbracket of a Pontiac G6 at the Orion Assembly Plant in Lake Orion, Michigan.

### Management System

We are establishing a common, global occupational health and safety management system (OHSMS) based on the ISO 9000-2000 Quality Management System. This system provides the framework for effective management of numerous programs and procedures including:

- GM Global Best Health & Safety Practices
- Ergonomics
- Safety through design
- Contractor safety
- Skilled trades safety
- Employee well-being
- Employee assistance programs
- Industrial hygiene evaluation
- Due diligence surveys

# Social Performance

## Health, Safety and Security

GM's Asia Pacific region has successfully piloted and implemented the OHSMS, finding that it complements existing efforts and helps organize procedures and processes. GM will integrate the OHSMS with GMS, GM's Manufacturing System.

### Office Safety

The GM health and safety process is being expanded to impart knowledge from manufacturing health and safety initiatives into the office and non-manufacturing environment. Beyond our standard leadership elements of a Safety Review Board, Incident Investigation, Safety Observation Teams, and Safe Operating Practices, the key initiatives of the process include:

- Security/Life Safety initiatives including emergency response planning, fire prevention and protection, and workplace violence prevention
- Healthy Work Environment initiatives are designed to ensure that the physical safety aspects of the environment in which we work comply with applicable standards. These include drinking water quality, food safety, general safety, housekeeping, indoor air quality and office ergonomics
- Employee Fitness/Wellness initiatives provide our employees with opportunities to maintain appropriate levels of fitness and wellness to support their overall health and well-being.
- Personal Safety/Accident Prevention initiatives recognize that we must be concerned about the well-being of our employees in all aspects of their lives, not just while they are at work, and include: safe driving programs, recreational safety, and safety at home

The GM Health and Safety Process for the office and non-manufacturing environment will be implemented across all regions and will assist the Corporation in attaining our next level of improvement in health and safety performance. Phase 1, dealing with facility and infrastructure elements, has been implemented in the U.S. and Asia Pacific. Mexico, Canada, LAAM and GME will be onboard in 2005. Phase 2 is the leadership elements of implementation including communications, Safety Observation Tours, and employee training, scheduled for 2005 and 2006.

### Memberships

We belong to numerous health and safety industry and business associations. Experience has shown that such partnerships have symbiotic benefits, where we learn from benchmarking against other organizations and in turn share our best practices.

In addition to industry partnerships in the U.S., GM is an active member in several key ANSI (American National Standards Institute) standards for machine safety, as well as the development of the first U.S. standard for an Occupational Health and Management Safety System. At the international level, GM has been an active participant in standards for robot safety, machine safety and ergonomics.

### Security

Four elements of security are addressed in our standards:

- Processes and administration for GM security operations - these standards specify requirements for GM Security Operations and suppliers, including process scope and performance reporting requirements for GM locations.
- Fire and emergency prevention and protection standards seek to assure the protection of employees, property and continuity of business operations.

# Social Performance

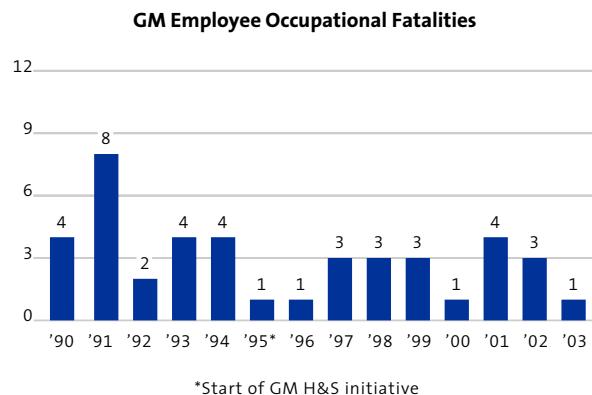
## Health, Safety and Security

Local business unit management, along with security personnel must develop specific procedures for each facility.

- Investigation of wrongdoing or negative incidents - these standards cover how security investigations within General Motors are to be conducted.
- Security standards are established to assure the protection of employees and property.

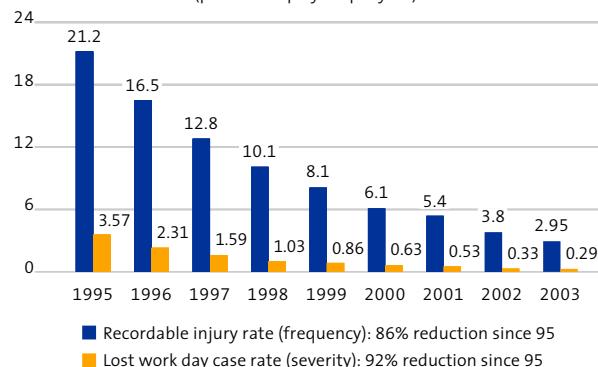
### Performance (GRI LA7)

Our Health and Safety performance improvement over the past nine years, since we introduced our Health and Safety initiative has been remarkable. At the corporate level, the Total Recordable Rate and Lost Workday Case Rate (LWDC) have been reduced 85% and 91% respectively from 1995 levels. If we compare the LWDC Rate of today to our 1993-beginning baseline, we now average over 10,000 fewer LWDC's per year. This has been achieved by having strong leadership, working with our union partners, being consistent with our process, and implementing common systems and practices in health and safety.



### Global Health and Safety Progress

(per 100 employees per year)

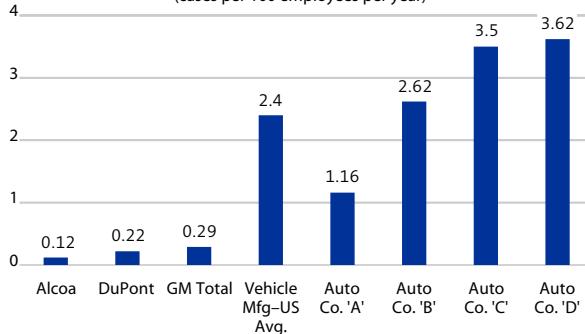


### Benchmarking

While we are proud of our efforts and of our position as the automotive industry leader, we know we can do better. We benchmark ourselves against other industry leaders to inspire us to match their world-class performance.

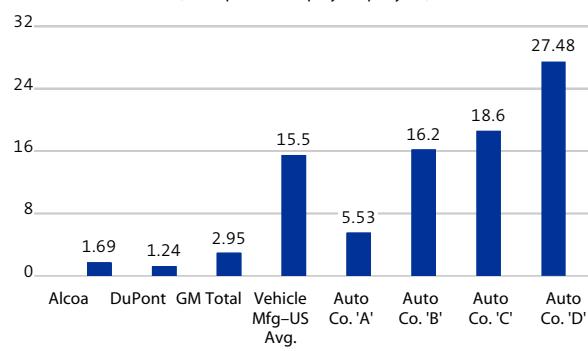
### 2003 Comparison Lost Work Day Case Rates

(cases per 100 employees per year)



### 2003 Comparison of Total Recordable Injury Rates

(cases per 100 employees per year)



# Social Performance

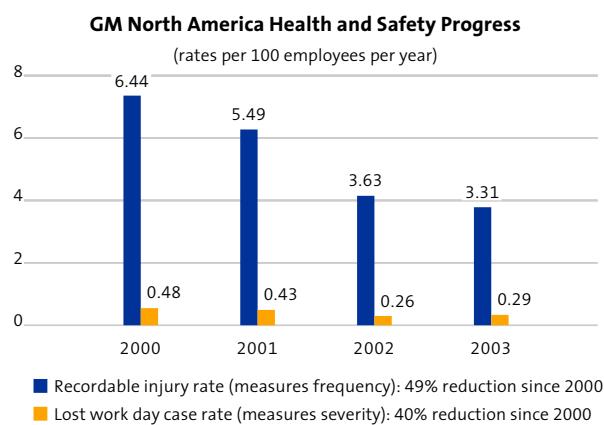
## Health, Safety and Security

### Awards

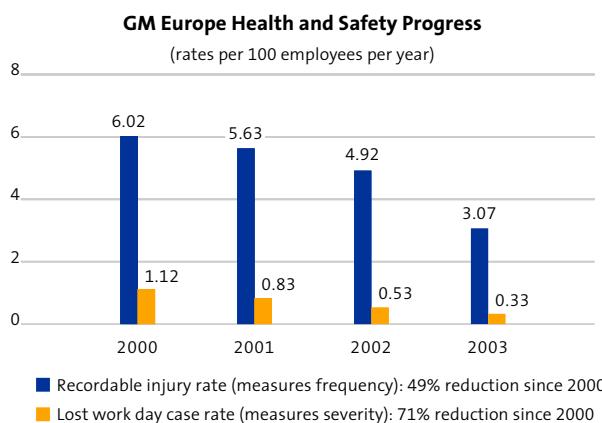
GM Thailand achieved 20 million hours worked without a lost workday case. The plant celebrated the health and safety milestone with a plant-wide celebration. Rick Wagoner provided a congratulatory video, and dignitaries from the Royal Thai government were in attendance. GM North America received the National Safety Council award for safety performance.

### Regional Performance

#### GM North America



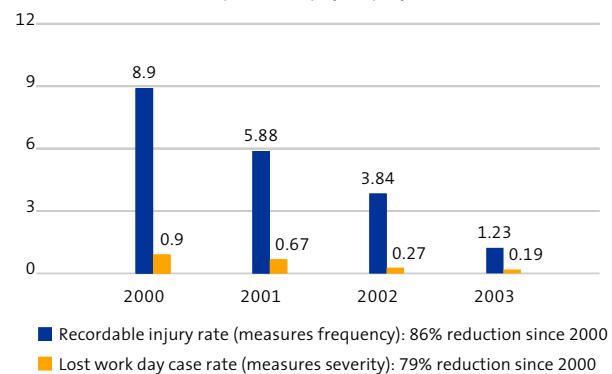
#### GM Europe



#### GM Asia Pacific

##### GM Asia Pacific Health and Safety Progress

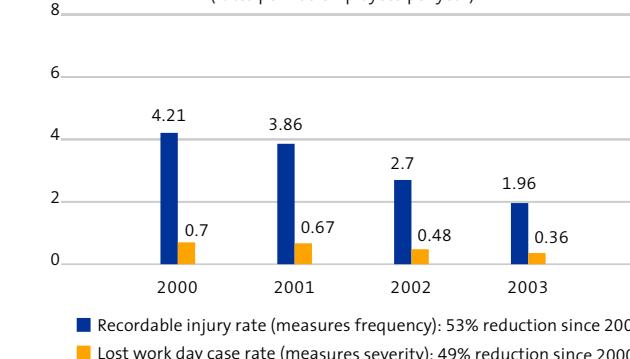
(rates per 100 employees per year)



#### GM Latin America, Africa, Middle East

##### GM Latin America, Africa, and Middle East Health and Safety Progress

(rates per 100 employees per year)



# Social Performance

## Employee Satisfaction

### Overview

A company can invest millions in technology and facilities, but it is of little value if employees are unsatisfied. Engaged, enthusiastic, motivated employees are the key to business success. Our Employee Enthusiasm Strategy focuses on engaging employees with positive leadership behavior and effective management strategies. We emphasize personal safety and economic stability and have begun to develop policies and programs to assist our employees both at work and in their homes.

### Objectives

We are committed to developing and deploying employee skills, talent and potential effectively, influencing and shaping our performance to drive business outcomes and giving employees unmatched career opportunities. We see a clear link between our investment in human performance and our market performance and financial results.

We strive to instill a performance culture that inspires employees to do their best, empowers them to make decisions, rewards accomplishment, embraces challenges and embodies high expectations. Creating this performance culture relies largely on our employees feeling a strong sense of job satisfaction. We want to make GM a desirable place to work, an employer of choice worldwide and a place people enjoy coming to every day. The key to helping assure job satisfaction is a disciplined process requiring, constant focus and a strong drive for results – digging deep for talent, deploying that talent properly and creating aggressive career development plans.

### Actions

There are a number of challenges we face in developing a meaningful Employee Enthusiasm Strategy. Most important among these is the diversity of our global workforce.

Our employees have their own interests and personal circumstances that make them all unique. The diversity of our 326,000 global employees is one of our strengths. However, this makes managing our culture and engaging all our employees particularly challenging. We address this challenge by setting a framework globally that our teams interpret locally.

### Our Initiatives

GM recognizes that overcoming these challenges is very rewarding for our employees and the company – there is a clear link between our investment in human performance and our market performance and financial results. We focus on creating a performance culture and surveying our employees.

### Creating a Performance Culture

We have embraced four priorities to create our unique performance culture:

- Focus on the customer - create products that exceed our customers' expectations .
- Act as one company - leverage the strengths of our global team, drive common best practices and accelerate knowledge transfer.
- Embrace stretch targets - reach for goals beyond what is thought possible.
- Move with a sense of urgency - drive significant speed into our business.

### Staff Survey

For more than 60 years, we have asked our employees how they feel about their jobs and the company. In 2003, we ran our second global employee census available to all hourly, salary and executive employees.

It is a self-administered survey to assess employees' perceptions of GM's cultural and business priorities. There are a number of core questions for all employees, as well as some supplemental questions at the request of individual sites or locations. It asked for employee views on:



# Social Performance

## Employee Satisfaction

- Corporate goals and objectives
- A sense of urgency
- Product and customer focus
- Innovative products and services
- Improved business results,
- Leadership
- Integrity
- Communication
- Involvement
- Teamwork, and
- Learning and development.

## Performance

### Staff Survey Results

All GM employees had the opportunity to participate in our 2003 global employee census. The survey was administered to all salaried and executive employees electronically, with more than 59,000 participating. A majority of hourly employees completed a paper version of the survey. The global response rate for the 2003 census was 47%, a higher rate than the last global survey in 2000.

Significant improvements were found in all areas covered by the survey. In 2003, 68% of all participants gave a favorable response, compared to 58% in 2000, representing an increase of 10% in employee satisfaction over two years. Results were rolled out to local business units in early 2004. Leadership within each business unit is currently working on action plans to achieve further improvements.

## Overview (GRI EC4)

We recognize that our responsibility for managing our impact on society extends to our suppliers. We have policies and programs in place to discharge these responsibilities. These include a worldwide purchasing policy as well as employee guidelines.

## Objectives

Our Worldwide Purchasing Policy includes a number of practices that guide us, and our suppliers in our purchasing activities throughout the world. Guidelines for employees concerning supplier management are discussed in "Winning with Integrity - Integrity in the Workplace" and "Integrity in the Marketplace". These detail how employees must ensure complete fairness in the supplier selection process.

The **environmental impacts of our suppliers** are covered in detail elsewhere in this report.

## Requirements (GRI HR2-3)

As GM purchases \$83 billion worth of goods and services from 3,500 global suppliers, managing our supply chain is a complex task. Our approach is to make sourcing decisions based on our suppliers' performance in four areas: quality, service, technology and price (QSTP). QSTP helps us to reduce the impacts of our purchases and manage the risks associated with them.

**Read more on [www.gmsupplypower.com](http://www.gmsupplypower.com) >>**

## Worldwide Purchasing Policy

As evidenced by our contracts with our suppliers, our Worldwide Purchasing Policy requires that any goods or services supplied must comply with all applicable regulations or standards of the country(ies) of destination, or the country relating to the following: manufacture, labeling, transportation, importation, exportation, licensing, approval or certification of goods or services. This includes, but is not limited to those

relating to environmental matters, wages, hours, conditions of employment, subcontractor selection, discrimination, occupational health and safety, and motor vehicle safety (Paragraph 25 of General terms).

## Suppliers and Human Rights

We expect our suppliers to sign up to the **Global Sullivan Principles** or to make a similar commitment supporting human rights. As our Purchasing manual states:

*General Motors does not purchase goods produced with forced or involuntary labor, prison labor, slave labor or child labor (Reference Paragraph 25 of General Motors Standard Terms and Conditions). If a questionable situation is observed, the employee should contact their local Purchasing Management for direction.*

## Performance

### Staff Survey Results

All GM employees had the opportunity to participate in our 2003 global employee census. The survey was administered to all salaried and executive employees electronically, with more than 59,000 participating. A majority of hourly employees completed a paper version of the survey. The global response rate for the 2003 census was 47%, a higher rate than the last global survey in 2000.

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# Social Performance

## Employee Training

### Overview

GM has a long standing commitment to helping its employees continue to grow the knowledge and skills required to fulfill our vision of being the world leader in transportation products and services.

GM offers centralized learning through GM University (GMU), a corporate university established in 1997, and the Technical Education Program. GMU is a global network of learning resources designed to help GM employees continuously improve their competitive performance to drive success at GM. GMU offers more than 2200 courses to GM's 82,500 executive, management, technical and professional employees. GM also offers a Technical Education Program in partnership with universities, where employees can take courses and earn degrees in automotive subjects.

### Objectives

Our investment in our people goes deeper than paying their salaries. Our employees must be equipped with the skills and knowledge required to continuously improve and grow their knowledge base. Educating our workforce to achieve the highest standards is one of our biggest priorities.

Accordingly, GM University's vision is to provide leading edge learning resources for developing personal and professional excellence resulting in technical and business leadership. GMU seeks to improve GM's business performance by:

- Building professional skills and capabilities linked to performance and results
- Fostering faster learning that can be leveraged globally
- Developing leadership/executive programs that build capability tied to business results
- Enabling corporate-wide change initiatives to improve business results
- Helping develop a performance driven culture.

To underscore the importance of learning, GM establishes an annual training target for its salaried employees. In 2004, employees are encouraged to acquire 20 hours of learning related to their annual objectives and work assignments.

### Actions

Having committed to training our workforce to the highest standards, we needed to find the best way to provide this training to ensure it was both meaningful and efficient. We now offer our employees:

- **GM University, GMU (see below)**
- **The Technical Education Program**
- **Interactive Distance Learning**
- **e-Learning**

For Education initiatives outside GM, please see the [Education section](#).

### GM University



GMU has 14 functional colleges tied to GM's global business processes. Each college is charged with developing curricula tailored to the professional needs and unique challenges facing employees from a business sector, divisional or regional perspective. A "Dean", typically an operating executive within the function, is responsible to his/her Global Process Leader for



HUMMER



# Social Performance

## Employee Training

developing and delivering courses/learning activities that improve capability and drive results for that function. The president of GMU, with the council of Deans, sets GMU strategic direction and oversees learning operations.

GMU integrates employee development and performance as custodian of the corporation's Performance Management Process (PMP). This annual process helps employees align their individual performance goals with GM's overall business goals. Goal-setting, mid-year and annual reviews provide opportunities to constructively discuss performance, recognize accomplishments, and help employees understand how their individual performance contributes to overall business results.

GMU is committed to learning and development even when it faces a tough business environment. To better align with corporate financial objectives, GMU has reduced training costs by:

- Focusing on the development and delivery of "mission critical" courses. Mission critical courses are those earmarked by the function as "critical" to the achievement of business objectives.
- Increasing the use of Interactive Distance Learning (IDL), e-Learning (see right) and blended learning solutions.

### Technical Education Program

Since 1984, the Technical Education Program (TEP) has partnered with leading universities to provide job-related education to GM professionals. University seminars, courses and degree programs are offered in leading automotive topics. Available degrees range from associate to doctoral, as well as certificate options all targeted to GM's core competencies, competitiveness, and advanced technical work.

Delivered through the flexibility of distance learning technologies, the program makes high quality, flexible education from top-ranking universities easily accessible to GM employees.

### Interactive Distance Learning

Launched in 1999, Interactive Distance Learning (IDL) uses a combination of live one-way video, two-way audio (for communication between the instructor and students) and an interactive keypad for quiz sessions. On average, 350 live video broadcasts are beamed every month via satellite to 232 GM facilities and more than 6,000 GM dealerships in North America. There are approximately 100 active GMU Distance Learning courses aimed at GM employees covering a wide variety of subjects on a variety of functional topics.

Originally created as a fast, flexible, and cost-effective way to convey new product training to GM dealers, sales and service personnel, IDL is also used for communicating details about new product launches, as well as addressing new product issues that emerge during initial dealer rollouts.

### e-Learning

E-Learning uses GM's Intranet to improve the access and availability of GMU courses - 24/7. GMU has been gradually growing the percentage of e-Learning courses over the last few years. The e-Learning courses provide more flexibility in response to busy employee schedules. At the same time, they eliminate the expense and inconvenience of travel to a classroom and promote common content across the globe. In some instances, IDL and/or e-Learning may be combined with classroom sessions to provide 'blended' learning that can make the overall approach more effective and efficient for certain topics.

# Social Performance

## Employee Training

### Performance (GRI LA9)

In 2003, more than 150,700 participants received 760,960 hours of learning with 69% of the hours spent in traditional classrooms, 27.5% on web-based learning and nearly 3% on Interactive Distance Learning. By increasing the use of e-Learning, GM saved at least \$10 million in productivity costs and gave employees 250,000 hours of their valuable time back.

The quality of GM University programs has been recognized with awards from a number of respected trade organizations including: the American Society for Training & Development (ASTD), Training Magazine, Executive Excellence Magazine, the International Association of Continuing Engineering Education, Corporate University Xchange, and the National Automobile Dealers Association.



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## Overview

Few things in life are more satisfying than watching a child revel in excitement when learning something new. This is especially true when the subject of their delight is math and science. That's right, math and science.

GM strongly believes in supporting a comprehensive, diverse base of education programs for children in grades K-12 (Kindergarten through 12th grade). These include hands-on, experience-based education activities, math and science mentoring programs, technology curriculum dissemination to schools, and an educational web site for families. Our [education web site](#) covers environment, energy and technology issues, has separate, age-appropriate sections for children in grades K-4, grades 5-8, and grades 9-12, and also provides classroom materials.

- Read more on [employee training >>](#)
- Read more on [community investment and philanthropy >>](#)

## Objectives

Our goal is to foster enthusiasm for science, environment and energy issues with a combination of innovation, technology and partnerships that support the following principles:

- Enlightenment: Help students develop an awareness of science, math and technology issues
- Knowledge: Reinforce awareness with solid concepts and real-world applications
- Attitudes: Help students personalize their relationship with the global environment.
- Action: Help students make a difference.

## Initiatives

Since today's young people are tomorrow's stewards, we are committed to educational initiatives to help them find workable solutions to future challenges. We want to make sure students have the tools they need to succeed, and to do so, we must actively invest in their future. And helping students develop technical skills is also good for GM's future. Our initiatives run from kindergarten to high school and beyond:

- [Grades K-4 \(see below\)](#)
- [Middle and high school](#)
- [Post-K-12 programs](#)

### Grades K-4

- ["The Earth Day Way: Every Day,"](#) is a K-4 classroom program promoting environmental responsibility and energy conservation. GM and Weekly Reader partnered on this curriculum for children, teachers and parents
- ["Technology: Inventing the Future,"](#) is a curriculum designed to inspire students' interest in science and a future in a science-based career. General Motors and Weekly Reader have teamed up to create an educational program that details ways that science and technology can be applied to benefit the community and the environment and draw attention to the many ways children's lives are enhanced by scientific and technological advances.
- Whether you want to be a veterinarian, teacher, dentist or astronaut - you will use science and math principles. That is the foundation of a new initiative, ["Count on Science & Math for Your Future,"](#) designed to help students see the importance and excitement of science and math concepts in all career paths. Weekly Reader and GM offer the program in English and Spanish. More than 350,000 students received free bilingual bookmarks.

[Download the bookmarks >>](#)

- We also support teachers' science and math curriculums by providing learning resources on [www.gmability.com/education](http://www.gmability.com/education) and [www.weeklyreader.com](http://www.weeklyreader.com).

### Middle and high school

- **"Fuel Cells: Driving the Future,"** a nationwide fuel cell education package developed by GM and Weekly Reader, has reached nearly 3.5 million middle school students. It provides science teachers with an engaging curriculum highlighting the fundamentals of hydrogen fuel cell technology.
- **"GM Tech Tour for Students,"** a middle school education component of the GM Technology Tour, highlights GM's innovative vehicles and the technologies that will have a positive impact on the environment.
- GM is a sponsor of the Society of Automotive Engineers **"A World in Motion"** program that introduces math and science principles to students through hands-on engineering design experiences. AWIM joins students, teachers, and volunteer practicing engineers and scientists to explore physical science principles together by completing projects called Challenges. The AWIM Challenges, divided into a series of four curricula, are designed for students in Grades 4-10. The Challenges introduce the students to principles of physics, motion, flight, and electronics. The AWIM program is intended to promote student interest and literacy in math and science. Industry volunteers provide technical assistance and often serve as role models to students who may never have considered pursuing a career in the science or engineering fields before.
- GM Canada partnered with a local high school principal interested in keeping environmental studies in the Ontario curriculum through locally developed programs. The result was the development of two courses - Watershed Monitoring and Management (Grade 11) and Industry and

the Environment (Grade 12). The outlines were refined and submitted to the Ontario Ministry of Education and subsequently approved. The Watershed Monitoring and Management course has been taught for the last 2 years and the Industry and the Environment course just completed its first semester.

- GM also sponsors **FIRST**, an organization encouraging young people to explore careers in science and technology by using a competition format similar to sporting events where students learn the fun and excitement that can be found in a technical career. GM sponsors thirty-two FIRST teams.
- **MATHCOUNTS** is a U.S. middle school math enrichment volunteer program that helps prepare students for the working world by stimulating their interest in math and math-related careers. MATHCOUNTS is a unique math-based program that builds math skills, promotes strategic problem solving, and sharpens analytical abilities. Through the program, the educational, technical, business, and governmental communities work together to promote math excellence among junior high school students. "Mathletes" are coached by teachers and volunteers and compete in regional, state, and national competitions. GM has been a national supporter of the MATHCOUNTS program since 1987.
- U.S. Department of Energy (DOE) **National Science Bowls** is a competition that encourages student involvement in math and science and improves awareness of science and technology career options.
- **Keystone Center's Sustainable Energy Curriculum** is a module for teachers in which diverse groups review critical information and use scientific reasoning and processes to explore the energy issue. GM provided monetary and in-kind support in the form of speakers and mentors for the program.

# Social Performance

## Education

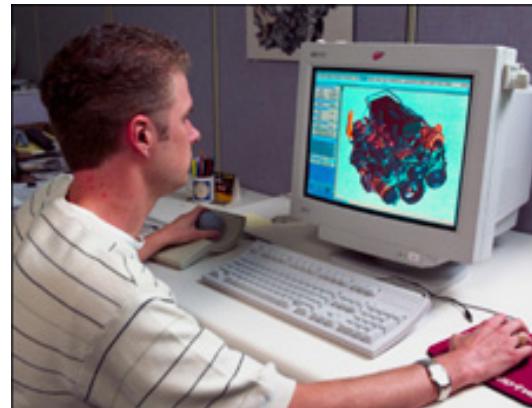
- **Detroit Area Pre-College Engineering Program** (DAPCEP) is a nationally acclaimed K-12 program designed to motivate and prepare minority youth for college and careers in engineering, math, science or technology. We have been active in DAPCEP for more than 25 years, and operate a design engineering class for seventh and eighth grade students and this year began a fuel cell pilot program for juniors and seniors.
- General Motors has teamed up with the environmental education non-profit, Earth Force, to implement the **Global Rivers Environmental Education Network** (GREEN) program. The GM-GREEN partnership brings together employees from GM facilities, local environmental and watershed advocacy groups, community leaders, educators, and young people to protect local water resources and raise awareness of GM's commitment to the environment.
- **"SPACE: A Journey to our Future"** is an unprecedented new traveling exhibition on space exploration that has completed lift-off at Seattle's Pacific Science Center and is currently being housed at the St. Louis Science Center. SPACE is made possible by General Motors with additional support from Space Day Foundation and Lockheed Martin, and is produced by Clear Channel Exhibitions in educational collaboration with the National Aeronautics and Space Administration (NASA) and the National Science Teachers Association (NSTA). The purpose of SPACE is to present educational elements in scenic environments that will fuel one's imagination in the future of space exploration.
- GM partnered with Junior Achievement to develop a new module entitled **"Fuel Cells: Powering Our Economic Future."** This activity introduces students to the business and economics perspective of investing in research and development of the hydrogen fuel cell as an alternative source of energy. The program is currently being piloted in 5 metropolitan cities with plans for national rollout in the fall of 2004.
- **Coop Education and Intern Program:** Our environmental cooperative education and intern program seeks to provide a hands-on engineering experience to students working with our facilities. Students take on given assignments with a variety of manufacturing operations including assembly, metal casting, metal stamping and machining operations. Upon graduation, the students are able to accept an assignment at a General Motors facility and immediately add value due to their prior co-op work experience.
- **General Motors Youth Educational Systems** In 1995, Jack Smith launched the General Motors Youth Educational Systems (GM YES), the first large-scale effort to integrate high school classroom studies with on-the-job experiences. In 1996, the organization evolved to become an independent group with participation from other automakers. Today, called **Automotive Youth Educational Systems (AYES)**, businesses, schools and educators teamed up to place 4,400 students in automotive technician internships in 44 states. (AYES) is a dynamic partnership between participating automotive manufacturers, participating local dealers, and selected local high schools/technical prep schools to encourage awareness of and participation in careers as automotive technicians. GM was the initiator of this innovative industry-wide program in 1995, which has since grown to include the participation of over 330 schools nationwide.

## Post-K-12 programs

- **GM Automotive Service Educational Program (ASEP) GM Body Service Educational Program (BSEP):** In 1979, General Motors recognized that the technology incorporated into the next generation of automobiles was going to change dramatically. GM's responded to the need by developing the GM's Automotive Service Educational Program (ASEP) and GM Body Service Educational Program (BSEP). These technical education programs were designed to educate qualified service & body shop technicians on advance vehicle technology in a school/work setting. GM ASEP and BSEP currently participate in 68 schools in the United States and Canada. In this two-year program students earn an Associate Degree and participate in an 8 to 10 week rotations between school and a dealership allowing students to apply skills while earning an hourly wage. This partnership between GM, GM dealerships, colleges/universities and communities incorporates advanced automotive technical and body training with a strong academic foundation. By the end of the 2004 graduating year, the ASEP/BSEP program will have reached almost 12,000 Graduates since its inception. Students have intern opportunities at GM dealerships – Chevrolet, Pontiac, GMC, Cadillac, Oldsmobile, Buick, Saturn, Saab and Hummer. These programs offer students outstanding career opportunities, economic development for the community, and improve our customer satisfaction.
- **Partners for the Advancement of Collaborative Engineering Education (PACE)** is a corporate alliance between GM, EDS, Sun Microsystems Inc. and UGS. Since its inception in 1999, 27 institutions have been selected to join the PACE program, which has contributed software, hardware, training and technical support to schools like Purdue, Michigan State, Northwestern and Virginia

Tech, and institutions in Canada, China, Germany, Mexico and Sweden. In-kind contributions to the PACE program total \$208 million including computer-aided design, manufacturing and engineering software as well as hardware and training. Selected universities are invited to participate based on several criteria including: a long-term relationship with GM as a primary educational partner and a strong recruiting relationship, strength in design, engineering and manufacturing, and the institution's current and intended interest in developing curricula using PACE products and processes.

- **Challenge X** is a groundbreaking student engineering competition sponsored by General Motors Corporation (GM) and the U.S. Department of Energy (DOE). The Challenge X program was established by DOE and GM to challenge university teams to explore vehicle solutions that will minimize energy consumption and reduce emissions.



Students participating in the Challenge X competition will model, simulate and test powertrains and subsystems of the Chevrolet Equinox on computers.

Year one will focus on modeling, simulation, and testing of the powertrain and vehicle subsystems. In years two and three, students will integrate their advanced powertrain and subsystems into a 2005 model Chevrolet Equinox. The Equinox is a compact SUV that already provides competitive fuel economy with three basic goals: reduce energy consumption, decrease emissions, and maintain the performance and utility features of the vehicle.

“Our aim with Challenge X is to provide a valuable learning experience that mirrors the real-world development process of automotive control systems and subsystems, and we are happy to mentor the students as they use MATLAB and Simulink in their competition projects,” said Jack Little, president and CEO, The MathWorks. “The MathWorks is committed to furthering Model-Based Design, and we are proud to play a role in supporting hands-on engineering education for automobile design.”

Competitions are held at the end of each academic year to showcase the teams’ learning and vehicle development.

# Keyword Index

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# Keyword Index

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General Motors is committed to the Global Reporting Initiative, and this index is designed to show how we have approached each of the elements within the 2002 framework (the latest version available). In contrast to previous years GRI indices, this year we have included an 'extent of coverage' indicator. This will help us to more accurately identify our strengths, weaknesses, opportunities and threats, and ultimately to improve our performance.

The Global Reporting Initiative (GRI) is a multi-stakeholder process and independent institution whose mission is to develop and disseminate globally applicable Sustainability Reporting Guidelines. These Guidelines are for voluntary use by organizations for reporting on the economic, environmental, and social dimensions of their activities, products, and services. The GRI incorporates the active participation of representatives from business, accountancy, investment, environmental, human rights, research and labor organizations from around the world. Started in 1997, GRI became independent in 2002, and is an official collaborating center of the United Nations Environment Program (UNEP) and works in cooperation with UN Secretary-General Kofi Annan's Global Compact. [www.globalreporting.org](http://www.globalreporting.org)

## Key:

	Yes, this indicator has been covered by the report, or the information can be found elsewhere on gm.com
	This indicator has only partially been covered by the report or gm.com
	Work in progress
	Not applicable or proprietary information

NB/ GRI core indicators are shown in **bold**. Additional indicators are in *italic* text.

The indicators are split into the following sections:

1. **Vision and Strategy (9-2)**
2. **Profile (9-2)**
3. **Governance Structure and Management Systems (9-3)**
4. **GRI Content Index (9-4)**
5. **Performance Indicators (9-5)**
  - a. **Economic (9-5)**
  - b. **Environmental (9-6)**
  - c. **Social (9-10)**

GRI Ref Number	Indicator Description		Page
<b>1. Vision and Strategy</b>			
1.1	Statement of the organization's sustainability vision and strategy regarding its contribution to sustainable development	↑	3-2
1.2	Statement from the CEO (or equivalent senior manager) describing key elements of the report	↑	1-1
<b>2. Profile</b>			
2.1	Name of reporting organization	↑	3-2
2.2	Major products and services	↑	3-5
2.3	Operational structure of the organization	↑	3-4
2.4	Description of major divisions, operating companies, subsidiaries and joint ventures	↑	3-5
2.5	Countries in which the organization's operations are located	↑	3-4
2.6	Nature of ownership; legal form	↑	3-4
2.7	Nature of markets served	↑	3-4
2.8	Scale of the reporting organization	↑	5-1
2.9	List of stakeholders	↑	3-12
<b>Report Scope</b>			
2.10	Contact person(s) for the report, including e-mail and web addresses	↑	1-8
2.11	Reporting period (e.g. fiscal / calendar year) for information provided	↑	1-7
2.12	Date of most recent previous report (if any)	↑	1-7
2.13	Boundaries of report and any specific limitations on the scope	↑	1-7
2.14	Significant changes in size, structure, ownership, or products / services that have occurred since the previous report	↑	1-7
2.15	Basis for reporting on joint ventures, partially owned subsidiaries, leased facilities, outsourced operations and other situations that can significantly affect comparability from period to period and / or between reporting organizations	↑	1-7
2.16	Explanation of the nature and effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement	↑	1-7

GRI Ref Number	Indicator Description		Page
<b>Report Profile</b>			
2.17	Decisions not to apply GRI principles or protocols in the preparation of the report	🚫	n/a
2.18	Criteria / definitions used in any accounting for economic, environmental, and social costs and benefits	🚫	n/a
2.19	Significant changes from previous years in the measurement methods applied to key economic, environmental and social information	↑	1-7
2.20	Policies and internal practices to enhance and provide assurance about the accuracy, completeness, and reliability that can be placed on the sustainability report	↑	1-7
2.21	Policy and current practice with regard to providing independent assurance for the report	⚠	
2.22	Means by which report users can obtain additional information and reports about economic, environmental and social aspects of the organization's activities, including facility-specific information (if available)	↑	1-8
<b>3. Governance structure and management systems</b>			
3.1	Governance structure of the organization, including major committees under the board of directors that are responsible for setting strategy and for oversight of the organization	↑	3-6
3.2	Percentage of the board of directors that are independent, non-executive directors	↑	3-9
3.3	Process for determining the expertise board members needed to guide the strategic direction of the organization, including with regard to environmental and social risks and opportunities	↑	3-9
3.4	Board-level processes for overseeing the organization's identification and management of economic, environmental, and social risks and opportunities	↑	3-9
3.5	Linkage between executive compensation and achievement of the organization's financial and non-financial goals	➡	Annual report
3.6	Organizational structure and key individuals responsible for oversight, implementation, and audit of economic, environmental, social and related policies	↑	3-10
3.7	Mission and values statements, internally developed codes of conduct or principles, and policies relevant to economic, environmental and social performance and the status of implementation	↑	3-2
3.8	Mechanisms for shareholders to provide recommendations or direction to the board of directors	↑	3-9

GRI Ref Number	Indicator Description		Page
<b>Stakeholder engagement</b>			
3.9	Basis for identification and selection of major stakeholders	↑	<a href="#">3-12</a>
3.10	Approaches to stakeholder consultation reported in terms of frequency of consultations by type and by stakeholder group	↑	<a href="#">3-12</a>
3.11	Type of information generated by stakeholder consultations	↑	<a href="#">3-12</a>
3.12	Use of information resulting from stakeholder engagements	↑	<a href="#">3-12</a>
<b>Overarching policies and management systems</b>			
3.13	Explanation of whether and how the precautionary approach or principles is addressed by the organization	→	<a href="#">6-2</a>
3.14	Externally developed, voluntary economic, environmental and social charters, sets of principles, or other initiatives to which the organization subscribes or which it endorses	↑	<a href="#">1-6</a> <a href="#">3-2</a>
3.15	Principle memberships in industry and business associations, as well as national / international advocacy organizations	↑	<a href="#">3-12</a>
3.16	Policies and / or systems for managing upstream and downstream impacts.	↑	<a href="#">4-2, 3-10</a> <a href="#">6-9</a>
3.17	Reporting organization's approach to managing indirect economic, environmental, and social impacts resulting from its activities	↑	<a href="#">4-36</a> <a href="#">5-11</a>
3.18	Major decisions during the reporting period regarding the location of, or changes in, operations	↑	<a href="#">3-4</a>
3.19	Programs and procedures pertaining to economic, environmental and social performance. Include: priority and target setting, major programs to improve performance, internal communication and training, performance monitoring, internal and external auditing, senior management review	↑	<a href="#">3-10</a>
3.20	Status of certification pertaining to economic, environmental and social management systems	↑	<a href="#">6-2, 3-3</a> <a href="#">3-10</a>
<b>4. GRI Content Index</b>			
4.1	Provide a table identifying location of each element of the GRI Report Content (section and indicator) in the report	↑	<a href="#">2-1</a> <a href="#">9-1</a>

GRI Ref Number	Indicator Description		Page
<b>5. Performance Indicators</b>			
<b>5a. Economic</b>			
<b>Customers</b>			
EC1	Net sales	↑	2-1, 5-3 5-11
EC2	Geographic breakdown of markets. (For each product or product range, disclose national market share by country where this is 25% or more. Disclose market share and sales for each country where national sales represent 5% or more of GDP)	➡	3-4 3-13 5-11
<b>Suppliers</b>			
EC3	Cost of all goods, materials, and services purchased	🚫	Proprietary Information
EC4	Percent of contracts that were paid in accordance with agreed terms (e.g. scheduling of payments, form of payment etc)	⚠	7-17
EC11	<i>Supplier breakdown by organization and country (see <a href="http://www.gmsupplypower.com">www.gmsupplypower.com</a>)</i>	➡	www
<b>Employees</b>			
EC5	Total payroll and benefits expense (incl. wages, pension, redundancy payments	↑	5-7
<b>Providers of capital</b>			
EC6	Distributions to providers of capital broken down by interest on debt and borrowings, and dividends on all classes of shares	➡	5-4
EC7	Increase/ decrease in retained earnings at end of period	↑	5-3
<b>Public sector</b>			
EC8	Total sum of taxes of all types paid, broken down by country	➡	Annual report
EC9	Subsidies received broken down by country or region	➡	Annual report
EC10	Donations to community, civil society, and other groups broken down in terms of cash and in-kind donations per type group	↑	5-14
EC12	<i>Total spent on non-core business infrastructure development e.g. hospital/school for employees and their families</i>	↑	5-14
<b>Indirect economic impacts</b>			
EC13	<i>Describe the organization's indirect economic impacts</i>	↑	5-7 5-11 5-14

GRI Ref Number	Indicator Description		Page
<b>5b. Environmental</b>			
<b>Materials</b>			
EN1	Total materials use other than water by type (report in tonnes, kg or volume)	→	6-22, 4-39
EN2	Percentage of materials used that are wastes (processed or unprocessed) from sources external to the reporting organization. (Refers to both post-consumer recycled material and waste from industrial sources)	↑	6-22
<b>Energy</b>			
EN3	Direct energy use segmented by primary source. Report on all energy sources used by the reporting organization for its own operations as well as for the production and delivery of energy products (e.g. electricity or heat) to other organizations	↑	6-12
EN4	Indirect energy use. Report on all energy used to produce and deliver energy products purchased by the reporting organization (e.g. electricity or heat)	↑	6-12
EN17	<i>Initiatives to use renewable energy sources and increase energy efficiency</i>	↑	6-13
EN18	<i>Energy consumption footprint (i.e. annualized lifetime energy requirements) of major products</i>	↑	6-12
EN19	<i>Other indirect (upstream/downstream) energy use and implications, such as organizational travel, product lifecycle management and use of energy-intensive materials</i>	→	6-12
<b>Water</b>			
EN5	Total water use	↑	6-20
EN20	<i>Identify water sources and related ecosystems/habitats significantly affected by the organization's use of water</i>	→	6-20 6-40
EN21	<i>Annual withdrawals of ground and surface water as a percent of annual renewable quantity of water available from the sources</i>	⚠	6-20
EN22	<i>Total recycling and reuse of water. Includes wastewater and other used water (e.g. cooling water)</i>	⚠	6-20
<b>Biodiversity</b>			
EN6	Location and size of land owned, leased, or managed in biodiversity-rich habitats (info on these pending from GRI)	→	6-40
EN7	Description of the major impacts on biodiversity associated with the organization's activities and/ or products and services in terrestrial, freshwater, and marine environments	→	6-40
EN23	<i>Total amount of land owned, leased, or managed for production activities or extractive use by the organization</i>	⚠	6-40

GRI Ref Number	Indicator Description		Page
<b>Biodiversity (cont)</b>			
EN24	<i>Amount of impermeable surface as a percentage of land purchased or leased</i>	⚠	6-40
EN25	<i>Impacts of organization's activities and operations on protected and sensitive areas (e.g. IUCN protected areas categories 1-4, world heritage sites and biosphere reserves)</i>	⬆	6-40
EN26	<i>Changes to natural habitats resulting from the reporting organization's activities and percentage of habitat protected or restored</i>	➡	6-40
EN27	<i>Objectives, programs and targets for protecting and restoring native ecosystems and species in degraded areas</i>	➡	6-40
EN28	<i>Number of IUCN Red List species with habitats in areas affected by the reporting organization's operations</i>	🚫	n/a
EN29	<i>List business units currently operating or planning operations in or around protected or sensitive areas</i>	➡	6-40
<b>Emissions, effluents and waste</b>			
EN8	Greenhouse gas emissions (CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> ). Report separate sub-totals for each gas in tonnes of CO <sub>2</sub> equivalent for the following: Direct emissions from sources owned or controlled by the reporting entity. Indirect emissions from imported electricity heat or steam	⬆	6-34
EN9	Use and emissions of ozone-depleting substances. Report each figure separately in accordance with Montreal Protocol Annexes A, B, C and E in tonnes of CFC-11 equivalents	⬆	6-28
EN10	NO <sub>x</sub> , SO <sub>x</sub> and other significant air emissions by type.	⬆	6-28
EN11	Total amount of waste by type and destination (i.e. the method by which it is treated, including composting, reuse, recycling, recovery, incineration or landfilling)	⬆	6-22
EN12	Significant discharges to water by type (see forthcoming GRI protocol on water)	⬆	6-21
EN13	Significant spills of chemicals, oils and fuels in terms of total number and total volume (significance defined in terms of both the size of the spill and impact on the surrounding environment)	⬆	6-6
EN30	<i>Other relevant indirect greenhouse gas emissions i.e. as a consequence of the reporting entity but occur from sources owned or controlled by another entity</i>	⬆	6-34, 4-29 4-34
EN31	<i>Identify all production, transport, import or export of any waste deemed "hazardous" under the terms of the Basel Convention Annex I, II, III and VII</i>	⬆	6-22
EN32	<i>Identify water sources and related ecosystems/ habitats significantly affected by the organization's discharges of water and runoff</i>	➡	6-40

GRI Ref Number	Indicator Description		Page
<b>Suppliers</b>			
EN33	<i>Performance of suppliers relative to environmental components of programs and procedures described in response to Management Systems and Governance section of GRI Guidelines</i>	↑	6-8
<b>Products and services</b>			
EN14	Significant environmental impacts of principle products and services (describe and quantify where relevant).	↑	4-12
EN15	Percentage of the weight of products sold that is reclaimable at the end of the products' useful life and percentage that is actually reclaimed	↑	4-37
<b>Compliance</b>			
EN16	Incidents of and fines for non-compliance with all applicable international declarations/ conventions/ treaties, and national, subnational, regional, and local regulations associated with environmental issues (explain in terms of countries of operation)	↑	6-6
<b>Transport</b>			
EN34	<i>Describe significant environmental impacts of transportation used by reporting organization for logistical purposes</i>	🚫	n/a See 6-34
<b>Overall</b>			
EN35	<i>Total environmental expenditures by type (explain definitions used for types of expenditures)</i>	🚫	Proprietary Information
<b>5c. Society</b>			
<b>Labor practices and decent work</b>			
<b>Employment</b>			
LA1	Breakdown of workforce by region/country, employment type (full/ part time) and employment contract (permanent/ temporary)	↑	5-7
LA2	Net employment creation and average turnover segmented by region/ country	↑	5-7
LA12	<i>Employee benefits beyond those legally mandated (e.g. contributions to health care, maternity, education and retirement)</i>	↑	5-7 Family first Life benefit
<b>Labor/management relations</b>			
LA3	Percentage of employees represented by independent trade union organizations or other bona fide employee representatives, broken down geographically, OR percentage covered by collective bargaining agreements	↑	5-8
LA4	Policy and procedures involving information, consultation and negotiation with employees over changes in the organization's operations (e.g. restructuring)	↑	GMability
LA13	<i>Provision for formal worker representation in decision making or management, including corporate governance</i>	↑	3-6

GRI Ref Number	Indicator Description		Page
<b>Health and safety</b>			
LA5	Practices on recording and notification of occupational accidents and diseases, and how they relate to the ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases	↑	7-10
LA6	Description of formal joint health and safety committees comprising management and worker representatives and proportion of workforce covered	→	7-10
LA7	Standard injury, lost day and absentee rates and number of work-related fatalities (including subcontracted workers)	↑	7-13
LA8	Description of policies or programs (for the workplace and beyond) on HIV/AIDS	↑	3-3, 5-15
LA14	<i>Evidence of substantial compliance with the ILO Guidelines for Occupational Health Management Systems</i>	⚠	GMability
LA15	<i>Description of formal agreements with trade unions or other bona fide employee representatives covering health and safety at work and proportion of the workforce covered</i>	⚠	7-10
<b>Training and education</b>			
LA9	Average hours of training per year per employee by category of employee (e.g. senior/ middle management, professional, technical, etc.)	→	7-18
LA16	<i>Description of programs to support the continued employability of employees and to manage career endings</i>	⚠	GMability
LA17	<i>Specific policies and programs for skills management or for lifelong learning</i>	↑	7-18
<b>Diversity and opportunity</b>			
LA10	Description of equal opportunity policies or programs, as well as monitoring systems to ensure compliance and results of monitoring	↑	7-2
LA11	Composition of senior management and corporate governance bodies (including board of directors), including female/male ratio and other indicators of diversity as culturally appropriate	↑	7-7
<b>Human rights</b>			
<b>Strategy and management</b>			
HR1	Description of policies, guidelines, corporate structure and procedures to deal with all aspects of human rights relevant to the reporter's operations, including monitoring mechanisms and results (state how policies relate to existing international standards such as UDHR and the ILO's Fundamental Conventions)	↑	5-8
HR2	Evidence of consideration of human rights impacts as part of investment and procurement decisions, including selection of suppliers/contractors	↑	7-17
HR3	Description of policies and procedures to evaluate and address human rights performance within the reporting organization's supply chain and contractors	↑	7-17
HR8	<i>Employees training on the reporter's policies and practices concerning all aspects of human rights relevant to the reporter's operations</i>	⚠	GMability

GRI Ref Number	Indicator Description		Page
<b>Nondiscrimination</b>			
HR4	Description of global policy and procedures/programs preventing all forms of discrimination in the reporter's operations, including monitoring systems and results	↑	<a href="#">7-2</a>
<b>Freedom of association and collective bargaining</b>			
HR5	Description of freedom of association policy and extent to which it is universally applied independent of local laws, and description of procedures/ programs to address this issue	↑	<a href="#">5-6</a>
<b>Child labor</b>			
HR6	Description of policy excluding child labor as defined by the ILO Convention 138 and extent to which this policy is visibly stated and applied	↑	<a href="#">5-8</a>
<b>Forced and compulsory labor</b>			
HR7	Description of policy to prevent force and compulsory labor and extent to which this policy is visibly stated and applied	↑	<a href="#">5-8</a>
<b>Disciplinary practices</b>			
HR9	<i>Description of appeal practices, including, but not limited to, human rights issues</i>	↑	<a href="#">5-8</a>
HR10	<i>Description of non-retaliation policy and effective, confidential employee grievance system</i>	↑	<a href="#">5-8</a>
<b>Security practices</b>			
HR11	<i>Human rights training for security personnel (including type of training, number of persons trained and duration of training)</i>	⚠	<a href="#">5-8</a>
<b>Indigenous rights</b>			
HR12	<i>Description of policies, guidelines, and procedures to address the needs of indigenous people</i>	↑	<a href="#">5-8</a>
HR13	<i>Description of jointly managed community grievance mechanisms/authority</i>	⚠	<a href="#">GMability</a>
HR14	<i>Share of operating revenues from the area of operations that are redistributed to local communities</i>	➡	<a href="#">5-14</a>
<b>Community</b>			
SO1	Description of policies to manage impacts on communities in areas affected by the reporting organization's activities, as well as description of procedures/programs to address this issue, including monitoring systems and results (Include explanation of procedures for identifying and engaging in dialogue with community stakeholders)	➡	<a href="#">5-14</a>
SO4	<i>Awards received relevant to social, ethical and environmental performance</i>	↑	<a href="#">6-4</a>

GRI Ref Number	Indicator Description		Page
<b>Bribery and corruption</b>			
SO2	Description of the reporting organization's policy, procedures/management systems, and compliance mechanisms for organizations and employees addressing bribery and corruption	↑	1-6
<b>Political contributions</b>			
SO3	Description of reporting organization's policy, procedures/management systems and compliance mechanisms for managing political lobbying and contributions	⚠	tray.com
SO5	<i>Amount of money paid by the reporter to political parties and institutions whose prime function is to fund political parties or their candidates</i>	⚠	tray.com
<b>Competition and pricing</b>			
SO6	<i>Court decisions regarding cases pertaining to anti-trust and monopoly regulations</i>	🚫	n/a
SO7	<i>Description of reporting organization's policy, procedures/management systems, and compliance mechanisms for preventing anti-competitive behavior</i>	↑	5-6
<b>Product responsibility</b>			
<b>Customer health and safety</b>			
PR1	Description of policy for preserving customer health and safety during use of reporting organization's products and services, and extent to which this policy is visibly stated and applied, as well as description of procedures/programs to address this issue, including monitoring systems and results	↑	4-24 4-36
PR4	<i>Number and type of instances of non-compliance with regulations concerning customer health and safety, including the penalties and fines for these breaches</i>	🚫	n/a
PR5	<i>Number of complaints upheld by regulatory or similar bodies to oversee or regulate the health and safety of the reporting organization's products and services</i>	🚫	n/a
PR6	<i>Voluntary code compliance, product labels or awards with respect to social and /or environmental responsibility that the reporter is qualified to use or has received</i>	↑	1-6 4-19 - 4-28
<b>Products and services</b>			
PR2	Description of the reporting organization's policy, procedures/management systems, and compliance mechanisms related to product information and labeling	➡	4-29
PR7	<i>Number and type of instances of non-compliance with regulations concerning product information and labeling, including any penalties or fines for these breaches</i>	🚫	n/a
PR8	<i>Description of reporter's policy, procedures/ management systems, and compliance mechanisms related to customer satisfaction, including results of surveys measuring customer satisfaction</i>	↑	4-18

GRI Ref Number	Indicator Description		Page
<b>Advertising</b>			
PR9	Description of reporting organization's policies, procedures/management systems and compliance mechanisms for adherence to standards and voluntary codes related to advertising		
PR10	<i>Number and types of breaches of advertising and marketing regulations</i>		
<b>Respect for privacy</b>			
PR3	Description of reporting organization's policy, procedures/management systems and compliance mechanisms for consumer privacy (also see <a href="http://www.gm.com/privacy">www.gm.com/privacy</a> )		<b>3-16</b> <a href="http://www.gm.com/privacy">www</a>
PR11	<i>Number of substantiated complaints regarding breaches of consumer privacy (see <a href="http://www.gm.com/privacy">www.gm.com/privacy</a>)</i>		<a href="http://www.gm.com/privacy">www</a>