

# Chairman's Message

General Motors is committed to sound corporate citizenship in all aspects of our business. Above all, we know that maintaining a strong company will help ensure our continued commitment to the communities in which we live and work, and to the social interests we have identified as important to our business and our stakeholders.

In the energy and environment arena, we at GM believe it is highly unlikely that oil alone will supply all of the world's rapidly growing automotive energy requirements; we know there is no single solution that will offer sustainable transportation; and we are concerned about the concentration of greenhouse gases in the atmosphere. In our view, the key to addressing these concerns is energy diversity. As part of the solution, we're dramatically intensifying our efforts to displace petroleum-based fuels — by building a lot more vehicles that run on alternatives, such as E85 ethanol, and by significantly expanding and accelerating our commitment to electrically driven vehicles, such as hybrids; advanced "plug-in" hybrids; extended range electric vehicles, like our Chevy Volt concept; and hydrogen fuel cell vehicles, like our drivable Chevy Sequel.

GM's corporate responsibilities extend to other areas as well, including safety and diversity. At GM, we strive to make each new model safer than the one it replaces. We are a leader in global research, engineering, and innovation to improve road safety and reduce injuries and fatalities. The application of technologies such as OnStar and StabiliTrak® to our entire North American vehicle line by 2010 is an example of our safety strategy in action.

We also have a commitment to keeping our employees safe on the job. GM's Global Safety team facilitates the sharing and implementation of best practices that have proven successful in other parts of the company. The result is that our plants are among the safest in the industry.

Finally, GM employs one of the most diverse work forces in the global business community — 284,000 people around the world — and we are committed to promoting diversity within our ranks. We believe the diversity of our workforce helps us design, build, and market vehicles that best meet the needs of our diverse consumers.

Thank you for your interest in General Motors.

Rick Wagoner
Chairman and Chief Executive Officer



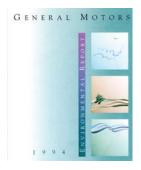
# Sound Citizenship and Strong Performance

"General Motors is committed to sound corporate citizenship in all aspects of our business. Above all, we know that maintaining a strong company will help ensure our continued commitment to the communities in which we live and work and to the social interests we have identified as important to our business and our stakeholders."

#### **Rick Wagoner**

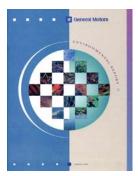
**Chairman and Chief Executive Officer** 

GM's long commitment to transparency is evidenced by our corporate reporting on non-financial matters. We published our first environmental report in 1994 in consultation with the Ceres organization. The report has evolved over the years from a focus on GM's environmental performance in the United States to a corporate responsibility report that covers our global operations in all four regions.



#### 1994

- -CERES Endorsement
- -Environmental Report
- -U.S. Based
- -Printed report



#### 1995

-Environmental, Health & Safety Report -North American Based



#### 1996

-Environmental, Health & Safety Report -North American Based



#### 1997

- -Community Participation
- -Product & Traffic Safety
- -Supplier Relations



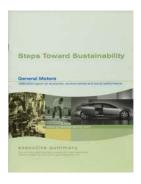
#### 1998

- -Stakeholder Relationships
- -Diversity
- -Philanthropy Report Merged



#### 1999

- -Economic, Social & Environmental
- -Web Based Report
- -Global Reporting Initiative



#### 2000

- -Economic, Social & Environmental
- -Web Based Report
- -Global Reporting Initiative



#### 2001

- -Sustainability Report
- -Regional Information



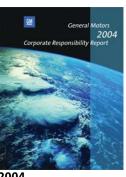
#### 2002

-Corporate Responsibility



### 2003

-GMAbility



2004

-GRI "In Accordance"



-One Global Report

# 2002 GLOBAL REPORTING INITIATIVE GUIDELINES

GM's Corporate Responsibility reporting has followed the 2002 Global Reporting Initiative Guidelines (GRI) since their inception. This fulfills the commitment to transparency and accountability — a commitment that is increasingly important for global companies with multiple stakeholders. The report is published online at gmresponsibility.com, with PDF files available to download and print on demand.

In the 2005/06 report, GM describes its progress in the traditional GRI focus areas of product, economic, social and environmental performance. These issues are carefully managed according to GM's vision and strategy and are guided by its widely renowned internal governance process. GM presents these achievements within the context of key issues that impact our business.

This report covers the year 2005 and 2006 through mid year. The data are primarily calendar year 2005 information. Our Corporate Responsibility Report was prepared internally by a team of GM employees and reviewed and endorsed by an Editorial Review Board comprised of GM Leaders and subject matter experts. Our previous Corporate Responsibility Report covered calendar year 2004 and part of 2005.

The full report is available on www.gmresponsibility. com. We continue to fully integrate the report with www.gmability.com, the company's Corporate Responsibility web site.



# Performance at a Glance

2005/06 Corporate Responsibility Report

# Performance at a Glance | Scorecard

GM's environmental, economic, product and social Key Performance Indicators (KPIs) are shown below in our Performance Scorecard. The tables cover KPIs comparing 2004 to 2005 and some of our five year targets.

Economic Indicators	2004		2005
Financial KPIs	2004 Annual Report pg. 46		2005 Annual Report pg. 45
Product Indicators	2004	2005	Performance
Fuel Economy, miles per gallon (US)	•		
- Car	29.4	28.9	2 % decrease
- Light truck	21.4	21.4	No change
CO <sub>2</sub> per mile, by model year (US)			
- Car	302gm	307	2 % increase
- Light Truck	439	430	2 % reduction
Environmental Indicators	2004	2005	Performance 2000-2005 target
Energy use (GWh) **	31,686	31,442	Reduced 14.8 % (exceeded 10% Target)
CO <sub>2</sub> emissions (metric tons)	12.35 million	11.68 million	Reduced 15.5 % (exceeded 8% Target)
Waste (metric tons) ***	4.08 million	3.53 million	Reduced 23.4 % since 2000 (target 15%)
Recycling rate	86.5 %	88 %	Increased 7.3 % since 2000 (target 15%)
Water use (cubic meters)	57.5 million	60.7 million	Reduced 19.0 % (exceeded 10% Target)
Sites certified to ISO 14001	99 %	100 %	118 of 118 manufacturing facilities have implemented an EMS

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

Social Indicators	2004	2005	Performance 2004-2005
Community donations/sponsorships (US\$)*	\$68 million	\$61.2 million	Reduced 10 %
Diversity: hourly female employees (U.S. workforce)	18.4%	17.3%	Reduced 6 %
Diversity: salary female employees (U.S. workforce)	25.9%	24.8%	Reduced 4.3 %
Diversity: hourly minority employees (U.S. workforce)	25%	24%	Reduced 4 %
Diversity: salary minority employees (U.S. workforce)	20%	20%	No change
Recordable injury rate (per 100 employees) (North American workforce)	2.98	2.85	Reduced 13.4 %
Lost time accident rate (per 100 employees) (North American workforce)	0.26	0.24	Reduced 7.7 %

<sup>\*</sup> See currency converter at www.oanda.com, a non-GM site, please check privacy policy.

<sup>\*\*</sup> See energy conversion factors at physics.nist.gov, a non-GM site, please check privacy policy.

<sup>\*\*\*</sup> See unit conversion factors at ts.nist.gov, a non-GM site, please check privacy policy



# **About Us** | Introduction

General Motors designs, builds, and markets cars and trucks worldwide. In 2005, GM sold nearly 9.2 million cars and trucks, the second highest sales volume in our history. GM has manufacturing operations in 33 countries and sales operations in 200 countries.

General Motors has a long tradition of success and innovation within the automotive business, which was founded in 1908. Today the company's global headquarters are at the GM Renaissance Center in Detroit, Michigan, USA. GM's business units are located in North America (GMNA), Europe (GME), Asia-Pacific (GMAP), and Latin America, Africa and the Middle East (GMLAAM).

### **Brands and Partners**



Since the 1920s, GM has been driven by strong, distinctive brands. Our success in the marketplace is directly related to innovative products that meet and exceed our consumers' expectations. Going forward, we're putting great emphasis

on building and differentiating each of our automotive brands around the world, and accelerating our drive for consistent, world-class distribution networks.

#### **GM's Brands**

GM's cars and trucks are sold under the following brands:





## Taking the Lead

General Motors is a global designer and manufacturer of cars and trucks with operations in 33 countries and sales networks in 200 countries. Guided by a six-point set of core values that embrace continuous improvement, customer enthusiasm, innovation, integrity, teamwork and individual respect and responsibility, GM is a leader not only in the automotive industry, but also in corporate responsibility.

Parts and accessories are sold under the GM, GM Goodwrench, and ACDelco brands through GM Service and Parts Operations (SPO).



OnStar (www.onstar.com) is the industry leader in vehicle, security, and information services in the U.S.

Additional information about GM's brands is available on

the company's corporate web site, www.gm.com, and in our 2005 Annual Report.

### **Our Vision & Values**

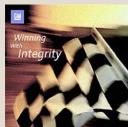
General Motors' vision is to be the world leader in transportation products and related services, earning our customers' enthusiasm through continuous improvement driven by the integrity, teamwork, and innovation of GM people.

GM has defined six core values to guide our employees' conduct in their day-to-day business across global operations:

- Continuous Improvement: We will set ambitious goals, stretch to meet them, and then "raise the bar" again and again. We believe that everything can be done better, faster, and more effectively in a learning environment.
- Customer Enthusiasm: We will dedicate ourselves to products and services that create enthusiastic customers. No one will be second guessed for doing the right thing for the customer.
- Innovation: We will challenge conventional thinking, explore new technology, and implement new ideas, regardless of their source, faster than our competition.
- Integrity: We will stand for honesty and trust in everything we do. We will say what we believe and do what we say.
- Teamwork: We will win by thinking and acting together as one General Motors team focused on global leadership. Our strengths are our highly skilled people and our diversity.

# COMMUNICATING VALUES TO EMPLOYEES

In the preface to "Winning with Integrity — Our Values and Guidelines for Employee Conduct," GM's Chairman and CEO Rick Wagoner states:



#### **GM Team Members:**

The pace of change at GM has never been faster, and it won't slow down any time soon. As we launch this annual update of our guidelines for employee conduct, *Winning With Integrity*, now is a good time for all of us to reflect on things that do not change at GM: our core values. They are constant. They are the foundation that we stand on in conducting business. *Winning With Integrity* is a cornerstone of our commitment to those values, starting with the core value of integrity.

Integrity is not optional at GM. We live it every day. It guides our decisions, our work, and our commitment to correct mistakes when we spot them. It guides us whether the company is riding high or battling through tough stretches. Integrity transcends borders and language; it's all about promoting a culture that demands and supports proper business conduct. Doing the right thing day-in and day-out is essential to our reputation and our success.

Operating with integrity means honest and accurate reporting of our performance, both internally and externally. It means careful attention to our internal controls and policies. It means understanding our legal responsibilities, and complying with them. In short, it means competing by the rules and making sure that our actions match our words.

This publication, Winning With Integrity, sets out the policies and obligations that help guide our business conduct worldwide. Please read it carefully and follow its guidance consistently.

It all comes down to personal responsibility — mine, yours, and all of ours — for the way we work and conduct ourselves as GM employees. Winning with integrity requires a commitment by every member of the GM team.

I know I can count on all employees to do their part; you have my commitment to do the same.

Rick Wagoner
Chairman and Chief Executive Officer

 Individual Respect and Responsibility: We will respect others and act responsibly, so that we can work together to meet our common goals.

Our company is based on these fundamental values. We have adopted and endorsed principles, such as the GM Environmental Principles and the Global Sullivan Principles, that are consistent with these values and serve to inform our strategies. These strategies drive our behaviors and actions, which produce the results that matter.

The guidelines are important not just for compliance — with the law and with GM's policies — but also for aligning with GM's core values. The foundation for all conduct by GM and its employees is the core value of integrity, and Winning with Integrity deals with personal integrity, integrity in the workplace, integrity in the marketplace, and integrity in society and communities. The guidelines, available online through GMability.com, explain GM's policies and present examples of situations that employees might face with suggestions on how to deal with them.

#### **Cultural Priorities**

At GM, you often hear the word "performance"
— performance cars, parts, management, and even a performance culture.

A performance culture is a work environment that helps promote business results. An atmosphere that inspires employees to do their best, empowers decision-making, rewards accomplishment, embraces challenges, and embodies high expectations. It's key in creating a competitive, profitable, and satisfying workplace.

No matter how much an organization redesigns, reconfigures, or reorganizes for efficiency and productivity, high-performing people ultimately drive business results.

At GM, we've 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

In addition, many other elements combine to create a value-based, performance culture, including a healthy, safe work environment, competitive wages and benefits, a diverse workplace, adherence to human rights and labor standards, and of course, job satisfaction.

## **Corporate Governance**

#### **LEADERSHIP**

The General Motors Board of Directors represents the owners' interest in perpetuating a successful business, including optimizing long-term financial returns. The Board is responsible for determining that the Corporation is managed in such a way to ensure this result. This is an active, not a passive, responsibility. The Board has the responsibility to ensure that in good times, as well as difficult ones, management is capably executing its responsibilities. The Board's responsibility is to regularly monitor the effectiveness of management policies and decisions, including the execution of its strategies.

In addition to fulfilling its obligations for stock-holder value, the Board also has responsibility to GM's customers, employees, suppliers, and to the communities where it operates — all of whom are essential to a successful business. All of these responsibilities, however, are founded upon the successful perpetuation of the business.

The Board operates under General Corporation Law of the State of Delaware (where GM is incorporated), GM's certificate of incorporation and bylaws, and our Corporate Governance Guidelines, which were adopted by the Board in 1994 and updated most recently in 2006.

All committees are composed of independent directors. GM uses the same definition or standard of "independence" as the U.S. Securities and Exchange

Commission (SEC) and the New York Stock Exchange (NYSE).

Each independent director is obliged to notify GM of any event that may affect his or her independence.

### **Automotive Leadership Group**

The Automotive Strategy Board (ASB) is responsible for the global strategic direction of GM's automotive business, including alliances and corporate and resource issues. The Automotive Product Board (APB), formed in March 2005, focuses on the company's global product portfolio, product programs, global capacity planning, global capital and engineering budget, and advanced propulsion and technology strategies. The ASB and the APB — together, the GM Automotive Leadership Group — work together to manage GM's four business regions:

- North America (GMNA)
- Europe (GME)
- Latin America, Africa and Middle East (GMLAAM)
- Asia Pacific (GMAP)



#### **PROCESS**

GM is committed to high standards of corporate governance, accountability and responsibility, business integrity, and community leadership.

# Guidelines on Significant Corporate Governance Issues

In 1994, GM's Board pioneered adopting guidelines for corporate governance, which set out the principles by which GM is governed. The Directors and Corporate Governance Committee of the Board annually monitor compliance with these guidelines; and the Board has periodically reviewed and revised them to provide greater clarity, strengthen them, and to respond to changes in the corporate landscape, particularly the reforms resulting from the Sarbanes-Oxley Act of 2002.

The Corporate Governance Guidelines cover a variety of topics, including selection and training of the Board, Board leadership, Board composition and performance, Board relationship to senior management, Board committee matters, and leadership development.

Among the notable provisions of the Corporate Governance Guidelines are:

- Independent directors must comprise a substantial majority of the Board.
- All key committees are comprised solely of independent directors.
- Decisions regarding corporate governance are made by the independent directors.
- Directors must offer their resignation from the Board upon change in their principal occupation.
- Directors are encouraged to serve on no more than four boards.
- At least 70 percent of director compensation is paid in GM stock, which must be held until retirement from the Board.
- The Board and committees of the Board retain independent outside financial, legal, and other advisors as appropriate.
- The Board annually evaluates its own performance, as well as the performance of the Chairman and CEO.

### **Executive Sessions of the Board**

The independent directors of the Board meet regularly in executive session. The presiding director at these sessions is the Chair of the Directors and Corporate Governance Committee, who is elected by the independent directors. At these sessions, at a minimum, the independent directors review CEO succession, performance and compensation; strategic issues for Board consideration; future Board agendas and the flow of information to directors; management progression and succession; and the Board's corporate governance guidelines.

#### Code of Ethics and Conflicts of Interest

GM's directors, officers, and employees are subject to the same code of ethics, Winning with Integrity. GM requires all global executives and salaried employees to affirm annually that they are aware of the requirements of Winning with Integrity and are complying with those requirements.

#### **Under** Winning with Integrity:

- GM hires, promotes, trains and pays based on merit, experience, or other work-related criteria, and strives to create work environments that accept and tolerate differences while promoting productivity and teamwork.
- GM endeavors to protect the health and safety of each employee by creating and maintaining a healthy, injury-free work environment.
- All GM employees have an obligation to protect GM's assets, including information, and to ensure their proper use.
- Providing false or misleading information in any GM business record is strictly prohibited.
- As a general rule, GM employees should accept no gift, entertainment, or other gratuity from any supplier to GM or bidder for GM's business.
- GM employees must immediately disclose any situation that could result in an actual or potential conflict of interest involving the employee or any member of his household, such as investing in a supplier, dealer, customer, or competitor.

- GM and all its employees must comply with all laws, including the U.S. Foreign Corrupt Practices Act, competition laws, and export control laws.
- To protect GM's reputation for integrity, it must communicate clearly and accurately to the public.

### **Reporting Employee Concerns**

In keeping with its core values, GM employees have an obligation to notify the appropriate individuals of any unethical or illegal conduct they observe. GM maintains a toll-free telephone reporting system — GM Awareline — available on a global basis 24 hours a day, seven days a week. GM Awareline permits employees to anonymously report concerns of possible criminal wrongdoing, actions believed to be contrary to GM policy, and possible emergency life-threatening situations. A team drawn from GM's Legal Staff, Audit Services, and Global Security is responsible for monitoring, investigating, and acting on all concerns reported on Awareline.

## Managing Public Policy Issues

#### MANAGEMENT STRUCTURE

The principle purpose of the Public Policy Committee of the GM Board of Directors is to foster GM's commitment to operate our business worldwide in a manner consistent with the rapidly changing demands of society. The Committee shall discuss, and bring to the attention of the Board as appropriate, current and emerging political, social, and public policy issues that may affect the business operations, performance, or public image of the company. Matters reviewed by the Committee include, but are not limited to: research and development, automotive safety, environmental matters, government relations, diversity, corporate social responsibility, education, communications, employee health and safety, trade, and philanthropic activities.

GM's Public Policy Center (PPC) identifies, co-ordinates, and manages key issues that affect our business in the areas of corporate responsibility and sustainability, government relations, energy and environment, economics, diversity, philanthropy, and community relations. The objective of the PPC is to advance GM's

# **About Us** | Managing Public Policy Issues

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 affect GM's business decisions
- Support corporate business and cultural objectives
- Develop and execute coordinated public policy strategies
- Ensure that GM's strategic plans and operating practices take into account the changing public policy environment.

A Public Policy Global Coordination Team directs the PPC and comprises members from GM's four operating business 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 its Vice President of Environment and Energy, Vice President of Corporate Responsibility and Diversity, Vice President of Government Relations, and Chief Economist. These individuals make up the leadership of the Public Policy Global Coordination Team. The activities of the PPC are reported annually using this Corporate Responsibility Report and through the GMability web site (launched in 2001). The management approaches adopted for specific environmental, social, and community issues are discussed in the respective sections of this report.

#### **KEY ISSUES**

The auto industry is challenged with meeting numerous government regulations and addressing societal concerns by both improving current technology and creating new solutions. These new solutions must be developed at a cost that meets consumer, shareholder, and societal needs.

We recognize the potential global growth opportunity in our business and understand that economic growth must be balanced with environmental performance and societal well being. Providing more of the world's population with access to mobility options will serve to improve lives, but

with this growth come challenges. These challenges were identified in the World Business Council for Sustainable Development's (WBCSD) Sustainable Mobility project's final report, *Mobility 2030*. The report is available on the WBCSD web site www. wbcsd.org.

These challenges cannot be adequately addressed by one party. Strategic partnerships among business, government, and non-governmental sectors are essential to address challenges that we face collectively. In this section we discuss how GM is moving forward with our stakeholders to develop solutions that work for our business, our shareholders, our stakeholders, our employees, and the communities where we operate.

The key product and facility related corporate responsibility issues: sustainable mobility, conventional air emissions, greenhouse gas emissions, and road safety are discussed in the web-based report.

#### **Global Climate**

GM is concerned about the potential impact of its business, including its processes and its products, on society and the environment. We are also concerned about the concentration of greenhouse gases in the atmosphere and we believe there is a constructive way for all stakeholders to move forward together on this issue.

The basic challenge is to meet the world's growing demands for affordable transportation products necessary to sustain economic growth, while also addressing long-term concerns about the environment. GM believes the most effective way to improve energy efficiency and reduce greenhouse gas emissions is the voluntary development and global implementation of cost-effective energy technologies in all sectors.

GM is both reducing and reporting its greenhouse gas footprint through its globally integrated energy and carbon management strategy — a strategy that is measurable and verifiable.

GM's implementation plan to address this challenge reflects numerous voluntary greenhouse gasmanagement initiatives across the globe:

# **About Us** | Managing Public Policy Issues

- Products: GM is implementing advanced technologies in its internal combustion engines (such as Active Fuel Management, flex fuel systems capable of running on renewable E85 ethanol made from corn, and clean diesels), in its hybrid vehicles (which include GM's hybrid bus transmission systems, the Saturn Vue Green Line Hybrid and full-size hybrid pickups that are all available today, and full-size SUV and car hybrid systems that will be rolled out over the next few years), and in its hydrogen-powered fuel cell vehicles that emit only water (moving us toward the ultimate goal of removing the automobile from the environmental equation).
- Processes: GM continues to set targets and monitor greenhouse gas emissions from its facilities and is taking steps to achieve nearterm reductions. In 2005, GM's global facilities achieved a 15.5 % reduction in CO2 emissions compared to 2000.
- Strategic Planning: We are guided by GM's Environmental Principles.



GM believes the pursuit of a diversified energy portfolio ultimately provides the best opportunity not only to reduce greenhouse gas emissions from the automotive sector, but also to increase the oil-consuming nations' ability to withstand oil-supply disruptions. GM also supports scientific research to improve the understanding of the possible long-term effects of human activities on the climate system.

Policy initiatives that encourage advanced technology development are best addressed through voluntary

initiatives and market-oriented measures, not government mandates. For example, the Asia Pacific Partnership for Clean Development and Climate is taking a voluntary, technology-driven approach.

Given that climate change is a global issue both in terms of cause and implication, it is essential that all parties be appropriately engaged. This will require cooperation between countries, manufacturers and energy providers in research, development and commercialization. In addition, consumers must embrace these new technologies at a level sufficient to make a difference.

- For more details, see General Motors Report on Energy Security and the Global Climate Issue
- GM's response to the Carbon Disclosure Project Greenhouse Gas Emissions Questionnaire
- GM's voluntary reporting of greenhouse gas emissions under the U.S. Department of Energy Voluntary 1605(b) GHG Registry
- GM participates in voluntary energy and environmental management programs throughout the world to reduce GHG emissions.
- Environmental and Regulatory Matters section of GM's Form 10-K to the U.S. Securities and Exchange Commission

#### **Road Safety**

At the conclusion of the World Business Council for Sustainable Development (WBCSD) Sustainable Mobility project, GM evaluated where it could effectively work with members of the mobility group to address the challenges identified in the report.

The WBCSD Sustainable Mobility report identified road safety as one of the seven goals that will improve the outlook for sustainable mobility:

"Significantly reduce the total number of road vehicle-related deaths and serious injuries from current levels in both the developed and developing worlds."

Road safety was the obvious choice because of the potential to reduce road vehicle-related deaths and injuries. GM developed a plan of engagement with

# **About Us** | Managing Public Policy Issues

the WBCSD Mobility project members and proposed that the group join forces with the Global Road Safety Partnership (GRSP), the leading NGO working in this area. The Global Road Safety Initiative (GRSI) was formed to further support the mission of the GRSP.

The GRSI is funded by seven of the world's largest automotive and oil companies, which have committed \$10 million to road safety. Ford, Honda, Michelin, Renault, Shell, and Toyota have joined GM in a five-year project commitment.

GRSI will focus on the critical road-safety issues identified in the World Report on Road Traffic Injury Prevention (2004, World Health Organization [WHO] and the World Bank). These include pedestrian safety, drinking and driving, helmet use, speed management, and seat belt use. GRSI will build upon the good practice guides being developed by GRSP, WHO, World Bank, and the FIA-Foundation. It will provide training to road-safety professionals in developing countries, and provide seed money to support pilot projects to improve road safety.

GRSI will help to build the capacity of developing countries to reduce traffic fatalities and help expand GRSP's capability to deliver road-safety improvements in line with the recommendations of the World Report on Road Traffic Injury Prevention.

## **Competitive Challenges**

### **Currency Manipulation**

GM must compete in an intensively competitive global auto market. GM has been, and will remain, a strong competitor in the marketplace; but there are two important areas where governmental policies adversely affect its competitiveness. The artificially weak yen, whose real or inflation-adjusted value is at its lowest level in over 20 years and which the Economist magazine called the "world's most mispriced currency," provides Japanese automakers a \$2,000 to \$8,000 per vehicle cost subsidy for the more than two million vehicles annually exported into the United States. While we are very willing to make difficult decisions to transform our business to improve its competitiveness, we are not in a position

to counter the billions of dollars in annual subsidies caused by the excessively weak yen.

#### **Health Care**

GM has a growing retiree population and retains many active workers. GM provides health coverage to over one million employees, retirees and their families. GM's health-care bill in 2005 for every U.S. employee, dependant, retiree, and surviving spouse totaled \$5.3 billion. No other company in the world has that kind of health care obligation. Today we compete mostly against foreign-owned companies whose governments cover much of their employee and retiree health care and pension costs or who have few retirees in the U.S.

With support from the private sector, our government can exercise its power both as the largest purchaser of health care and as a policymaker to stabilize costs, reduce errors, and provide consumers the cost and performance information they need to make informed health-care decisions. GM works with other businesses, consumer groups, the health-care industry, and governments at every level to improve the quality of health care and reduce costs. We support accelerating the use of information technology to eliminate errors and improve care, reforming medical liability laws to reduce costly defensive medical practices, and promoting the availability of generic drug alternatives. We also urge policymakers to provide a greater focus on improving the quality of care for those with serious illnesses or chronic diseases — the one percent of the population that makes up 30 percent of the nation's overall health care

Currency manipulation and health-care costs represent a significant challenge to competitiveness in our largest market. GM is a formidable competitor when allowed to compete without the policy handicaps we face in the United States. Perhaps there is no better example than China. With the Japanese market virtually closed, China was the key to the Asia Pacific region for GM. Our growth in the China market has been truly impressive. GM became the #1 automaker in China in 2006.

We welcome competition in any region of the world, competition that is unfettered by currency manipulation and disproportionate health-care costs.

#### **ONGOING PARTNERS**

GM has established memberships, sponsorships and partnerships with organizations that advance common goals on social issues affecting public policy.

#### **Governmental**

- Voluntary Initiatives on Energy and Greenhouse Gas Emissions
- Freedom CAR



In January 2002, USCAR and the U.S. Department of Energy teamed together to create the FreedomCAR Partnership.

In September 2003, the FreedomCAR effort expanded to become the FreedomCAR and Fuel Partnership, adding five energy companies — BP America, Chevron Corporation, ConocoPhillips, Exxon Mobil Corporation and Shell Hydrogen LLC — to the USCAR/DOE partnership. It is supported by numerous suppliers, research institutions and universities.

#### Non-governmental

- Ceres
- The Nature Conservancy
- Automotive Service Educational Programs (ASEP)
- Automotive Youth Educational Systems (AYES)
- Safe Kids Worldwide
- SPACE: A Journey to Our Future
- Corporate Social Responsibility Initiative: Kennedy School, Harvard University
- Global Road Safety Partnership

#### **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

#### **CERES**

### http://www.ceres.org

GM's Environmental Principles have been endorsed by Ceres. GM was the first Fortune 50 manufacturing company to endorse the Ceres Principles in 1994. The Ceres Principles 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.

#### THE NATURE CONSERVANCY,

#### http://www.nature.org

In 1994, The Nature Conservancy and General Motors began a relationship that was unprecedented for both organizations because of its size and scope. General Motors was drawn to the Conservancy because its collaborative approach promotes a healthy economy and a healthy environment.

# ASEP (AUTOMOTIVE SERVICE EDUCATIONAL PROGRAM)

In 1979, General Motors recognized that the technology incorporated into the next generation of automobiles was going to change dramatically. GM responded to the need by developing the Automotive Service Educational Program (ASEP). These technical education programs were designed to educate qualified service technicians on advanced vehicle technology in a school/work setting. GM ASEP currently participates in 80 schools in the United States and Canada.

In this two-year program, students earn an Associate Degree and participate in an eight to 10-week rotation 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 training with a strong academic foundation.

The success of the program and the growing global market has led to an expansion of our automotive technical education curriculum in China. The first formal class of the Shanghai GM ASEP class graduated from the Shanghai Communications School in July 2006, with a graduation rate of 96.6 percent and an employment rate of 93.1 percent. Further expansion is planned into other provinces.



Shown are graduates from the first formal class of the Shanghai GM ASEP class at the Shanghai Communications School.

# AYES (AUTOMOTIVE YOUTH EDUCATIONAL SYSTEMS), http://www.ayes.org

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 which encourages awareness of, and participation in, careers as automotive technicians.

#### SAFE KIDS WORLDWIDE

http://www.usa.safekids.org

General Motors and Safe Kids Worldwide (formerly the National SAFE KIDS Campaign) have a 10-year partnership to implement the industry-leading Safe Kids Buckle Up program. Countless lives have been saved and injuries prevented as a result of this innovative and far-reaching program.



Safe Kids Buckle Up addresses a significant pubic health problem in the United States: motor vehicle crashes are the leading cause of death among children ages three to 14. In 2003, nearly 1,600 children ages 14 and under died and an estimated 220,000 went to emergency rooms with injuries from motor vehicle crashes. Correctly used child-safety seats are extremely effective, reducing the risk of death by as much as 71 percent; but nearly 73 percent of child seats are not installed or used correctly.

Safe Kids Buckle Up is a multifaceted national program bringing passenger-safety messages to children and families through community and dealer partnerships. More than 600 local Safe Kids coalitions and chapters have access to this life saving program. GM has served as the exclusive funding source of Safe Kids Buckle Up since 1996, and Chevrolet became the lead partner in October 2004.

Since the program's inception, more than 13 million people have been touched by Safe Kids Buckle Up events and community-outreach efforts. Safety experts have examined more than 800,000 seats for proper installation and have donated more than 350,000 seats to families in need. Tens of millions of people have been exposed to child passenger safety messages through public service announcements, educational videos, brochures, video news releases, and other materials. The Safe Kids Buckle Up program includes:

#### **Child Safety Seat Check Up Events**

Safe Kids coalitions nationwide, in partnership with GM dealerships and other community organizations, host public events that teach parents and caregivers to use child safety seats and safety belts correctly. More than 20,000 events have taken place in the past 10 years.

#### **Mobile Car Seat Check Up Vans**

A unique aspect of the program is the nationwide fleet of 119 Chevrolet Express and Venture vans donated by GM. These are used by Safe Kids coalitions to conduct community-based child safety seat checks in underserved areas. The vans are stocked with all the necessary equipment to conduct an inspection, including seats to give to low-income households or to replace recalled or damaged seats. The vans make it possible to bring the message directly to the public at children's stores, shopping centers, fairs, and other venues.

#### **Child Safety Inspection Stations**

Thirty-four Safe Kids coalitions conduct child safety seat inspections at 75 permanent locations with regular hours. Fifteen inspection stations are housed at General Motors dealerships.

#### **Child Safety Seat Distribution Program**

Safe Kids and General Motors have distributed 300,000 child safety seats to families in need. More than half of those seats were distributed through partnerships with the NAACP and the National Council of La Raza.

#### **State Legislation**

A 2001 Safe Kids study revealed startling deficiencies in state child-passenger safety laws and has led to 35 states and the District of Columbia enacting booster seat laws to require that older children use appropriate child safety seats.

#### SAFE KIDS BUCKLE UP HIGHLIGHTS

In addition to hundreds of thousands of child seat inspections and van and child safety-seat donations, Safe Kids Buckle Up also features:

#### SPECIAL EVENTS

#### **Child Passenger Safety Week**

Child Passenger Safety Week is an annual national campaign that focuses attention on the use of child safety seats and safety belts. In February 2006, more than 200 inspection events were held at Chevrolet dealers in celebration of CPS Week. Safe Kids introduced a parent toolkit that included carpool safety checklists and the Safety Belt Fit Test, an easy way to determine whether a child is ready to safely graduate from a booster seat to adult safety belts.

# National Automobile Dealers Association's Child Safety Month

Safe Kids Buckle Up and Chevrolet conducted more than 200 inspection events during September 2005 as part of Child Safety Month sponsored by the National Automobile Dealers Association. The kickoff was held in Miami and was staffed with bilingual technicians to educate Spanish-speaking families with in-language educational materials.

#### **NASCAR**

In February 2005, Chevrolet leveraged its relationship with NASCAR driver Jeff Burton to film a Safe Kids public service announcement encouraging parents to learn how to correctly install their child's seat. In order to reach fans at NASCAR events, Chevrolet funded a Safe Kids exhibit that is set up at races. The display is configured like a garage, staffed with Safe Kids experts as the "pit crew" to entertain kids and educate their parents.

#### OTHER SAFETY-RELATED ACTIVITIES

#### **Never Leave Your Child Alone**

More than 275 children have died of heatstroke in the last decade after being left in parked cars. Even in mild weather, the interior of a parked car can rise to dangerous temperatures in just a few minutes. The "Never Leave Your Child Alone" campaign consists of interactive displays that show temperatures inside and outside a vehicle; they can differ by as much as 70 degrees. The exhibit also demonstrates the startling speed at which a vehicle's temperature rises from comfortable to deadly. These displays are used at various events, such as NASCAR races and state fairs, and by local weather forecasters to educate and

inform parents and caregivers about the dangers of leaving children unattended in a vehicle.

#### Spot the Tot

In summer 2006, Safe Kids introduced "Spot the Tot," a national campaign designed to prevent injury to children in non-crash incidents. This program is designed to raise parents' awareness of vehicle backovers in driveways and parking lots. Safe Kids provides a few simple tips for adults and kids to make sure the area around the vehicle is safe before driving away.

#### Research

Safe Kids has conducted extensive research on the attitudes, knowledge, and behavior of parents in relation to child-safety seats. The results of this research have given the child-passenger safety community vital information that guides Safe Kids Buckle Up's programs, legislative campaigns, and resources for parents.

#### **Educational materials**

Safe Kids has created a wealth of materials designed to educate parents and caregivers on safety in and around vehicles. Age-specific child-restraint brochures, videos, public service announcements, children's activity books, and informational posters are provided to local community groups, schools, day care centers, and pediatricians' offices by the more than 600 Safe Kids coalitions and chapters across the United States.

#### **Child Passenger Safety Technical Training**

Safe Kids Worldwide is the certifying body for the 27,000 child safety seat technicians in the United States. Safe Kids coalitions have conducted approximately 4,000 sessions ranging from two-hour awareness classes to 32-hour technician-certification courses.

#### **Information Hotline**

Parents and caregivers receive free, bilingual Safe Kids Buckle Up materials and find child safety seat inspections in their area by calling (800) 441-1888 or visiting www.usa.safekids.org. The web site provides an interactive Child Safety Seat Guide along with safety tips, statistics, and more.

# **SPACE:** A Journey to Our Future, http://www.spaceevent.com

GM is partnering with NASA on a five-year exhibition on space exploration, 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.

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

As one of the founding supporters of the Corporate Social Responsibility Initiative, GM has 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 into mainstream corporate strategy. We have shared our insights and experience, which have been instrumental in helping to address some of the key questions addressed by the CSR Initiative.

### **Business partners**

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

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

# **U.S. Council for International Business (USCIB),** 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. GM takes an active role in USCIB with two executive appointments to chair USCIB committees.

# The Business Roundtable (BRT), 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, 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, it conducts research, convenes conferences, makes forecasts, assesses trends, publishes information and analysis, and brings executives together to learn from one another.

### **Additional partnerships**

GM is convinced that balanced public policy approaches to social issues are important to its business. Therefore, in addition to partnerships, GM has established alliances with organizations that help develop strategic solutions. GM works with many business associations in the various countries around the world where it does business. For example, GM is a member of the Alliance of Automobile Manufacturers in the U.S., the Canadian Vehicle Manufacturers Association (CVMA) in Canada, the European Automobile Manufacturers Association (ACEA) in Europe, the Korean Automobile Manufacturers Association (KAMA) in Asia, and the Federal Chamber of Automotive Industries (FCAI) in Australia, among many other organizations.



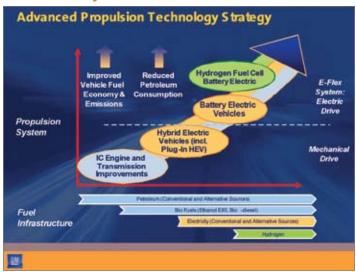
#### **KEY ISSUES & CHALLENGES**

To compete in the intense global auto industry today, GM is following a strategy designed to help the company achieve continued success. Core challenges include reducing vehicle emissions, improving fuel economy, continuing to improve vehicle safety, designing vehicles that provide value to our customers, producing quality vehicles, and appropriately managing the disposal of vehicles at end of life.

### **Advanced Technology Strategy**

GM's advanced technology includes a continuum of propulsion and fuel options. These range from continued advancements to the current Internal Combustion Engine (ICE) to electric propulsion systems that derive their power from various energy sources including hydrogen fuel cells.

### **Fuel Economy and Emissions**



GM is investing in a broad range of technologies to improve the fuel efficiency and lower the emissions of its products on a global basis. While the focus is on making improvements to all GM vehicles, GM believes that the biggest gains can be won by concentrating on improving fuel efficiency of larger vehicles first, because these are the vehicles that use the most fuel and create the most emissions. For that reason, GM has produced redesigned full-size SUVs that lead their segments in fuel economy rankings against competitors.



## Continuous Environmental Improvement

By developing alternative sources of energy and propulsion, we have the chance to mitigate many of the issues surrounding energy availability. We will be able to better cope with future increases in global energy demand. We will minimize the automobile's impact on the environment.

This means that we must continue to improve the efficiency of the internal combustion engine, as we have for decades. But, it also means we need to dramatically intensify our efforts to displace petroleum-based fuels by building more vehicles that run on alternatives, such as E-85 ethanol, and, very importantly, by significantly expanding and accelerating our commitment to the development of electrically driven vehicles.

GM continues to improve the efficiency of the traditional combustion engine with technologies like Active Fuel Management, six-speed transmissions, and various electrical systems technologies that help to increase fuel economy.

## Our Products | Advanced Engines

As part of General Motors' strategy to continue to improve fuel economy and reduce vehicle emissions, GM is placing a major focus on improving the traditional internal combustion engine. Around the world, GM is developing and implementing various technologies to help make this happen. From Twinport technology in Europe, to flexible fuel vehicle technology in the U.S., GM is making strides in applying technologies to conserve fuel and create fewer emissions in the process.

# IMPROVEMENTS TO THE TRADITIONAL GASOLINE ENGINE

In addition to new and future technologies like hybrid electric vehicles and hydrogen fuel cell vehicles, we are continuing to make improvements to the traditional gasoline engine. Some of the key powertrain technologies that GM is implementing include:

• Active Fuel Management (AFM) — This technology shuts off half of the vehicle's cylinders when less power is needed, such as during steady cruising speed or deceleration. With an eight-cylinder engine, this allows for driving in a fuel saving, four-cylinder-mode and then seamlessly switching back to a robust eight-cylinder-mode when needed to meet the demand for greater power. GM has also just introduced a 3.9 liter, six cylinder engine with AFM that allows the vehicle to run on three cylinders part of the time. GM's first debut of the V6 application is on the 2007 Chevrolet Impala.

For the 2006 model year, ten GM vehicles were equipped with AFM, and for the 2007 model year, 14 models utilize the technology. By 2008, more than two million GM vehicles will be equipped with AFM.

- Engine Variable Valve Timing This technology helps optimize engine air flow for maximum efficiency and power. By 2007, we will produce 2.5 million engines annually that utilize this fuel saving technology.
- Six-Speed Transmissions Fuel economy is enhanced with a six-speed transmission because smaller "steps" are used between gears, compared to a conventional four-speed

automatic. This allows the transmission to quickly find the best gear for the vehicle speed and road conditions. By 2008, GM plans to offer one million vehicles annually that will be equipped with this technology. Currently, GM has nearly 40 global vehicle applications that are using the six-speed transmission.

In addition to engine technologies, GM is focused on aerodynamics. Every vehicle we produce undergoes rigorous mathematical analysis and physical testing in the world's largest automotive aerodynamics wind tunnel and lab to optimize aerodynamic shape development, maximize cooling airflow, and minimize wind noise. All of this work helps improve the fuel efficiency of the vehicle. In fact, next to engine improvements, aerodynamics is the second largest contributor to fuel economy gains.

Other key technologies that help improve fuel economy include:

- Regulated voltage control (RVC) GM's patented RVC technology optimizes alternator load by reducing voltage when the battery reaches 80 percent state-of-charge. RVC extends battery and electrical component life.
- Electric cooling fans These fans replace engine driven fans. They require less horsepower and produce less noise.
- Variable displacement air conditioner compressor
   Replaces a fixed displacement compressor,
   providing an increase in fuel economy with A/C on.
- Electric power steering Reduces mechanical losses by eliminating the pump, hoses, and hydraulic fluids.

GM has made fuel economy a priority, and we are placing significant resources and effort into producing cars and trucks that offer leading fuel economy and performance. In fact, for the 2007 model year, GM is offering more vehicles (23 in all) that achieve 30 miles per gallon or better on the highway than any other automaker, according to EPA estimates. We are achieving these results by improving engine and transmission efficiencies, producing vehicles with better aerodynamics, and minimizing vehicle energy losses. And we're doing all

# **Our Products** | Advanced Engines

of this without compromising on value, performance, or utility.

In Europe, GM added a new 1.8-liter 140 hp gasoline engine to extend the Opel/Vauxhall engine offerings. The new engine provides:

- More power, reduced fuel consumption, enhanced refinement
- Continuously variable camshaft phasing and twostep intake manifold
- Intelligent lightweight design further enhances efficiency

The highly efficient four-cylinder unit is available in the new Opel/Vauxhall Zafira, Vectra, and Signum.

The all-new four-valve engine features numerous technology-highlights:

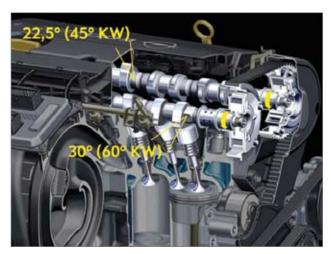
- a two-step intake manifold with a rotary sleeve instead of flaps to minimize flow losses
- a highly efficient oil-water heat exchanger
- a map-controlled thermostat
- a deep drawn exhaust manifold with an integrated catalytic converter

Tests with the Opel/Vauxhall Vectra resulted in the Motor Vehicle Emissions Group (MVEG)-cycle fuel consumption of 7.3 liters per 100 kilometers – 0.3 liters or four percent less than the previous Vectra 1.8.

Mass reduction, achieved by lightweight design, also contributes to the high efficiency of the engine.

Another key technology to improve fuel economy is the increased application of turbo charging. Two examples are the sporty top-of-the-range OPC version of the Meriva, powered by a newly-developed 180-hp 1.6-liter ECOTEC turbo engine and the 2.8l V6 ECOTEC turbo in the Vectra and Signum.





#### **DIESELS**



2007 Duramax Diesel 6.6L V8 Turbo

Diesel engines have been dramatically re-engineered to be cleaner and quieter. Diesel engines use about 25 percent less fuel than gasoline engines in light-load vehicle applications and as much as 70 percent less fuel in heavy-load conditions. This is because the diesel engine operates more efficiently, and diesel fuel provides more energy than gasoline, compressed natural gas, or ethanol.

Today's new diesel engines use electronics to monitor engine performance and vehicle activity. At the same time, high pressure fuel injection is used to optimize 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 and reduce the amount of particulates and nitrogen oxide emitted.

Globally, diesel engines are available in many different displacements and can be integrated into the smallest car or the largest truck. GM's diesel engine portfolio includes a range of choices, from the 1.3L 4-cylinder diesel engines in the Opel/Vauxhall Agila, Corsa, Meriva, and Astra, up to the 6.6L V8 Duramax diesel sold in the U.S.

In North America, GM's diesel strategy is applied first to larger vehicles, such as heavy-duty pickup trucks and utility vehicles, because fuel savings from a diesel engine are greatest when operating under heavy loads, towing, or traveling steep grades. GM currently offers the Duramax 6.6L turbo-diesel engine in the Chevrolet Silverado and GMC Sierra

heavy-duty pickups, and in the Chevy Kodiak, GMC TopKick, and in GM's full-size vans, the Chevy Express and GMC Savanna.

New U.S. government-mandated emissions regulations for diesel engines manufactured beginning January 2007 require a 90 percent reduction in particulate matter and a 50 percent reduction in hydrocarbons and NOx. Further reductions of NOx will be required in 2010. GM's Duramax 6.6L turbo-diesel engine has been revised to meet these new stringent regulations while still delivering the same vehicle performance our customers expect while minimizing cost.

In Europe, diesel engines have become a fun-to-drive, high torque, fuel efficient powertrain solution, and this has led to the diesel being the flagship powertrain in many European applications with an overall market penetration of about 50 percent. In addition to the 3.0-liter V6, GM in Europe offers four-cylinder diesel engines with 1.3, 1.7, 1.9, 2.0, and 2.5-liter displacements. Power output/maximum torque ranges from 70 hp/170 Nm to 184 hp/400 Nm. (includes Movano and Vivaro).

In Asia Pacific, there is a growing interest in diesels. Korea, India, and potentially China are growing markets. There is now more than a 90 percent diesel penetration in the Korean SUV market. The 2.0L diesel engine, developed jointly by GM Daewoo and GM, is the first diesel engine developed and manufactured by GMDAT. Vehicle applications in Korea include the GM Daewoo Winstorm (Chevrolet Captiva in export markets) and, later this year, the GM Daewoo Tosca (Chevrolet Epica in export markets). In Australia and New Zealand, the 2.0L will be used in the Holden Capiva.

#### **ALTERNATIVE FUELS**

# Compressed Natural Gas (CNG) and Liquified Petroleum Gas (LPG) Vehicles

The Opel Special Vehicles (OSV) division produces the Zafira 1.6 CNG and Combo 1.6 CNG and is Europe's biggest manufacturer of natural gas-powered vehicles. The OSV division is also the market leader in Germany. One way GME supports the natural gas trend in Europe is through targeted information

## Our Products | Advanced Engines

campaigns; for example, a CNG newsletter is regularly published in Austria.

Opel CNG models set new standards in environmental protection and resource-saving mobility. The Verkehrsclub Deutschland VCD (German Transport Association) publishes a car environmental list. The Zafira 1.6 CNG was either first or second in the van/seven-seat categories in the last three rankings. The Combo 1.6 CNG was ranked seven and eight in the family vehicle class in the last two surveys.

Demand for CNG vehicles is rising in Europe due to increased fuel prices and the implementation by certain national governments of long-term policy frameworks. The production plan for 2007 is 18,000 units.

In addition to producing the vehicles, GME also is working to help expand the CNG infrastructure in Europe by collaborating with local and regional fuel providers. CNG infrastructure is now at 700 fueling stations in Germany and will rise to 1,000 in 2008. Austria and Switzerland are also expanding their number of filling stations and France has announced the construction of 300 before 2010. Western Europe now has approximately 2,000 fueling stations.

The Vauxhall Dual-Fuel (LPG/Gasoline) lineup offers significant reductions in exhaust emissions, including particulates and oxides of nitrogen. Dualfuel vehicles provide an immediate opportunity for improved air quality and lower levels of greenhouse gas emissions. Since Vauxhall's pioneering role in the LPG market over five years ago, both the company and market have gained pace.

Many Chevrolet models are available as retro-fitted LPG/gasoline versions in many European countries. In Germany, the Chevrolet Rezzo LPG was selected the most cost-efficient vehicle in its class by the German automobile club ADAC.

In Korea, GM Daewoo produced 25,161 LPG vehicles in 2005, which accounts for 25 percent of total LPG vehicles produced in Korea. GM Daewoo, including the Daewoo Motor Company records, alone has produced 117,270 LPG units since the year 2002.

In Thailand, the Chevrolet 1.6 I CNG Optra with two body styles, sedan and station wagon, was introduced

in the third quarter of 2006. Introduction is planned of the Optra (bi-fuel) and Colorado (dual-fuel) models equipped with the country-first OEM CNG systems. GM Thailand (Chevrolet) is the first and only company that offers the three-year/100,000 kilometer full warranty. Also, the Chevrolet Optra is sold in India.

In Australia, GM Holden introduced, in October 2006, the dual-fuel Alloytec V6 engine available in the VE Omega, Berlina, and Commodore V-Series special edition models. The 3.6-liter engine runs on both gasoline and LPG, and delivers seamless transition from petrol to LPG while driving, with only a small power difference. A dual-fuel VE sedan range can be more than 1,100 km; and if customers travel around 30,000 kms annually, running on LPG can save more than 1,000 Australian dollars/year depending on fuel prices and driving style.

#### **Biofuels**

#### **UNITED STATES**

In 2006, GM also stepped up its efforts in the alternative fuels arena with an increased focus on the promotion of E85 ethanol in the U.S. E85 ethanol is a renewable fuel, made of 85 percent ethanol and 15 percent gasoline, which helps to reduce dependence on petroleum and reduces greenhouse gas emissions. Using E85 ethanol also has the ability to produce more horsepower and torque for the engine. It can also be a benefit to local economies as ethanol can be domestically produced from a variety of materials including corn, sugarcane, switch grass, cellulosic sources, and agricultural waste like corn stalks or rice husks.

General Motors has produced over two million flex fuel vehicles in the United States and has committed to doubling flex fuel production by 2010 in support of the Energy Future Coalition 25 X 25 (25 percent renewable fuels by 2025) project. In November 2006, we also announced that within three years our HUMMER brand will offer bio fuel powertrains across its entire lineup. HUMMER is the first automotive brand to make such a commitment. General Motors believes that E85 and other bio fuel offerings can provide energy diversity, significant environmental benefits, and support local jobs creation.

GM is working hard to educate consumers on the benefits of using E85 ethanol and launched a national advertising and marketing campaign, "Live Green, Go Yellow," to help do this at the beginning of 2006. To increase the E85 ethanol infrastructure around the country and make the fuel available to more people, GM is also partnering with government, fuel providers, and industry to increase the availability of E85 ethanol throughout the U.S. As of late 2006, GM had announced 12 partnerships with states, fuel providers, and fuel retailers to locate up to 175 new E85 fueling sites around the country.

General Motors launched the "Live Green, Go Yellow" campaign in 2006 with emphasis on consumer education, expanded product offering (16 model offerings), and the development of the retail market through partnerships with federal and state agencies, ethanol producers, and fuel retailers.

General Motors installed yellow fuel caps that read "E85 or gasoline" in an effort to remind consumers that they have a choice of fuel each and every time they fill up. In addition, exterior flex fuel badging has been added to GM flex fuel products. Many of these best practices are now being adopted by other OEMs.



Screen shot from the LiveGreenGoYellow website.

#### **GM EUROPE**

Today, all our new vehicles in Europe are equipped to operate on blends of five percent ethanol in gasoline (E5) and five percent biodiesel (B5). In addition, Saab now offers the benefits of E85 BioPower in two engine formats, both delivering enhanced performance as well as reduced GHG emissions. On sale initially in the Nordic markets, the UK and Ireland, the Saab 9-5 2.3t BioPower will also be available in other European countries. It is being offered in addition to the current 2.0t BioPower model, which is already established in Sweden as the best selling 'environmentally-friendly' vehicle. Both BioPower models combine the benefits of 'going green', through cutting GHG emissions, with the enjoyment of even sportier driving performance.

A further practical advantage of the BioPower formula allows customers to run on gasoline and/or E85 fuel in any proportions without the need to make adjustments. The adaptability of Saab's powerful Trionic engine management system has facilitated reprogramming to accommodate the different ignition timing and fuel/air mixture requirements of E85 fuel. Trionic monitors fuel type after every visit to the filling station and automatically makes any adjustments necessary for running on E85 and/or gasoline in any combination. That means Saab BioPower drivers can also use gasoline, should E85 not be available. E85 has a much higher octane rating (104 RON) than gasoline (95 RON), and turbocharging allows the use of a higher boost pressure and more advanced ignition timing — giving more engine power — than is possible on gasoline without risk of harmful 'knocking' or pre-detonation. The only hardware modifications necessary are more durable valves and valve seats, and the use of bioethanol-compatible materials in the fuel system, including the tank, pump, lines, and connectors.

GM welcomes long-term alternative fuel policies, incorporating fiscal incentives (such as reductions in company car taxation, exemption from congestion charges, and reduced excise duties), fuel taxes based on well-to-wheels GHG emissions, and strategies to ensure widespread alternative fuel availability, along with continued research to improve the environmental performance of both vehicles and fuels.

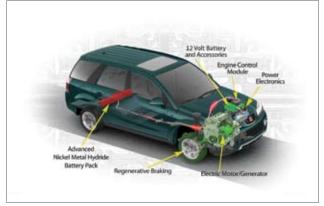
## Our Products | Hybrids

Producing hybrid vehicles is one piece of GM's strategy to improve fuel economy and reduce vehicle emissions, along with improving the traditional internal combustion engine and developing hydrogen fuel cells. GM has three distinct hybrid systems, and is targeting high-volume and high fuel consuming vehicles first to save as many gallons of fuel as possible. In keeping with this strategy, GM first introduced hybrid technology on transit buses in North America in 2003. Today there are over 550 buses in over 42 cities around the U.S. and Canada. The GM Allison Two-mode Hybrid system on these buses allows for many benefits including significant fuel economy improvements, reductions in certain emissions by up to 90 percent, and a 50 percent improvement in acceleration. In 2004, GM introduced the world's first hybrid pickup truck when it launched hybrid versions of the Chevrolet Silverado and GMC Sierra. These trucks, equipped with GM's Light Hybrid system, deliver the highest estimated city fuel economy of any full-size trck.



In the U.S., GM has plans to continue rolling out a very diverse hybrid program, designed to meet American driving patterns and needs. The systems vary in fuel economy savings and cost, providing an opportunity for more consumers to own a hybrid vehicle and benefit from increased fuel economy savings. Ultimately, GM plans to build 12 different hybrid models on its highest volume car and truck platforms, and will deliver these vehicles with the level of performance our customers have come to expect.

Continuing with the rollout of hybrid vehicles in late summer of 2006, GM launched the new 2007 Saturn Vue Green Line Hybid.



2007 Saturn Vue Green Line Hybrid

The vehicle provides a substantial fuel economy improvement over the conventional Vue and the highest highway fuel economy of any SUV on the road today. Starting at just under \$23,000, the Saturn Vue Green Line Hybrid is designed to bring affordable fuel-saving technology to the greatest number of consumers.

Following the introduction of the Vue Green Line, in 2007 GM will debut its new Two-mode Hybrid system for passenger cars on the 2008 Chevrolet Tahoe and 2008 GMC Ykon.

The system uses two electrically variable transmission modes for city and highway driving and, coupled with GM's Active Fuel Management system, will provide a composite fuel economy improvement of up to 25 percent. GM is developing the light-duty Two-mode Hybrid system in partnership with DaimlerChrysler and the BMW Group to combine the companies' expertise, thereby reducing development costs, while delivering a superior product.



GM will debut its new Two-mode Hybrid system on the 2008 Chevrolet Tahoe and GMC Yukon.

# Our Products | Hybrids

For the 2008 model year, Saturn will also utilize this Two-mode Hybrid technology on the 2008 Saturn Vue Green Line. It will be the industry's first application of the technology to a front-wheel-drive vehicle.

Another exciting hybrid technology that GM will make available in the future is plug-in hybrid technology. In November 2006, we announced intentions to produce a plug-in hybrid version of the Saturn Vue. This vehicle will have the potential to achieve double the fuel efficiency of any current SUV. A production date is dependent upon the availability of necessary battery technology, but this is a top priority for the company.

Other hybrid vehicles that GM has announced it plans to introduce include:

- 2008 Saturn Aura
- 2008 Chevrolet Malibu
- 2009 Cadillac Escalade
- 2009 Chevrolet Silverado (crew cab) Two-mode Hybrid
- 2009 GMC Sierra (crew cab) Two-mode Hybrid

## **Electric Vehicles**

#### **GM ELECTRIC VEHICLES**

### **Chevrolet Volt**



**Chevrolet Volt** 

At the 2007 North American International Auto Show in Detroit, GM unveiled a new electric vehicle concept, the Chevrolet Volt, that could nearly eliminate going to the gas station altogether. The Volt is a battery-powered electric vehicle that uses a gas engine to create additional electricity, thereby extending its range. It can be fully charged by plugging it into a 110-volt outlet for approximately six hours a day. When the lithium-ion battery is fully charged, the vehicle can deliver 40 city miles of pure electric vehicle range. When the battery is depleted, a 1-liter, three-cylinder turbocharged engine spins at a constant speed, or revolutions per minute, to create electricity and replenish the battery. This increases the vehicle's fuel economy and range. This means that if the driver lived within 30 miles from work and she charged her vehicle every night, or during the day at work, she could achieve 150 miles per gallon.

In addition to gasoline, the Volt is designed to accommodate a number of advanced technology propulsion solutions, such as the use of alternative fuels and hydrogen fuel cells. The Volt uses GM's Eflex system that utilizes multiple propulsion systems where the fuel may differ, but all ultimately end with an electric drive system. Examples include using an alternative fuel such as E85 ethanol, a blend of 15 percent gasoline and 85 percent ethanol. Using this fuel, a driver could achieve more than 525 miles per petroleum gallon. If the driver forgets to charge the vehicle or goes on vacation far from home, the Volt could still get 50 mpg by using the engine to convert gasoline into electricity and extend its range up to 640 miles; more than double that of today's conventional vehicles.

With the E-flex System that the Volt uses, the propulsion of the vehicle can be tailored to meet the specific needs and infrastructure of a given market. For example, somebody in Brazil might use 100 percent ethanol to power an engine generator and battery. While a customer in Shanghai might get hydrogen from the sun and create electricity using a fuel cell.

To make this concept a reality, technology for lithiumion batteries needs to evolve to the point where it can support the operation of a motor vehicle and provide the performance characteristics that drivers are accustomed to. Some experts predict that the technology could be production ready by 2010 to 2012.

GM has placed a very high priority on fuel cells and hydrogen as the long-term power source and energy carrier for automobiles. We see this combination

as the best way to simultaneously increase energy independence and security, remove the automobile as a source of emissions, and allow automakers to create better vehicles that customers will want to buy in high volumes.

GM's fuel cell program is focused on four areas:

- Developing a fuel cell propulsion system that can compete head-to-head with internal combustion engine systems – on performance, durability and cost
- Demonstrating our progress publicly to let key stakeholders experience firsthand the promise of this technology.
- Collaborating with energy companies to ensure that safe, convenient, and affordable hydrogen is available to our customers, enabling rapid transformation to fuel cell vehicles.
- Working with governments worldwide to ensure that appropriate market conditions and incentives are in place to enable a successful market introduction and subsequent sustainable market expansion.

We are targeting to design and experimentally prove a system that has the performance, durability, and cost — assuming scale volumes — of today's engine systems by 2010. We have made a major commitment to this effort and have spent more than \$1 billion to date. Additionally, to achieve our ultimate vision of a hydrogen economy and hydrogen fuel cell-based transportation, about 700 GM scientists and engineers are working around the world on research and development activities in places like the U.S., Germany, and Japan. As a result, we are making great progress in developing the necessary technologies and are increasingly confident we will reach our goal.

- In the last seven years, we have improved the power density of our fuel cell stack by a factor of fourteen.
- We have significantly improved, and will continue to improve, fuel cell durability, reliability, and cold start capability.

- We are developing safe hydrogen storage systems that approach the range levels required for customer acceptance and are exploring very promising concepts for the next generation of storage technology.
- We are making significant progress on cost reduction through technology improvement and system simplification.

Our progress has convinced us that fuel cell vehicles have the potential to be fundamentally better automobiles on nearly all attributes important to our customers. Achieving marketplace volume, however, will depend on a number of critical factors beyond GM's, or any vehicle manufacturer's control. One challenge to fast industry transformation is the fueling infrastructure. Ensuring that the cost of hydrogen is affordable to the general public and that refueling stations are abundant and conveniently located are major hurdles. Uniform codes and standards for both the vehicles and refueling methods will be needed as well. And of course, support and cooperation from government will be crucial to making this endeavor a reality. No single industry can accomplish this alone. That is why GM is working on these issues with a variety of partners and collaborators including governments, energy companies, and other interested parties around the world.

A major advantage of hydrogen is that it can be obtained from many pathways, including natural gas, nuclear, and a variety of renewable sources. GM is not in the energy business, so we are not experts on energy sources. However, as we work to commercialize fuel cell vehicles, we have a keen interest in the pathways to creating and distributing hydrogen, and the technologies, economics, and environmental benefits associated with each. As a result of that interest, GM is sponsoring trips to visit locations for hydrogen pathways, to provide a forum for learning. These trips will include locations to learn more about geothermal, nuclear, solar and biomass.

#### **GM FUEL CELL VEHICLES**



2007 Chevrolet Equinox Fuel Cell

GM is a leader in fuel cell technology and has demonstrated its fuel cell vehicles around the world. GM currently has six different hydrogen fuel cell vehicle models that illustrate the company's vision for what hydrogen fuel cell-based transportation could be, from a futuristic design that incorporates bywire technology, to the hydrogen fuel cell propulsion system integrated into the traditional vehicle we use today.

#### Sequel



The newly branded Chevrolet Sequel navigates the roads in Camp Pendleton, California.

In September 2006, General Motors introduced its drivable version of the most technologically advanced automobile ever built — the Chevrolet Sequel, GM's solution to provide the world with a cleaner, petroleum-free vehicle that is better in nearly every way.

### **Chevrolet Equinox Fuel Cell**

General Motors committed to building the world's largest fuel cell vehicle fleet when it announced its next-generation fuel cell vehicle — the Chevrolet Equinox Fuel Cell — in September 2006.



A Chevrolet Equinox Fuel Cell vehicle sits on a bluff overlooking the Pacific Ocean in Dana Point, California.

Enabled by GM's fourth-generation fuel cell propulsion system, the Equinox Fuel Cell is a fully-functional crossover vehicle, engineered for 50,000 miles of life. Importantly, the Equinox Fuel Cell is able to start and operate in sub-freezing temperatures during its 50,000-mile life. It is expected to meet all applicable 2007 U.S. Federal Motor Vehicle Safety Standards, and is equipped with a long list of standard safety features including driver and passenger frontal air bags and roof rail side-impact air bags; anti-lock braking system (ABS); StabiliTrak stability enhancement technology; and OnStar, while providing all of the environmental benefits of hydrogen fuel cell technology.

### HydroGen3

GM is currently demonstrating a fleet of Hydro-Gen3 fuel cell vehicles, based on the Opel Zafira mini-van, in the U.S. (Washington, DC and Irvine, California), Germany, Japan, China, and Korea. This enables GM engineers to gather data in real-world driving conditions to help bring fuel cell technology closer to commercialization. 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. GM currently

is testing liquid and compressed hydrogen storage systems in its HydroGen 3 fleets. With a range of between 170 to 250 miles, depending upon storage system, HydroGen3 has the same load space as the conventional Zafira in five-seater mode and a top speed of 100 mph.



HydroGen3 fuel cell vehicle

An example of the type of demonstrations GM is conducting on the HydroGen3 include the Fuel Cell Marathon, a unique 37-day marathon across Europe that the vehicle completed in 2004. The demonstration was designed to test the day-to-day reliability and durability of fuel-cell vehicles on public roads. The journey covered a distance of around 10,000 kilometers (6,210 miles) and started in Hammerfest, Norway. The marathon passed through 14 countries and finished in Portugal.



The HydroGen3 completed a 37-day marathon across Europe.

The Fuel Cell Marathon presented unique driving challenges, including an enormous variety of road conditions, temperature differences of over 40°C (104°F), steep mountain passes in the Alps, and violent downpours around the Mediterranean. But, after 23 days and 5,474 kilometers (3401 miles), the HydroGen3 set a new long-distance record for fuel cell cars.



Chevrolet Equinox Fuel Cell U.S. Army Prototype

In September 2006, the U.S. Army became the first customer of General Motors' latest fuel cell technology as the automaker deployed the first of its next generation Chevrolet Equinox Fuel Cell vehicle fleet. The Army's fuel cell vehicle will be used for non-tactical transportation purposes, primarily on military bases in Virginia and California. It is powered by GM's fourth generation fuel cell propulsion system, offering significantly improved performance, refinement, and range as compared with earlier generation vehicles. The Army's vehicle is a four-passenger crossover vehicle, with 186 miles of petroleum-free operating range. Safety features include driver and passenger airbags, antilock braking system (ABS), and OnStar.

### **KEY PARTNERSHIPS & INITIATIVES**

GM's goal is to validate and design a fuel cell propulsion system by 2010 that is competitive with current combustion systems on durability and performance, and that ultimately can be built at scale affordably. We believe the quickest, most effective way to overcome the challenges involved in creating commercially-viable fuel cell vehicles and the infrastructure to support them

is to work together with all involved stakeholders like automobile manufacturers, energy companies, technology providers, and governments.

Today, GM is involved in a variety of demonstration initiatives around the world to advance our research and development efforts surrounding hydrogen fuel cell vehicles and to help test and validate the prototypes and vehicles we have developed thus far.

#### **GM NORTH AMERICA**

#### **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 goal of the partnership is to develop new technologies that allow for the development of emission and petroleum-free cars and light trucks. FreedomCAR focuses on a broad portfolio of technologies, but the primary emphasis is on enabling the transition to hydrogen fuel and fuel cell vehicles.

# Joint Initiative with the U.S. Department of Energy

At the end of March 2005, GM and the U.S. Department of Energy signed a five-year, \$88 million agreement to build a 40-vehicle fuel cell fleet that will be used in demonstrations in Washington, DC; New York; California; and Michigan. Each party is contributing half of the overall cost of the initiative. As part of this program, GM will be working with Shell Hydrogen LLC to provide the New York City metro area with 13 fuel cell vehicles and the city's first hydrogen service station.

## **World's Largest Fuel Cell Vehicle Fleet**

GM will build the world's largest fuel cell vehicle fleet comprising more than 100 Chevrolet Equinox Fuel Cell vehicles and will begin placing them with customers in the fall of 2007, as part of a comprehensive deployment plan dubbed "Project Driveway." A variety of drivers — in differing driving environments — will operate these vehicles and refuel with hydrogen in three geographic areas: California, the New York metropolitan area and Washington, DC.

Enabled by GM's fourth-generation fuel cell propulsion system, the Equinox Fuel Cell is a fully-functional crossover vehicle. Importantly, the Equinox Fuel Cell is able to start and operate in subfreezing temperatures during its 50,000-mile life. It is expected to meet all applicable 2007 U.S. Federal Motor Vehicle Safety Standards, and is equipped with a long list of standard safety features including driver and passenger frontal air bags and roof rail side-impact air bags; anti-lock braking system (ABS); StabiliTrak stability enhancement technology; and OnStar, while providing all of the environmental benefits of hydrogen fuel cell technology.

### California Fuel Cell Partnership

together to achieve the following goals:

GM takes part in the California Fuel Cell Partnership (CaFCP), a collaboration of 31 member companies that are working together to promote the commercialization of hydrogen fuel cell vehicles. Members include automobile manufacturers, energy providers, government agencies, fuel cell technology companies, and transit authorities.

Over the next three years, the members will work

- Placing up to 300 fuel cell cars and buses into fleet demonstration programs across California
- Operating hydrogen fueling stations to support the vehicles
- Paving the path to commercialization through common protocols and methods
- Preparing communities and training first responders for vehicles and fueling
- Enhancing public awareness by exchanging information and resources worldwide

Major achievements by the end of 2005 include:

- 126 passenger vehicles and nine buses placed on California roads
- 16 hydrogen refueling stations in operation
- 588 first responders trained since 2003
- 5,156 refuelings at the West Sacramento station since 2000
- 15 new demonstration programs started in 2005

- 1,224 visitors from 15 countries in 2005
- 15,469 people had a first-hand experience with a fuel cell vehicle in 2005

### **Improved Hydrogen Storage**

Another example of GM's collaboration on fuel cell development is its work with Sandia National Laboratory. In January 2005, GM joined the lab in a partnership to design and test an advanced method for storing hydrogen. The four-year, \$10 million program is intended to develop and test tanks that store hydrogen in sodium aluminum hydride. The goal is to create a way in which to store more hydrogen onboard a vehicle than current hydrogen storage methods alow.

#### **GM ASIA**



Rick Wagoner and Hu Maoyuan, Chairman of SAIC, shake hands in front of the HydroGen3 after signing the MOU for clean energy vehicle cooperation between GM and SAIC

## Partnership in China

GM and Shanghai Automotive Industry Corp Group (SAIC) have formed a partnership to jointly pursue the development and commercialization of hybrid and fuel cell vehicles in China. The agreement reinforces the two partners' strong commitment to provide solutions to reduce the environmental impact of China's growing number of motor vehicles. In addition, GM and SAIC are working together to advance local engineering capability for clean energy vehicles and to promote the development of a Chinese hydrogen infrastructure.

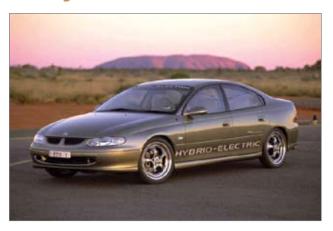
### **Fuel Cell Demonstration in Japan**

GM is taking part in a project to demonstrate fuel cell vehicles in Japan. The Japan Hydrogen & Fuel Cell Demonstration Project (JHFC) is directed by Japan's Ministry of Economy, Trade, and Industry (METI). GM and other automakers, as well as energy companies and key suppliers, are working together to better understand fuel cell technology and how to create a hydrogen infrastructure. The project is also educating the public about the use of fuel cells and about hydrogen as a safe and clean fuel. Participants plan to use data generated in the project to support the establishment of standards and regulations pertaining to fuel cells and hydrogen.

# **GM Holden Collaboration for future technologies**

GM Holden and Australia's Commonwealth Scientific and Industrial Research Organization (CSIRO) have joined forces to research many areas of automotive technology. Following an initial project in 2000, which involved the development of a hybrid electric learning vehicle, the ECOmmodore, GM Holden and the CSIRO have undertaken further development in the areas of power management strategies and energy storage technologies such as super capacitors. GM Holden and the CSIRO are, respectively, Australia's leading R&D investors in the private and in the public sectors.

### Holden CSIRO ECOmmodore Hybrid Learning Vhicle



GM Holden actively participates in GM's Global Hybrid Development Community, and is

currently leading the integration of one of GM's hybrid systems into future Rear Wheel Drive (RWD) vehicle architetures.

#### **GM EUROPE**

### **European Hydrogen and Fuel Cell Technology Platform**

In 2002, the European Commission formed an EU High Level Group on Hydrogen and Fuel Cells, which by summer 2003 released its report "Hydrogen Energy and Fuel Cells — A Vision of Our Future."

As a direct consequence of the report, the EU Commission launched the European Hydrogen and Fuel Cell Technology Platform (HFP). The main goal of the HFP is to facilitate and accelerate the development and deployment of cost-competitive, world class European hydrogen and fuel cell based energy systems and component technologies for applications in transport, stationary, and portable power. GM Fuel Cell Activities is actively engaged in HFP and contributes to various working groups.

In 2005, the HFP published a number of strategic documents: Strategic Overview, Strategic Research Agenda, Deployment Strategy, and Deployment Strategy Progress Report 2005. Based on these documents, an Implementation Action Plan for Applied R&D and Demonstration Actions was issued. This document will serve as the basis for public-private activities on hydrogen and fuel cells conducted under the European Union's 7th Framework Programme for Research and Development, lasting from 2007 to 2013.

A complementary activity was launched by the German government in 2006. The 10-year National Hydrogen and Fuel Cell Technology Innovation Programme aims at promoting hydrogen and fuel cell technology in the areas of research, development, and demonstration towards market introduction of these technologies. The level of government funding for this program will be 500 million Euros.

## **Clean Energy Partnership Berlin (Germany)**

The HydroGen3 is driven on public roads in Germany as part of Clean Energy Partnership Berlin (CEP), a public-private partnership, supported by the

German government. Since the end of 2004, CEP runs a demonstration project in Berlin with the aim of proving the everyday suitability of hydrogen for transportation purposes. Different methods of hydrogen production are demonstrated and hydrogen technologies for vehicles are further developed towards series production. As far as possible, the hydrogen used in the project is produced from renewable energy sources such as hydroelectric and wind power.

Two public hydrogen filling stations have been built in Berlin. Gaseous hydrogen is produced on site via electrolysis or reforming of LPG and stored in compressed form, while super-cooled liquid hydrogen is delivered by truck and stored in a cryogenic tank. The hydrogen is used by vehicles with modified internal combustion engines and by fuel cell vehicles.

A service station, specializing in hydrogen-powered propulsion, is located at one of the filling stations. This is where the CEP vehicles are examined and data is collected to provide important findings as to how the vehicles perform. Along with the operation of the service station, CEP also helps to develop advanced codes and standards for hydrogen infrastructure. GM's HydroGen3 is driven by the furniture company IKEA on a daiy basis.

#### REGIONAL REGULATORY APPROACHES

#### **United States**

In 2006, the U.S. National Highway Traffic Safety Administration (NHTSA) raised fuel economy standards (Corporate Average Fuel Economy standards-CAFE) for trucks. With this new rule, there have been seven consecutive years of increases in the annual light truck CAFE standards (from 2005-2011; from a truck fleet average in 2004 of 20.7 mpg to a fleet average in 2011 of 24.0 mpg — a 16 percent overall increase). NHTSA made a number of changes to the structure of the program to address the competitive inequities and distortions created in the marketplace by the existing program. NHTSA also included Medium Duty Passenger Vehicles (MDPVs) in the regulated fleet in 2011. The majority of MDPVs on the road today are General Motors products.

### **European Union**

ACEA (the European auto manufacturer association) has committed to a 25 percent reduction in average CO2 emissions of new car vehicle fleet over 1995 levels by 2008, reaching an average of 140g CO2/km on the European test cycle. The EU has also adopted vehicle fuel economy labels, publishes fuel economy guides, and monitors industry performance. Beyond 2008, the car industry is proposing an integrated approach that promotes CO2 emission reductions from all stakeholders involved. This will provide quick and superior results at lower costs. First estimates indicate that an integrated approach could ultimately deliver a higher reduction of CO2 emissions in a substantially more cost-efficient way compared to a purely car technology-focused route.

#### **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 starting in 2015. The 2010 requirement calls for an 11-30 percent 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 percent fuel economy reductions in the first stage, and 15 percent improvement in the second stage.

In Korea, the auto industry has established a voluntary target for the fuel economy improvement by 15 percent or more depending on engine displacement by 2012.

In Australia, the auto industry has set a voluntary target to reduce the National Average Fuel Consumption (NAFC) by 18 percent from 2000 to 2010. This translates into a reduction from 8.3 liters/100 km to 6.8 liters/100 km. The target relies on improvements in fuel quality to enable the introduction of new technologies. Taking into account changes in the vehicle market and international trends in measuring greenhouse impact, the target has been converted to a National Average Carbon Dioxide Emissions (NACE) metric of 222 grams per kilometer by 2010. The NACE will be reported ach year.

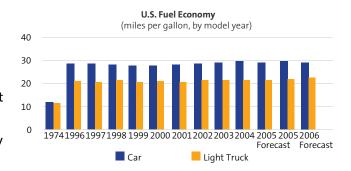
## **Efficiency & Emissions**

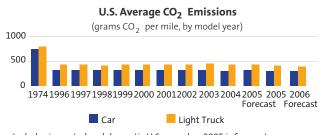
# GM NORTH AMERICA (U.S. AND CANADA ONLY)

### **Fuel Economy**

In the United States, the average fuel economy of our new cars and light trucks has increased over 130 percent and 75 percent, respectively, since 1974 (see graph). Since 1990, new vehicle fuel economy has been relatively constant, reflecting increased disposable income and relatively low fuel prices.

Greenhouse gas emissions and fuel economy are directly related. Carbon dioxide  $(CO_2)$ , a greenhouse gas emission, is emitted by the combustion of gasoline or diesel fuel in an engine.  $CO_2$  emissions from vehicles can be reduced through improved vehicle efficiency and responsible vehicle operation. For this reason, control of  $CO_2$  emissions from vehicles is tantamount to fuel economy controls.





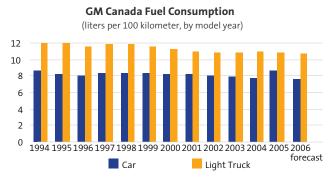
Includes imported and domestic U.S. car sales; 2005 is forecast;  ${\rm CO}_2$  emissions based on 8,865 grams of  ${\rm CO}_2$  per gallon of gasoline.

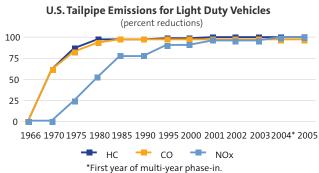
The fleet of GM produced vehicles, from which our 2006 Corporate Average Fuel Economy (CAFE) is calculated, is meeting the U.S. CAFE standards of 27.5 miles per gallon (mpg) for cars and 21.6 mpg for trucks.

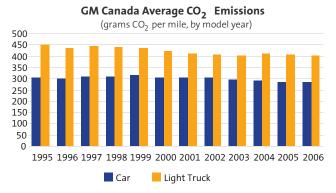
# Our Products | Efficiency & Emissions

In Canada, the fuel consumption (measured in liters per 100 kilometers or I/100 kilometer) of GM 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 I/100 km and 11.4 I/100 km, respectively.

exceeding the 50 percent requirement. Once fully phased-in, all GM cars and light-duty trucks will meet these standards, which cut smog-forming emissions (HC + NOx) by 99 percent relative to mid-1960's models. GM is also meeting more stringent standards for evaporative hydrocarbon emissions that began to phase in starting in 2004. In Canada, GM sells vehicles that meet these stringent U.S. Federal standards.







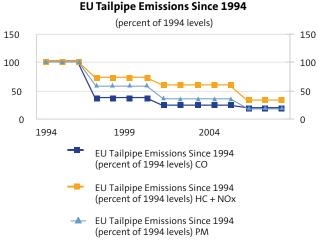
## EUROPE

### **Reducing exhaust emissions**



Exhaust emissions such as nitrogen oxides (NOx), particulates, 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 U.S., GM began meeting very stringent Federal Tier 2 and California low emission vehicle (LEV) II standards in the 2004 model year. In 2004, 45 percent of the cars and light light-duty trucks (LLDT)s that GM sold met the Tier 2 standard, exceeding the 25 percent requirement. In 2005, 66 percent of GM's cars and LLDTs sold met the Tier 2 standard,



With the latest Euro 4 standards, which became effective in 2005, emission levels of carbon monoxide and combined emissions of hydrocarbons and nitrogen oxides have been reduced by 97 percent

since 1970, when emission standards were first introduced. The most significant reductions were achieved between 1993-2005, with CO emissions reduced by 83 percent, combined HC + NOx by 69 percent and particulate matter (PM - from diesel engines) by 82 percent.

In 1989, GM was the first automobile manufacturer in Europe to supply all passenger cars with standard closed-loop, three-way catalytic converters. Since then, GM has complied with Euro 2, Euro 3, and Euro 4 emissions standards long before they became mandatory.

# Taking the lead with Diesel Particulate Filters

GM's core brand in Germany, Opel, has a long tradition for the development and application of vehicles and technologies that bring environmental improvement. With its newest-generation Diesel Particulate Filter (DPF), Opel again takes a leading role among German car manufacturers.

Opel now offers many of its diesel passenger cars with a particulate filter. In Germany, Opel offers its DPF technology as standard in three important volume segments, with a particulate filter in all 1.3-liter and 1.9-liter CDTI versions of the Astra, as well as in all diesel variants of the Vectra, Signum (1.9-liter and 3.0-liter V6), and the new Zafira. In addition, Opel is offering, through its dealerships, retrofit solutions for many of its current and previous diesel engines.

Opel's diesel particulate filter reduces particulate emissions to almost zero. The innovative DPF is integrated in the electronic engine management system. It operates without decreasing performance or increasing fuel consumption and represents state-of-the-art technology: the Opel DPF does not require fuel additives, thereby avoiding the disadvantages of other systems. A further benefit of Opel's DPF system is that it is completely maintenance-free over the entire vehicle life-cycle.

DPFs are also used in the new 2.0 I VCDi engine manufactured by GM Daewoo in South Korea, and powering the Chevrolet Captiva/GM Daewoo Winstorm/Opel/Vauxhall Antara, as well as the Chevrolet Epica/GM Daewoo Tosca and other models in the near future. It comes standard with a maintenance-free DPF.

## Responsible Vehicle Use

#### **GREENER DRIVING**

GM has introduced many innovations that improve fuel economy and exhaust emissions. But once customers drive off with their new vehicles, the way they drive can influence fuel economy by up to 15 percent.

GM encourages drivers to reap these savings by publishing greener driving tips. In Opel, Vauxhall, and Saab vehicles for instance, detailed information on environmentally-friendly and fuel-efficient driving is printed in the operating manual. The intelligent onboard computer in many models also enables drivers to check fuel consumption with the touch of a button.

The GM Fuel Economy and CO<sub>2</sub> Calculator enables users to compare GM and competitor models.

For general information on greener driving, see UNEP's greener driving guidance (non-GM web site).

Tips for improving fuel consumption and reducing CO<sub>2</sub> emissions:

- Avoid unnecessary short trips.
- 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. Turning off the engine pays off for waits of as little as one minute.
- Maintain constant speed, avoid unnecessary acceleration and braking.
- Shift into higher gears early. In each gear, stay in the lower engine speed range. While in coasting mode, don't step on the gas and don't disengage the clutch.
- Give your vehicle regular maintenance and tuneups, check tire pressure regularly.
- Remove roof luggage racks when not in use and switch off devices that consume additional energy, such as air conditioning, heated windows, or fog lights, when not needed.

#### **SAFER DRIVING**

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 and develop better driver judgment over time, help reduce the disproportionately high fatality rates of inexperienced drivers.

### **GM Partnership Initiatives**

GM supports community and policy initiatives aimed at educating the public about ways to assure their safety when driving:

- Encouraging safety belt usage
- Safe Kids Worldwide
- Mothers Against Drunk Driving
- Avoiding driver distraction
- Distraction research
- Teen driver safety

GM also supports partnerships that help emerging economies develop and implement policies and programs to help reduce risks for road users.

- Global Road Safety Initiative
- Child Occupant Safety Campaign

#### **Encouraging Safety Belt Use**

GM supports policies to encourage occupants worldwide to use safety belts, and has been in the forefront of supporting awareness and technological initiatives to help increase safety belt use. To reinforce this public health and road traffic safety priority, in 2006, GM joined the other major global automotive manufacturers to include safety belts in all passenger seating positions in our vehicles worldwide.

In support of national efforts to increase safety belt use during May 2003, 2004, 2005, and 2006, OnStar advisors re-minded subscribers to buckle up. Chevrolet also supported 'Buckle Up America!' with paid advertising and, in 2005, produced a Public Service Announcement with Dale Earnhart, Jr, to promote belt use. Chevrolet aired the



public service announcement in 2005 and 2006. GM's customer assis-tance advisors have supported the 'Buckle Up America! campaign' each year from 2003 to 2006 by reminding our customers to buckle up.

The National Highway Traffic Safety Administration (NHTSA), state and local traffic safety government agencies, and law enforcement nationwide have conducted national "Click It or Ticket" safety belt use enforcement mobilizations since 1998. These mobilizations, which



combine comprehensive public awareness with focused law enforcement activity, have helped increase the national safety belt use rate from 61 percent in 1996 to the 2005 rate of 82 percent — the highest ever in the U.S. In 2005, the belt rate in eight U.S. states exceeded 90 percent.

# 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.

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

# Our Products | Responsible Vehicle Use

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, GM believes it can help educate its customers in China — many of whom are buying a vehicle for the first time — about how to use the products safely. Chinese officials estimate that 77 percent of traffic deaths in China result from drivers ignoring traffic rules, and anticipate that this program will help reduce crashes significantly.

### Safe Kids Worldwide



In 1996, the National SAFE KIDS Campaign (now Safe Kids Worldwide) 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 partnership. The goal of this unprecedented collaboration is to address a significant public health issue in the United States by making child passenger safety educational materials and hands-on assistance available to families throughout America.

In 2006, GM and Safe Kids Worldwide celebrated the 10th anniversary of this partnership and announced a commitment to another three years. As of 2006, GM has donated 137 customized Chevrolet minivans and full-size vans to Safe Kids coalitions nationwide — with at least one in each state and the District of Columbia. These Chevy Express and Chevy Uplander vans contain everything coalitions need to host car seat checks in convenient locations such as dealerships, malls, and childcare facilities. Since the start of the partnership, Safe Kids coalitions, with GM's support, have checked over 800,000 child safety seats, donated more than 350,000 child and booster seats to families in need, and trained thousands of individuals in child passenger safety. More than 13 million people have been exposed to Safe Kids Buckle Up events and community outreach efforts.

In 2006, GM received two awards for our support of this commitment and partnership. In June 2006, Mark Rosenker, Acting Chairman of the National Transportation Safety Board (NTSB), recognized GM with the NTSB's "Safety Leadership Award" presented for "10 years of Outstanding Support for and Commitment to the Safe Kids Buckle Up Program." In April 2006, GM received the World Traffic Safety Symposium's Achievement Award for its partnership with Safe Kids Worldwide. This Community Service award was judged by the National Highway Traffic Safety Administration and other organizations.

In 2005, Chevrolet became the lead GM partner in Safe Kids Buckle Up partnership.

### **Mothers Against Drunk Driving (MADD)**

GM and its employees 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). 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.

# Safer Road Travel in Emerging and Transitional Automotive Economies

In December 2004, seven of the worlds largest automotive and oil companies announced a collaborative five-year, \$10 million project to help reduce road traffic fatalities and injuries in emerging and transitional automotive markets. The World Health Organization (WHO) estimates that about 1.2 million pedestrians, pedal cyclists, motorcyclists, and motor vehicle passengers died in 2004 in roadway crashes; and projections indicate that the number will increase significantly in the next decade, unless actions change the trend.

The collaboration, called the Global Road Safety Initiative (GRSI), includes GM, Ford, Honda, Michelin, Renault, Shell, and Toyota. The Global Road Safety Partnership (GRSP) — a partnership among business, NGO's, and governments established in 1999 and is hosted by the International Federation of Red Cross and Red Crescent Societies — will manage and deliver the initiative. GM currently chairs the initiative's Steering Committee.

More on GRSP >> www.grsproadsafety.org

In 2004, the World Health Organization, along with the World Bank, the GRSP, and the FIA Foundation

for the Automobile and Society, collaborated to produce the "World Report on Road Traffic Injury Prevention," which identified a number of areas for action including data collection for risk assessment; roadway infrastructure to support multiple types of road users; roadway user behaviors, including safety belt and helmet use, and alcohol; and the safety of pedestrians and cyclists. This collaboration is also working to develop and publish good practice guides to assist countries in developing and implementing plans to improve road safety.

GRSI is focusing on the key risk factors identified in the World Health Organization's 2004 World Report on Road Traffic Injury Prevention. On June 15, 2005, GRSP announced that ASEAN (the Association of Southeast Asian Nations, whose members are Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam) is the first region for GRSI focus. The GRSI welcomes other organizations that may be interested in participating. GRSI plans to use the good practice guides under development and, in partnership with other organizations, will help train road safety professionals and provide seed funding to establish pilot programs to address these critical issues. In addition to financial resources, the GRSI will provide expertise and linkages with governments and communities in selected regions and countries and will partner with additional organizations to leverage their collective resources.

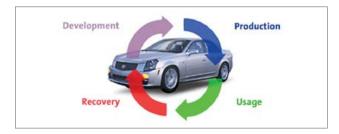
# GM Thailand Localized the North American's Child Safety Campaign

GM Thailand localized the North American's Child Safety campaign (Buckle up Campaign and Precious Cargo) to fit with Asia lifestyle. A program named Child Occupant Safety Campaign (Khun Noo Plod Pai Nai Yanyont) is demonstrated through the GM products (Chevrolet Zafira, Optra, and Colorado) by converting to the COS Mobile Exhibition unit, equipped with audio, foldable exhibition boards, educating material, mascot, experts, and games. The program now is an active body in the National Safety Council, Thailand Road Safety Campaign, Don't Drive Drunk Campaign, and Ramathibody Hospital's Child Safety Research Units. The program is introduced in Australia and ASEAN countries.

## Vehicle Design

#### LIFE CYCLE APPROACH

Life-cycle thinking is part of the design process at GM. Design engineers are aided by Design for the Environment (DfE) engineers to apply the appropriate tools to make informed decisions on materials, processes, and implications for end-of-life disposal. Environmental improvements of the components of a given model are tracked through the design phase and reported in our Environmental Features brochures. This approach tracks environmental improvements made to the vehicle and identifies the plant where it was built. The Environmental Features brochures are available at many GM dealerships and on the web.



GM's life cycle approach is updated by the following:

- a global life cycle analysis subcommittee, which manages skills and resources
- GaBi 3 Professional software for life cycle analyses
- one of the largest databases of automotive life cycle inventory (LCI) data.

#### Part of GM's DfE approach includes:

- designing to reduce fuel consumption and emissions
- designing for safety
- design for reycling

#### **GLOBAL VEHICLE QUALITY**

GM's vehicle quality strategy is an enterprise-wide approach with primary focus on designing, engineering, manufacturing, and selling world-class vehicles to consumers in all markets. Over the past several years, consistent and significant progress has been made in initial quality, reliability or long-term quality, and perceptual quality. Our approach has enabled us to deliver product excellence and industry-leading value. GM is totally committed to leading and in offering our customers with the best quality experience over the lifetime of vehicle ownership.

### **GM North America**

In North America, our quality continues to improve according to both our own internal measurements and independent surveys.

- Our initial quality has improved 25 percent over the past five years, and by 11 percent this year alone.
- According to J. D. Power and Associates 2006 Initial Quality Study, seven of the top 15 assembly plants in North and South America are GM plants ... more than any other manufacturer. Additionally, GM won the Gold Plant award for the fifth consecutive year.
- In the area of long-term quality, commonly referred to as reliability, Buick and Cadillac both placed in the top five in this year's J. D. Power and Associates Vehicle Dependability Study.
- For the second year in a row, GM was recognized as the top performer in the 2006 Strategic Vision Total Quality Study with five GM models ranking at the top of their segments.
- GM dealers also rank among the leaders in the most recent J. D. Powers and Associates Customer Service Index Study, which measures customer satisfaction among new vehicle owners with the dealer service department during the first three years of ownership.
- One of the most critical facts in our quality story is that we have reduced our total warranty repairs by 40 percent over the past five years.

GM's momentum in quality is the result of a concerted decade-long effort to intensely focus on and improve all aspects of vehicle quality ... initial quality, long-term quality, and perceptual quality. Quality begins early in the vehicle design phase to ensure quality that lasts over the lifetime of the vehicle.

The steady improvement has enabled GM to offer, beginning with the 2007 model year, the best warranty of any full-line manufacturer. The new five-year/100,000 mile powertrain limited warranty is fully transferable with no deductible. In addition, we have extended the roadside assistance and courtesy transportation programs to coincide with the term of the powertrain warranty. It's the best powertrain warranty coverage in the auto industry.

## **Vehicle Safety**

Road safety is a complex system involving vehicles, roadways, and drivers. GM is a leader in global research, engineering, product innovation, and external engagements to improve road safety and reduce injuries and fatalities.

Although road fatalities have declined sharply in developed countries, fatalities are projected to increase significantly in developing countries where there are more people and motor vehicles, and where it is often the most vulnerable users — pedestrians and cyclists — who are at greatest risk.

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

Helping drivers avoid crashes and making vehicles safer is a priority for GM. Collaborating with road safety stakeholders to help advance an understanding of the global and local road traffic challenges and help implement effective risk countermeasures is also a key element of GM's road safety strategy.

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. GM is committed

to researching and implementing programs and technologies that promote continuous safety — before, during, and after a crash.

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

#### MAKING VEHICLES SAFER

GM strives to make each new model safer than the one it replaces. Vehicle-based safety strategies generally fall into three categories:

- BEFORE: Collision avoidance technologies
- DURING: Crashworthiness designs and technologies that help mitigate the injury potential of a crash
- AFTER: Post-crash systems that can help alert emergency rescue to a crash and help provide information to aid rescue specialists and vehicle systems that can help reduce post-crash risk for occupants.

GM also encourages safer driving behaviors, such as always wearing safety belts and using child safety seats, booster seats, and safety belts for children who are large enough -- every time on every trip; designating a driver who has not been drinking to do the driving; and avoiding distractions.

#### **Before: Crash Avoidance**

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

- StabiliTrak Control System
- Daytime Running Lamps

- Antilock Brakes
- Traction Control
- Tire Pressure Monitoring Systems
- Adaptive Cruise Control (ACC)
- Forward Collision Warning (FCW)

### **During: 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.

GM vehicles are designed to help protect occupants in the 'first' collision, which deforms the vehicle structure and changes the velocity of the vehicle's center of mass. Also, GM vehicles are designed to help reduce injury risk for occupants in the 'second' collision, which occurs between the vehicle occupant(s) and the vehicle interior.

The vehicle structure helps provide energy absorption and occupant protection. GM develops its vehicles to address 156 types of crashes, more than three times the number required by governments and testing agencies around the world. The vehicle's body is designed to help absorb energy by deforming in a controlled manner during a collision. High strength steel is integrated into the vehicle structure. The safety cage surrounds the passenger compartment to help provide protection. Systems that help protect occupants during the 'second' collision include the safety belt system, including pretensioners for front seats, frontal air bags, side-impact head curtain air bags, rollover-enabled roof-rail mounted air bags, and seat design including head restraints.

- Design for Crash Compatibility
- Automatic Air Bag Suppression Systems
- Saab Active Head Restraint System

#### **After: Post Crash**

After a crash, GM's OnStar system can transmit a signal to alert an OnStar advisor of potential circumstances that may require emergency help. Also, OnStar customers can push a button to seek help from the OnStar Center for themselves or other road users. The Advanced Automatic Crash Notification (AACN) system takes OnStar service to the next level. AACN can automatically call for help if the vehicle is involved in a moderate or severe frontal, rear, or side-impact crash — regardless of air bag deployment — and can transmit specific data about the crash to the OnStar center to help emergency rescue provide trauma assistance specific to the crash.

- OnStar
- Post-crash vehicle strategy

#### Standard StabiliTrak and OnStar

In January 2005, GM announced that OnStar and StabiliTrak electronic stability control would become standard features for retail customers in the U.S. and Canada, covering all segments and prices (except for a limited number of commercial vehicles). In Australia, GM Holden has made Electronic Stability Program (ESP®) standard equipment on all VE/VM models.

OnStar will be available on nearly all cars and light duty trucks sold to retail customers by the end of 2007. The first year of OnStar safety and security service is included on all OnStar-equipped vehicles.

The StabiliTrak Control System will be standard on all GM cars and trucks sold to retail customers by the end of 2010, excluding medium duty trucks. StabiliTrak will be standard on all GM SUVs and vans by the end of 2007.

In 2006, StabiliTrak is available on 40 models of passenger vans, large SUVs, mid-size SUVs, and other cars and light duty trucks. As enablers of electronic stability control, antilock brakes and traction control

will become standard as well on vehicles equipped with StabiliTrak.

### **GM'S SAFETY FEATURES**

Examples of GM's continuous safety: before, during, and after a crash:

#### **Before: Crash Avoidance**

- StabiliTrak Control System
- Daytime Running Lamps
- Antilock Brakes
- Traction Control
- Tire Pressure Monitoring Systems
- Adaptive Cruise Control
- Forward Collision Warning
- Child Safety

### **During: Crashworthiness**

- Vehicle structure and energy management
- Design for Crash Compatibility
- Automatic Air Bag Suppression Systems
- Saab Active Head Restraint System

#### **After: Post Crash**

OnStar

### StabiliTrak Control Sytem



In 2006, GM offered Proactive Roll Avoidance, designed to help stabilize a vehicle during cornering to help reduce the risk of a rollover, on full-size SUVs and vans

StabiliTrak is GM's electronic stability control system (ESC), 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 Antilock Braking System (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 oversteer (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.

StabiliTrak can assist the driver on snowy or wet roads by:

- Helping to move the vehicle where the driver intends it
- Helping to control or minimize fishtailing
- 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
- Helping the vehicle respond more naturally and predictably to the driver's steering commands, even in avoidance maneuvers.

Studies of Electronic Stability Control (ESC) systems have demonstrated their ability to help reduce crash risks. A National Highway Traffic Safety Administration (NHTSA) study states that ESC "has the potential to anticipate situations leading up to some crashes before they occur and has the

capability in some cases to help prevent them."
A study conducted by the Insurance Institute for Highway Safety (IIHS) and published in 2004 said that "ESC reduced fatal single-vehicle crash risk by about 56 percent" and that "ESC reduced the risk of all single-vehicle crashes (fatal and non-fatal) — by 41 percent." An updated IIHS study published in 2006 states that ESC "could prevent nearly one-third of all fatal crashes and reduce the risk of rollover over by as much as 80 percent." The newer IIHS study also states that "researchers have updated the 2004 results, finding that ESC reduces fatal multiple crash risk by 32 percent."

Millions of GM vehicles have been sold in North America with StabiliTrak. GM has produced more vehicles in more different market segments with electronic stability control than any other manufacturer. GM was the first automaker in the segment to add StabiliTrak as standard equipment on its Savanna and Express 15-passenger extended wheelbase vans. In 2006, GM offered Proactive Roll Avoidance, an enhancement to StabiliTrak. Proactive Roll Avoidance is designed to help stabilize a vehicle during cornering to help reduce the risk of a rollover. It is implemented on full-size SUVs and vans.

- "Preliminary Results Analyzing the Effectiveness of Electronic Stability Control (ESC) Systems," National Highway Traffic Safety Administration, 2004.
- "Effect of Electronic Stability Control," Insurance Institute for Highway Safety, 2004.
- 3. "Status Report." Insurance Institute for Highway Safety, Vol. 41, No. 5, June 13, 2006.

#### **Antilock Brakes**

Antilock brakes are available on virtually all GM vehicles. Antilock brakes help drivers control a vehicle during hard braking on most slippery surfaces. They work by reducing wheel lock-up thereby helping the driver maintain steering control.

#### **Traction Control**

Traction control is available on many passenger cars and trucks. It helps the driver maintain control on most slippery surfaces by reducing wheel spin.

# Adaptive Cruise Control (ACC) and Forward Collision Warning (FCW)

In 2006, several GM models offer Adaptive Cruise Control (ACC) and Forward Collision Warning (FCW). ACC is designed like conventional cruise control systems to set the vehicle's speed using throttle. Unlike conventional cruise control, ACC automatically maintains a driver-selected distance between the GM vehicle and the vehicle ahead using throttle and brakes. In field research, ACC helped reduce tailgating and increased the time that drivers remained in their lanes, rather than switching lanes. Field research also said drivers reported that ACC helped reduce driver "stress" compared with manual driving without ACC.

Forward Collision Warning (FCW) alerts the driver using audible alerts and an advisory display to help assist the GM driver in avoiding rear-end crashes. FCW provides visual and auditory cues for the "closing" distance between the GM vehicle and vehicle ahead. In field research, FCW was observed to reduce tailgating behavior. ACC and FCW are implemented together; however, even if the driver has not activated the Adaptive Cruise Control system, the vehicle's Forward Collision Warning system will still issue an alert when appropriate.

### **Child Safety**

GM continues to recommend that children who are 12 years old and under should ride in a rear seat, properly restrained, in all vehicles, including vehicles with advanced air bag systems. Crash statistics show that children are safer if they are restrained in a rear seat. Even in vehicles equipped with the passenger sensing system and other advanced air bag systems, 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.

GM also has created a GM airbag safety web site which provides extensive information, including videos, about GM's air bag leadership, the importance of air bags in vehicle safety, and how they work.

In 2006, GM marked its 10th anniversary of the Safe Kids Buckle Up partnership with Safe Kids Worldwide. Since the first child seat checkup in 1997, more than 800,000 car seats have been inspected by trained child seat installers. Each inspection can last up to 45 minutes. GM has donated more than \$50 million to Safe Kids since 1996 and provided 137 vans for car seat inspections to coalitions around the country. The partnership also involves promoting safety for children around motor vehicles. GM was the first manufacturer to address the tragedy of children being trapped in car trunks. The illuminated handle to open the trunk has been required on all new vehicles since 2002. The focus on trunk entrapment evolved into the Never Leave Your Child Alone program, which stresses the dangers of leaving children for even a minute in a closed vehicle on a moderately warm or hot day. On average, 35 children a year die from heat stroke from being left in hot cars. In 2006, GM sponsored the national launch of Spot the Tot, an awareness program for parents, caregivers, and older siblings to visually inspect the perimeter of the vehicle to be sure young children are not playing under or near a vehicle.



OnStar is a unique blend of cutting-edge technology and personal service that provides an unparalleled level of safety, security, and peace of mind. It is a key

element in GM's approach to continuous safety before, during, and after a crash. General Motors is making OnStar a standard feature and providing one year of service on all new retail vehicles sold in the United States and Canada. This expansion will be completed by the end of 2007. GM's commitment to increased OnStar availability can open new opportunities to help save lives and reduce the consequences of road related emergencies.

OnStar, a wholly owned subsidiary of General Motors, is the U.S. and Canada's leading provider of in-vehicle safety, security, and communication services using wireless technology and the Global Positioning System (GPS) satellite network to link the vehicle and driver to an OnStar Call Center, where advisors are available 24 hours a day, 365 days a year.

OnStar safety and security services include automatic notification of air bag deployment, stolen vehicle location assistance, emergency services, turn-by-turn navigation, roadside assistance, remote door unlock, GM Goodwrench remote vehicle diagnostics, and a monthly diagnostic report emailed to more than two million OnStar subscribers. OnStar Hands-Free Calling allows drivers to make and receive handsfree, voice-activated calls from their vehicle. More information about OnStar can be found at www. onstar.com.

OnStar advisors are available at the touch of a button. Pressing the blue button can automatically connect the subscriber to the OnStar Call Center, where advisors help with safety, security, and convenience services. In an emergency or lifethreatening situation, subscribers press the red OnStar emergency button. The call is routed to a specially trained OnStar advisor who has access to emergency service providers. The advisor will give emergency providers the subscriber's vehicle location and request for help. The advisor can stay on the line and conference in the emergency services provider.

### **High Value to Users**

Recent OnStar research has indicated that drivers place a high value on the OnStar safety and security services, especially automatic air bag deployment notification, remote door unlocks, stolen vehicle assistance, and remote diagnostics. OnStar encourages its subscribers to be Good Samaritans and call OnStar to report situations where emergencyresponders may be needed.

# Helping the U.S. National Center for Missing and Exploited Children

OnStar has joined with the National Center for Missing and Exploited Children in its efforts to help find missing children. OnStar's GPS and wireless technologies, plus the expertise of its call center advisors can enable OnStar subscribers to help bring missing children home safely.

# Advanced Automatic Crash Notification (AACN) on 24 New Models in 2006

OnStar also plays a key role in the event of a crash. If an air bag deploys in an OnStar-equipped vehicle, the

OnStar Call Center is automatically notified within seconds of the deployment.

GM also offered the new Advanced Automatic Crash Notification (AACN) on 24 of its models in 2006. Using a collection of strategically located sensors, AACN can automatically send a digital crash signature from the crash scene to the OnStar Center for help if the vehicle is involved in a moderate to severe frontal, rear, or side impact crash, regardless of air bag deployment. AACN provides crash severity information to OnStar advisors who relay this data to 911 dispatchers. This information can help emergency service professionals make professional assessment on issues such as the probability of severe injuries; the appropriate combination of emergency personnel, equipment, and medical resources needed at the crash scene; and the best suited medical facility to treat the vehicle occupants.

### **Post-crash Vehicle Strategy**

In addition to OnStar, which can help summon help, GM is implementing a post-crash vehicle strategy to help reduce risks for occupants and emergency responders. The systems include electrical system design to help maintain electrical system integrity in the primary circuit; help limit exhaust manifold surface temperature; help keep the doors closed and latched during the crash and enable at least one occupant side door to open without tools after the crash; and to turn on the vehicle's lights, unlock the doors, and turn the HVAC blower off after the crash.

# Vehicle Recycling

#### **GLOBAL APPROACH**

Since 1994, vehicle manufacturers around the world have been promoting the responsible treatment of end-of-life vehicles (ELV) regardless of where they are used and retired. In all of GM's regions — Africa, Asia Pacific, Europe, Latin America, Middle East and North America — the goal is to improve the ELV vehicle infrastructure through partnerships. For example, across North America, GM continues to develop new technologies through the Vehicle Recycling Partnership and its recycling infrastructure partners.

In addition to our partnerships, GM continues to design its vehicles to be as recyclable and recoverable as is reasonable, and to implement these designs on vehicles around the world. We have developed global standards on recycling and recoverability in order to gain common benefits across regions.

GM is focusing on recycling-oriented design, utilizing recycled plastics in new vehicle production, as well as working with a network of qualified end-of-life vehicle dismantlers. Thousands of tons of polymeric parts used in GM vehicles are marked for recycling, making recovery of those parts easier at the vehicles' end-of-life, and increases the potential for landfill avoidance. Recycling old cars will increasingly become an economically feasible part of a car's life cycle as the demand for recycled materials grows. For example, Opel uses more than 30,000 metric tons of re-processed plastics annually. The goal is to successively increase the amount of recycled materials used by optimizing production procedures. In cooperation with medium-sized suppliers, the International Technical Development Center (ITDC) in Russelsheim worked out the requirements for using custom-made recycled materials in the production of headlight housings.

GM was first among U.S. automakers to provide access to vehicle recycling information by posting dismantling manuals on GMAbility.com. GM now has the 2007 dismantling manuals available online.

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, around 80 percent by weight of vehicles at end-of-life are recycled.

GM provides all dismantlers in Europe with information on all required pre-treatment steps and mandatory components removal via the International Dismantling Information System (IDIS). This is sent out annually on a DVD, with two interim updates on IDIS' web site. The system encompasses 448 models, representing 48 brands from 25 automakers. All information is available in over 20 languages. By 2015, the proportion of materials from end-of life vehicles that must be reused or recovered is to be increased to 95 percent of vehicle weight. Today GM works together with other automakers on future post-

shredder separation technologies (PST) to constantly increase the recycling quota and meet this ambitious goal.

Also, pre-treatment manuals that provide detail for removing automotive fluids and substances of concern are available.

GM is committed to reducing the use of substances of concern in vehicles. GM's global standard, GMW 3059, is used in all vehicle programs worldwide for handling restricted and reportable substances.

'Environmental Features' brochures are developed for new North American vehicle programs. The brochures highlight examples of environmental performance of the vehicle and identifies where it was built. For example, the Saturn Vue uses recycled plastic in the manufacture of the wheelhouse liners that equates to over 959,000 pounds of post-industrial recycled material used each model year. The Chevrolet Impala uses approximately 30 percent recycled material in the front and rear water deflectors. This results in 60 tons of recycled material being used per model year. In the Lansing Grand River, Michigan Assembly plant, over 90 percent of the purge solvent used for paint line cleaning is recycled. GMAbility.com details environmental features for many GM vehicles.

#### **MATERIALS**

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

- use non-toxic/non hazardous material
- increase the use of easy-to-recycle materials
- choose recycled over virgin material whenever technically feasible and economically viable

As our Environmental Principles state, "we are committed to restore and preserve the environment" and "we continually assess the impact of our plants and products on the environment...with the goal of continuous improvement." Part of this process is to manage and assess substances of concern. In our products, this is tracked through the GMW3059 global specification for restricted and re-portable chemicals. GM, along with others, led the effort to



Balsa fields in Ecuador

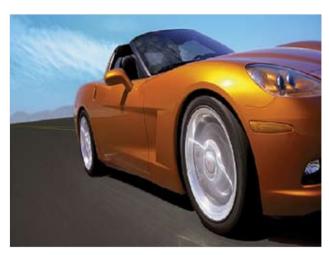
harmonize this list of substances of relevance to the auto industry through the creation of the Global **Automotive** Declarable **Substances** of Concern List (GADSL). GMW3059/ **GADSL tracks** globally our use of

approximately 200 restricted or reportable chemicals/chemicals categories in parts that are potentially relevant to vehicles. This information is used to develop priorities for elimination and substitution of chemicals of concern. This approach goes well beyond what is required by the EU ELV and current regulations, and encompasses chemicals of relevance in the automotive sector which are included on other focused lists such as Persistent Organic Pollutants (POPs), Persistent Bioaccumulative Toxics (PBTs), Chemicals of Concern in Marine Environments (OSPAR), Carcinogens Mutagens Teratogens (CMTs), etc. Beyond the heavy metals (lead, cadmium, hexavalent chromium, mercury), current priorities for substitutions are brominated flame retardants and certain classes of fluoropolymers.

#### **Biomaterial**

"Bio-based" materials are materials that are derived from renewable resources. These materials can pro-vide benefits when they are used for some vehicle applications. Natural fibers have been used in GM vehicles in applications such as package tray substrates, door trim substrates, rear seat backs, and cargo area floors. However, the use of biomaterials in vehicle applications continues to evolve. One example of a newer use of bio-based materials is the inner floor panel for the Corvette, which uses balsa wood for the inner core. (The balsa tree is the fastest growing tree in the world. Balsa plantations are

established in fields previously used for agricultural purposes; therefore rain forests are not cleared.) GM continues to look at applications where biobased materials may be used in future vehicles in a sustainable manner.



Chevrolet Corvette with balsa floor

# 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. 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 (DfE) process. If a material is approved, the 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 become part of our products.

The PMRv team provides critical support during assessment of the materials proposed for use at GM facilities. Timely review and communication to material and designing engineers and local HMCCs assist 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 processes and materials in conjunction with the PMRv process. These early assessments analyze systems planned for use in 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.

### **Creating a Market for Recycled Materials**

By increasing the use of recycled materials, GM is making a significant contribution to creating a market for recycled materials.

GM has continually increased the number of parts in each car line that can be manufactured from recycled plastic materials. Currently, 20 percent of the plastic materials approved by General Motors Materials Engineering contain post-industrial and/or post-consumer recyclate. Examples of post-consumer recycled plastics include nylon carpet, PET soda bottles, and polycarbonate water jugs.

In 2000, the European Parliament passed a directive that addressed costs, recycling, and recovery targets for end-of-life vehicles (ELVs) as well as substance bans. To meet these requirements, GM has 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 its entire product range. The Design for Recycling/Recovery (DFR) concept, which is primarily focused on Design for Pre-treatment (DFP), has been adopted for all newly designed vehicles. DFP includes easy accessibility to all parts or fluids which are mandatory for removal. All plastic components are marked to identify the material content. DFR/DFP concepts are conveyed to design engineers and suppliers through global specification GMW 3116.



2007 Cadillac SRX – Uses over 2,000 recycled tires/year for the radiator side baffles

GM is 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 10 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 and other fractions (i.e., inert fractions). One of many uses for the organic fraction is in blast furnaces, where it serves as a substitute for coal 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.

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

GM has developed GMW3116 to calculate the recyclability of its vehicles. Using the mass of each part and the list of materials currently recycled, the recyclability rate for each vehicle type can be developed. GM uses the ISO Standard (ISO 22628) 'Road Vehicles — Recyclability and Recoverability — Calculation Method' for calculating the percentage of recyclable and recoverable materials in its vehicles.

GM vehicles are designed to meet the recyclable/ recoverable requirements in the existing EU and Japan ELV laws.



2007 Chevrolet Impala — Uses 60 tons/year of recycled plastic used in the front and rear water deflectors

### **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 engineers to 'design-in' the products and processes that benefit vehicle recycling at end-of-life. It has also been a key information source to ensure compliance with the European Union ban on certain heavy metals and other national and international standards, laws, and regulations on certain substances of concern.

GM maintains a web site to provide information to suppliers for environmental product and process development and improvement. For details, visit www.gmsupplypowe.com



# **Economic Performance** | Financial Information

General Motors creates a significant positive economic benefit around the world with manufacturing operations in 33 countries and vehicles sold in 200 countries. GM is an important and valuable employer in many countries and its goal is to be a positive force in the communities where it operates and to work with stakeholders to improve the environmental and social impacts of its business.

Please review our 2005 Annual Report for details on our 2005 financial performance. Please review pg. 45 of our 2005 Annual Report.

# Labor Force

#### **WAGES & BENEFITS**

GM's 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.



### Global Presence and Local Impact

With manufacturing operations in 33 countries and sales in 200 countries, General Motors has a significant economic impact around the globe, not only as an employer, but also in the communities in which it operates.

### **Wages and Employment**

For wages and employment numbers, please refer to pg. 58 in the 2005 GM Annual Report at.

#### **Pensions**

GM sponsors a number of defined benefit pension plans covering substantially all U.S. and Canadian employees, as well as certain other non-U.S. employees in Germany, Belgium, the United Kingdom, Mexico, South Africa, Australia, and Hungary. The benefits provided by the plans covering employees are generally based on years of service, and in some cases, compensation history. GM's funding policy with respect to its qualified pension plans is to contribute annually not less than the minimum required by applicable law and regulations, or to directly pay benefit payments where appropriate. With \$95 billion in assets, U.S. pension plans were over-funded by the end of 2005 by \$7.5 billion. In 2006, GM does not have any contributions due for its U.S. hourly and salaried plans. It also does not anticipate making any discretionary contributions to its U.S. hourly and salaried pension plans. GM's long-term strategic and expected return-on-assets assumptions are derived from detailed periodic studies conducted by its actuaries and asset management group.

### **Legal Compliance**

Conditions attached to 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 GM operates. The company's compensation

# **Economic Performance** | Labor Force

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 GM operates 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 health maintenance organizations (HMO), preferred provider organizations (PPO), and indemnity plans.

# **Community Investment**

GM's economic success is inextricably linked with the health and vitality of the communities where it operates. Decisions about plant sites, employment levels, and supplier selection create the most measurable impact on a community. Taxes also support important public services and investments. GM also contributes to community life through philanthropic contributions and volunteer efforts.

#### **PHILANTHROPY**

The GM Foundation was organized in 1976 exclusively for receiving and administering funds for charitable, educational, and scientific purposes. The Foundation makes distributions to organizations that qualify as exempt organizations under local/regional policies and practices consistent with section 501(c) (3) of the U.S. Internal Revenue Code. The GM Foundation supports many plant-city activities. These initiatives help establish GM as a valued corporate citizen in the communities in which we operate.

### **EMPLOYEE CONTRIBUTIONS**

Through the annual Charitable Giving Campaign, employees in the U.S. can make direct payroll contributions to the United Way and its funded agencies, or other not-for-profit organizations, such as Mothers Against Drunk Driving, The Nature Conservancy, or The Marrow Foundation. In 2005,

GM and its employees contributed over \$18.7 million to these organizations.

GM provides a web-based application for employee contributions for the annual U.S. GM/UAW
Charitable Giving Campaign, as well as the GM
Matching Contributions Program for employee contributions to higher educational institutions. In addition, employees and others outside of GM can make donations for disaster relief efforts through the GM Global Aid web site. On occasion, such employee donations are matched dollar-for-dollar by the GM Foundation.

#### **EMPLOYEE VOLUNTEERING**

GM employees can feel proud of helping others while earning financial support 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 gifts of service, GM employees have generated grants exceeding more than \$4 million over the past six years. The program is now available to GM employees in Argentina, Australia, Brazil, Canada, Chile, Colombia, Ecuador, Germany, Kenya, Poland, South Korea, the United Kingdom, the United States, and Venezuela.

On May 5, 2006, United Way International recognized the GM Foundation for Global Community Investment Leadership for the GM Volunteer Plus International program. The GM Foundation was awarded its Corporate Award for dedicated financial and advisory support of United Way International's global and regional capacity to nurture and serve the affiliate network.

#### **CONTRIBUTIONS**

In 2005, GM and the GM Foundation contributed more than \$61 million to charitable causes through cash contributions, in-kind donations, and participation in charity events. GM typically donates products, components, and other equipment to a variety of universities, colleges, vocational schools, secondary schools, and correctional institutions with automotive-service or engineering programs. GM

also donates non-product equipment and real estate to selected non-profit charitable institutions in the communities in which we operate. In addition, the company participates in numerous charity events benefiting a diverse group of philanthropic causes and organizations. These contributions reach their target groups through the GM Foundation and GM corporate contributions.

#### 2005 CONTRIBUTIONS WORLDWIDE

Cash Contributions (Dollars in millions)	GM Foundation	GM Corporation*	Total
Health & Human Services	10.7	3.6	14.3
Education	8.7	2.1	10.8
Civic & Community	9.1	2.2	11.3
Public Policy	1.3	0.5	1.8
Environmental & Energy	0.6	0.1	0.7
Arts & Culture	1.9	0.1	2.0
Other	5.0	0.6	5.6
Total Cash Contributions	37.3	9.2	46.5
In-Kind Donations	0	10.5	10.5
Total Contributions	37.3	19.7	57.0
Charitable Events	0	4.2	4.2
TOTAL	37.3	23.9	61.2

<sup>\*</sup> Includes North American Operations, Europe, Latin America, Africa and Middle East, Asia Pacific, Note: Contribution focus area categories may overlap and hence appear to understate others, since contributions can only be reported in one category. For example, our "Earthtroop" environmental education program may be categorized as "education," when it also clearly represents an "environmental" contribution.

In addition to corporate and Foundation support, the continued outpouring of support from the 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 their company. This year's initiatives have focused on:

- Disaster relief
- Civic and community support
- Support for education
- Support for arts and culture
- Support for health

#### **Disaster Relief**

In times of crisis, a community's needs spike sharply, and the response must be swift. Since its inception in 2000, GM Global Aid has facilitated over \$12 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 GM employees, but also others worldwide, to contribute funds to disaster relief efforts, many of which are matched by the GM Foundation.

In 2005, GM Global Aid facilitated the donation of nearly \$8 million to organizations worldwide to assist in disaster relief efforts. These donations included:

- \$10,000 to the American Red Cross to assist with flood-relief efforts in Pensacola, FL.
- Over \$21,000 to match employee contributions to CARE and UNICEF to assist in disaster relief efforts as a result of the South Asia earthquake and flooding in Central America.
- As a result of the tsunami in Southeast Asia, contributions from the GM Foundation and GM employees around the world totaled over \$3.3 million.
- The GM Foundation, GMAC, and GM employees around the world contributed over \$3.8 million to support disaster relief efforts as a result of Hurricanes Katrina and Rita.

#### 2005 HURRICANE SEASON

The 2005 hurricane season was the deadliest on record in the United States. Several hurricanes made landfall, with the most powerful being Katrina, which devastated the Gulf Coast region, followed shortly thereafter by Rita, which caused damage to the Texas and west Louisiana coastal areas.

Hurricane Katrina was one of the fiercest ever seen in the U.S. The major metropolitan area of New Orleans, LA experienced major breeches in its levee system, which resulted in extreme flooding throughout the city. The American Red Cross indicated that this was the largest mobilization of its resources in its history for a single natural disaster. Thousands of people in Alabama, Florida, Louisiana, and Mississippi lost their homes, belongings and jobs, and were in need of shelter, food, water and medicine. Approximately 750,000 survivors were dispersed across the nation.

GM, the GM Foundation, and GMAC were among the first responders to the relief efforts.

- An immediate combined contribution from the GM Foundation and GMAC of \$500,000 to American Red Cross Hurricane 2005 Relief fund. \$100,000 of this contribution was specifically designated to the American Red Cross Northwest Louisiana Chapter in Shreveport, LA (a GM plant city), which sheltered over 15,000 evacuees. GM employees in Shreveport were instrumental in supplying volunteer services and goods to those impacted in their area.
- GM Foundation matched, dollar-for-dollar, employee contributions to American Red Cross Hurricane 2005 Relief fund. A specific GM employee donation site was established on GMAbility.com. Employee contributions eligible for this match, including gate collections, made across the world totaled over \$1.6 million.
- GM Katrina Assistance Fund was established to assist evacuees with community-based projects, partnering with local non-profit organizations and utilizing GM and GMAC employee volunteers. The contributions to these projects totaled \$45,000.
- In-kind donations included nearly 150 vehicles provided to the American Red Cross, including HUMMERs, full-size SUVs, trucks, and vans; 10 vehicles were provided to the Humane Society of the United States to assist in the rescue coordination of abandoned, trapped, or displaced animals; 12 HUMMER H3s were provided to the Louisiana government for use in rebuilding efforts.

#### AMERICAN RED CROSS PARTNERSHIP

In 2005, the GM Foundation launched a six-year agreement with the American Red Cross over which time the Foundation will donate a total of \$4 million to assist the Red Cross in its disaster and emergency relief programs. This donation includes the procurement of HUMMER vehicles, which will be delivered to various Red Cross chapters across the U.S., allowing the chapters to strengthen their emergency preparation and disaster response capability.

The first HUMMERS were delivered in 2005 to Chapters in areas hardest hit by Hurricanes Katrina and Rita, including Baton Rouge and New Orleans, LA; Biloxi, MS; and Houston, TX. In addition, two HUMMER H1s were donated to the National Headquarters in Washington, D.C., to be used as communication vehicles.



In 2006, Red Cross Chapters in Atlanta, Detroit, Los Angeles, San Diego, San Francisco, New York City, Norfolk, Va., Philadelphia and Washington, D.C. received a combination of H1, H2, and H3 vehicles.

### **Civic and Community Support**

The GM Foundation supports organizations that strengthen community awareness and improvement. In 2005, the combined contributions from the GM Foundation and GM totaled \$11.3 million for civic and community efforts.

#### MARTIN LUTHER KING MEMORIAL

Since 2000, General Motors has been a proud corporate sponsor of the Washington, D.C. Martin Luther King Jr. National Memorial Project Foundation, Inc., and its effort to build a memorial honoring one of America's greatest inspirational leaders. The

ceremonial groundbreaking on the much-anticipated project took place November 13, 2006 in Washington, D.C. The King Memorial, the first on the National Mall to honor a person of color and a non-president, will stand on four acres at the edge of the Tidal Basin. It will be situated adjacent to the Franklin Delano Roosevelt Memorial and in a direct line between the Lincoln and Jefferson Memorials. The site will create a visual "line of leadership" from the Lincoln Memorial – where Martin Luther King Jr. gave his famous "I Have a Dream" speech in 1963 - to the Jefferson Memorial. GM is committed to being a driving force behind the memorial and honoring Dr. King's contributions to the civil rights movement and humanity. GM and the GM Foundation donated \$10 million to the campaign, becoming the lead corporate sponsor in the effort to build the monument. GM's commitment will continue well beyond the groundbreaking by providing continued leadership for ongoing fundraising efforts. So far, corporations, organizations, and individuals have raised two-thirds of the \$100 million needed to build and maintain the memorial.

### NELSON MANDELA CHILDREN'S FUND The Nelson Mandela Children's Fund (NMCF), founded by Nelson R. Mandela, is a development agency focused on changing the ways in which society treats children and youth in order to improve their lives.



GM South Africa donated five Isuzu utility vehicles to the Nelson Mandela Children's Fund.

In October 2002, General Motors (GM) South Africa entered into a partnership with the NMCF. The partnership commenced with GM South Africa

donating five Isuzu utility vehicles to the NMCF to benefit communities and in support of children and development. Four vehicles were provided to four projects, with the fifth vehicle being used by NMCF Programs Department to access other community-based projects.

NMCF provided the vehicles to the following organizations:

- Umtata Child Abuse Resource Centre (UCARC),
   which works to uphold and promote the rights
   of the individual child and children in general,
   through its commitment to promoting cultural
   values and practices to promote children's
   rights and accessibility to basic social services.
   The vehicle allowed UCARC to reach remote
   communities, improved access to services,
   increased its ability to work with other service
   providers, and increased visibility of the project in
   the community.
- Sibusisiwe Home for the Mentally Disabled. This organization provides day care and shelter for mentally and physically disabled children. The donated vehicle is used to collect donated food and other basic needs; facilitate the safe transportation of children to clinics, hospitals, or to specialized medical consultations; and to enhance the commitment and capacity of staff since the vehicle can provide practical, quick, and reliable solutions to the many challenges faced by the home.
- Thembalethu Home Based Care (THBC) The vision of this organization is to provide a haven of love and hope to those infected and affected by HIV/AIDS (estimated at 47 percent) and poverty (+60 percent unemployment) in the Nkomazi Region of Mpumalanga, South Africa. The vehicle is used for project work, including its use as a hearse for the poorest of poor families that cannot afford funeral parlors, weekly food distribution of food parcels and bulk food to orphans and patients, delivery of medicine to home-based care groups and ARV clinic, and the transportation of care-workers, youth, caregivers, and orphans to functions and training courses.

help orphans and vulnerable children affected and infected by HIV/AIDS. It deals with a wide spectrum of related issues from a child, family, and community level. Various services are provided, including counseling, life skills, assistance with schoolwork referrals, youth enrichment programs, art, and recreation. Families are visited and assessed, children from parentless households are assisted with referrals for foster placement, and food parcels are provided for the families with the greatest needs. In 2003, the Kingdom Trust was involved in 14 communities and seven in 2004/05.

The vehicles provided by GM South Africa have proven to be of direct and demonstrable assistance to organizations supporting the well being of children in South Africa. The support also assisted families and communities of orphaned and vulnerable children to get resources, such as food, and complemented efforts to access services for children such as birth certificates, identity documents, and other devices from the state.

### **Support for Education**

During 2005, GM continued relationships with universities through the Key Institution Program, which is made up of schools selected primarily for the quality of their engineering and business programs. Educational contributions from GM and the GM Foundation totaled more than \$10.8 million in 2005, with approximately 80 percent 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 2005, GM

matched more than \$709,210, representing more than 1,972 employee contributions to 331 accredited degree-granting institutions and libraries.

GM also provides direct support to students. In 2005, GM granted 1,000 scholarships, totaling more than \$2 million, to outstanding engineering, environmental, public policy, and business students. In addition, many participating students completed summer internships at GM 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.

### **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, and awareness of arts in education programs. In 2005, GM and the GM Foundation contributed more than \$2 million to a diverse group of these organizations.

### **Support for Health**

General Motors directs its health care philanthropic efforts to support various health-related activities and organizations that target access to appropriate care and communicating patient care standards. In 2005, combined contributions from GM and the GM Foundation for health and human services were \$14.3 million.

#### ACCESS TO CARE AND INFORMATION

When a patient is diagnosed, they, their family, and friends may want information, referral to community services, practical assistance, or counseling. GM Health Care Initiatives (HCI) supports specific efforts that put patients, their families and doctors in touch with the critical information they need as quickly as possible.

#### **QUALITY OF CARE STANDARDS**

GM HCI supports organizations working to communicate quality patient care standards to purchasers, providers, consumer organizations, individuals, policymakers, and health care researchers in a form that is useful for health care decision-making. These standards of care should be driven by the quality of care, not only by the cost of care, and should include participation in clinical trials and quality of life considerations.

SELECT DISEASE RESEARCH AND PREVENTION GM supports organizations working to further research related to the causes, prevention, and treatment of various diseases, such as cancer, heart disease, and diabetes.

#### CANCER RESEARCH

GM established the GM Cancer Research Awards 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. Cancer research remains one of GM's philanthropic priorities, and this year marks the 28th anniversary of the GM Cancer Research Awards. The awards, valued at \$250,000 each, are considered among the most prestigious in medicine. The awards have recognized the accomplishments of 108 Laureates, 13 of whom have gone on to win Nobel Prizes. The GM Foundation contributed more than \$1 million to the Cancer Research Awards program in 2005 and has contributed more than \$53 million to cancer-related endeavors since inception.

#### ANGEL FLIGHT AMERICA PARTNERSHIP

Saab Automobile
USA has signed
a partnership
agreement with
Angel Flight America



(AFA) to support and promote the charity's urgent air transportation services. AFA, the U.S.'s largest aviation-related charitable organization, will receive \$75,000 from Saab. Saab will also donate the use of six of its 9-7X midsize sport utility vehicles for one year to be used by the organization's "Earth Angels." AFA flies more than 90 percent of all medical/emergency "mercy flights" in the U.S. AFA pilots, flying their own or rented aircraft, pay all the expenses associated with the flight. In 2005 alone, Angel Flight America pilots contributed more than \$25 million as they flew some 23,000 missions

carrying more than 57,000 people, many of whom would otherwise have had no access to the urgent care they needed.

# CENTERS FOR DISEASE CONTROL FOUNDATION PARTNERSHIPS

In early 2006, the General Motors Foundation and the Centers for Disease Control Foundation (CDC) announced a joint initiative resulting in the procurement of vehicles in eight developing countries over the next two years. The Centers for Disease Control provides rapid detection and response for emerging health threats and supports disease research, prevention, and care in 43 countries around the world. Under the partnership, the GM Foundation will fund the initial purchase of 16 vehicles in eight countries, including Angola, Cambodia, Kenya, Laos, Tanzania, Thailand, South Africa, and Uganda. The CDC requested the assistance of the GM Foundation to help acquire the vehicles, which will be used to support emerging disease diagnosis and assessment, as well as malaria, HIV, and refugee health programs.

#### **HIV/AIDS**

For General Motors, HIV/AIDS is a global human rights and health and safety issue. As part of our ongoing commitment to human rights globally, through our endorsement of the Global Sullivan Principles, adherence to the GM Core Values, and commitment to our internal credo "Winning with Integrity," GM has been and will continue to be at the forefront of the HIV/AIDS issue.

We recognize that our economic success is inextricably linked with the health and vitality of the communities where we operate. While GM's business operations worldwide have not been significantly impacted by the HIV/AIDS, tuberculosis, and malaria pandemics, we recognize that our business success will continue to be tied to a healthy, productive workforce and a healthy, viable customer base. We have health and safety protocols in place to address tuberculosis and malaria and have been especially proactive in efforts to build awareness of HIV/AIDS.

HIV/AIDS is a preventable disease that affects:

- the productivity of employees, especially those in developing nations,
- the very fabric of family and community in which our employees live and work,
- and the macroeconomics of a developing nation's future.

As HIV/AIDS is preventable if those at risk are educated about the dangers, GM has determined that we can have the greatest impact by focusing on awareness building, with particular emphasis on high-risk communities where we have operations. Our HIV/AIDS strategy has two key dimensions: programs for our employees, their families, and communities; and outreach to the global community, creating partnerships with industry, governments and NGOs.

#### WORKPLACE PROGRAMS

General Motors is committed to provide a safe and healthy work environment for our employees worldwide. We have developed and implemented a workplace program which is aimed at preventing new infections, providing care and support for employees infected and managing the impact of the epidemic in the organization and the community.



GM South Africa sponsors voluntary HIV/AIDS testing and counseling programs.

GM's HIV/AIDS workplace programs seek to ensure a policy of nondiscrimination and support for those employees living with HIV/AIDS, as well as to invest in prevention, through education and awareness, to

reduce the incidence of HIV/AIDS in our employees, their families and their communities.

While each HIV/AIDS program is tailored to honor country laws, trade agreements, and cultural sensitivities, common components make up the framework of every program. Using the Centers for Disease Control's (CDC) HIV/AIDS templated education and prevention program, GM is targeting manufacturing sites in high-risk areas in the Asia Pacific and Africa regions. The program was successfully piloted in GM Thailand in 2001, followed by GM India, GM South Africa, GM Indonesia, and GM East Africa. We are initiating implementation of this program in multiple GM China facilities. Programs typically include top leadership engagement; a human resource policy on HIV/AIDS; cross-functional steering committees; peer training; new-employee orientation; family and community outreach; and relationship building with private sector, governmental, NGO, and health care organizations.

Many of our programs have been acclaimed locally and nationally. The National HIV/AIDS Partnership recognized GM with a Pioneer Award at its first ever "Red Ribbon Leadership Awards on 2005 World AIDS Day at the United Nations," for demonstrated and exceptional corporate leadership and social responsibility.

GM Health Care Initiatives, under the direction of the Corporate Medical Director, oversees GM HIV/AIDS programs that:

 Operate employee programs in South Africa, Kenya, Thailand, Indonesia, and India and are rolling out programs throughout the rest of our Asian operations. Programs provide employees with education and awareness; address the stigma associated with HIV/AIDS, provide access to medical services, including voluntary testing and counseling (VCT) and treatment tailored to national and local laws and cultural sensitivities.

(Of note: GM South Africa monthly VCT campaigns, such as the "I Know My Status drive"; GM India and Thailand poster contests; and condom distribution as part of GM East Africa's "Dual Method" campaign.)

 Support community outreach initiatives such as an HIV/AIDS Hotline in Thailand and awareness training at community events, health centers and schools in India, Thailand and South Africa which are conducted by GM employee peer educators.



GM Thailand helps support an orphanage for children of AIDS patients and victims.

- Help support an orphanage in Thailand caring for over 500 children of AIDS patients and those that have succumbed to the disease.
- Donated five trucks that allow the Nelson Mandela Children's Fund in South Africa to help HIV-positive children.



GM East Africa formed an alliance with the USAID mission in East Africa to address HIV/AIDS issues.

COMMUNITY PARTNERSHIP AT GENERAL MOTORS EAST AFRICA

On June 14, 2006, General Motors East Africa signed an agreement with the United



States Agency for International Development (USAID) mission in East Africa and Family Health International to form an innovative alliance aimed

at addressing the problem of HIV/AIDS through job creation.

The new partnership, called LifeWorks, will strengthen the economic capacity of economically vulnerable women and orphans who reside in communities surrounding truck stops along transport corridors. Bill Lay, the Managing Director of General Motors East Africa, will co-chair the LifeWorks Partnership Business Advisory Council that will provide business expertise to the partnership. GM staff will train targeted groups in strategic planning and business skills at a total cost of about \$240,000 over four years, and USAID will match this amount.

#### PUBLIC EDUCATION AND AWARENESS CAMPAIGN



#### A Closer Walk

GM recognizes that the HIV/AIDS pandemic is too large for any one entity to solve; governments, civil society, and the business sector all must get involved. We believe that through partnerships of all kinds, the world can put an end to the ravages of this terrible disease. To this end, GM is sponsoring the dissemination and distribution of A Closer Walk, the critically acclaimed film by Oscar-nominated Director Bob Bilheimer that explores the intricate relationship between health, dignity and human rights and shows the harsh realities of HIV/AIDS in the world.

A Closer Walk raises fundamental questions about our responsibilities to one another and offers hope amidst tragedy. The film was conceived as a tool to create a groundswell of public opinion that will dramatically alter the climate in which global priorities about HIV/AIDS are established, and policies are made. The premise of the project is that until such time as the enormous power of concerned and committed public opinion is brought to bear on

the devastating human tragedy that is HIV/AIDS, the crisis will only worsen.

GM's awareness and education campaign is in its fourth year. By the end of 2006, A Closer Walk will have been seen by more than a billion people in theatres, auditoriums, town halls, classrooms, churches, NGO venues, private homes, and on television networks around the world.

#### Some Highlights

- A Closer Walk has premiered in cities across the globe, including New York, Los Angeles, Miami, Washington, DC, Toronto, Bangkok, Kiev, Johannesburg, Durban, Phnom Penh and New Delhi.
- A Closer Walk was chosen to open the 2004 AIDS Film Festival at the Scala Theatre in Bangkok, Thailand in July at the 15th International AIDS Conference. Over 900 people attended the Asian premiere of the film.
- The world premiere television broadcast took place on World AIDS Day, December 1, 2004 in South Africa on SABC-TV on primetime and uninterrupted. GM partnered with SABC and GM South Africa to sponsor the broadcast.
- On March 5, 2005, the Canadian Broadcasting Corporation aired an uninterrupted, nationwide broadcast on CBC Newsworld, followed immediately by a panel discussion, "What Can I Do?"
- September 2005, Cambodian national broadcast sponsored by the United Nations Development Program.
- The U. S. television premiere of A Closer Walk was broadcast on August 31, 2006 on PBS stations across the country.
- Film trailer sponsored by GM at the 2006 Cannes
   Film Festival on screens stationed at the "Red Carpet" and "Festival Stage".
- Ambassador John Rood distributed copies at the Caribbean Regional Chiefs of Mission HIV/AIDS Conference in Nassau, Bahamas in October 2006.

Plans for broadcasts in India and China are in the works.

GM's partners in this global endeavor include the Bill & Melinda Gates Foundation, the M.A.C. AIDS Fund, the Elizabeth Glaser Pediatric AIDS Foundation, amfAR, the Global Health Council, Action India Trust, UNDP, the World Bank, International AIDS Trust, the Global Business Coalition on HIV/AIDS (GBC), the Asia Society, and RADAR/Canadian Rotary. A full listing of *A Closer Walk* events can be found at www.acloserwalk.org.

Douglas Gardner, United Nations Development Program (UNDP) Resident Coordinator, Cambodia, premiered A Closer Walk (ACW) in September 2005. He writes,

"The power of ACW is that it reaches people at a very inner level. It touches everyone, regardless of their location on the planet. Not only does it open up issues on HIV/AIDS, but it advances related issues of human rights, children, women and more. For our work in the UN on all of these issues, the film was so very welcome."

In short, we are grateful that General Motors chose to sponsor this film. Please know how valuable it has been in our outreach to people throughout Cambodia... We plan to keep the momentum going with a deeper and wider response that leverages the charge that ACW has given."

### It All Comes Together

In November 2005, GM South Africa (GMSA) was honored in Johannesburg by the American Chamber of Commerce (AMCHAM) for its corporate social investment and HIV/AIDS program. Winning the top accolade, the Star-of-the-Stars Award, GMSA was recognized for taking a creative approach to HIV/AIDS awareness for its role in the screening of the AIDS documentary A Closer Walk on South African TV station, SABC2.

Added to this were the awareness efforts of the company's trained, employee-peer-educator group which brought the film to an additional 18,444 people. The judging panel commented, "Innovative

ideas and programs like GM's A Closer Walk are vitally necessary to make a significant enough impact on the disease. Well done to all involved and we encourage you to put even more effort into distributing your documentary as widely as possible and as quickly as possible. Our future depends on it."

GMSA is partnering with the GMSA Foundation to develop a curriculum based on *A Closer Walk* with the goal of distribution into all South African schools. Louis Hattingh, GMSA Employee Benefits & Services Manager states, "Apart from awareness, voluntary testing and counseling, and treatment, our comprehensive HIV workplace program focuses on empowering our employees with awareness skills so that they are able to empower others. To this end, we believe that the documentary *A Closer Walk* is a powerful tool able to reach people irrespective of their race, gender, and education; and this is the ultimate objective of our awareness campaigns."

#### **GM VOLUNTEER PLUS INTERNATIONAL**

The GM Volunteer PLUS International program, which encourages GM employees to be involved in the communities where they live and work, continues to launch in new locations around the world. The program is now available to GM employees in Argentina, Australia, Brazil, Canada, Chile, Colombia, Ecuador, Germany, Kenya, Poland, South Korea, United Kingdom, United States, and Venezuela.

In Poland, employees have volunteered time through a program organized by Opel Polska, "Together We Can Do More." This program provides support to school-age children through after school homework assistance and organized activities.

GM of Canada employees are involved in many volunteer activities, including working with Junior Achievement in delivering services to classrooms which involves motivating young people in the areas of business and manufacturing. Employees are also involved with Big Brothers and Big Sisters of Toronto.

In Colombia, GM Colmotores employees are involved in various support activities within their communities, including children and youth, services to the elderly, and environmental and building repair. For the past three years, 47 employees

have volunteered nearly 800 hours with Junior Achievement, which has benefited over 2,200 students.

On May 5, 2006, United Way International recognized the General Motors Foundation for Global Community Investment Leadership for the GM Volunteer Plus International program, and awarded the Foundation its Corporate Award for dedicated financial and advisory support of United Way International's global and regional capacity to nurture and serve the affiliate network.

Through the 2005 calendar year, the GM Foundation has contributed over \$2.1 million to charities around the world in conjunction with over 500,000 hours of volunteer service provided by GM employees.

#### **EMPLOYEE TESTIMONIALS**

ELIZABETH LÓPEZ, DISTRIBUTION ASSISTANT, SALES AND DISTRIBUTION, ANDEAN REGION, GMVPI VENEZUELA



Elizabeth López and Susan Riestra (Local Administrator)

"Being a volunteer has helped me to grow personally and spiritually. I feel that having a program like this one allows employees to get to know each other, share experiences, feelings, emotions, and even strategies. This year I want to become the leader of activities that will help an organization get organized and set for success. The fact that I'm a nutritionist

gives me a sense of responsibility towards communities that are in need of a healthy nutrition."

GM COLMOTORES AND ITS VOLUNTEER EMPLOYEES PROVIDED A JOYFUL 2005 CHRISTMAS FOR 2200 PEOPLE

In a special Christmas campaign, General Motors Colmotores and its employees donated gifts valued at \$13,000 to 15 non-profit organizations. This initiative allowed every functional area to adopt a non-profit organization to help them celebrate Christmas Eve, buying gifts, clothes, and food to help 2,200 children and elderly underprivileged people in Bogotá Colombia. The 500 GM volunteers, and their families who donated their time sharing a special day with the community, are still thankful for the opportunity to have participated in this activity.

As a result of this campaign, the GM Foundation will give \$7,250 to the non-profit organizations in recognition of the 1400 volunteer hours. Thousands of smiles were the proud result of this campaign.



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#### **PRINCIPLES AND POLICY**

### **GM Environmental Principles**

GM's Environmental Principles, adopted in 1991, apply to its facilities, products, and employees worldwide, and provide guidance in the conduct of daily business practices. Each GM facility has local environmental guidelines that build on and implement the company'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 its business decisions.

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

- 1. We are committed to actions to restore and preserve the environment.
- 2. We are committed to reducing waste and pollutants, conserving resources, and recycling materials at every stage of the product life cycle.
- 3. We will continue to participate actively in educating the public regarding environmental conservation.
- 4. We will continue to pursue vigorously the development and implementation of technologies for minimizing pollutant emissions.
- 5. 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 Performance Criteria (GM EPC) support the consistent implementation of GM's Environmental Principles across the globe. They address common environmental issues that affect GM's facilities worldwide and help to develop common global strategies. The GM EPC supplements applicable legal requirements by setting baseline environmental management and performance at GM facilities.

GM's Environmental Performance Criteria ensure that a base level of environmental performance is achieved regardless of where GM operations are located.

An example of the GM EPC in action is the disposal of industrial and chemical waste, which requires careful handling. This type of waste should be disposed of in



### Protecting the Planet

GM's Environmental Principles provide a comprehensive commitment to protect human health, natural resources and the global environment. These initiatives

- including a global commitment to reducing energy and water use
- establish GM as a leader in corporate environmental responsibility.

appropriately constructed landfill sites that contain specific environmental protection features. Not all countries where GM operates require that this type of waste be disposed of in hazardous waste landfills; however, the GM EPC requires that all industrial and chemical waste from its sites is disposed of in suitably regulated hazardous waste landfills regardless of its regulatory classification.

Another example is that the GM EPC requires the evaluation of the environmental condition of any site prior to the sale, acquisition, or lease of the site. All sites undergo a Phase I Environmental Assessment and, if required, a Phase II Assessment and Environmental Compliance Audit. This allows GM to assess any environmental remediation that may be required and determine possible environmental liabilities and associated costs.

### **Ceres Principles**

The Ceres Principles are a ten-point code of environmental conduct promoting continuous environmental improvement. GM was the first Fortune 50 manufacturing company to endorse the Ceres Principles in 1994. GM's Environmental Principles were endorsed by Ceres. GM engages with Ceres and their members in dialogues of mutual interest and concern. GM appreciates 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.

### **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, maintained, and communicated to all employees
- are available to the public.

### **Measuring our Global Performance**

It is GM's policy to assess and report its global environmental performance where possible. GM's Global Environmental Metrics Team (made up of employees from operating units worldwide, and GM's Global Environmental Issues Team) agreed on a common set of metrics for all of the company's facilities. The metrics, which were established in 1999, include parameters for energy use, water use, waste, and certain air and water emissions.

GM publishes its 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 over 100 facilities in many countries with different cultural and regulatory environments, where regional differences in definitions, terminology, and calculation methods pose challenges. GM strives to ensure the accuracy and comparability of the reported data and will continue to refine the data management processes to provide further quality assurance.

#### **MANAGEMENT**

### **Environmental Management Systems**

All GM manufacturing facilities around the world have implemented the GM Environmental Management System (EMS) which combines elements of the environmental management standard ISO14001 and elements that are specific to GM operations. This overarching management system is designed to drive a continuous performance improvement cycle in line with legal requirements, site-specific objectives and targets, and corporate and sector policies and strategies. Once implemented, a facility's EMS is certified by a third-party accredited registrar in conformance with ISO14001 or the EU Eco-Management and Audit Scheme (EMAS).

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

By maintaining environmental management systems, GM can measure its environmental performance, and share knowledge, processes, and technologies within GM to plan and target improvements across its manufacturing facilities. As a result of this commitment to environmental management practices, GM has improved its environmental performance and reduced emissions and costs.

### **Specific Management Programs**

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

#### **CHEMICALS MANAGEMENT**

Chemicals Management (CM) uses a single supplier to provide non-product-related chemicals at each GM facility and provide incentives to the supplier to reduce total chemicals usage. GM has expanded the program to include all indirect chemicals used in the

manufacturing process (those not directly involved in producing a vehicle). The indirect chemicals budget can vary from several hundred thousand dollars to several million dollars at a single plant. Chemicals Management uses a single first-tier supplier to provide indirect chemicals and on-site chemical services at each GM facility. The program covers chemical process control, process improvements, and chemical reuse and recycling. The supplier also provides the chemical data required for regulatory reporting.

The expanded programs have resulted in an average material saving of 20 percent over a three-year period. Savings come from chemical conservation and standardization, process optimization, and environmental performance. Other benefits include better quality, throughput, and manufacturing efficiency. The expanded program enhanced GM's CM specification with standardized program scope and administration, and the program now supports GM's strategic environmental and manufacturing initiatives.

In North America, GM 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 of the efforts of this consortium, GM has increased its spending with minority chemicals suppliers by more than 300 percent in the past four years (from \$1,900,000 to \$6,779,557). This amount also exceeds GM's aggressive 10 percent minority supplier corporate goal. The MMCA's cooperative business model led to GM cost reductions of an additional \$542,365 in 2005 alone.

#### RESOURCE MANAGEMENT

This program views waste as a 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 the 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 employees 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 GM environmental professionals to help them keep pace with evolving environmental issues and best practices.

GM is developing a Global Environmental Certification and Training Program which will focus on the GM Environmental Principles, GM Environmental Performance Criteria, and GM Best Practices. The training is scheduled to be rolled out in 2007 to all environmental personnel.

#### **EMPLOYEE COMMUNICATIONS**

GM uses numerous methods to communicate with employees. An Internal Communications Strategy Team manages the direction and flow of environmental information and continually evaluates the effectiveness of communications, which include plant and facility newsletters, satellite broadcasts, regional networking meetings, and management meetings.

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 the 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**

In the U.S., statutory, regulatory, and permit programs administered by various government agencies impose numerous environmental requirements on GM facilities and vehicles. For example, a typical automobile/light-duty truck assembly 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 GM's own audit programs.

Each instance of alleged non-compliance is treated seriously. These actions are often settled, even though GM may not agree that a violation has occurred. In these situations, GM does not admit liability, but settles the matter if it is determined that settlement 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 2005 are reported in the table below:

	No. of resolved matters	Total value of penalties/fines paid*
Clean Air Act (CAA)	2	\$106,621
Clean Water Act (CWA)	0	0
Resource Conservation and Recovery Act (RCRA)	1	\$57,750
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)	1	\$39,000
Hazardous Material Transportation	0	0
Total Value	4	\$203,371

<sup>\*</sup> 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.

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

#### **ACCIDENTAL RELEASES**

GM tracks chemical spills and non-routine air emissions from our facilities in the U.S. and Canada. U.S and Canadian requirements are different for spill/release reporting. In order to present information in a comparable fashion, the information presented here represents spills/releases that are above thresholds required in the U.S. Environmental Planning and Community Right to Know Act (EPCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Spills and non-routine air emissions above reportable quantities as defined by the EPCRA and CERCLA have remained at zero for both the U.S. and Canadian facilities from 2003 through 2005.

#### AWARDS AND ACCOMPLISHMENTS

Every year, various GM operations receive awards recognizing the company's commitment to environmental stewardship.

#### **ORGANIZATION**

### **Energy and Environmental Strategy Board**

The Energy and Environmental Strategy Board (EESB) is responsible for developing GM's global energy and environmental strategy. Accountable to the Automotive Strategy Board, which is responsible for the global strategic direction of GM's automotive business, EESB members include senior leaders from Communications, Engineering, Powertrain, Worldwide Facilities/Manufacturing, Public Policy and Legal, and the Research and Development and Planning area. 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 Board Core Team

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

- Vehicle Energy
- Vehicle Emissions
- Vehicle Fuels
- Materials Engineering Environment
- Facilities Environment (see below)
- Facilities Energy (see below)
- Vehicle Pass-by Noise

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

#### **Worldwide Facilities Group (WFG)**

The Worldwide Facilities Group (WFG) manages the operational aspects (i.e., environment, energy, water) of GM's manufacturing facilities around the world. The EESB sets the energy and environmental strategy, which the WFG executes. Working under the WFG are the Environmental Services and Energy & Utilities Services Groups.

The WFG oversees a number of other teams involved in global environmental management. Under the coordination of the WFG Environmental Services Group, the Global Environmental Issues Team (GEIT) is responsible for implementing common environmental policies for GM operations worldwide.

The WFG Energy & Utilities Services Group (WFG-EUSG) is responsible for driving energy and water reduction globally. The Global Energy Team (GET) is a subset of the WFG-EUSG and is comprised of the WFG-EUSG Center of Service Managers in each Global Region, plus the GMNA Functional Leaders in the WFG-EUSG. During 2001, the GET established a global target to reduce energy use by 10 percent by 2005 from a 2000 baseline. More details on performance against this target can be found in the Energy section of this report.

#### **GM NORTH AMERICA**

### **Environmental Training**

In the U.S., GM has 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 successful completion of an Institute of Hazardous Materials Management exam. In order to maintain certification, at least 24 hours of technical environmental training are required annually. Approximately 90 percent of GM North America environmental professionals have achieved CHMM certification. GM conducts similar training programs in Canada and Mexico.

#### **GM EUROPE**

### **Environmental Training**

In Europe, environmental training is provided for engineers at GM's 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.

# **Environmental Performance** | Supplier Management

GM encourages continual environmental improvement in its value chain.

In addition to compliance with all applicable laws and regulations, the implementation of a sound environmental management system (EMS) should help suppliers to both comply with the applicable regulations and proactively manage their environmental issues. For these reasons, GM requires its tier-one product suppliers — those that directly supply parts for use in the vehicle production — to have an ISO14001 compliant EMS in place at all manufacturing facilities that supply GM with materials or parts.

To reinforce the priority placed on the environment, GM requires suppliers to provide proof of certification or a plan for implementing the ISO EMS.

GM's Environmental Statement of Requirements for suppliers and a number of other resources are available on our dedicated supplier web site, www. GMSupplyPower.com. For information on suppliers and human rights, please visit the Human Rights section of the report.



Stephen Johnson, Administrator, U.S.EPA; Elizabeth Lowery, GM – VP Environment and Energy; Keith Wandell, JCI – President; Bo Andersson, GM – VP Global Purchasing and Supply Chain; Randy Leslie, JCI – VP.

In 2006, GM established and presented the first-ever Environmental Excellence Award to recognize a GM supplier that:

 Supports GM's environmental initiatives, including ISO14001 certification, Supplier's Partnership for the Environment (SP) membership, and others,

- Exhibits transparency in its environmental performance, and
- Brings new technologies to GM that improves environmental performance of the company's facilities or products.

The award was presented at the 2006 North American International Auto Show, GM Supplier Recognition Event, to Johnson Controls, Inc (JCI). At this event, GM also hosted Mr. Stephen Johnson, Administrator, U.S. Environmental Protection Agency and the Suppliers Partnership for the Environment (SP).

# 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). 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 practices. General Motors was instrumental in the formation of SP following a successful pilot with the EPA at GM's Saturn division. SP membership now includes 39 member companies.

SP has work groups concentrating on specific tools to help suppliers improve their environmental performance. The work groups 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.
- Environmental Performance Metrics Develops methods for measuring improvement in both business and environmental performance of suppliers and manufacturers.

## **Environmental Performance** | Supplier Management

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

Examples of the environmental and economic gains that have been achieved through SP are:

- Packaging Work Group Partnering with Goodwill Industries to create a by-product reduction facility to environmentally and cost effectively address non-hazardous waste at auto companies and their suppliers. The work group is addressing ways to optimize packaging parameters to reduce waste, promote reuse, and maximize recycling while reducing costs.
- Chemical Issues Work Group Provides a forum for discussing emerging chemical issues within the auto supply chain, develop common approaches, and share best practices.
- 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.
- Small Business Forum This activity provides a forum for the Tier 2 and 3 suppliers to share their issues and communicate them more effectively to the auto manufacturers and Tier 1 suppliers.
- SP Technical Assistance Workshops Workshops are provided by the EPA and the National Institute for Standards and Technology - Manufacturing

Extension Partnership (NIST-MEP) to train small and mid-sized enterprises in the automotive sector on the business value of integrating environmental issues into lean manufacturing and business processes.

Detailed information on the Suppliers Partnership for the Environment can be found at www. supplierspartnership.org.

# GM Greening of the Supply Chain Project in China

Following on the success of the GM Suppliers Partnership for the Environment in the U.S. and successful proof of concept for a Greening of the Supply Chain (GSC) Project in Mexico and Brazil by the World Environment Center (WEC), GM along with WEC, GM-China, and Shanghai GM (SGM) launched a similar effort for key suppliers in the Shanghai area in 2005. The GM-WEC GSC project in China aims to help the suppliers to reduce energy, water, and raw material consumption per unit of output to help the suppliers to be more competitive and reduce their environmental footprint.

Using WEC guidelines, SGM selected key, first-tier suppliers to participate in the project, inviting the suppliers to SGM HQ in October 2005 for a launch meeting to explain the procedures and the required commitment. Just before the end of the year, WEC and its Chinese consultants visited each of the suppliers for a half-day to:

- Determine the technical level of each of the suppliers and aid in customizing the training to meet the real needs of the suppliers
- Begin the relationship-building key to change programs
- Point out opportunities for improvement that will be the focus of the training and,
- Help the suppliers to establish a baseline for evaluating the project benefits.

In February 2006, WEC and its Chinese consultants delivered a two-day training workshop on clean production, energy efficiency, and financial analysis techniques to prepare the suppliers to return to their factories and perform a self-audit. From the

## **Environmental Performance** | Supplier Management



SGM Suppliers at the February 2006 Training Workshop for the GSC Project

self-evaluation, the suppliers developed an action plan of changes that they intended to implement in the short and medium-term. WEC returned one month later to visit each supplier to verify if they were still committed and making progress toward implementing meaningful improvements. The suppliers were making good progress and several had already begun to implement improvements. After sharing the progress with GM, GM-China, and SGM, WEC shifted the remaining technical assistance resources to the suppliers that needed the most support and that had the best opportunities for important results.

## Energy

#### **OBJECTIVES**

GM's Global Energy Team (GET) is responsible for implementing the company's global energy strategy. This team drives strategies to reduce energy use and costs. The GET 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 Worldwide Facilities Group, Energy and Utility Services, and meets on a quarterly basis.

#### **Global Data**

GM has been collecting global energy data since 1999. Collecting standardized energy data for over 150 facilities around the world poses significant challenges due to regional, technical, and cultural differences. To enhance the quality of these data and the efficiency of their collection, GM has implemented a new information system across all facilities.

## **GLOBAL INFORMATION SYSTEM**

In 2001, the WFG-Energy and Utility Services Group launched a new Internet-based approach for managing its worldwide utilities data in North America. The system has now been expanded to cover GM's global operations. The system is used to receive, validate, and store data for utilities usage, such as natural gas, electricity, water, and steam. The system verifies utility billing accuracy against internal meter readings and is the key enabler for site utility and site environmental managers and engineers to monitor and manage global 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 system provides internet-based utility trend charts and related information instantly to its network of GM global site managers around the world. 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 and facilitates enhanced decision making related to utility use.

GM has deployed this system across its global facilities, and the Energy and Utility Services Group is actively training personnel at all facilities to learn how to effectively manage the system. Training sessions were conducted in Europe during 2006. A major benefit of the system is that there are multiple levels of checks and balances on all sources of data. This process provides a comprehensive picture of global utility use and has been instrumental in providing the necessary data to reveal cost savings over the cost of the initial investment.

## **Global Target**

During 2001, a corporate target was established to reduce energy use by 10 percent globally by 2005 from a 2000 baseline; the Performance section below outlines the results of our efforts. In addition, a new corporate target to reduce energy use by

10 percent globally by 2010 from a 2005 baseline was established. GM also has global CO2 reduction targets which are discussed in the Greenhouse Gases section of this report.

## **COST COUNCIL INITIATIVES**

To further focus energy conservation efforts, GM introduced an integrated Cost Council Initiatives Program. This has been fully implemented in GMNA and is in the process of being implemented in GME and GM LAAM. The Program defines Best Practices in each region, drives implementation at facilities, and uses scorecards to monitor progress. The process is supported by top management and progress is reported monthly at the facility level and at quarterly regional level. These initiatives have significantly accelerated global energy conservation efforts.

## PLANT-LEVEL INITIATIVES

An example of Cost Council Initiatives implemented at the plant level is in GM's paint shops. Because of their complexity, it has traditionally been considered too difficult to shut down paint operations for short periods, such as weekends. GM now has implemented weekend paint shop shutdowns at all facilities, saving eight to ten percent of the energy consumed. Further examples of Cost Council 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
- Involvement in voluntary energy programs that aim to improve energy efficiency (see below).

PLANT-LEVEL ENERGY SUFFICIENCY PLANS
Energy Sufficiency Plans are also part of the Cost
Council Initiatives and involve employees taking
responsibility for energy conservation in their own
work areas. These plans give detailed procedures for
turning off equipment, lights, and other machinery,
as well as identifying leaks, such as compressed air.
The sufficiency plan lists the individual responsible

and the expected savings. The plans are very successful in helping to save energy.

The Energy and Utility Services Group (EUSG) provides support for employee training, savings calculations, and performance monitoring. Monthly meetings between the EUSG and Plant Management to review performance and energy trends facilitate the success of energy efficiency initiatives. The Worldwide Facilities Group is making significant progress in establishing energy sufficiency plans for all GM operations.

## **Voluntary Energy Programs**

GM believes 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. GM is involved in many voluntary energy programs aimed at reducing the environmental impact of energy use.

Although the two examples shown below focus on U.S. programs, the lessons learned are being implemented across our global operations.

## **EPA GREEN LIGHTS PROGRAM**

GM has continued to participate in the U.S. EPA Green Lights Program for the fifth year. During 2005, GM completed lighting assessments and implementing improvements at most GMNA assembly, stamping, and powertrain plants. The lighting efficiency plans generally involve installing more efficient fluorescent light fixtures, which provide similar light levels with significant energy savings, as well as removing unnecessary lighting and installing motion sensors where appropriate.

As a result of GM's Green Lights initiative, 20 GM plants have now received EPA Green Lights Certification. An additional four plants have completed Green Lights upgrades with two more plants expected to be completed by the end of 2006. The lessons learned from the EPA Green Lights Program have been comprehended in GM's Lighting Standards and are routinely implemented in new building construction and product programs. GM's newest facility, the Lansing Delta Township plant, is equipped with energy efficient lighting and controls

resulting in less than 60 percent of the electric power usage allowed by Michigan's energy code.

Similar programs have been implemented at three Mexican and six Canadian sites to achieve cost-effective lighting system improvements.

# EPA LANDFILL METHANE OUTREACH PROGRAM AND EPA GREEN POWER PARTNERSHIP

GM participates in the U.S. EPA Landfill Methane Outreach Program, a voluntary program to expand the use of landfill gas for plant heating and electrical generation. In 2005, five GM facilities utilized methane gas from landfill sites as boiler fuel: the Toledo, Ohio powertrain plant; the Oklahoma City, Oklahoma; Orion, Michigan; Fort Wayne, Indiana; and Shreveport, Louisiana assembly plants. Annual savings at our plants burning landfill gas exceed \$500,000 per location.

According to a 2003 study by the World Resources Institute and the Green Power Market Development Group, GM was the largest non-utility direct user of landfill gas in the U.S. By the end of 2005, GM's direct utilization of landfill gas was 1.5 TBTUs.

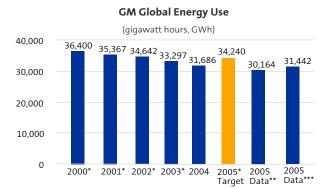
In addition to burning methane in plant boilers, GM also is committed to purchasing two percent of the electrical load at our Service Parts Operations from environmentally responsible power sources through the EPA Green Power Partnership. In May 2003, greener power generated from landfill gas began flowing to Service Parts Operations locations in Flint and Grand Blanc, Michigan. GM buys approximately 13 million kWh of electricity each year from the Granger Energy landfill gas-to-electricity project.

As a result of the Methane Outreach Program and the Green Power Partnership, GM expects renewable energy to approach two percent of its North American total power needs.

## **Performance**

In 2005, GM consumed 31,442\* gigawatt-hours (GWh) of energy from various sources including electricity. This represents a 0.77 percent decrease over 2004 and a 14.8 percent decrease against 2000.

\*2005 Data now includes GMDAT facilities (Bupyeong, Boryeong, Gunsan & Changwon), China facilities (Shanghai & Shenyang), and the GM South Africa (GMSA) Facilities. Previous data (2000-2004) did not include these facilities, with the exception of Shanghai, China. Energy Consumption for 2005 (excluding GMDAT, Shenyang China and GMSA) was 30,164 GWh, which corresponds to an 18.2 percent reduction.



- \*\* Performance under the 2000 baseline
- \*\*\* Performance under the new baseline, which includes GMDAT facilities (Bupyeong, Boryeong, Gunsan & Changwon), China facilities (Shanghai & Shenyang), and the GM South Africa Facilities)
- \* See energy conversion factors at physics.nist.gov, a non-GM site, please check privacy policy

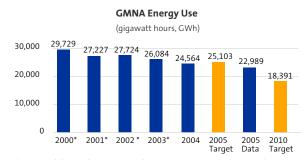
#### **GM NORTH AMERICA**

## **GMNA Target**

GM's North American region maintains its own separate regional target to reduce energy use. In 2005, GMNA surpassed its target of a 25 percent reduction in energy use goal from a 1995 baseline by realizing a 31 percent reduction over the timeframe. A new long-term goal for GMNA has been established as a 20 percent reduction in energy use by 2010 from a 2005 baseline. 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.

## **Energy Use**

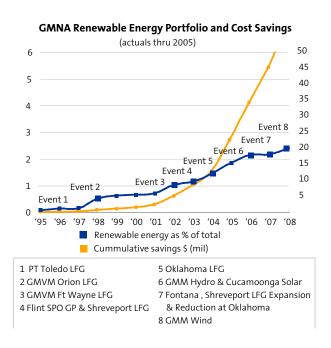
In 2005, GMNA consumed 22,989 GWh of energy. Overall energy usage for the region was down 31 percent, compared to 1995. Compared to 2004, overall energy use was down 6.41 percent.



\* Re-stated due to changes in our data management systems providing new analyses of data sets. 2002 was the first year to include data from Allison Transmission Division.phase-in.

## **Renewable Energy Use**

Working with the Green Power Market Development Group, GM is advancing implementation of alternative and renewable energy projects. The group, comprised of leading corporations and the World Resources Institute, focuses on developing U.S. corporate markets for 1,000 megawatts of cost-competitive, new, green power capacity by 2010. We are working with the group to develop landfill gas use, fuel cell generation, and photovoltaic and wind power projects.



## Solar in California

General Motors is one of the leading users of renewable energy in North America. In addition to our use of landfill gas as boiler fuels, GM also began using photovoltaic systems to provide electrical energy in 2006.

A new photovoltaic installation at our Rancho Cucamonga, California Service Parts facility became operational in June 2006. According to the World Resources Institute, it is the largest photovoltaic installation among publicly held corporations in the United States.



Solar panels line the roof of the GM Service Parts Operations Parts Distribution Center in Rancho Cucamonga, California. The parts center is the nation's largest corporate solar photo voltaic installation. The solar panels keep costs down and reduce the facility's environmental impact. Solar energy not consumed is fed back into the California power grid, helping thousands of Californian's power their own homes..



GM is in the final stages of developing an additional solar photovoltaic installation at a facility in Fontana, California. This project is approximately three-quarters of the size of our Rancho Cucamonga installation, and will also be a significant project.

The system, consisting of 180,000 square feet of solar panels, provides 50 percent of the facility's electrical load – producing 1.5 million KWh per year. This is the equivalent of replacing 675 tons of coal per year.

The New York Times recognized GM's outstanding leadership in deploying this project through the use of innovative technology and power purchase agreements (article available at www.nytimes. com/2006/10/21/business/21solar.html - login required).

## **GM** of Canada Energy Use

Since 2000, GM's Canadian operations have reduced energy use by more than 15 percent. Energy use decreased in 2005 by 2.69 percent compared to 2004. GM of Canada publishes detailed energy efficiency accomplishments annually in the Canadian GHG Challenge Registry Program.

## **GM of Mexico Energy Use**

GM Mexico (GMM) decreased total energy use in 2005 by 6.64 percent over 2004. Since 2000, GMM operations have reduced energy use by 4.98 percent. GMM continues to implement a series of energy efficiency initiatives, including:

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

In 2005, GMM also received the National Energy Savings Award, based on their performance in 2003 & 2004.

## **GM EUROPE ENERGY USE**

GME Operations increased energy use in 2005 compared to 2004 by 2.75 percent to 4,667 GWh due primarily to an increase in production. Since 2000, GME operations have reduced energy consumption by 1.68 percent. GME operations continue the aggressive implementation of energy conservation initiatives in order to contribute to global energy

reduction targets. Building on progress in 2004 in GM Europe, we engaged employees in:

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

## **GM ASIA PACIFIC ENERGY USE**

During 2005, GM's Asia Pacific (AP) operations saw an overall increase in energy use, primarily due to expansion in the region. Total consumption for the region was 2,395 GWh.

\* Total Consumption for the GMAP region now includes GMDAT (Boryeong, Bupyeong, Changwon & Gunsan) and two joint venture facilities in China — Shanghai & Shenyang.

# GM LATIN AMERICA, AFRICA AND MIDDLE EAST ENERGY USE

Energy use in Latin America, Africa and Middle East (LAAM) operations decreased in 2005 by 2.42 percent to 1,391

\*\* GWh. Since 2000, GMLAAM operations have decreased energy use by 4.88 percent. GMLAAM operations continue their aggressive implementation of common energy conservation initiatives in order to contribute to global energy reduction targets.

## **GM ARGENTINA ENERGY USE**

## **Objectives**

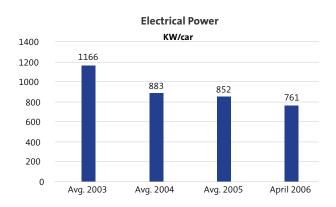
GM Argentina is committed to reducing consumption of resources.

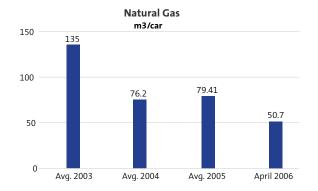
#### **Methods:**

Electrical power

Compressed air reduction during non-productive hours

- Turning off air compressor for one hour during operation time
- Elimination of air leaks mainly in Body Shop
- Turning off heat ventilation (at the whole plant, including administration building)
- BASHs & PASHs turned off during weekend
- BASHs temperature set point reduced from 23°C to 20°C
- PASHs & Clean Room off after production
- Primer & Top Coat oven cure optimization





## **GM EAST AFRICA (KENYA)**

GM East Africa (GMEA) won the overall Energy Management Award for 2004/2005 during the Kenyan National Competition for Energy Management in Industry. GMEA also won the Electricity Savings Award in the same competition. GMEA achieved a 37 percent reduction in electrical consumption per vehicle and a 22 percent reduction in consumption of industrial diesel oil per vehicle over a 1 1/2 year time frame. These achievements were realized by implementing a variety of energy efficiency improvement measures related to lighting, compressed air management, equipment optimization, and paint oven optimization.



GM East Africa (GMEA) won the overall Energy Management Award for 2004/2005 during the Kenyan National Competition for Energy Management in Industry.

\*\* Performance includes GM South Africa Consumption (GMSA), which has not been previously reported. GMLAAM 2005 performance (excluding GMSA) is 1,326 GWh, which corresponds to a 7.0 percent decrease from 2004 performance and a 9.34 percent decrease from 2000 performance.

#### **WATER USE**

One of GM's Environmental Principles is specific to reducing waste and pollution and conserving resources. GM works to minimize the impact of water use on nearby communities, particularly where water is scarce. GM uses water as efficiently as possible and requires that it is treated prior to being discharged.

In all GM 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, GM applies its own minimum requirements and guidelines as defined by the Environmental Performance Criteria, which apply globally.

GM's efforts to drive water conservation include:

- Developing a culture of conservation, involving employees, through the Quality Network and ISO14001 program
- Designing water recycling, reuse, and 'water cascading' into our processes
- Installing meters to track consumption in order to drive conservation efforts
- Implementing water conservation projects that also generate good economic payback, such as replacement of once-through water uses by recycle systems and cooling towers.

Please note the volumes and treatment of wastewater is reported in Emissions to Water (GMNA only).

## **Global Target**

In 2001, GM set a global target to reduce water use by 10 percent between 2000 and 2005. As of December 2004, GM had far surpassed its global target, and continued to drive reductions in water consumption by making its 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 below.

In 2006, GM set a new global target to reduce water use by 10 percent between 2005 and 2010.

#### **PERFORMANCE**

In 2005, GM's global operations used 60.7 million cubic meters of water, which includes water consumption from the GMDAT, GMSA, and Shenyang & Shanghai, China facilities (previously not included in our reporting). Even with the addition of these facilities, GM has reduced water use by 19.0 percent compared to 2000, far exceeding the target of 10 percent by 2005.

**GM Global Water Use** (million cubic meters, purchased and well water)



- \* inclusive of GMSA, GMDAT & GM China Shenyang & Shanghai
- \*\* Under Original 2000 baseline
- \*\*\* minus 10% from 2005 performance (60.7)

\* 2005 Data now includes GMDAT facilities (Bupyeong, Boryeong, Gunsan & Changwon), China facilities (Shanghai & Shenyang), and the GM South Africa (GMSA) Facilities. Previous data (2000-2004) did not include these facilities, with the exception of Shanghai, China. Water Consumption for 2005 (excluding these facilities) was 56.9 million cubic meters, or a 24.2 percent reduction from the original 2000 baseline.

## **GM NORTH AMERICA**

In 2005, GM reduced water usage by 4.05 percent compared to 2004, using 37.6 million cubic meters. GM's target was to reduce water use by 15 percent between 2000 and 2005. This target was successfully completed by December 2004, when a 16.1 percent reduction in water use was realized over 2000 levels.

In 2006, GMNA set a new target to reduce water use by 20 percent between 2005 and 2010.

At the Janesville Assembly facility in Wisconsin, a cooling tower was installed for eight large powerhouse air compressors and brought on-line in January 2005. This has resulted in a water savings of over 92 million U.S. gallons through April 2005, over 2004 consumption. This corresponds to a similar reduction in discharge volume to the Rock River.

## **GM** Canada

GM Canada Ltd. (GMCL) decreased its water usage by 5.20 percent compared to 2004, using 4,684 million cubic meters. GMCL has continued to work to reduce water consumption with the implementation of various water saving projects.

## **GM of Mexico**

GM Mexico (GMM) decreased water use in 2005



by 3.054 percent compared to 2004. GMM is well known for its efficient water use, using only half the volume of water required per vehicle compared to average U.S. automotive manufacturing plants.

The Ramos Arizpe complex has a near total water reuse process where only 15 percent of water used is discharged. The Silao Complex set an aggressive ISO14001 goal to reduce water consumption by 15 percent per unit of production from a 2002 base year. The project used flow meters, reuse of non-potable water, and potable water savings and, to date, has reduced water usage by 0.73 cubic meters per vehicle or the equivalent of 192 U.S. gallons per vehicle. With the plant assembling over 200,000 vehicles per year, that means that they save at least 4 million gallons of water each year.

The Toluca Complex achieved an average 12 percent reduction in fresh water rights costs as a government incentive because of its excellent wastewater treatment programs that exceed compliance requirements.

#### **GM ASIA PACIFIC**

During 2005, our Asia Pacific operations saw an overall increase in water use to 7.5 million cubic meters, due primarily to expansion and production increases in the region. Note that data for the GMAP region now includes the GMDAT facilities (Bupyeong, Boryeong, Changwon & Gunsan) and two Joint Venture facilities in China (Shenyang & Shanghai).

#### **GM** India

Facing acute groundwater shortages in recent years, GM India had been forced into a position of purchasing water from nearby externally-owned bore wells and other sources in order to meet production requirements. GM developed an innovative solution that involves obtaining water from the nearby Narmada Canal, allowing a reliable supply of water. There also has been a reduction of the impact on natural resources, given the move to use more surface water rather than ground water. Water quality used in the production process has also improved. Sixty-eight percent of GM India's annual water requirement is now sourced from the Narmada Canal.

# GM LATIN AMERICA, AFRICA AND MIDDLE EAST

During 2004, GM's Latin America, Africa and Middle East (LAAM) operations reduced overall water use by 0.95 percent. Data for GMLAAM now includes two facilities in South Africa, which were previously not reported.\*

## **GM Argentina**

#### **OBJECTIVES**

GM Argentina is committed to reducing waste water effluents. In the three year period between 2003 and 2006, GM Argentina reduced waste water/vehicle produced by 52 percent.

## METHODS:

- Water flushing in urinals
- RO unit purge to gutters

## **Environmental Performance** | Water

- Change of spray nozzle in stage N° 7 in paint shop (saving 2.45 m3/h)
- Adjustment of overflow in stage N° 4 (saving 0.25 m3/h).
- Change of industrial water in Stage N°6 for DI Water (saving 5.4 m3/h)
- Reduction of drainage in stage 8 A, B from four times per month to once a month (saving 47 m3/ month)
- Reduction drainage Stage N°7 from four times per month to once a month (saving 36 m3/ month)
- Reduction drainage Stage N°4 from two times per month to once a month (saving 80 m3/month)
- \* 2005 Data now includes GMSA facilities. Previous data (2000-2004) did not include these facilities. GM LAAM Water Consumption for 2005 (excluding GMSA) was 4.7 million cubic meters, or an 18.3 percent reduction from the original 2000 baseline.

## Waste & Recycling

Wastes are generated by production processes and support operations. Support operations include activities such as facility maintenance, powerhouse services, wastewater treatment, and administrative and engineering offices. As expressed in our Environmental Principles, GM is committed to reducing waste and pollutants, conserving resources, and recycling materials. GM's objectives for both hazardous and non-hazardous wastes are similar. The goal is to reduce waste as much as possible at its source. Where this is not possible, GM reuses or recycles as much as is technically and economically feasible.

The most effective environmental practices focus on eliminating 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. GM continues to evaluate and apply processes, practices, materials,

or products that avoid, reduce, or control pollution at its source. 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 GM has 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.

GM collects waste metrics data from its worldwide facilities using a combination e-mailed surveys and a web-based reporting system. A total of 134 GM sites provided waste data in 2005, of which 108 (81 percent) are in North America. Joint venture data is not included in this report at this time. GM continually works to overcome global challenges such as differences in waste definitions from region to region and to refine the global data collection process.

## **Resource Management**

GM's Resource Management (RM) program preserves natural resources, reduces environmental impact, and achieves cost savings. In this program, a single supplier manages all wastes at the plant. The supplier is encouraged to reduce waste volumes.

GM has designed the Resource Management 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, this approach makes the supplier a partner inside the plant. Wastes previously sent to landfill, such as cardboard boxes and wooden pallets, are now directly reused or recycled. Now operating, where economically feasible, in all GM North American manufacturing facilities, the RM program has saved \$6 million over the past three years. GM currently is in the process of implementing the program in Europe and South America.

The U.S. Environmental Protection Agency (EPA) has recognized the program through its WasteWise program.

## **Chemicals Management**

Details about the Chemicals Management program can be found in the Environmental Management section of this report.

## **Voluntary Pollution Prevention Programs**



GM continues to participate in U.S. Environmental Protection Agency (EPA) WasteWise, a voluntary program that helps organizations eliminate solid waste to benefit the

environment. In 2004, GM was inducted into the WasteWise "Hall of Fame," commemorating an ongoing commitment to waste reduction; this was the fourth consecutive year that GM was recognized with awards by the WasteWise program.

In 2005, GM's U.S. operations prevented or recycled 1.634 million metric tons of waste. Because waste also has an effect on greenhouse gas (GHG) emissions, these waste savings also reduced our GHG emissions in 2005 by 1.1 million metric tons of carbon dioxide equivalents. According to the EPA's Waste Reduction Model (WARM), this is comparable to the annual emissions from the power used by 504,195 households and the carbon dioxide used by over 91 million tree seedlings grown for 10 years.

## **Global Target**

GM exceeded the previous five-year target (2000-2005), which was to reduce all waste materials by 15 percent. All global manufacturing operations and most of the non-manufacturing locations in North America participated in the reduction goal. GM global facilities actually achieved a 23.5 percent reduction in total waste. Over the same period, global recycling rates increased from 82 to 88 percent.

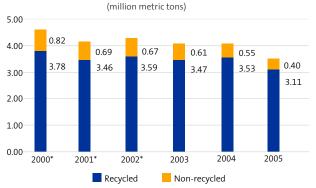
A new five-year goal has been established for the period 2005-2010 that requires further reductions in non-recycled wastes. Each GM geographic region — North America (GMNA); Europe (GME); Asia-Pacific (GMAP); and Latin America, Africa, Middle East (GMLAAM) — is responsible for setting their own targets, based on the existing waste management infrastructure and opportunities in the region.

#### **Performance**

GM's global facilities exceeded their five-year 15 percent waste reduction target by reducing total waste generation 23.4 percent (from 4.61 million metric tons to 3.53 million metric tons) between 2000 and 2005. Global waste volumes were down 13.5 percent in 2005, compared to 2004. Worldwide vehicle production was down 4.1 percent and production-adjusted waste amounts decreased 9.8 percent during the same one-year period.

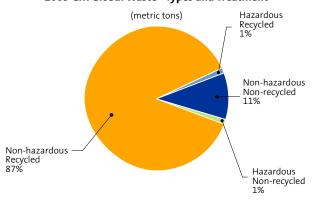
Non-recycled waste decreased 23.3 percent in 2005, falling from 0.553 million metric tons in 2004 to 0.424 million metric tons in 2005. Recycling rates at GM global facilities averaged 88 percent in 2005, up from 82 percent in 2000.

#### **GM Global Operations - Total Waste**



<sup>\*</sup> Data restated due to greater accuracy in data collection.

## 2005 GM Global Waste - Types and Treatment



The chart above shows the methods used to manage waste.

#### **GM NORTH AMERICA**

## **Waste Reduction and Recycling Targets**

GMNA manufacturing and support operations exceeded their previous target of 15 percent and cut the amount of all wastes generated by 30.7 percent (from 3.7 to 2.55 million metric tons) between 2000 and 2005. On a per-vehicle-produced basis, this is equal to a reduction of 15.4 percent. In 2005, GMNA recycled 83 percent of all waste materials.

For the period 2005 through 2010, GMNA set a target to continue to reduce non-recycled waste by an additional 15 percent. To help achieve waste reduction and recycling goals, GMNA uses several specific management programs including Resource Management, Chemicals Management, and Industrial Oil Management, in addition to ISO14001 environmental management systems and the WE CARE program.

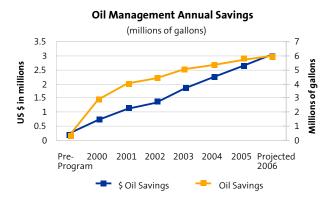
The GMNA operations that contribute to the waste data in this report currently represent over 80 percent of GM global automotive operations and, in addition to manufacturing and assembly facilities, include Service & Parts Operations and major administrative, engineering, and test facility complexes.

## INDUSTRIAL OIL MANAGEMENT

The focus of the used oil program is to manage used oil from the Powertrain and Stamping plants. Those plants account for 90-95 percent of the used oil generated by GMNA operations. Used oil is picked up, processed, and returned to the plants by reputable suppliers. GM's two suppliers have good environmental records, work well with the regulatory authorities, and recycle the used oil into fluids and lubricants that are sold to our plants for cost savings.

The total cost savings estimate on returned products versus virgin oil products is now greater than \$2.5 million annually, with no compromise in quality or performance of the recycled oil products. The used oil program's savings are significant, sustainable, and are in accordance with our Environmental Principles and practices. GM also is working with all plants to reduce the amount of oil generated, to better segregate used oil streams, and to recycle on-site

where possible. For example, the GMNA plant that generates the highest amount of oil, a transmission plant, revised its used oil practices, resulting in a reduction in the water content of used oil streams by about one-third. As a result, the plant reduced its used oil costs by about 70 percent. Several plants are now performing on-site oil recycling as well. The chart tracks the savings:



GM Powertrain and Stamping plants are expected to use 20 percent of recycled oil products in 2006 with two thirds of GM plants being fully compliant. Currently, GM purchases nearly five million gallons of recycled oil products annually. GMNA generates about six million gallons of recoverable oil annually, and will likely purchase more recycled oil than the recoverable oil it generates within the next two years.

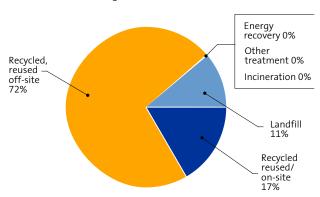
Oil management and lubrication standards can be found at www.gmsupplypower.com in the manufacturing power library.

## NON-HAZARDOUS WASTE MANAGEMENT

Total non-hazardous waste managed in 2005 was 2,527,033 metric tons in GMNA, which represents a reduction of 17.5 percent over 2004 (10 percent decrease on a production-adjusted basis). Non-hazardous waste is made up of general plant trash, used packaging, most foundry wastes, production scrap and scrap metals, and most industrial process sludge and waste oils. In 2005, GM recycled or reused 88.5 percent of non-hazardous wastes (see chart below).

## 2005 GMNA Non-hazardous Solid Waste

Management Methods



Total non-hazardous waste = 21,444 metric tons

#### HAZARDOUS WASTE MANAGEMENT

The total hazardous waste managed in 2005 was 21,444 metric tons, which is down from 2004 (9.9 percent actual and 1.9 percent adjusted for production). Increased recycling and reduction activities account for the majority of the annual improvement. In 2005, GM recycled over 47 percent of hazardous waste. A small portion of the decrease was a result of waste that was delisted by petition from the hazardous classification. GMNA hazardous wastes include batteries, some process fluids, solids, sludge, solvents, maintenance fluids, and some waste oils.

2005 GMNA Hazardous Solid Waste

# Recycled/reused off-site 47% Energy recovery 35%

Landfill

Other

treatment 5%

Recycled

reused/on-site

## **Selected Recycling Case Studies**

#### **SOLVENT WIPE RAGS**

GM assembly plants recycle solvent cleaning wipes into new vehicle parts. The wipes are made of a polypropylene material and are pre-soaked with a mild solvent. Rather than incinerating used wipes, a material recovery supplier treats the solvent-laden rags on-site; this removes over 95 percent of the solvent. The polypropylene material is cleaned, shredded, baled, and densified. The densified material is then mixed with other recycled content to form pellets, which are molded into polypropylene vehicle components such as plastic wheel well liners. Typical reductions can amount to more than 25 tons in a given year. Polyester wipes are also converted to insulation materials and used in vehicle applications.

## FERROUS GRINDING SWARF

Ferrous grinding swarf is a mix of liquids and iron and steel shavings from machining operations. A GM team of environmental engineers, facilities managers, buyers, manufacturing engineers, materials engineers, and numerous suppliers has been working together to recycle this complex material. Recycled ferrous swarf is blended with steel machining chips and then sold, typically to steel mills. The program is projected to save more than \$250,000 and divert 6,340 tons of ferrous grinding swarf from landfills each year.

#### **BATTERY RECHARGE AND REUSE**

Goodwill Industries of Flint has partnered with GM to provide a battery recharge/reliability verification service to ensure that 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 receive the batteries from facilities, recharge and check them, and return them for reuse. Batteries that can no longer be reused are reclaimed in an environmentally sound manner.

#### **CARTRIDGE FILTERS**

Cartridge filters are cylindrical air filters used extensively throughout GM assembly, metal fabricating, and powertrain operations to filter

## **Environmental Performance** | Waste & Recycling

particulate matter generated from production activities from the air, helping to maintain indoor air quality. GM's cleaning program for these industrial filters expanded since last year with over 8,000 filters being cleaned and reused during 2005. 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. In some cases, metal fines are extracted and are sent offsite for recycling. Some plants also send their filters directly to recyclers. As a result of these recycling and reuse activities in 2005, landfilled filter waste was reduced by 60 metric tons and the plants saved \$421,000 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 re-circulated and reused. The filter media becomes a waste product, along with the metal scrap. This material has been sent to landfills in the past but several GM facilities now utilize suppliers that clean, shred, and recycle their rolled filter media into plastic pellets which are used in plastic products that include pallet spacers and other mixed plastic products.

#### SCRAP PALLETS AND WOOD

Landscape wood processing facilities receive scrap pallets and other wooden packaging from several GM facilities. 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.

#### **GM ECUADOR**

 More than 95 percent of the hazardous waste generated by GM Ecuador is being used for energy recovery purposes, reducing the use of municipal landfills.

#### **GM ARGENTINA**

GM Argentina is committed to reducing hazardous waste through the following methods:

- Drying metallic and biological sludge by heat;
- change of lime by cationic polymer; and
- change of chemicals in the process.

Implementation of these programs has resulted in a 50% reduction in hazardous waste from 2003 to 2006.

## **Emissions to Air & Water**

## **EMISSIONS TO AIR**

All U.S. environmental engineers are required to be CHMM certified (Certified Hazardous Materials Managers) and have had specialized training to manage air emissions. These experts have a thorough knowledge of the applicable regulations and have designed programs that review current emissions levels and establish goals for reducing them. GM is committed to reducing ambient air emissions from the manufacturing process. This section highlights how this occurs and gives some examples of the innovative engineering practices that have been 'designed into' GM facilities.

Painting operations are the main source of Volatile Organic Compound and Hazardous Air Pollutant emissions from automotive assembly plants. The main source of other air pollutant emissions from facility operations, such as nitrogen oxides (NOx), sulfur oxides (SOx) and carbon monoxide (CO), is from burning fuel to supply heat and power.

In the U.S., GM established an Air Steering Committee that shares lessons learned across the Corporation with an emphasis on reducing facility air emissions. The committee examines past, present, and future air management programs and aligns them with evolving regulatory demands. The Committee discusses the Best of the Best (BOB) programs and initiatives, and encourages its members to apply these BOB practices at their own facilities. For example, the Committee focused on the best practices to reduce Hazardous Air Pollutant chemicals.

During the past decade, GM has decreased emissions from heating and power operations by reducing the use of coal and oil-burning systems in favor of cleaner-burning natural gas, and reducing fuel use by improving the energy efficiency of GM facilities. Older coal-burning systems have been replaced with smaller, higher-efficiency systems.

Environmental engineers in the Powertrain Components and Casting operations use the Casting Emission Reduction Program (CERP) to drive the use of new core resin systems and moldmaking operations to reduce emissions to air and water. The Foundry Environmental Issues Team has developed business plans with key objectives to reduce emissions from melting, pouring, cooling, and shakeout operations at our casting plants.

## **Ozone Depleting Gases**

GM has taken major steps towards eliminating ozone-depleting substances from our products, processes, and operations. None of our products contain ozone-depleting substances (ODS). We continue to maintain some stationary equipment, such as process cooling or air conditioning systems, that contain ODS. The refrigerant-containing systems will be replaced as required and the ODS refrigerants will be recovered and recycled.

## **Hazardous Air Pollutant (HAP) Emissions**

The U.S. EPA identifies 189 Hazardous Air Pollutants (HAP) to be regulated. During 2000, an extensive effort was initiated with the paint suppliers to minimize the amount of HAPs contained in coating materials. As of November 2006, nearly all of the paint shop coatings used in the U.S. had been reformulated to reduce HAP emissions to below the standards set by the Maximum Available Control Technology (MACT) requirements.

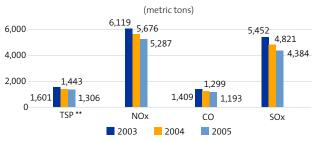
## **Criteria Air Pollutant Emissions**

The major source of criteria air pollutant emissions (other than VOCs) is from burning fuel to supply heat and power to our facilities. GM has cut emissions from these sources by reducing the use of coalburning systems, increasing the use of cleaner-burning natural gas, and improving the energy efficiency of facilities. GM continues to participate

in the EPA's Landfill Methane Outreach Program and has converted facility boilers at several different GM operations to burn landfill gas. Doing so reduces criteria pollutant emissions. For more on the Landfill Methane Outreach Program, see the Energy section of this report.

The following graph shows criteria air pollutants emitted from our North American facilities since 2003. The data is 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 eight percent over the previous year (2004) and 17 percent since 2003. On a GMNA production-adjusted basis, these emissions dropped four percent between 2003 and 2005.

#### **GMNA Criteria Air Pollutant Emission**



- \* Air emission data derived from corporate fuel use records and generalized emission factors. \*\* Total Suspended Particulates
- See unit conversion factors at ts.nist.gov, a non-

## GM site, please check privacy policy.

## **EMISSIONS TO WATER**

GM strives to use water as efficiently as possible. Plant wastewater is treated before being discharged to either municipal wastewater treatment plants or other receiving bodies of water, all while meeting applicable permit requirements. In locations where there are no clear wastewater discharge criteria, GM applies its own requirements and guidelines as defined by the Environmental Performance Criteria (EPCs), which apply globally.

GM facilities operate in accordance with local, regional, and national air and wastewater regulatory requirements. All manufacturing

facilities are required to be certified to the ISO14001 environmental management system.

Wastewater quality tests measure levels of various parameters such as Biological Oxygen Demand (BOD5), Total Suspended Solids (TSS), Chemical Oxygen Demand (COD), nitrogen, phosphorus, oil, grease, and heavy metals. Global data is not available for these indicators due to the differing data collection systems and variations in analytical processes. The challenge with wastewater is to ensure that on-site wastewater treatment facilities remain efficient and up-to-date to comply with local discharge regulations in a cost-effective way.

GMNA's Wastewater Facility Containment program maintains safety, reliability, and compliance with relevant regulations and GM Environmental Performance Criteria.

## **GM NORTH AMERICA**

## **Painting and Coating**

Painting and coating operations at GM assembly facilities are a major source of VOC emissions. When renovating our paint shops or installing new equipment, GM uses technologies that reduce air emissions. Since 2000, three paint shops (Shreveport Assembly, Flint Assembly, Lansing Craft Center) were updated and four new paint shops (Lansing Grand River, Oshawa Complex, Lordstown Assembly and Lansing Delta Township Assembly) were built with state-of-the-art technology. The technologies include:

- Low VOC emission water-borne basecoat coatings for new and modified systems
- Abatement systems to control VOCs from bake ovens, ELPO dip processes, and portions of our spray booths
- Reduced use of cleaning and purge solvents
- Use of de-ionized water for purging waterborne basecoat
- High efficiency electrostatic application of waterborne paints
- Use of powder-based primer surface materials at certain locations and lead-free ELPO material.

The Flint Truck facility is currently in the process of installing an abatement device on the ELPO process of the 560 (Medium Duty) line. The project involves the rework of the ELPO oven and installation of a Regenerative Thermal Oxidizer (RTO). The RTO will contribute to the reduction of odors, as well as controlling VOC emissions from the entire process by 95 percent.

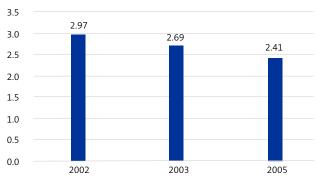
## GM NORTH AMERICA TRI AND NPRI REPORTING

GM quantifies emissions and effluents from its 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.

GM's U.S. facilities submitted their 19th annual TRI report to the U.S. EPA in July 2006 representing 2005 data. The report highlights 50 facilities that reported emissions for 48 of 637 chemicals. GM of Canada Limited (GM of Canada) presented its 13th annual NPRI report to Environment Canada for 2005. Six facilities reported emissions or transfers of 42 chemicals that met reporting thresholds out of 676 chemicals listed, including criteria air contaminants and speciated VOCs. Normalization for production of U.S. and Canadian data is calculated using the number of vehicles produced in each country's plants.

#### **SARA TRI Releases and Transfers**

(kilograms per vehicle produced)



The combined, non-adjusted U.S. facilities' TRI onsite releases to air, water, land, and treatment, and off-site transfers to publicly-owned treatment

works and treatment/disposal facilities dropped by 12.6 percent over the previous year. Combined TRI releases and transfers are down 86 percent since the 1988 base year. When adjusted for production, combined TRI releases and transfers are 2.4 kg/ vehicle, down 79 percent since 1988. 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. The diverse mix of non-assembly operations result in our emissions per vehicle appearing to be higher compared to other automakers.

Similarly, the Canadian combined air, water, and land releases and off-site transfers are down over nine percent since 2004. When adjusted for production, NPRI releases and transfers are 8.72 kg/vehicle, down a percent from the previous year. Canadian figures include emissions from Criteria Air Contaminants (CACs) such as carbon monoxide, nitrogen oxides, particulate matter <2.5µm, particulate matter <10µm, total particulate matter, sulfur dioxide, and total volatile organic compounds which is why emissions per vehicle appear significantly larger than the reported U.S. figures. GM of Canada reported about 5481 metric tons of Criteria Air Contaminant air releases in 2005, slightly lower from 6038 metric tons in 2004. This decrease is predominantly related to a significant decrease in VOC emissions at the Oshawa Car Assembly Plant due to production decreases.

NPRI Releases and Transfers
(kilograms per vehicle produced)

8.84
8.81
8.72
8
6
4
2
0
2003
2004
2005

An analysis of NPRI emissions (excluding CACs) and transfers to municipal sewage treatment and landfill per vehicle indicate that, in 2005, totals decreased to 2.18 kg/vehicle from 2.27 kg/vehicle in 2004 in GM of Canada.

In 2005, Environment Canada introduced a new reporting requirement for greenhouse gas emissions (GHG). The facility level reporting is expected to improve the level of accuracy of the National GHG Inventory, track performance, and improve public confidence through transparency.

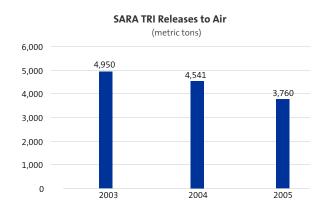
Any facility that emits at least 100 kilotons of carbon dioxide equivalents per year is required to report annually on its emissions of 24 GHGs, including carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, perfluorocarbons, and hydrofluorocarbons.

There were two GM of Canada facilities that met the reporting threshold for GHG emissions in 2005. GM of Canada submitted annual emissions of carbon dioxide equivalents for three of the 24 GHG gases subject to reporting for a total of approximately 270 kilotons, down slightly from the reported 277 kilotons in 2004.

## **TRI/NPRI Emissions to Air**

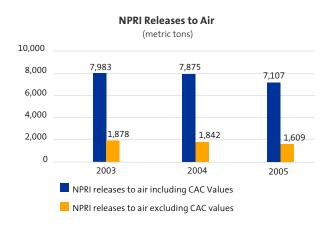
#### GM U.S.

Between 2004 and 2005, combined TRI air pollutant emissions from all U.S. facilities were down 17.2 percent (from 1.268 in 2004 to 1.136 in 2005), while U.S. production levels were down 7.6 percent. This represents a 10.4 percent decrease in one year on a production-adjusted basis. Since 2003, air emissions are down 24 percent overall and 10.8 percent per vehicle (from 1.273 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, especially Hazardous Air Pollutants (HAPs). Other contributing factors include production levels (fewer vehicles painted in 2005 compared to 2004), as well as product and process changes.



#### **GM CANADA**

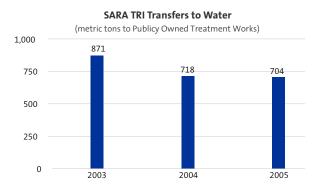
GM of Canada NPRI 2005 air releases decreased by approximately 1.6 percent to 7107 metric tons compared to 2004 releases of 7875 metric tons. The significant factors contributing to this reduced reporting were a decrease in production at the Oshawa Car Assembly plant which is GM Canada's largest facility, as well as the conversion to the new car paint ELPO process which includes a new Regenerative Thermal Oxider (RTO) (versus the old ELPO process without any abatement technology), and the sale of our London electromotive division in 2005.



## TRI/NPRI EMISSIONS TO WATER

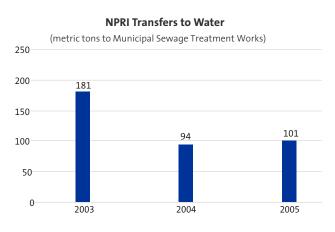
## GM U.S.

Combined divisional TRI transfers to water are down 2.0 percent from 2004 levels and 19.2 percent from 2003 levels (see graph). Production-adjusted emissions of water pollutants decreased from 0.22 to 0.21 kg/vehicle since 2003. Production was down 14.8 percent between 2005 and 2003. 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**

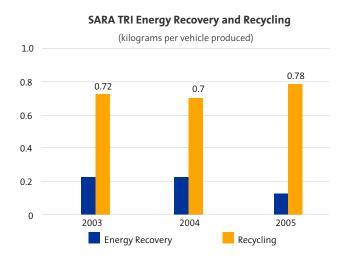
Total transfers to municipal sewage treatment plant (MSTP) for GM of Canada increased from 94 metric tons in 2004 to 101 metric tons in 2005. Most of this increase is related to significantly higher discharge on nitrate ion at the Oshawa Car Assembly Plant due to the migration from the existing paint ELPO process to the new paint ELPO process that utilizes a different material. On a normalized, per vehicle basis, these transfers increased from 0.10 kilograms per vehicle to 0.12 kilograms per vehicle over the same time period.



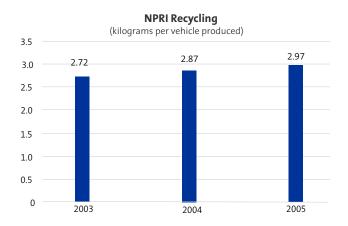
#### RECYCLED TRI AND NPRI SUBSTANCES

A portion of the toxic materials from U.S. and Canadian facilities is managed using recycling and energy recovery. Those amounts in kilograms, adjusted for production, are presented in the following graphs for 2003-2005 from the U.S. TRI and the Canada NPRI.

On a production-adjusted basis, recycled volumes of U.S. TRI substances increased 7.8 percent between 2003 and 2005 and energy recovery levels decreased 45 percent. Non-adjusted TRI recycling decreased by 8.2 percent, while energy recovery decreased by 53 percent.



On a production-adjusted basis, the amount of GM of Canada reported NPRI substances recycled (including energy recovery) decreased by approximately six percent between 2004 and 2005. Total non-adjusted GM of Canada recyclables decreased by approximately 150 metric tons from 2004 to 2005. This change is attributed to a decrease in production at the Oshawa Metal Centre which supplies stamped metal to the Oshawa Car Assembly Plant.



## **GM EUROPE**

## **Water-Based Paint Technology**

In 2005, GM Belgium implemented water-based paint technology in one of the three topcoat spray booths. This means in the first topcoat line the solvent-born metallic basecoat has been replaced by water-borne metallic basecoat. A reduction in solvent emission was expected, but the results proved an even larger reduction.

This was due to several actions in addition to the paint conversion:

- The cleaning contractor was charged for his cleaning thinner consumption
- Measuring devices were installed
- Paint shop continued a close follow up of the consumption of other thinners
- Improvement opportunities were discussed in monthly meetings with representatives from paint shop production, processing, and cleaning

This resulted in a reduction in solvent emission from 69.16 g/m² coated surface in 2004 to 55.05 g/m² coated surface in 2005 just after conversion of just one line. The other lines are scheduled to be converted by November 2007.

# GM LATIN AMERICA, AFRICA AND MIDDLE EAST

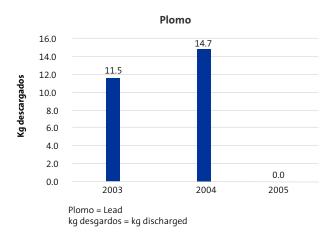
## **GM Ecuador**

The use of electrostatic applicators in basecoat and clearcoat applications was implemented during 2006 to reduce VOC emissions.

## **EMISSIONS TO WATER**

In Colombia and South Africa, GM commissioned other initiatives to ensure conformance with the Environmental Performance Criteria (EPC) and the protection of water quality.

- In Colombia, a project was developed for the design, construction, start-up, and stabilization of a biological wastewater treatment system. The system includes equalization, aeration, secondary treatment, sludge clarifier, and sludgedewatering units.
- At the Delta Motors automobile assembly units in South Africa, initiatives to remove chromium and paraffin from manufacturing processes have been combined with the construction of treatment plants to address discharges of electrocoating-related wastewater discharges.
- At GM Ecuador, conversion to lead-free ELPO during 2005 reduced soluble lead discharged to municipal sewerage system from 16 Kg as [Pb 3+] during 2004 to less than 0.01 Kg during 2005.
- A wastewater project to implement the biological wastewater treatment system (BWTS) has been approved. The BWTS will process around 600 m3 of domestic wastewater that is currently being discharged directly to municipal sewerage system.
- GM Ecuador has contributed with donations to environmental development programs in Quito. The most important project involved the remediation and recovery of the main body of water in the city.



## **Greenhouse Gases**

#### **OBJECTIVES**

## **Global Target**

In 2004, both GM's global energy use and  $\mathrm{CO}_2$  targets of 10 percent and eight percent, respectively, were met successfully — one year ahead of schedule. Therefore, for 2005-2010, GM has established new aggressive goals for global energy and  $\mathrm{CO}_2$  emissions of an additional 10 percent and eight percent, respectively. GM's energy goal is based on an absolute reduction in BTUs, while the  $\mathrm{CO}_2$  goal is based on an absolute reduction in tons of  $\mathrm{CO}_2$  emissions. The only material greenhouse gas (GHG) emission from GM's facilities is  $\mathrm{CO}_2$ .

GM's global facility CO<sub>2</sub> reduction from 2000-2005 was 15.5 percent, while GM's global vehicle production in 2005 was over nine million vehicles.

The difference between our CO<sub>2</sub> target and the energy target is due to the various ways the electricity is generated. Different generation methods, such as coal, natural gas, nuclear and hydro, have different emission factors due to the varying amounts of CO<sub>2</sub> these sources emit. CO<sub>2</sub> emissions from GM's purchased electricity equates to approximately 66 percent of GM's CO<sub>2</sub> footprint globally. Therefore, GM continues to implement its global energy strategy with a goal to grow its 'green power' purchases.

# A Systems Approach to Managing Greenhouse Gases

GM manages its greenhouse gas (GHG) emissions from its processes and products using a learning/ systems approach. This systems approach includes six key steps:

- Establish GHG reporting process: GM reports
   GHG emissions and reductions from operations
   that are owned and/or under operational/
   management control. This creates an operational
   boundary of financial control consistent with
   the World Resources Institute GHG Protocol
   and is consistent with the principle of taking
   responsibility for processes that can be controlled
   by GM.
- Establish a global process to collect accurate
  data: GM has co-developed a third party, global
  computer-based data collection system, called
  GM2100, which includes a thorough training
  element, to facilitate accurate, timely data are
  collection from each of GM's facilities around the
  globe. This database enables the development of
  an accurate energy and emissions baseline.
- Establish an emissions baseline from the GM2100 database.
- Establish both internal and external performance targets against the baseline.
- Publicly and transparently report progress against the established targets.
- Involve stakeholders: This is part of the feedback loop that is required for a learning system to develop over time.



REPORTING AND MEASURING OUR EMISSIONS GM takes responsibility for reporting emissions that result from operations under its direct financial ownership, management, or operational control. This clearly-defined boundary helps to avoid such things as double counting of direct and/or indirect CO<sub>2</sub> emissions and directly links these costs to the business bottom line.

GM also reports the CO<sub>2</sub>/mile emissions from its fleet of products to the U.S. government as part of the DOE 1605(b) GHG reporting program.

CO<sub>2</sub> emissions from GM products in use by its customers is a function of many factors, including what vehicles customers choose, how they choose to drive them, and whether they maintain them properly. Fuel economy is a measure of a vehicle's CO<sub>2</sub> emissions. GM's task is to make available a broad portfolio of products that meet customer needs and demands, and which incorporate cost effective, fuel efficient technologies in balance with other consumer expectations. For full details on greenhouse gas emissions from our products, please see the Product chapter.

#### MANAGING RELEVANT IMPACTS

GM developed its global GHG reporting strategy based on the experience gained from working with voluntary programs such as the U.S. Department of Energy (DOE) 1605(b), the Environmental Protection Agency (EPA)-Climate Leader Program, and the World Resources Institute (WRI) GHG Protocol. GM's reporting approach includes the WRI GHG Protocol Scopes 1-3.

The combined expertise and guidelines from the aforementioned processes helped to define GM's *de minimis* thresholds for reporting emissions. Under GM's GHG reporting policy statement, it will publicly report emissions that are five percent or greater than total facility emissions.

This approach is consistent with the World Resources Institute and the EPA Climate Leaders programs for tracking and reporting GHGs within an entity's organizational and operational boundaries of financial/management control.

GM supports voluntary programs that help to understand emissions that are outside direct ownership, and GM supports programs to manage GHG emissions throughout a product's lifecycle.

DATA COLLECTION – ACCURATE AND ACCOUNTABLE GM's web-based data collection and management system is helping monitor and measure energy use as well as calculate the related CO<sub>2</sub> emissions. A third party is engaged in collecting and verifying energy, water, and other environmental data from approximately 150 facilities around the globe. GM has a process in place to review performance quarterly with senior management and monthly with local management, to ensure that global and regional targets are being met.

GM measures and reports emissions data based on direct emissions from the burning of fossil fuels, such as oil, gas, and coal, as well as indirect emissions from purchased electricity. Key to the deployment of such a comprehensive energy and GHG management system globally is GM's Inventory Management Plan, co-developed with the U.S. Environmental Protection Agency (EPA). Training the employees is another critical factor in ensuring data credibility and accuracy. The training, co-managed by GM and the third-party contractor, occurs frequently because of the complexities in collecting disparate pieces of information from around the globe.

In 2004, GM began the process of updating the energy, water, and GHG data collection and management system with the new system. The data within the new system is third party verified and has greatly improved the accuracy and completeness of all current and historical data for GM. From 2000 onwards, GM has re-stated energy use data and some performance data. Therefore, data shown in previous GM Corporate Responsibility Reports may be different when compared to the 2005/06 Report.

Typically, product emissions are listed in terms of rated fuel economy, which is one factor influencing total CO<sub>2</sub> emissions from a vehicle in the hands of the consumer. Other factors, such as driver behavior and vehicle maintenance, can significantly influence CO<sub>2</sub> emissions from each vehicle in use. For this reason, GM includes a fuel economy calculator in this report to enable customers to more accurately determine their

CO<sub>2</sub> emissions from their vehicle in use. For more on fuel economy, see the Product chapter of this report.

Another key factor influencing total CO<sub>2</sub> emissions from a vehicle is the type of fuel used. For example, the use of E85 ethanol derived from cellulose reduces CO<sub>2</sub> emissions by up to 86 percent versus gasoline on a per gallon basis in a well-to-wheels comparison.

Note: In support of the Montreal Protocol, GM stopped using chlorofluorocarbons (CFCs), which are ozone-depleting substances (ODSs), in its vehicles. In 1995, GM switched to using hydrochlorofluorocarbons (HCFCs), which are non-ozone depleting substances and which have a much lower global warming potential.

#### **VOLUNTARY REPORTING**

GM voluntarily reports its environmental performance with guidelines developed by the Global Reporting Initiative (GRI). This includes performance metrics associated with GHG emissions. GM believes that reporting GHG emissions is an important strategic tool to accomplish a number of key public policy objectives, including:

- Encouraging environmental performance management by companies of all sizes, public sector bodies, not-for-profit organizations, and individuals
- Focusing these organizations on how to measure and take concrete steps to reduce GHG emissions within their direct control, in the most costeffective manner
- Aggregating as accurately as possible the combined reductions in GHG emissions achieved by the reporting organizations (without doublecounting)
- Demonstrating that voluntary measures can be highly effective in achieving reductions
- Ensuring continued global competitiveness and stimulating innovation
- Recording initiatives to reduce GHG emissions around the world and ensuring proper recognition for these reductions

- Enabling fair comparisons in the performance of competitors within industry sectors
- Continuing to build a 'common sense' framework for GHG emissions reporting which promotes market-based mechanisms, without creating undue cost or bureaucratic burdens, and
- Cost-effectively allocating resources to achieve

GHG emission reductions.

## **ACTIONS**

In 2004, GM developed a Global Operation web site to illustrate operational and GHG management activities. The web site enables customers to see GM's global footprint, regional business units, the countries where GM operates, the brands by country of operation, and the facilities in each country.

GM has also been working to update its U.S. plant profiles to show information regarding community outreach, environmental and energy activities, TRI/ SARA environmental data, and other plant summary information.



GM participates in voluntary energy and environmental management programs throughout the world to reduce GHG emissions. GM applies the experiences gained from participation in the U.S. voluntary programs to its facilities across the globe. The table below gives a summary of many of the commitments to GHG emissions reductions from global operations.

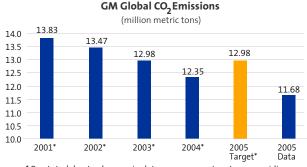
Voluntary Program	Targets/Progress/Awards
DOE 1605(b): Greenhouse Gas Reporting Guidelines and Registry	GM participated in the development of the 1605(b) GHG Reporting Protocol with the U.S. DOE in 1994. GM has been reporting under the 1605(b) guidelines since the program's inception in 1995. Reduction in CO <sub>2</sub> equivalent emissions from U.S. facilities from 1990 to 2005 equals 43.7 million metric tons — an 80 percent decrease in emissions.
DOE Climate VISION Program (started in 2003)	GM is committed to reduce $CO_2$ per vehicle produced by at least 10 percent between 2002 and 2012 for all U.S. GM facilities.
The Business Roundtable (BRT) Climate RESOLVE Program (started in 2003)	GM is implementing energy and GHG reduction programs across its global operations in support of the Business Round Table Climate RESOLVE program.
EPA Climate Leaders Program (started in 2002)	GM is the only automotive partner selected as a founding member to join the program with an aggressive target jointly developed with the EPA. GM's original goal for this program was to reduce absolute tons of CO <sub>2</sub> from GMNA facilities by 10 percent between 2000 and 2005. GM achieved a 23 percent reduction from 2000-2005. GM is working with the EPA to submit an inventory management plan for its new Climate Leaders CO <sub>2</sub> reduction target for its North American Operations of 40 percent from 2000-2010.
EPA Energy Star Program	GM is a founding member and has set 25 percent energy reduction target across its global Facility Operations from 2000-2010. In 2005, GM global energy usage was reduced 14.5 percent from 2000 levels. More on Energy.
EPA WasteWise	GM's U.S. operations reduced 1.8 million tons of waste, resulting in more than 4 million metric tons of avoided ${\rm CO_2}$ equivalent emissions in 2005. The EPA awarded GM the WasteWise Partner of the Year Award (2001 and 2003) and EPA WasteWise Climate Partner of the Year Award (2003). More on waste and recycling.

EPA Combined Heat and Power Partnership	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.
EPA Green Power Partnership	GM is a Founding Partner of the Green Power Partnership and has made the commitment to source 2 percent of Service Parts Operation (SPO) facilities' electric load with green power sources. To date, GM is sourcing just 1.88 percent (1.48 TBTUs) of its energy load from renewable energy sources.
EPA Landfill Methane Outreach Program	GM is the second largest corporate user of landfill gas for thermal energy in the U.S. With its Oklahoma City assembly plant converting in 2004, GM now has five facilities using landfill gas as boiler fuel. This effort currently provides 1.88 percent of the company's U.S. energy usage from renewable sources. GM received the EPA Partner of the Year Award in 2004.
EPA Suppliers Partnership for the Environment (SP)	GM is 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.
EPA Best Workplaces for Commuters (BWC)	GM registered its World Headquarters at the Renaissance Center, Detroit, Michigan, USA, to participate in the EPA-BWC program in June 2004. The EPA BWC program is in partnership with the U.S. Department of Transportation. Eligibility for participation requires that 14 percent of the local workforce is participating in the programs made available to reduce the burden on the infrastructure and reduce traffic congestion and GHG emissions.
World Resources Institute Green Power Market Development Group (WRI-GPMDG)	GM is a founding partner of the WRI-GPMDG and is 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.
Great Lakes Renewable Energy Association (GLREA)	In partnership with the GLREA, GM has 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 renewed the grant for the 2005 calendar year.
Other Global Activities	
Canadian GHG Challenge Registry	The Canadian Standard Association GHG Registry (formerly VCR established in 1995) was established in 2005 as a key element of Canada's National Action Program on Climate Change. The GHG Registry'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 2006, GM of Canada Limited (GMCL) was acknowledged for receiving, for the 8th consecutive year, Gold Level status for comprehensively reporting its GHG emissions to the Canadian Standard Association GHG Registry.  Other information on the Canadian Standard Association GHG registry can be found on the following web page. www.ghgregistries.ca/challenge/cha_Entity_e.cfm?no=662

Carbon Disclosure Project	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 asking for information concerning their greenhouse gas emissions. GM has participated in submitting the CDP questionnaire since the inception of the program.
Australian Greenhouse Gas Challenge	GM Holden has participated in the Australian Government's Greenhouse Challenge since 2000. GM Holden has now implemented 100 percent of the CO <sub>2</sub> 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 10,147 CO <sub>2</sub> equivalent tons of GHG emissions from GM Holden's manufacturing facilities.
European Emissions Trading	In January 2005, emission trading began on a pan-European basis as a mandatory system for many companies. The European Union Emissions Trading Scheme (EU-ETS) involves seven of GM's European Operations. To date, GM's EU-ETS allocations are in place and are fully comprehended in GM's global GHG management strategy.

## **PERFORMANCE**

In 2005, GM's global facilities emitted 11.68 million metric tons of CO2 (see graph), a 15.5 percent decrease compared to 2000 - surpassing the global target of an eight percent reduction from 2000-2005. CO2 emissions are calculated from fuel and electricity use at each facility, which are the major sources of greenhouse gas emissions from operations.



\* Re-stated due to changes in data management systems providing

GM's new global facility CO2 reduction target is an additional eight percent from 2005-2010.

For information on the efficiency and emissions of GM's global vehicle fleet, please visit the Product section.

## **GM NORTH AMERICA**

GM's North American operations account for over 60 percent of the company's global operations. Accordingly, GM sets greenhouse gas (GHG) reduction targets and tracks environmental metrics for its North American region. The performance from 2000 to 2005 achieved a reduction in CO2 of 23 percent and a 6.8 percent reduction from 2004.

Since 1995, GM has reduced the energy consumption of its North American Operations by 31 percent or 6,878.12 GWh.

GM joined the U.S. Environmental Protection Agency's (EPA) Climate Leaders Program in 2001 and was recognized in January 2005 for achieving its commitment to reduce CO2 emissions from its North American facilities by 10 percent from 2000 to 2005. GM was the first partner in the Climate Leaders Program to achieve its goal and did so two years ahead of schedule.

Having achieved the EPA Climate Leaders target, GM and the EPA have partnered again to establish a new target from 2005-2010 of 17 percent for GM's North American facilities totaling a program target from 2000 of 40 percent. GM's will continue its commitment to the EPA and will continue its leadership across the automotive industry in managing facility GHG emissions.

GMNA (including the U.S., Canada, and Mexico) emissions of CO2 in 2005 were 8.6 million metric tons, a 23 percent decrease from 2000 levels. These emissions equate to 73 percent of GM's global CO2 facility emissions.

## GM U.S.

In 1995, GM was 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 continues to provide this information. In 2005, CO2 emissions from GM's U.S. facilities were 7.61 million metric tons, a reduction of 33 percent from 1990 levels and a reduction of 24.6 percent from 2000.

GM also reports its use of Halogenated Substances (refrigerants). Since 1990, GM has reduced CO2 equivalent emissions from use of refrigerants in the U.S. by 92.1 percent.

## **GM of Canada**

GM's Canadian operations report greenhouse gas emissions as part of the Canadian GHG Challenge Registry. GMCL has reported to the program since its inception in 1994 and for the seventh consecutive year was recognized as a Gold Level Champion Reporter.

GM's Canadian operations have achieved a 20 percent reduction in energy consumption between 2000 and 2005, resulting in a 14 percent 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 2006 with the program. This report has yet to be evaluated to determine the appropriate recognition.

## **GM EUROPE**

GME emissions of  $CO_2$  in 2005 were 1.43 million metric tons, a 23 percent decrease from 2000 levels.

EMISSIONS TRADING IN EUROPE
In January 2005, emissions trading began on a
pan-European basis and will be a mandatory
system for many companies. The new European

Union Emissions Trading Scheme (EU-ETS) involves seven of GM's European Operations. To date, our EU-ETS allocations are in place and completely comprehended in GM's global GHG management strategy.

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, the Society of Motor Manufacturers and Traders, U.K.) 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 of vehicle production over the next ten years.

## **GM ASIA PACIFIC**

GM's Asia Pacific emissions of  $CO_2$  in 2005 were 1.2 million metric tons, increasing from 0.338 million metric tons in 2000 as a result of increased vehicle production.

# AUSTRALIAN GOVERNMENT'S GREENHOUSE GAS CHALLENGE

2004/2005 represents Holden's fifth year of participation in the Australian Greenhouse Gas Challenge. Holden has now implemented 100 percent of the  $\mathrm{CO}_2$  reduction initiatives outlined in its GHG Challenge, and the top five action plans directly account for the reduction of 10,147  $\mathrm{CO}_2$  equivalent tons of GHG emissions from Holden's manufacturing facilities.

# GM LATIN AMERICA, AFRICA AND MIDDLE EAST

GM's Latin America, Africa and Middle East emissions of  $CO_2$  in 2005 were 0.47 million metric tons, a 6.4 percent decrease from 2000 levels.

#### APPROACHES TO LAND USE AND CLEANUP

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 environmental cleanup 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.

## **Case study: GM Syracuse Main Plant**

This 800,000 sq. ft. manufacturing facility in Syracuse, New York ceased operations in 1993; and GM entered a Consent Order with the State of New York to clean up the facility while redeveloping the site into a new industrial park. Tons of contaminated soil were removed, storm sewers were cleaned, a new storm water management system was constructed, and the facility's former landfill was closed. With strategic scheduling, GM was able to employ some innovative approaches to the cleanup, such as the use of lowlevel contaminated soils as landfill cover and the use of an excavated area for the construction of the new storm water system. In April 2005, GM received an award for engineering excellence from the American Council of Engineering Companies of New York for the innovative approaches used in restoring this former manufacturing facility. The facility is now home to more than 15 small to mid-size companies that continue to grow the economy of central New York.

#### PROTECTING WILDLIFE AND BIODIVERSITY

## **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. GM was drawn to the Conservancy because its collaborative approach promotes a healthy economy and a healthy environment. It also generates innovative initiatives within local communities that preserve landscapes, help local economies, and save precious places around the world.



Chevrolet Suburban donated to the Nature Conservancy in Texas.

During the past 12 years, GM has donated nearly \$10 million in cash and more than 180 vehicles to aid the often-rugged conservation work of the Conservancy. GM's funding supports many different projects within the Conservancy, and GM's donated vehicles are serving on preserves in all 50 states in the U.S. and in 20 other countries. Most recently, GM donated a 2007 Chevrolet Silverado to The Nature Conservancy of Texas in Dallas. In addition, GM donated two Saturn VUE Green Line Hybrid vehicles to The Nature Conservancy in Washington, DC and San Francisco. In 2006, a 2007 Chevrolet Tahoe was donated to The Nature Conservancy of Wisconsin to assist in the conservation of Chequamegon Bay, Mukwonago River Watershed, and Lulu Lake. The Silverado and the Tahoe are two of GM's FlexFuel vehicles, so they can run on either gasoline or E85 (a mixture of 85 percent ethanol and 15 percent gasoline). E85 ethanol burns cleaner than gasoline, reduces our dependence on petroleum, and is mostly renewable.



Silverado Hybrid Pickup donated to the Nature Conservancy in Florida with graphics designed by local students.

## **Environmental Performance** | Land Use, Biodiversity & Cleanup

During 2006, GM and the GM Foundation provided financial assistance to The Nature Conservancy in China to work with the local government in developing a Reserve Area Management Plan for the Chongming Dongtan Nature Reserve, near Shanghai. A second initiative supports the Conservancy's work on the National China Blueprint Project.

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. To date, GM's total donation to The Nature Conservancy reaches over \$24 million. For more information on The Nature Conservancy visit www.nature.org.

# Case study: Protecting the Brazilian Rainforest



**Brazil Rainforest** 

In 2001, GM 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 (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 to create 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, preservation, and natural regeneration can play in responding to concerns over global climate change.

In October 2005, representatives from GM and American Electric Power officially dedicated a visitor's center for environmental education on the Cachoeira River Natural Reserve, located in the state of Paraná in Brazil. The announcement coincided with a week-long series of meetings hosted by The Nature Conservancy's International Leadership Council.

The dedication highlights a partnership between GM, The Conservancy, and SPVS (Society for Wildlife Research and Environmental Education) that serves to restore and protect 30,000 acres of the Brazilian Rainforest.

"GM has been a long-time partner with The Nature Conservancy and this rainforest restoration project is particularly important to us," said Elizabeth A. Lowery, GM vice president, Environment and Energy. "Today, we are happy to dedicate this new visitor's center that will highlight the importance of Brazil's rainforests and encourage others to join us in the protection of this natural resource."



Staff plant seedlings in the forest.

The opening of the visitor's center is part of a project that began more than five years ago. The center is intended to serve the local community and visitors to the region with educational resources and activities. It will also support field operations involved in the

## **Environmental Performance** | Land Use, Biodiversity & Cleanup

restoration of the adjacent rainforest. Also housed within the center are training rooms, exhibits, interactive modules, and kiosks illustrating the program's contribution to environmental awareness and action. In addition, a nature trail has been developed for visitors to experience the reserve and the habitats it serves to protect.

GM, along with twelve other U.S. corporations, participated in the meetings that included a first-hand review of the current environmental projects inside the Atlantic Rainforest, specifically in the Bahia and Paraná states of Brazil.

## 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 habitats. WHC helps landowners, particularly companies, manage their unused land in an ecologically sensitive manner. This program has brought together volunteer wildlife teams of company employees and community groups, such as the Boy Scouts, Girl Scouts, and local schools.



McLaughlin Bay Wildlife Reserve

With the goal of sustainable companies operating in sustainable communities, habitat programs help develop an environmentally aware workforce and public.

Currently, eight GM facilities have attained WHC certification. These are:

 Saginaw Metal Casting Operations, Michigan, for its demonstration wetland which uses and recycles site wastewater

- Saginaw Malleable Iron, Michigan, for its Malleable Prairie, a capped former municipal landfill which is now a habitat for native wildflowers and other wildlife
- GM Canada Headquarters, Oshawa, for its stewardship of the 105-acre McLaughlin Bay Wildlife Reserve
- Lordstown Assembly for its Blue Heron rookery

   the largest in the State of Ohio with around 375
   established nests in the rookery
- Bedford, Indiana Butterfly/Pollinator Garden
- Spring Hill Manufacturing, Tennessee Entire Site
- GM World Headquarters at the Renaissance Center in Detroit, Michigan – an outside plaza and promenade along the Detroit River contain native species and soft-engineering shoreline
- GM Technical Center in Warren, Michigan created a green space from an eight-acre parking lot with native wildflowers, grasses, shrubs, and trees

## 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 employees, 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 2005, 312 GM mentors representing 58 facilities participated in the program.

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

## **Environmental Performance** | Land Use, Biodiversity & Cleanup

- 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



General Motors and its leadership have a long history of commitment to diversity and equal employment opportunity. GM was the first automaker to launch a minority dealer initiative, a minority supplier initiative, and a women's retail initiative.

GM's core value of individual respect and responsibility helps ensure a sustainable commitment to diversity and sets fundamental expectations for behaviors and actions that create an environment that allows everyone to fully contribute.

- GM is fundamentally changing the way its vehicles are designed, built, marketed, and sold to better address the wants, needs, shopping, and purchasing dynamics of diverse consumers.
- GM believes great products and innovations are born of creative organizations that bring to bear diverse perspectives.



## Defining Diversity, Opening Doors

With the Global Sullivan Principles as a guide, General Motors seeks to improve quality of life for its employees, their families and communities in which we operate.

## **DIVERSITY AT GM**

GM's Diversity Strategy is built on a broad definition of diversity — much more than race, gender, and ethnicity. Our strategy encompasses such dimensions as age, family status, religion, sexual orientation, level of education, physical abilities, union representation, years of service, language, thinking styles, and personality type. "Many People, One GM, Now" reflects GM's global diversity commitment. We believe that our differences contribute to our ability to achieve common goals and objectives for total customer enthusiasm. Diversity at General Motors is defined as the collective mix of peoples' differences in the workplace, society, families, and communities.

## **Vision**

GM's diversity vision is to create an environment that naturally enables employees, suppliers, dealers, and communities worldwide to contribute fully to the pursuit of total customer enthusiasm.

## **Diversity Strategy**

GM's Diversity Initiatives has oversight for GM's long-term, comprehensive diversity strategy based on three guiding principles:

- The integration and alignment of diversity into all aspects of GM's operations
- The creation of a "one company" experience and a strong culture of fairness and respect for all who interface with GM



 An approach to diversity that keeps "big and fast" in mind

Specific leadership behaviors help drive integration of diversity principles into the business. These behaviors include:

- Communicating expectations
- Seeking diverse input
- Creating diversity awareness
- Managing for results

In addition, supporting GM's Diversity strategy includes an extensive group of leaders and volunteers who are involved in the Diversity Network, such as:

**Strategic champions** – responsible for integration and alignment across all major interfaces (Consumers, Dealers, Employees, Communities, and Suppliers).

**Diversity partners** – Volunteers across GM who act as change agents and points of contact for information and resources.

Affinity Groups and Affinity Group Council – with over 3,000 members, GM's Affinity Groups represent ten broad constituencies responsible for the recruitment, retention, and development of their constituents. They also support marketing and product development. Each Affinity Group has a senior leadership liaison acting as champion and mentor for its membership.

Leadership Liaisons – senior level executives assigned to Affinity Groups who provide advice and ideas about effective leadership within the context of GM culture, challenge the group to be successful, hold the groups accountable to add value and contribute to GM, probe for ways to show support, act as an advocate at leadership and management meetings, share learnings about constituencies with other executives, and finally learn about the constituency's issues and concerns understand and monitor group issues on an ongoing basis.

Diversity affiliates – a broad network of individuals who have indicated interest in receiving diversity materials.

**Employee nexus group** – This cross-functional group of individuals met for a two day discussion about the diversity of functions within GM resulting in a powerful video series titled, "Behavior x Results = Success.

## **Accomplishments**

In 2005, Diversity Initiatives launched a diversity "Owner's Manual" that is available to any employee and provides tools, information, and resources to build individual and organizational competence around diversity. In addition, Diversity Initiatives launched the new "Reaching Farther" award given to employees who demonstrate leadership, taking individual responsibility for driving diversity at GM. The communication strategy has been enhanced and the GM intranet web site is continually updated to provide a comprehensive set of resources for all GM employees. Diversity Initiatives has begun collecting success stories to demonstrate how diversity contributes to GM's bottom-line.

## **Policy Development**

GM has a number of policies for guidance in this area:

- GM Policy Statement Regarding Diversity, Equal Opportunity, Affirmative Action, Non-Discrimination, And Sexual Harassment
- GM Policy Regarding Employment Of Individuals With Disabilities
- GM Anti-Harassment policy
- GM Equal Employment Opportunity Policy
- GM Policy Regarding Employment of Special Disabled Veterans, Veterans of the Vietnam Era, Other Covered Veterans, Newly Separated Veterans and Recently Separated Veterans.

## **Consumer Diversity**

Between 2000 and 2005, the Hispanic population in the United States grew 13.1 percent. During that time, Hispanic new light vehicle retail purchases increased 28.7 percent. As of 2005, Hispanics accounted for 14.2 percent of the U.S. population and 8.2 percent of new light vehicle retail sales. These

numbers are enhanced with global population trends, particularly in the developing world. Globally diverse markets are GM's future. GM's diversity markets growth strategy includes:

- Leveraging GM's ten Affinity Groups to understand better diverse market needs, get the facts on spending power and buying trends, and to develop marketing campaigns
- Leveraging community events to build relationships and brand knowledge
- Sponsoring public policy organizations such as the U.S. Hispanic Chamber of Commerce
- Working with GM dealers so they understand the changing marketplace and the business opportunity and nuances of customer service for particular minority groups
- Designing advertising and consumer literature aimed at minority groups. For example, in the U.S., GM has created and placed advertisements specifically for African-American and Hispanic publications, has created Spanish-language advertisements, and produces brochures for women car buyers.

Consumer diversity is not only about ethnicity. In the UK, for example, Vauxhall Mobility has been the market leader, since 2000, in the supply of vehicles to disabled customers on the UK's Motability initiative. In excess of 40,000 cars are delivered to Motability customers by Vauxhall Mobility each year, supported by a specialist dedicated customer care centre and more than 400 Motability accredited retailers.

## **Dealer Diversity**

GM was the first U.S. automaker to institute a structured minority dealer initiative. For more than 30 years, GM has been committed to growing a diverse and financially successful dealer network. Since 1972, GM has offered an industry-leading training program to minorities to help prepare them to become future dealers.

Today, more than 80 percent of GM's approximately 340 minority dealers own their dealerships outright. The selection process for identifying new dealerships has been standardized and aligned with GM field operations, nationwide. Additionally, GM launched the Women's Retail Initiative in January 2001, and 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. Today, GM has 265 womenowned dealerships.

For more information about the Dealer Development program, please visit www.identifythebest.com/

# **Employee and Talent Acquisition and Development**

GM's recruiting process strives to make globally diverse candidates aware of GM, attract them to the company, consider GM an employer of choice, commit to GM's vision, join the team, and be placed where they can fully contribute to total customer enthusiasm.

In the U.S., GM's recruiting efforts include campus recruiting and using experienced professionals. GM recruits 80 percent of all new college graduates, interns, and co-ops from Key Institutions and Key Recruiting Organizations (KRO). The remaining 20 percent come from local or niche schools. The teams involved in the recruiting process are made up of GM employees from various functions, positions, levels, schools, and service dates. The ten Affinity Groups play an important role and have made significant contributions toward the recruitment, retention, and development of GM employees.

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 prestigious national conferences.

## **Supplier Diversity**

In 2005, General Motors continued to lead the automotive industry in suppler diversity, spending \$5.6 billion with U.S.-based minority suppliers, and raised the total to nearly \$57 billion since the industry's first program was established in 1968.

GM has retained its supplier diversity leadership position despite a continued reduction in U.S. vehicle sales which had, in some instances, influenced spending throughout the company. Compared to 2004, GM's minority spending dropped from \$6.6 billion in 2004 to \$5.6 billion in 2005.

GM's Tier 1 spending with minority suppliers dropped from \$4.2 billion in 2004 to \$3.6 billion in 2005. Tier 2 minority spending dropped from \$2.4 billion in 2004 to \$2 billion in 2005.

Minority suppliers provide content and support services for a variety of important GM products, ranging from the new full-size trucks to the upcoming launch of three cross-over vehicles. GM tracks spending by ethnic minority, as certified by the National Minority Supplier Development Council. For 20 consecutive years, GM Tier 1 minority spending has been \$1 billion or more.

In April 2005, GM awarded five minority suppliers with its Supplier of the Year award: Black River Plastics; Bridgewater Interiors LLC; MPS Group, Inc.; NYX, Inc.; and The Ideal Group, Inc.

## **Communities**

Employees give back to various GM communities through their gifts of time and talent, participating with organizations and community groups that have value for them. GM supports this form of community investment, through volunteerism, and respects a philosophy of 'personal time, personal choice' regarding how people choose to get involved in community needs and issues.

GM VOLUNTEERPLUS INTERNATIONAL

The GM Volunteer PLUS International program, which encourages GM employees to be involved in the communities where they live and work, continues to launch in new locations around the world. The program is now available to GM employees in Argentina, Australia, Brazil, Canada, Chile, Colombia,

Ecuador, Germany, Kenya, Poland, South Korea, United Kingdom, United States, and Venezuela.

See Economic Section: Community Investment for more details. In 2005, GM won the Michigan Governor's Service Award for Volunteerism due, in part, to important new work with the GM Volunteer PLUS International program and internal partnerships leveraging employee relationships through GM Diversity Initiatives.

ENCOURAGING COMMUNITY ENGAGEMENT GM and the GM Foundation are reaching even farther by improving opportunities and community resources for civic engagement. YouthMove Michigan is one example. A pilot project with Youth Service America of Washington, D.C., YouthMove Michigan (www.youthmove.org) is a unique web site offering volunteer service activities for Michigan young people from all walks of life.

Additionally, collaboration with Domestic Corps of The Ross School of Business at the University of Michigan and the SOLV organization, the largest volunteer-based charity of the American northwest, has led to an innovative study for improving community engagement in the State of Michigan through episodic volunteerism. Called the 'Our Michigan' Project, students from the University of Michigan worked closely with SOLV of Oregon and the Michigan Community Service Commission to compile an assessment and business plan that will lead to the formal proposal of an enhanced model for volunteerism in the State of Michigan to benefit all diverse Michigan communities.

GM's Diversity Partners and employees demonstrated this model through a 2005 pilot activity on *Make a Difference Day*, partnering with SOLV and 6 local charities.

Acting as a catalyst, the SOLV pilot resulted in each charity managing a volunteer-based community activity that invited involvement not only from GM employees, but also from the stakeholder community at-large. Locally driven, the end result had many facets, including:

 the reforestation of an urban area blighted by a vast outbreak of dying Ash trees

- GM employee mentors introducing young, underserved children to career paths at General Motors
- management of a community fair designed to enhance the quality of life for urban families, groups, and individuals in the areas of health, finance, and fitness
- improvements to the main office of a Hispanic community outreach organization, and painting the community elementary school
- help for senior citizens by building wheelchair ramps, painting, and providing general support
- the clean up of sites on a local river

## **Diversity Awards**

Through community partnerships, new models of volunteerism and a commitment to diversity, GM is raising the bar on volunteerism while touching lives and making a difference. A few examples of external recognition for our performance are:

- Texas Association of Mexican American Chambers of Commerce (TAMACC) Corporate Hispanic Advocate of the Year Award in El Paso, Texas (August, 2006)
- Women in Communications Matrix Award

   Vanguard Award for innovative use of various communications mediums to market to women
   Cynthia Price (May 2006)
- Chinese Institute of Engineering Asian-American Engineer of the Year Award – Yucong Wang (February 2006)
- On Wheels, Inc., 2006 Urban Wheel Award presented to Accentmarketing with the Latino Diversity Advertisement of the Year Award for the "50 Most Beautiful People" Pontiac print ad featuring Latina race car driver Milka Duno during the 2006 Urban Wheel Awards, the only official event that celebrates diversity during the North American International Auto Show in Detroit. (January 2006)
- Auto Mundo Magazine Chevrolet Tahoe Car of the Year (2006)

- FAMA Magazine Chevy Impala Car of the Year for Woman (2006). The Award was presented during the 2006 Detroit Auto Show.
- FAMA Magazine Pontiac Solstice Best New Small Car for Woman (2006). The Award was presented during the 2006 Detroit Auto Show.
- Hispanic Business Magazine Named Sonia Green, Director, GM Diversity Sales and Marketing Southeast Region, as one of the top 2005 Elite Women (2005)
- Marketing y Medios Magazine 2004 Best Hispanic Spot - Pontiac Vibe's "City Lights" to Accentmarketing 2005
- Direct Marketing Association of Detroit

   Excellence in Marketing Special award for
   General Motors Women in the Driver's Seat guide
   (2005)
- International Association of Business Communicators – 2004 Renaissance Award for the Women in the Driver's Seat guide (2005)
- Auto Mundo Magazine- Pontiac G6 "Car of the Year Award" (2005)
- FAMA Magazine Pontiac G6 Car of the Year (2005)
- Diversity Leadership Award Diversity Best Practices and Business Women's Network 12th Annual Diversity and Women's Leadership Summit & Gala (November 2005)
- American Institute for Managing Diversity, Inc.
   Pioneering Leadership In Diversity Lorna G.
   Utley (November, 2005)
- 2005 Corporate Champion of the Year Award
   Michigan Women's Business Council (November 2005)
- Hispanic Magazine, 2006 Corporate 100 (February 2006 issue)
- 10 Top Companies for Innovation in Diversity, Second Place Winner of 2005
- Profiles in Diversity Journal, The Forum for Business Diversity – Second Annual International Innovation In Diversity Awards for You Make A Difference Award

# **Social Performance** | Diversity

- Organizations of Chinese Americans Corporate
   Achievement Award Angie Chin (October 2005)
- NBMBAA Industry Award (National Black MBA Association, Inc.) Inaugural Recipient (October 2005)
- 2005 Trailblazer Award Out & Equal Workplace
   Summit Leslie Hohman (September, 2005)
- Working Mother Magazine, 100 Best Companies for Working Mothers 2005 (October 2005 issue).
   Rick Wagoner featured as one of 20 CEOs.
- LatinaStyle Magazine, 50 Best Companies for Latinas to Work for in the U.S. (August 2005 issue)
- VISTA Magazine, America's Top Family Friendly Companies for Hispanics (April 2005 issue)
- Fortune Magazine, 50 Top Employers for Minorities (August 22, 2005 issue)
- Latin Business Magazine, Corporate Diversity Honor Roll 2005 (September 2005 issue)
- HACR (Hispanic Association on Corporate Responsibility) Fortune 100 Corporate Index ranking of #5
- HRC (Human Rights Council) Corporate Equality Index (September 2005)
- NPRC (National Puerto Rican Coalition) Corporate Responsibility Award (July 2005)
- LULAC (League of United Latin American Citizens)
   Presidential Award, June 2005 LULAC National
   Convention
- Bridging Technologies Award Detroit Hispanic Development Corporation - Orlando Padilla (April 2005)
- Asian Pacific American Chamber of Commerce Corporation of the Year, (May 2005)
- The Profiles in Diversity Journal, Top Ten winners in annual International Innovation in Diversity Awards – GM – Second Place. May/June issue of Profiles in Diversity Journal.

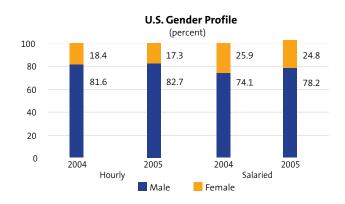
- 2005 Elite Women, Hispanic Business Magazine
   Sonia Green (April 2005)
- National Amigo Award NAHP (National Association of Hispanic Publishers), (March 2005).
   Nominated by El Hispano News.
- NAHP Local/Regional Award NAHP (National Association of Hispanic Publishers) March 2005.
   Nominated by El Central Hispanic News.
- Top Companies Making a Difference for People With Disabilities – Scientific American, October 2005 issue
- Chinese Institute of Engineering Asian-American Engineer of the Year Award – Man-Fen Chang (February 2005)
- Top 50 Corporations for Supplier Diversity

   Hispanic Trends Magazine (January/February issue, 2005)
- Top 10 Companies to Work For in America
   IHispano.com (January 2005)

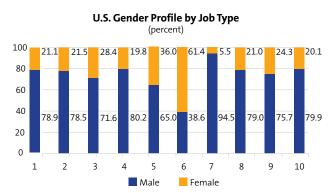
#### **GM NORTH AMERICA**

# **Gender**

In 2005, in the United States (excluding GMAC), the ratio of male to female employees is approximately 5-to-1 with female employees making up 19.3 percent of the workforce. Broken down by hourly and salaried employees, women make up 17.3 percent and 24.8 percent, respectively, as shown in the following chart.



The chart below shows the 2005 gender profile for U.S. employees broken down by job type.



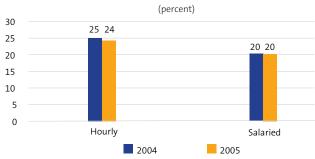
 $\hbox{U.S. only; GM Corporate, including Saturn, portion of GMAC, Electro-motive and MIC}\\$ 

- 1 Total 2 Officials, Managers
- 3 Professionals
- 4 Technicians
- 5 Sales Workers
- 6 Office, Clerical 7 Craftsmen (skilled)
- 8 Operatives (semi-skilled)
- 9 Laborers
- 10 Service Workers

# **Minority Employees**

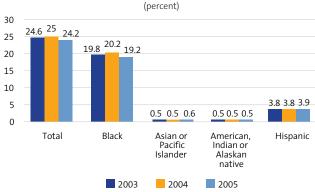
The following chart shows the distribution of minority employees in hourly and salaried ranks in the United States (includes GMAC Financial Services, MIC & Saturn).





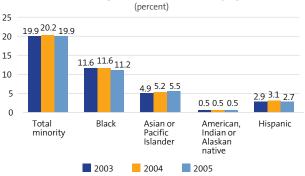
The chart below indicates representation of individual minority groups in the salaried and hourly workforce in the United States.

#### **U.S. Minority Profile for Hourly Employees**



\* U.S. only; GM Corporate, including Saturn, portion of GMAC and MIC

#### **U.S. Minority Profile for Salaried Employees**



 $^{\ast}$  U.S. only; GM Corporate, including Saturn, portion of GMAC and MIC

### **GM EUROPE**

#### Gender

100

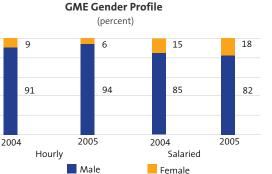
80

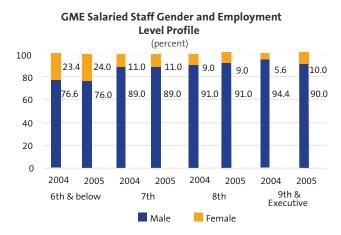
60

40

20

The following charts show the distribution of employees by gender.





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.

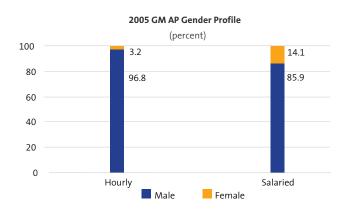
# **Discrimination-Related Agency Charges**

In Europe, GM has signed formal agreements on racism and tolerance with GM's German Works Council (labor union leaders). Litigation regarding discrimination is rare in Europe.

### **GM ASIA PACIFIC**

### Gender

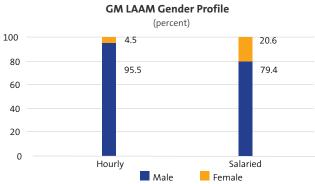
Gender profile by hourly and salaried employees in 2005 is shown in the following chart.



#### **LATIN AMERICA, AFRICA & MIDDLE EAST**

## Gender

Gender profile by hourly and salaried employees in 2005 is shown in the following chart.



# Health, Safety & Security

One major challenge for General Motors and the automobile industry in general 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 has been developing leading indicators to complement existing injury and illness record-keeping. As incident rates continue to decline, tracking ongoing improvement will require other leading indicators (e.g. process-related performance). To meet these challenges, GM has a number of initiatives in place:

- Sharing Safety Practices
- Skilled Trades Safety
- Industrial Truck / Material Handling
- Risk assessment
- Management system
- GM Safe Driving
- Office safety
- Memberships
- Security
- UAW-GM Health and Safety Activity

# **Sharing Safety Practices**

A key strategy in reducing risk is the identification and sharing of safety practices. GM's experience has shown that a safety practice can come from anywhere in the world. Through email, teleconferences, or GM's Health and Safety web site, information is shared and passed to all corners of the globe. The Global Safety team facilitates development of these safety 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 safety objectives, sharing information, and providing leading edge information.

# **Skilled Trades Safety**

## **Course - Tools for Skilled Trade Supervisors**

The purpose of this tool is to provide supervisors with the skills they need to effectively supervise skilled trades' employees from a safety perspective. Examination of past injuries/fatalities has found that a need exists to ensure that skilled trades' supervisors are keenly aware of hazard identification and hazard control when performing their duties. In light of this data, and in support of the Skilled Trade Focus (one of our Health & Safety Requirements), this course was being implemented in 2006 as a positive step towards meeting this focus.

"Assigning Risk" refers to the introduction of a different approach to how skilled trades' supervisors assign work. When skilled trades take on the assignment, they are accepting risk, but risk that has been identified and covered with a "pre-task" plan to mitigate that risk. This pre-task plan is the joint responsibility of the supervisor and the employee. In summary, with the greater risk of serious injury that our skilled trades employees face, the goal is to develop a mindset where our employees make the right decisions, every time, for their protection, and work to a plan specifically designed to mitigate risks.

# **Industrial Truck / Material Handling**

A review of statistics over the past several years identified a potentially significant source of injuries

and near misses in GM North America. This source involves the interplay between pedestrians and mobile equipment such as fork trucks in our locations. As a result of this data review, GMNA Safety and UAW-GM Health and Safety identified several actions to reduce incidents of this type. Some of the key initiatives involved in this program are as follows:

- Improved data collection
- Formation of pedestrian industrial vehicle committees at each location
- Regular safety messages
- Sharing of best practices and in-house developed videos
- Posters
- Color selection for new material dollies
- New seat belt policy
- Plant layout quidelines
- Orange crush zones (high risk/high caution areas)

The list above reflects some of the efforts currently being implemented across GM North America and shared with our other global regions as well.

#### **Risk Assessment**

Joint programs with trade unions and specialized employee training initiatives have helped GM become the leader in health and safety performance in the automotive industry. GM has developed a practical risk assessment and design methodology that is used during the design of machine safety features. Known as Safety 21, this process has dramatically improved machine safety resulting in reduced risk to GM employees.

Safety 21 is a joint effort between GM engineering and safety professionals, the United Auto Workers (UAW) union, and 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. Safety 21 is now being used by GM engineers around the world.

# **Management System**

GM has integrated the core elements of safety processes into GMS, the GM Global Manufacturing System. Leading indicator metrics have now been integrated into GMS to provide global operations managers with a process specifically designed to mitigate risks.

Additionally, GM's Asia Pacific (AP) region has implemented an 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 and complements the integration of safety into GMS.

# **GM Safe Driving**

GM's Safe Driving Program is an ongoing program of traffic safety awareness and driver training focusing, not only on our employees, but also the general population. A cross-functional team continued GM's leadership role in promoting increased safety belt use in the U.S., helping to achieve a national belt use rate of 82 percent in 2005 and gaining enactment of long-term government support for programs that will further increase that rate. The team led coalition efforts to promote high-visibility enforcement campaigns, pushed successfully for Federal policy changes, advocated strong state belt use legislation, reminded customers to buckle up, and educated target audiences through advertising. Former National Highway Traffic Safety Administration Jeffrey W. Runge said the team "has saved literally thousands of lives, and deserves the thanks of the American people."

# **Office Safety**

General Motors continues its efforts to develop a 24/7 safety culture among all employees. The platforms of manufacturing and office safety exist to foster safety in all work areas and assignments. The safety processes are now fully integrated into the General Motors Global Manufacturing System (GMS).

The GM Office Health and Safety process assesses the physical safety of our facilities, and requires the

implementation of risk reduction processes such as building emergency plans, indoor air quality management, and related healthy work environment initiatives. In addition, focus is aimed at engaging leaders at all levels to actively promote safety in their respective work areas with their employees.

Global implementation of the process continues.

# **Memberships**

GM belongs to numerous health and safety industry and business associations. Experience has shown that such partnerships have benefits, where GM learns from benchmarking against other organizations while, in turn, sharing its own practices.

In addition to industry partnerships, GM is an active member in several key ANSI (American National Standards Institute) standards for machine safety, as well as ANSI Z10, the first U.S. standard for an Occupational Health and Management Safety System. At the ISO or international level, GM has been an active participant in standards for robot safety, machine safety, and ergonomics.

# **Security**

GM's standards address four elements of security:

- 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. Local business unit management, along with security personnel, must develop specific procedures for each facility.
- Investigation of wrongdoing or negative incidents – these standards address how security investigations within General Motors are to be conducted.
- Security standards are established to assure the protection of employees and property.

# **UAW-GM Health and Safety Activity**

The UAW-GM Health and Safety Activity, part of the UAW-GM Center for Human Resources (see Training), develops programs and provides training which



"Health and safety at work – and at home – is a number one UAW-GM priority."

are implemented within UAW-represented GM facilities. Workers receive appropriate health and safety training based on their job assignments. Additionally, the activity conducts audits of facilities to ensure proper implementation of Health and Safety programs. The UAW and GM have led the

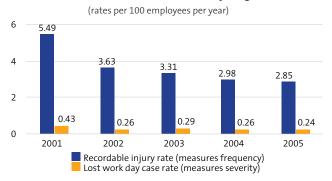
way nationally in developing such industrial health and safety programs as Ergonomics, Lockout and Energy Control, Confined Space Entry, Fall Hazard Control, and Industrial Hygiene, to name a few.

Since 1985, more than 20,000 plant-based safety trainers have completed courses at the Health and Safety Center. The joint administration and development of health and safety programs during the past 25 years at the national and local levels have been a major factor in improving health and safety conditions for UAW represented workers and GM salaried employees.

Visit the UAW-GM web site at uaw-gm.org/health\_safety.

#### **GM NORTH AMERICA**

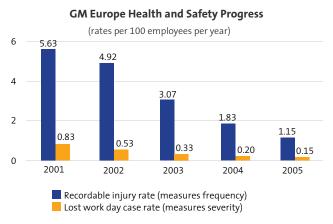
#### **GM North America Health and Safety Progress**



# **Case Study Example**

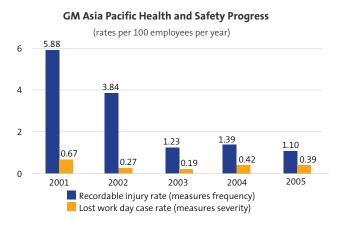
GMNA and UAW-GM worked closely with the Skilled Trades Safety Team to develop a multipronged approach to reducing injuries among our skilled trades workforce. Process improvements included an emphasis on pre-task planning, and a targeted awareness program known as Take 2 for Safety which encourages skilled trades' employees to review the job and consider the hazards prior to beginning a task. The result has been a notable reduction in serious injuries among skilled trades' employees

#### **GM EUROPE**



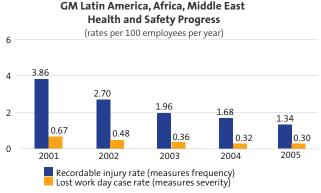
GME has continued to improve health and safety in the region. In addition to adopting programs related to skilled trades' safety and pre-task planning, GME developed and implemented an innovative near miss tracking process that continues to work well, with more than 10,000 such incidents reported by year's end.

#### **GM ASIA PACIFIC**



GMAP has continued to improve health and safety in the region. Improvement ranged from increased awareness by using safety training programs relating to contractors, electrical safety, enhanced driving skills, and first aid, as well as implementation of a serious safety violation policy for management staff, and a skilled trades high-risk work process.

## LATIN AMERICA, AFRICA AND MIDDLE EAST



LAAM continued its efforts to reduce injuries by focusing on ergonomics issues and on accident prevention training. LAAM has had great success implementing a program in which each work team has a team member assigned to coach and mentor safe behaviors. This responsibility rotates month to month to enhance learning and implementation of the GM health and safety culture.

# **Employee Satisfaction**

There are a number of challenges GM faces to deliver a successful Employee Enthusiasm Strategy. Most important among these is the diversity of the global workforce.

GM employees have their own interests and personal circumstances that make them unique. However, this makes managing GM's culture and engaging all the employees particularly challenging. GM addresses these challenges by setting a framework globally that can be interpreted locally.

#### **INITIATIVES**

GM recognizes that overcoming these challenges is very rewarding for its employees and the company there is a clear link between investment in human performance and market performance and financial results.

#### **CREATING A PERFORMANCE CULTURE**

GM has embraced four priorities to create its unique performance culture:

- Focus on the customer create products that exceed customers' expectations
- Act as one company leverage the strengths of the 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 the business.

#### **STAFF SURVEY**

For more than 60 years, GM has routinely asked its employees how they feel about their jobs and the company. In 2005, a web-based "Pulse" survey was initiated to gauge salaried employees' sentiments about the North American Turnaround Plan. Every other month, 1500 randomly sampled salaried employees in Canada, Mexico, and the United States are asked about the four key initiatives of the Turnaround Plan. The initiatives are:

- Continuing to raise the bar on execution of new products.
- Revitalizing the sales and marketing strategy in the U.S.
- Really picking up the pace on reducing cost and improving quality.
- Addressing the health care burden in the U.S.

# **Staff Survey Results**

Over 9000 salaried employees in North America were given the opportunity to participate in a North American Turnaround Plan survey during the past year.

Initial findings from September 2005 revealed that at least half of the employees surveyed had a clear understanding of the four key initiatives. Improvements have been seen in the percentage over time.

+19%	Continuing to raise the bar on execution of new products
+11%	Revitalizing the sales and marketing strategy in the U.S
+16%	Really picking up the pace on reducing cost and improving quality
+35%	Addressing the health care burden in the U.S.

Salaried employees feel they have enough information about their role in the North American Turnaround Plan. In addition, a majority of employees reported that they are frequently engaged in activities that support each of the four initiatives. For example, a majority of employees promote sales of GM products among family, friends, and their community.

Over time, more salaried employees believe that GM as a whole is well managed (+20 percent), and that GM is making the changes necessary to compete effectively (+34 percent).

## **Action Resulting from the Survey**

Leadership continues to refine the amount and type of information on the North American Turnaround Plan based on findings from the Pulse surveys. Frequent inputs from employees allow for real-time course corrections.

# **Human Rights**

General Motors believes that support for human rights begins by treating each other with respect and dignity. GM employees are responsible for respecting each other in their business relationships and in the communities where GM operates. GM's fairness and respect policies demonstrate support for employees' rights. GM recognizes that the responsibility for managing the impact on society also extends to GM's suppliers. This section addresses how GM discharges

# **Social Performance** | Human Rights

its human rights responsibilities to both employees and suppliers.

### **PRINCIPLES**

GM honors all local laws, respects local customs, and adheres to the Global Sullivan Principles (GSP) throughout its global operations. GM also encourages its suppliers to adopt the Global Sullivan Principles or another equivalent set of principles that support human rights. According to the Global Sullivan Principles, General Motors will:

- Express our support for universal human rights and, particularly, those of GM employees, the communities within which GM operates, and parties with whom GM does business, as detailed in the rest of this section.
- Promote equal opportunity for 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. See the diversity section in Social Performance.
- Respect employees' voluntary freedom of association.
- Compensate employees to enable them to meet their basic needs and provide the opportunity to improve their skill and capability in order to raise their social and economic opportunities.
   See wages and benefits section in our Economic chapter.
- 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. See Winning with Integrity guidelines.
- Work with governments and communities in which GM does 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. See the contribution section of the Economic chapter.
- Promote the application of these principles by those with whom GM does business.

GM will be open in our implementation of the principles and provide information that publicly demonstrates our commitment to them.

#### **POLICIES**

GM has a number of policies in place that apply to employees and suppliers (detailed below). Since GM purchases \$150 billion worth of goods and services from more than 25,000 global suppliers, it also has a specific Global Purchasing Supply Chain (GPSC) Policy to help manage this complex area of our business.

### **Child Labor**

General Motors respects all local laws regarding compulsory school attendance and does not hire children under the legal age for employment in any location.

GM's GPSC Policy prohibits its suppliers and their subcontractors from using child labor in the supply of goods or services. GM continues to monitor performance in this area.

## **Forced Labor**

The decision to seek employment is voluntary, and GM does not condone involuntary servitude in any form. GM's GPSC Policy prohibits the purchase of goods produced with the use of forced or slave labor.

## **Freedom of Association**

General Motors respects the right of all employees to choose union membership. The Global Sullivan Principles specifically calls for respect for the voluntary freedom of association. GM complies with all laws covering the right of employees to organize for purposes of collective bargaining and encourages employees to support or oppose union membership without fear of coercion or retaliation from General Motors, any individual, or external organization.

# **Global Purchasing and Supply Chain Policy**

GM's GPSC Policy requires that any goods or services supplied must comply with all applicable regulations or standards of the countries of destination. These relate to the manufacture, labeling, transportation, importation, exportation, licensing, approval, or certification of goods or services. This includes environmental matters, wages, hours, conditions of employment, subcontractor selection, discrimination, occupational health and safety, and motor vehicle safety. Each supplier must confirm, both at the time of contracting and periodically thereafter, that neither it nor any of its subcontractors will utilize child, slave, prisoner, or any other form of forced or involuntary labor or engage in abusive employment practices or corrupt business practices (see text on "Paragraph 25" below).

Read more on www.qmsupplypower.com

# **COMPLIANCE WITH PRINCIPLES**

GM's Corporate Responsibility Group has created a self-assessment survey (aligned with our Process Risk Management system) that will be used internally to evaluate compliance with the Global Sullivan Principles.

#### COMPLIANCE WITH POLICIES

Within GM, local management representatives are ultimately responsible for compliance with our policies; the benefits of being recognized as a good corporate citizen are well understood. GM's internal Winning with Integrity guidelines and the Global Sullivan Principles have been communicated throughout GM globally and serve as guidelines for conduct.

GM has a number of initiatives in place to address challenges. For example, GM supports indigenous rights by employing the most qualified individuals for the position to be filled, which includes indigenous executives in decision-making capacities.

GM also maintains a 24-hour toll-free telephone line called "GM Awareline" that is available to anyone (including employees and suppliers) globally, seven days a week. Callers can 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. GM's business units worldwide have customized this reporting process to meet local language and cultural needs. Operations that choose not to use the Awareline because of legal or cultural reasons must implement an alternate, approved process. Currently the GM Awareline or an alternative process is available in 45 countries.

All Awareline complaints are investigated. Based on the type of complaint, global security or the local human resource representative is responsible for conducting follow-up activities. Most cases are completely investigated and closed within 60 days from the date of the complaint.

#### **SUPPLIER COMPLIANCE**

Suppliers are responsible for assessing themselves as well as their subcontractors' compliance with Paragraph 25 (see below) of GM's Purchase Order Terms and Conditions. Global Purchasing has implemented an electronic survey that suppliers use to notify GM of their assessment.

Paragraph 25 (abridged) of GM's Purchase Order Terms and Conditions: "Compliance with Laws; Employment/Business Practices"

The supplier shall comply with all applicable laws, rules and regulations of the host country or that relate to the manufacture, labeling, transportation, importation, exportation, licensing, approval or certification of goods or services. This includes, but is not limited to, those related to environmental matters, data protection or privacy, wages, hours, and conditions of employment, subcontractor selection, discrimination, occupational health /safety, and motor vehicle safety.

The supplier asserts that neither it nor any of its subcontractors will utilize child, slave, prisoner or any other form of forced or involuntary labor or engage in abusive employment or corrupt business practices in the supply or goods or provision of services under their contract.

#### **GM AWARELINE**

The GM 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.

The general trend of Awareline complaints over the past four years has been a decrease within all of the complaint types; exceptions occurring in an increase in Employee Workplace Issues reported from 2003 to 2004, and in Safety from 2004 to 2005 - as set out in the table below. It is felt that the reduction in numbers involving discrimination, harassment, and sexual harassment 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. Employee workplace issues are referred to individual operating locations to be resolved by the unit through the normal course of business as prescribed by local operating practice.

HR Policies & Procedure web site. This helps ensure open communication with management when employees have a question, concern, or complaint about any aspect of their employment.

In 2005, there were a total of 227 Open Door cases. In all of the cases, management's initial position was upheld. The table below provides a breakdown of the 227 cases by issue:

2005 Open Door Cases By Issue	
Issue	No. of cases
Separation Incentive Program Participation	130
Discharge/Final Release	55
Discipline	10
Performance Appraisal	8
Miscellaneous	24

Results from GM's staff survey can be found in the employee satisfaction section

Complaint Type	2005	2004	2003	2002
Discrimination	4	9	17	46
Employee Workplace Issues	664	679	534	806
Harassment	5	14	33	61
Personal Threats	15	34	36	39
Safety	13	9	23	49
Sexual Harassment	13	15	22	23

# **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, GM manages complaints according to the Open Door Policy, detailed in the U.S.

# **Social Performance** | Employee Training

GM has a long-standing commitment to helping our employees continue to grow the knowledge and skills required to fulfill the company's vision of being the world leader in transportation products and services. GM's investment in its people goes deeper than paying their salaries. GM employees must be equipped with the skills and knowledge required to continuously improve and grow. GM's policy is to educate our workforce to achieve the highest standards.

GM's learning strategy is linked to our business strategy and business goals. Learning enables business performance through the development of mission critical skills and capability. The business strategy cannot be implemented successfully unless the learning strategy is in place and is effective — upgrading skills and performance globally. Learning is aligned with business results and functional capabilities on a global basis. 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.

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 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.

GMU offers more than 2,000 courses to its more than 80,000 executive, management, technical, and professional employees around the world. GM also

offers a Technical Education Program in partnership with universities, where employees can take courses and earn degrees in automotive subjects.

Having committed to training its workforce to the highest standards, GM needed to find the best way to provide this training to ensure it was both meaningful and efficient. GM now offers its employees:

- Traditional classroom training, web-based learning, Interactive Distance Learning, and selfdirected study through GM University (see below)
- The ability to further technical knowledge and skills while earning a degree through the awardwinning Technical Education Program.

For Education initiatives outside GM, please see the Education section.

# **GM** University



**GM** University class

GMU has 14 colleges serving GM's global business processes. Each college develops courses to meet the needs of employees from a functional, divisional, or regional perspective. A "Dean," typically an operating executive, is responsible for developing and delivering courses that improve results for that business function. The president of GMU, with the council of Deans, oversees learning operations and GMU strategic direction. GMU integrates employee development and performance under GM's Performance Management Process (PMP). This annual process helps employees align their individual performance goals with overall business goals. Goalsetting, mid-year, and annual reviews provide opportunities to constructively discuss performance, recognize accomplishments, and help employees

# **Social Performance** | Employee Training

understand how their individual performance contributes to overall business results. GMU is committed to learning and development even in a challenging business environment.

GMU manages costs by:

- Focusing on the development and delivery of courses that are critical to the business
- Increasing the use of Distance Learning (DL), e-Learning, 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.

### **Distance Learning**

Distance Learning (DL) uses state-of-the-art equipment to train GM salary and dealership employees in North America, Canada, and Mexico. DL 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, 400 live video broadcasts covering a wide variety of subjects on a variety of functional topics are delivered monthly via satellite to GM salaried employees in over 200 GM facilities and more than 6,500 GM dealerships in North America, Canada, and Mexico.

Originally created as a fast, flexible, and costeffective way to convey new product training to GM dealers and sales and service personnel, DL 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 global access and availability of GMU courses — 24 hours a day, seven days a week. GMU gradually has been growing the percentage of e-learning courses over the last few years. Currently, approximately 34 percent of all employee learning is completed via the web. GMU has launched 600 global e-learning courses in multiple languages. 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, Distance Learning 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.

# Partnership with the UAW

Since the early 1980s, the United Auto Workers (UAW) and General Motors have jointly developed education and training programs that have provided workers with a variety of lifelong learning opportunities.



UAW-GM CENTER FOR HUMAN RESOURCES
At the national and local levels, union and
management representatives work together to
develop and deliver programs that have helped
employees strengthen basic skills, earn college
degrees, and better apply their technical skill and
knowledge at work.

In 1984, the UAW-GM
Center for Human
Resources (CHR) was
established through
contract negotiations
between the UAW and
GM. The CHR is a nonprofit organization that
develops and administers
joint education, training
and retraining activities,



profit organization that UAW-GM CHR staff jointly develops and administers develop, support, and deliver joint education, training a wide range of programs and retraining activities, and activities.

as well as specific services, for UAW-represented GM employees throughout the U.S. The UAW-GM focus is on continuing development of education and training opportunities that address both organizational needs and strengthen employee job security.

The UAW-GM CHR staff jointly develops, supports, and delivers a wide range of programs and activities in four general areas:

- Health and Safety
- Skill Development and Training
- Work and Family
- Product Quality Involvement and Promotion

http://www.uaw-gm.org/

#### **UAW-GM QUALITY NETWORK**

Since 1987, the UAW-GM Quality Network has been supporting quality improvement with a wide range of strategies and initiatives. Through the direction and support of the UAW-GM Leadership Quality Council, it is implemented at UAW-represented GM locations across the organization. Fundamental to the Quality Network is a system of beliefs and values; "Customer Satisfaction through people, teamwork, and continuous improvement." This means inviting all people to be full partners in the enterprise, working from a position of trust, putting quality into all processes, and more.



The Quality Network Suggestion Plan invites all people to be involved in continuous improvement. Last year, about 77 percent of employees submitted ideas and 35 percent of all suggestions were adopted. Remarkably, the first-year net savings came to almost \$300 million. In actuality, the savings are even greater, as the average idea can be implemented for two-three years. Last year, there

was a first-year net savings of \$6.76 for every dollar GM paid for suggestion awards.

Quality Network Planned Maintenance reduces GM's overall manufacturing costs. First, it increases throughput which, in short, means that machinery and equipment are available when needed. Second, it substantially reduces maintenance costs through a proactive process which focuses on preventing machine problems.



PEOPLE Make Quality Happen, known widely as "PMQH," promotes joint teamwork and honors quality improvements at the local, group/divisional, and national levels. Teams throughout North America have contributed significantly to quality improvement with a broad array of innovations. Team results have resolved quality problems, improved worker safety, increased savings, reduced warranty claims, and more.

## **Global Learning**

#### GM UNIVERSITY EUROPE

GMU in Europe aligns with the organizational set up of its parent organization in North America. Twenty-seven employees are based in different European locations including Germany, Sweden, and England. GMU Europe supports GME with the implementation of global curricula and training as well as the development and rollout of European curricula, where appropriate and needed. Furthermore, it supports the European region with the development and deployment of Change Management initiatives.

In 2005, more than 600,000 participants, including GM employees and dealers, received approximately 1,700,000 hours of training with 23 percent of the hours spent in traditional classrooms, 34

# **Social Performance** | Employee Training

percent on web-based learning, and nearly 43 percent on Distance Learning. By increasing the use of e-learning and Distance Learning, GM saved approximately \$8 million in productivity costs.

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 (NADA).

# Education

Since today's young people are tomorrow's stewards, GM is committed to educational initiatives to help them find workable solutions to future challenges. GM actively invests in their future to help ensure students have the tools they need to succeed. Helping students develop technical skills is good for GM's future.

GM's policy is to support a comprehensive, diverse base of educational programs for children in grades K-12 (kindergarten through grade 12). GM continues to track the progress made by the GM-sponsored education initiatives. GM's goal is to foster enthusiasm for science, math, 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.

General Motors invests in learning around the world where we do business, not only for our workforce but also for the local communities in which we operate. The efforts highlighted in this report are only a few

examples of GM's recognition of the importance of learning and education worldwide.

#### **AWARDS**

#### Safe Kids Worldwide

#### **Award title**

Fuel Cells: Driving the Future won Connecticut Quality Improvement Award Innovation Prize

2006 JA Impact Award

**Best Education Web site** 

2005 Bronze SABRE Award

General Motors announced the continuation of its 10-year partnership with Safe Kids Worldwide (formerly the National SAFE KIDS Campaign) to implement the industry-leading Safe Kids Buckle

Up program. Over the next three, years the General Motors Foundation will contribute \$11.4 million, including up to 18 vehicles to Safe Kids Buckle Up. Countless lives have been saved and injuries prevented as a result of this innovative and farreaching program. Safe Kids Buckle Up addresses a significant public health problem in the United States, motor vehicle crashes, which are the leading cause of death among children ages three to 14.

Safe Kids Buckle Up is a multifaceted national program bringing passenger safety messages to children and families through community and dealer partnerships. More than 600 local Safe Kids coalitions and chapters have access to this life saving program. GM has served as the exclusive funding source of Safe Kids Buckle Up since 1996, and Chevrolet became the lead partner in October, 2004.

Since the program's inception, more than 13 million people have been touched by Safe Kids Buckle Up

events and community outreach efforts. Child passenger safety experts have examined more than 800,000 seats for proper installation and have donated more than



# **Social Performance** | Education

350,000 seats to families in need. Tens of millions of people have been exposed to child passenger safety messages through public service announcements, educational videos, brochures, video news releases, and other materials. The Safe Kids Buckle Up program includes:

Child Safety Seat Check Up Events: Safe Kids coalitions nationwide, in partnership with GM dealerships and other community organizations, host public events that teach parents and caregivers to use child safety seats and safety belts correctly. More than 20,000 events have taken place in the past 10 years.

Mobile Car Seat Check Up Vans: A unique aspect of the program is the nationwide fleet of 119 Chevrolet Express and Venture vans donated by GM. These are used by Safe Kids coalitions to conduct community-based child safety seat checks in underserved areas. The vans are stocked with all the necessary equipment to conduct an inspection, including seats to give to low-income households or to replace recalled or damaged seats. The vans make it possible to bring the message directly to the public at children's stores, shopping centers, fairs, and other venues.

Child Safety Inspection Stations: Thirty-four Safe Kids coalitions conduct child safety seat inspections at 75 permanent locations with regular hours. Fifteen inspection stations are housed at General Motors dealerships.

Child Safety Seat Distribution Program: Safe Kids and General Motors have distributed 300,000 child safety seats to families in need. More than half of those seats were distributed through partnerships with the NAACP and the National Council of La Raza.

State Legislation: A Safe Kids study revealed startling deficiencies in state child passenger safety laws and has led to 35 states and the District of Columbia enacting booster seat laws to require that older children use appropriate child safety seats.

# Safe Kids Buckle Up Highlights

In addition to hundreds of thousands of child seat inspections and van and child safety seat donations, Safe Kids Buckle Up also features:

#### **SPECIAL EVENTS**

Child Passenger Safety Week Child Passenger Safety Week is an annual national campaign that focuses attention on the use of child safety seats and safety belts. Inspection events were held at Chevrolet dealers in celebration of CPS Week.

National Automobile Dealers Association's Child Safety Month - Safe Kids Buckle Up and Chevrolet conducted more than 200 inspection events during September 2005 as part of Child Safety Month sponsored by the National Automobile Dealers Association. The kickoff was held in Miami and was staffed with bilingual technicians to educate Spanish-speaking families with in-language educational materials.

NASCAR — In February 2005, Chevrolet leveraged its relationship with NASCAR driver Jeff Burton to film a Safe Kids public service announcement encouraging parents to learn how to correctly install their child's seat. In order to reach fans at NASCAR events, Chevrolet funded a Safe Kids exhibit that is set up at races. The display is configured like a garage, staffed with Safe Kids experts as the "pit crew" to entertain kids and educate their parents.



A Safe Kids van participates in the Chevrolet Continuous Safety Tour Friday, June 30, 2006 in Miami Gardens, Florida. Safe Kids vans travel the country offering child safety seat inspections and promoting child safety in automobiles.

#### NON-CRASH RELATED SAFETY ACTIVITIES

Never Leave Your Child Alone - More than 275 children have died of heatstroke in the last decade after being left in parked cars. Even in mild weather, the interior of a parked car can rise to dangerous temperatures in just a few minutes. The "Never Leave Your Child Alone" campaign consists of interactive displays that show temperatures inside and outside a vehicle; they can differ by as much as 70 degrees. The exhibit also demonstrates the startling speed at which a vehicle's temperature rises from comfortable to deadly. These displays are used at various events, such as NASCAR races and state fairs, and by local weather forecasters to educate and inform parents and caregivers about the dangers of leaving children unattended in a vehicle.

#### RESEARCH

Safe Kids has conducted extensive research on the attitudes, knowledge, and behavior of parents in relation to child safety seats. The results of this research have given the child passenger safety community vital information that guides Safe Kids Buckle Up's programs, legislative campaigns, and resources for parents.

#### **EDUCATIONAL MATERIALS**

Safe Kids has created a wealth of materials designed to educate parents and caregivers on safety in and around vehicles. Age-specific child restraint brochures, videos, public service announcements, children's activity books, and informational posters are provided to local community groups, schools, day care centers, and pediatricians' offices by the more than 600 Safe Kids coalitions and chapters across the United States.

CHILD PASSENGER SAFETY TECHNICAL TRAINING Safe Kids Worldwide is the certifying body for the 27,000 child safety seat technicians in the United States. Safe Kids coalitions have conducted approximately 4,000 sessions ranging from two-hour awareness classes to 32-hour technician certification courses.

## INFORMATION HOTLINE

Parents and caregivers receive free bilingual Safe Kids Buckle Up materials and find child safety seat

inspections in their area by calling (800) 441-1888 or visiting www.usa.safekids.org. The web site provides an interactive Child Safety Seat Guide along with safety tips, statistics, and more.

#### **GM NORTH AMERICA**

In the U.S., GM's initiatives support students from kindergarten to high school. These programs include hands-on environmental education activities, mentoring programs by GM engineers and scientists in math and science, technology curriculum dissemination to schools, and a web site created to educate children and their parents about environment, energy, and technology issues.

The GMability Education web site was named Best Education web site by the Web Marketing Association in 2004. It also won The Holmes Group's 2005 Bronze SABRE award, which recognizes excellence in technical aspects of communication including the production of annual reports, corporate advertising, or web sites. It has a section for teachers and separate, age-appropriate sections for students in grades K-4, 5-8 and 9-12. The teachers' section features downloadable lesson plans, including our award-winning fuel cell curriculum, developed by Weekly Reader. The sections for students feature interactive games, activities, and graphics on the environment, energy, and technology. Students can learn about fuel cells, hybrid technology, how cars and trucks are designed, and what they can do to help the environment.

In 2006, the GMability. com/ education web site was refreshed with new interactive material showing how internal

combustion



engines work, interactive graphics, and ageappropriate games.

This past January, the new content on the site generated a 26 percent increase in page views versus last year, and a 37 percent increase in unique visitors from this time last year. The site is also receiving viewers from around the world, as some of the top



**GMAbility Education web site** 

referrers were google.co.uk, google.ca, and google.com.au.

The GMability Education web site currently features topics on manufacturing, the environment, and fuel cell technology.

## Kindergarten through grade 4

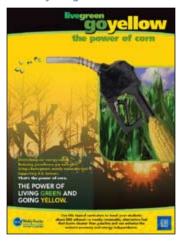
For younger children, GM provides various resources including *The Earth Day Way: Every Day* to generate enthusiasm for environmental consciousness every day, and the *Technology: Inventing the Future* curriculum designed to inspire students' interest in science and a future in a science-based career. Science and math curricula are available on GMability.

This year, the GM Janesville, Wisconsin assembly plant sponsored an art competition amongst elementary schools students, to create artistic interpretations promoting nature conservation and renewable fuels such as ethanol.

# Middle and high school

Continuing the campaign to excite kids about future energy sources, GM launched Hydrogen: Tomorrow's

Energy Source, a curriculum focused on examining the major energy sources used today, and well as the benefits of using hydrogen for future energy needs, which reached nearly 1.9 million middle school students.



GM and Weekly Reader also launched

a new educational program on E85 ethanol that is aimed at a generation poised to benefit from its use. The multimedia middle school curriculum, "Live Green, Go Yellow: the power of corn," includes a classroom DVD that demonstrates the process by which ethanol is produced from domestically-grown corn. In-class activities introduce students to E85 ethanol and how it could make a positive impact on the way in which we fuel our automobiles by reducing dependence on petroleum and reducing greenhouse gas emissions. Using the curriculum, students explore the economic, agricultural, and environmental impacts of using E85 ethanol as a fuel source.

GM continues to sponsor various projects such as the FIRST science and technology robotics competition; MATHCOUNTS, to stimulate interest in math-related careers; and Detroit Area Pre-College Engineering Program (DAPCEP), to motivate and prepare minority youth for college and careers in technology. Also, since 2001, GM of Canada employees have partnered with a local high school developing and delivering locally-developed environmental studies courses. The result was the government-approved Watershed Monitoring and Management course (Grade 11) and the Industry and the Environment course (Grade 12). The courses will be offered again in 2006 – 2007.

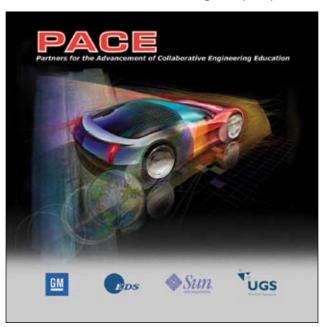
Please refer to the GMability pages for details of the resources available for Grades 5-8 and Grades

9-12. Lesson plans can be browsed by topic or by the national standards addressed by each. Read more about educational partnerships with the Society of Automotive Engineers: A World in Motion and the 'Global Rivers Environmental Education Network'.

# Post-K-12 programs

The GM Automotive Service Educational Program (GM ASEP) was established to foster education in technology and develop the next generation of dealer service technicians. GM ASEP is currently offered at 66 colleges in the United States, 14 in Canada, and one in China. This partnership between GM, GM dealerships, colleges, universities, and communities incorporates advanced automotive technical training with a strong academic foundation. By the end of 2006, GM ASEP graduated well over 13,000 dealer service technicians. Students complete their internships at local GM dealerships. These programs offer students outstanding career opportunities, economic development for the community, and improve our customer satisfaction.

For more information visit: www.gmasepbsep.com



Partners for the Advancement of Collaborative Engineering Education (PACE) links GM, EDS, Sun Microsystems, and UGS to develop the automotive Product Lifecycle Management (PLM) team of the future. PLM focuses on all aspects of a product's life - from its design, manufacture, marketing, distribution, maintenance, and finally into recycling, disposal, and reuse/sustainability. Since its inception in 1999, 40 institutions have been selected to join the PACE program. The PACE Partners are joined by many companies who contribute software, hardware, training, and technical support to academic institutions in the U.S., Canada, China, Germany, Mexico, Sweden, Australia, and South Korea. As of the end of 2005, the program had provided a combination of in-kind and cash contributions with a total commercial value exceeding \$3.95 billion to 34 PACE institutions globally. For more information on PACE partnerships please see the PACE web site: www.pacepartners.org.

CHALLENSY OF G

Challenge X is a groundbreaking student engineering competition sponsored by GM and the U.S. Department of Energy (DOE). The Challenge X program was established by the DOE and GM to challenge university teams to explore vehicle solutions that will minimize energy consumption and reduce emissions.

Year one focused on modeling, simulation, and testing of the powertrain and vehicle subsystems. In years two and three, students integrated 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



A student reviews an engine design during the ChallengeX competition.

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.

## **LATIN AMERICA, AFRICA & MIDDLE EAST**

## **GM South Africa (GMSA)**

General Motors South Africa has implemented a HIV/AIDS mentorship program at Sanctor High School. Twenty students attended peer educator training, the first stage to implement a school HIV/AIDS program with the assistance and support from General Motors South Africa and their peer educators, assisting them to develop, implement, and sustain their own HIV/AIDS school program.



General Motors South Africa has implemented a HIV/AIDS mentorship program at Sanctor High School. Shown are the twenty students who attended the peer educator training,

## **General Motors in Israel**

In Israel, General Motors and its local partner and vehicle distribution network, Universal Motors Israel (UMI), support a number of community outreach education initiatives to promote interest and excellence in science and technology, safety, and

the environment. GM and UMI, together with the Technion - Institute of Technology, Israel's Ministry of Education, NASA, and other bodies, sponsored the second FIRST regional competition in Israel in March 2006. The FIRST program in Israel is an extension of the U.S. robotics competition to foster interest among high school students in science and technical fields. Twenty-six Israeli high schools participated in the 2006 program and four teams continued to the U.S. finals in Atlanta, GA.



Winners of the 2006 FIRST Robotics Competition in Israel

During 2005, GM, UMI, and the Technion's Institute of Technology opened an interactive Road Safety exhibit at the Israel Museum of Science, Technology, and Space. The permanent exhibit is expected to receive tens of thousands of young visitors from elementary, middle school, and high schools, together with their teachers and families. GM and UMI also continued support of the Israeli Safe Kids campaign with a focus in 2005 on educational campaigns aimed to educate the public about the correct use of booster seats. Israel's Safe Kids program is available in multiple languages including Arabic and Hebrew.

GM also provided scholarships in 2004-2005 to students in leading Israeli universities in support of graduate research in the science and engineering fields, as well as Technion's SciTech camp for gifted high school students, and the SAE Formula One challenge undertaken by students at Ben-Gurion University.

#### **GM ASIA PACIFIC**

### **GM China**



Donation ceremony at Jin Ri Primary School, Shanghai, China, June 23, 2006

GM China employees collected funds that helped build two libraries at local Shanghai elementary schools. GM China worked with local charity Shanghai Sunrise to identify two schools in need — Jin Ri Primary School and Peng Zhen Primary and Secondary School. The schools have 2,200 students in grades one through nine. Shanghai Sunrise facilitates one-to-one educational sponsorships for underprivileged children in Shanghai.



Donation ceremony at Jin Ri Primary School, Shanghai, China, June 23, 2006

"General Motors and our employees take great pride in giving back to the communities in which we do business," said former GM Asia Pacific President (current GM North America President) Troy Clarke. "By supporting two libraries, we hope to provide more children the opportunity to experience the wonders and joy of reading."

# GM Daewoo Auto & Technology (GM Daewoo)

PARTNERS FOR THE ADVANCEMENT OF COLLABORATIVE ENGINEERING EDUCATION (PACE) GM Daewoo established a unique automotive planning, design, and engineering partnership with the opening of the PACE Center at Hongik University. PACE is a corporate alliance between GM Daewoo parent General Motors, EDS, Sun Microsystems, and UGS, with contributions from Alias, Altair, Fluent, Hewlett-Packard, LSTC, and MSC Software. Founded in 1999, PACE has supported 34 leading academic institutions around the world through the contribution of computer-based engineering tools.

Hongik University will receive computer-based hardware in addition to modeling and simulation software. The university also will receive technical and educational materials, as well as vehicle parts for student and instructor training, and academic support. The estimated \$212 million worth of contributions is the largest donation of its kind ever made to a university in Korea.

As part of its effort to promote the development of a design and engineering-linked curriculum and foster automotive industry talent in Korea, GM Daewoo will participate in a Product Lifecycle Management (PLM) education program that Hongik University will set up though the PACE program. PLM provides an organic connection between the development, production, and after sales service stages of a product. Students will be offered additional opportunities for practical learning through joint programs with GM Daewoo and participation in PLM-related lectures.

FIRST ANNUAL KOREA AUTO SCIENCE CAMP GM Daewoo Auto & Technology (GM Daewoo) sponsored the First Annual Korea Auto Science Camp held at the Yong-in Future Leadership Center in Kyeonggi-do in August 2005. The unique activity was created by GM Daewoo to stimulate interest in science and nurture the development of young talent. Approximately 100 elementary school students participated. The camp provided a thorough introduction to the many scientific principles involved in the design and working of today's motor vehicles, including their propulsion systems, transmissions, brakes, suspensions, steering, and safety technology.

Participants were given hands-on experience making their own car models and viewing vehicles in 3-D. A science magic performance that introduces the principles involved in the popular Gyrodrop amusement park ride, the mystery of water and traditional sciences; a presentation on the history of Korea's automobile industry; and quizzes and a campfire are among the other highlights of the fourday camp.

### **GM Holden - Australia**

#### SUSTAINABLE SCHOOLS

GM Holden supports education through partnerships with various organizations. One example is the New South Wales Department of Education's Sustainable Schools Program which is in 190 primary and secondary schools. The program encourages students, teachers, and the community to make their school an ecologically sustainable organization.

#### NATIONAL YOUTH SCIENCE FORUM

Since 2000, GM Holden has sponsored a residential course at the University of Canberra which introduces senior students to the world of science and technology.

#### **FORMULA SAE-A**

With the Society of Automotive Engineers Australasia, university students participate in a car racing competition that aims at giving young engineers hands-on involvement in a meaningful automotive project and to produce graduates familiar with teamwork, cost-effective designs, and deadline imperatives.



Victorian students participate in the RACV endurance event.

#### **RACV ENERGY BREAKTHROUGH**

Each year GM Holden and the Royal Automobile Club of Victoria give Victorian students the experience of designing and building an energy efficient vehicle and competing in a 24-hour endurance event. The intent is to bring the classroom into the real world, celebrating learning and student achievement. GM Holden has also funded a new track for hybrid vehicles and initiated technology forums. In 2005, almost 300 teams from over 140 schools in Victoria, South Australia, Tasmania, Queensland, and New South Wales participated.

# MARYBOROUGH TECHNOLOGY CHALLENGE This Queensland event is another training ground for future engineers. In 2005, more than 11,000 people attended the three-day event.

# Commonwealth Science and Industrial Research Organization (CSIRO) Lab on Legs

GM Holden and CSIRO have developed a national education program to encourage students in year's five to eight to consider careers in science, engineering, and technology and to increase their awareness of road safety issues. Driving Innovations involves a range of experiments relating to vehicle safety, environmental and future technology. This free program aims to address a continuing decrease in the number of students studying science.

# **Social Performance** | Education

Partners for the Advancement of Collaborative Engineering Education (PACE)

The Engineering, Art, and Design faculties of Monash University are the first in Australia to join the PACE alliance. As part of its ongoing relationship with the Bachelor of Industrial Design course at Monash University in Melbourne, Holden works with Monash to establish the clay modeling course and studio that supported eight young aspiring designers through the final year of their course. Three of those graduates signed on for their first day of work at Holden Design in early 2006.

INDUSTRY AWARDS AND TRAINEESHIPS
GM Holden participates in industry award programs that promote vocational training and recognize academic excellence. "The Holden Prize" covers key automotive trades programs conducted by TAFE college partners in Victoria and local universities. GM Holden is a major sponsor of the SA "Apprentice of the Year" award and supports training awards run by NSW and SA education departments. GM Holden has supported a T3 program with the New South Wales Department of Vocation, Education, and Training to train Year 11 and Year 12 students in vehicle servicing and administration.

VEHICLE, ENGINE AND COMPUTER DONATIONS GM Holden regularly donates vehicles, engines, and components to TAFE institutions and youth training programs nationally.

# **GRI INDEX**

This index aims to show how we have ordered our report using the 2002 Global Reporting Initiative (GRI) framework.

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					
+	denotes GRI indicator reflected in our KPI scorecard					

	GM CRR GRI Index				
GRI Ref Number	Indicator Description		Location of Information		
	1. Vision and Strategy				
1.1	Statement of the organization's sustainability vision and strategy regarding its contribution to sustainable development	4	Our Message > Internal Commitment Our Company > Vision, Values & Actions		
1.2	Statement from the CEO (or equivalent senior manager) describing key elements of the report	4	Our Message > Executive Statement		
	2. Profile				
2.1	Name of reporting organization	*	Our Company		
2.2	Major products and services	*	Our Company > Global Presence > Brands and Partners		
2.3	Operational structure of the organization	4	Our Company		
2.4	Description of major divisions, operating companies, subsidiaries and joint ventures	4	Our Company > Global Presence		
2.5	Countries in which the organization's operations are located	4	Our Company > Global Presence		
2.6	Nature of ownership; legal form	*	Our Company > Global Presence		

2.7	Nature of markets served	*	Our Company > Global Presence
2.8	Scale of the reporting organization	*	Economic Performance > Financial Information
2.9	List of stakeholders	*	Our Company > Stakeholder Engagement
	Report scope		
2.10	Contact person(s) for the report, including e-mail and web addresses	+	Tools > Contact Us > `
2.11	Reporting period (e.g. fiscal / calendar year) for information provided	*	Our Message > Using this report
2.12	Date of most recent previous report (if any)	*	Our Message > Using this report > GRI Reporting
2.13	Boundaries of report and any specific limitations on the scope	*	Our Message > Using this Report > About this Report
2.14	Significant changes in size, structure, ownership, or products / services that have occurred since the previous report	*	Our Message > Using this report > Approach and Structure
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	*	Our Message > Using this Report > About this Report
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	*	Our Message > Using this report > About this Report
	Report profile		
2.19	Significant changes from previous years in the measurement methods applied to key economic, environmental and social information	*	Our Message > Using this report > About this Report
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	*	Our Company > Stakeholder Engagement > Assurance
2.21	Policy and current practice with regard to providing independent assurance for the report	*	Our Company > Stakeholder Engagement > Assurance
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)	*	Our Message > Contact Us

3. Governance structure and management systems			
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	4	Our Company > Corporate Governance
3.2	Percentage of the board of directors that are independent, non- executive directors	*	Our Company > Corporate Governance > Leadership
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	*	Our Company > Corporate Governance > Leadership
3.4	Board-level processes for overseeing the organization's identification and management of economic, environmental, and social risks and opportunities	*	Our Company > Corporate Governance > Leadership
3.5	Linkage between executive compensation and achievement of the organization's financial and non-financial goals	*	2005 Annual Report pg. 133
3.6	Organizational structure and key individuals responsible for oversight, implementation, and audit of economic, environmental, social and related policies	•	Our Company > Managing Public Policy > Management Structure
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	*	Our Company > Vision, Values & Actions Our Company > Corporate Governance > Corporate Governance Processes Environmental Performance > Management Systems > Principles and Policy
3.8	Mechanisms for shareholders to provide recommendations or direction to the board of directors	*	Our Company > Corporate Governance
	Stakeholder engagement		
3.9	Basis for identification and selection of major stakeholders	*	Our Company > Stakeholder Engagement
3.10	Approaches to stakeholder consultation reported in terms of frequency of consultations by type and by stakeholder group	*	Our Company > Stakeholder Engagement
3.11	Type of information generated by stakeholder consultations	*	Our Company > Stakeholder Engagement
3.12	Use of information resulting from stakeholder engagements	*	Our Company > Stakeholder Engagement

	Overarching policies and management systems				
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	*	Our Company > Corporate Governance > Corporate Governance Processes Environmental Performance > Management Systems > Principles and Policy		
3.15	Principle memberships in industry and business associations, as well as national / international advocacy organizations	*	Our Company > Stakeholder Engagement > Ongoing Partners		
3.16	Policies and / or systems for managing upstream and downstream impacts.	*	Our Products > Our Vehicle Strategy Our Company > Managing Responsibility Environmental Performance > Management Systems > Performance Environmental Performance > Supplier Management Social Performance > Human Rights > Actions		
3.17	Reporting organization's approach to managing indirect economic, environmental, and social impacts resulting from its activities	*	Economic Performance > Economic Contribution		
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	*	Our Company > Managing Responsibility Environmental Performance > Management Systems		
3.20	Status of certification pertaining to economic, environmental and social management systems	+	Environmental Performance > Management Systems > Performance		
	4. GRI Content Index				
4.1	Provide a table identifying location of each element of the GRI Report Content (section and indicator) in the report	*			
	5. Performance Indicators				
	5a. Economic				
	Customers				
EC1	Net sales	*	2005 Annual Report pg. 45		
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)	*	2005 Annual Report pg. 46-48		

	Suppliers			
EC3	Cost of all goods, materials, and services purchased	*	Social Performance > Human Rights > Policies	
	Employees			
EC5	Total payroll and benefits expense (incl. wages, pension, redundancy payments)	*	2005 Annual Report Pg. 58	
	Providers of capital			
EC6	Distributions to providers of capital broken down by interest on debt and borrowings, and dividends on all classes of shares	+	2005 Annual Report Pg. 58	
EC7	Increase/ decrease in retained earnings at end of period	*	2005 Annual Report Pg. 45	
	Public sector			
EC8	Total sum of taxes of all types paid, broken down by country	+	2005 Annual Report (throughout report)	
EC10	Donations to community, civil society, and other groups broken down in terms of cash and in-kind donations per type group	*	Economic Performance > Community Investment > Performance	
EC12	Total spent on non-core business infrastructure development e.g. hospital/school for employees and their families	*	Economic Performance > Community Investment	
	Indirect economic impacts			
EC13	Describe the organization's indirect economic impacts	*	Economic Performance > Labor Force Economic Performance > Economic Contribution Economic Performance > Community Investment	
	5b. Environmental			
	Materials			
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)		Environmental Performance > Waste and Recycling	
	Energy			
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	*	Environmental Performance > Energy > Performance	

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)	+	Environmental Performance > Energy	
EN17	Initiatives to use renewable energy sources and increase energy efficiency	4	Environmental Performance > Energy > Actions	
EN18	Energy consumption footprint (i.e. annualized lifetime energy requirements) of major products	4	Environmental Performance > Energy	
EN19	Other indirect (upstream/downstream) energy use and implications, such as organizational travel, product lifecycle management and use of energy-intensive materials	*	Environmental Performance > Energy	
	Water			
EN5	Total water use	* +	Environmental Performance > Water > Performance	
EN20	Identify water sources and related ecosystems/habitats significantly affected by the organization's use of water	+	Environmental Performance > Water > Performance	
	Biodiversity			
EN6	Location and size of land owned, leased, or managed in biodiversity-rich habitats (info on these pending from GRI)	+	Environmental Performance > Land Use, Biodiversity & Cleanup	
EN25	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)	+	Environmental Performance > Land Use, Biodiversity & Cleanup	
EN26	Changes to natural habitats resulting from the reporting organization's activities and percentage of habitat protected or restored	+	Environmental Performance > Land Use, Biodiversity & Cleanup	
EN27	Objectives, programs and targets for protecting and restoring native ecosystems and species in degraded areas	+	Environmental Performance > Land Use, Biodiversity & Cleanup	
EN29	List business units currently operating or planning operations in or around protected or sensitive areas	+	Environmental Performance > Land Use, Biodiversity & Cleanup	
Emissions, effluents and waste				
EN8	Greenhouse gas emissions (CO2, CH4, N20, HFCs, PFCs, SF6). Report separate subtotals for each gas in tonnes of CO2 equivalent for the following: Direct emissions from sources owned or controlled by the reporting entity. Indirect emissions from imported electricity heat or steam	+	Environmental Performance > Greenhouse Gases > Performance	
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	*	Environmental Performance > Emissions to Air > Ozone Gases	

EN10	NOx, SOx and other significant air emissions by type.	4	Environmental Performance > Emissions to Air	
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)	+	Environmental Performance > Waste and Recycling	
EN12	Significant discharges to water by type (see forthcoming GRI protocol on water)	•	Environmental Performance > Water	
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)	*	Environmental Performance > Management Systems > Management	
EN30	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	+	Environmental Performance > Greenhouse Gases	
EN31	Identify all production, transport, import or export of any waste deemed "hazardous" under the terms of the Basel Convention Annex I, II, III and VIII	4	Environmental Performance > Waste and Recycling	
	Suppliers			
EN33	Performance of suppliers relative to environmental components of programs and procedures described in response to Management Systems and Governance section of GRI Guidelines	+	Environmental Performance > Supplier Management	
	Products and services			
EN14	Significant environmental impacts of principle products and services (describe and quantify where relevant).	+	Our Products > Our Vehicle Strategy Our Company > Corporate Governance	
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	*	Our Products > Vehicle Recycling	
	Compliance			
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)	*	Environmental Performance > Management Systems > Management	
	5c. Society			
Labor practices and decent work				
	Labor practices and decent work			
	Labor practices and decent work  Employment			
LA1		•	2005 Annual Report Pg. 58	

LA12	Employee benefits beyond those legally mandated (e.g. contributions to health care, maternity, education and retirement)	*	2005 Annual Report (throughout report)			
	Labor/management relations					
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	+	2005 Annual Report Pg. 58			
LA4	Policy and procedures involving information, consultation and negotiation with employees over changes in the organization's operations (e.g. restructuring)	*	Workplace section of GMAbility			
LA13	Provision for formal worker representation in decision making or management, including corporate governance	4	Our Company > Corporate Governance			
	Health and safety					
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	+	Social Performance > Health, Safety & Security			
LA6	Description of formal joint health and safety committees comprising management and worker representatives and proportion of workforce covered	*	Social Performance > Health, Safety & Security			
LA7	Standard injury, lost day and absentee rates and number of work-related fatalities (including subcontracted workers)	+	Social Performance > Health, Safety & Security > Performance			
LA8	Description of policies or programs (for the workplace and beyond) on HIV/AIDS	*	Economic Performance > Community Investment > Performance			
	Training and education					
LA9	Average hours of training per year per employee by category of employee (e.g. senior/ middle management, professional, technical, etc.)	+	Social Performance > Employee Training > Performance			
LA17	Specific policies and programs for skills management or for lifelong learning	•	Social Performance > Employee Training			
Diversity and opportunity						
LA10	Description of equal opportunity policies or programs, as well as monitoring systems to ensure compliance and results of monitoring	*	Social Performance > Diversity			
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	*	Social Performance > Diversity > Performance Our Company > Corporate Governance > Leadership			

Human rights						
Strategy and management						
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)	*	Social Performance > Human Rights Our Company > Corporate Governance			
HR2	Evidence of consideration of human rights impacts as part of investment and procurement decisions, including selection of suppliers/contractors	4	Social Performance > Human Rights			
HR3	Description of policies and procedures to evaluate and address human rights performance within the reporting organization's supply chain and contractors	4	Social Performance > Human Rights			
Nondiscrimination						
HR4	Description of global policy and procedures/programs preventing all forms of discrimination in the reporter's operations, including monitoring systems and results	*	Social Performance > Diversity			
Freedom of association and collective bargaining						
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	4	Social Performance > Human Rights			
Child labor						
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	4	Social Performance > Human Rights			
Forced and compulsory labor						
HR7	Description of policy to prevent force and compulsory labor and extent to which this policy is visibly stated and applied	4	Social Performance > Human Rights			
Disciplinary practices						
HR9	Description of appeal practices, including, but not limited to, human rights issues	4	Social Performance > Human Rights			
HR10	Description of non-retaliation policy and effective, confidential employee grievance system	4	Social Performance > Human Rights			
Indigenous rights						
HR12	Description of policies, guidelines, and procedures to address the needs of indigenous people	4	Social Performance > Human Rights			

Share of operating revenues from the area of operations that are redistributed to local communities	+	Economic Performance > Community Investment				
Community						
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)	+	Economic Performance > Community Investment				
Awards received relevant to social, ethical and environmental performance	4	See individual sections				
Bribery and corruption						
Description of the reporting organization's policy, procedures/ management systems, and compliance mechanisms for organizations and employees addressing bribery and corruption	4	Our Message > Our Commitments > Global Sullivan Principles				
Political contributions						
Description of reporting organization's policy, procedures/ management systems and compliance mechanisms for managing political lobbying and contributions	4	Corporate Governance				
Amount of money paid by the reporter to political parties and institutions whose prime function is to fund political parties or their candidates	4	www.fec.gov				
Competition and pricing						
Description of reporting organization's policy, procedures/ management systems, and compliance mechanisms for preventing anti-competitive behavior	*	Our Company > Corporate Governance Economic Performance > Competitiveness				
Product responsibility						
Customer health and safety						
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	*	Our Products > Responsible Vehicle Use Our Products > Vehicle Safety >Avoiding Crashes				
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	*	Our Products > Quality > Performance Our Products > Vehicle Safety > Making Vehicles Safer Environmental Performance > Management Systems > Management				
	Community  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)  Awards received relevant to social, ethical and environmental performance  Bribery and corruption  Description of the reporting organization's policy, procedures/management systems, and compliance mechanisms for organizations and employees addressing bribery and corruption  Political contributions  Description of reporting organization's policy, procedures/management systems and compliance mechanisms for managing political lobbying and contributions  Amount of money paid by the reporter to political parties and institutions whose prime function is to fund political parties or their candidates  Competition and pricing  Description of reporting organization's policy, procedures/management systems, and compliance mechanisms for preventing anti-competitive behavior  Product responsibility  Customer health and safety  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  Voluntary code compliance, product labels or awards with respect to social and /or environmental responsibility that the	Community  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)  Awards received relevant to social, ethical and environmental performance  Bribery and corruption  Description of the reporting organization's policy, procedures/management systems, and compliance mechanisms for organizations and employees addressing bribery and corruption  Political contributions  Description of reporting organization's policy, procedures/management systems and compliance mechanisms for managing political lobbying and contributions  Amount of money paid by the reporter to political parties and institutions whose prime function is to fund political parties or their candidates  Competition and pricing  Description of reporting organization's policy, procedures/management systems, and compliance mechanisms for preventing anti-competitive behavior  Product responsibility  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  Voluntary code compliance, product labels or awards with respect to social and /or environmental responsibility that the				

Products and services						
PR2	Description of the reporting organization's policy, procedures/ management systems, and compliance mechanisms related to product information and labeling	+	Our Products > Efficiency & Emissions > Actions			
PR8	Description of reporter's policy, procedures/ management systems, and compliance mechanisms related to customer satisfaction, including results of surveys measuring customer satisfaction	*	Our Products > Vehicle Quality			
Respect for privacy						
PR3	Description of reporting organization's policy, procedures/ management systems and compliance mechanisms for consumer privacy	*	Social Performance > Diversity GM privacy statement			