



OPERATING IN THE GREEN



Corporate Responsibility Report 2009

Our Focus on Environmental Responsibility 1

Commitment to the Environment, Health and Safety 2

Key focus areas

Commitment Demonstrated Through Practice 3

ISO 14001, OSHAS 18001, Rising environmental steward recognition, Gold award and million-hour safety award, Star site for OSHA voluntary protection program

Product Design 4

Zero emission electric powered lift trucks, Environmentally friendly ICE powered lift trucks, Green innovations, Alternative power initiatives, Advanced fleet management system development, Lift truck life cycle cost and carbon impact model

Manufacturing/Operations 6

Safety performance, Newly chartered Americas energy committee, Air quality enhancements, Energy consumption management, Hazardous and solid waste reduction, Recycling, Use of solar energy, Ecological/societal effects, Water and soil conservation, Trip reduction

Corporate 9

NMHG supplier sustainability survey, Recycling, Global carbon footprint calculation, Energy efficient IT operations, Energy consumption management, Energy conscious fleet management

Social Responsibility 11

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Our Focus on Environmental Responsibility

Environmental sustainability is one of the most critical issues faced by our generation. Our choices -- whether at home or at work -- impact the air we breathe, the water we drink, the food we eat and the land we enjoy. Our world is not only becoming more interconnected through economics, communications and transportation, we are also growing environmentally interdependent. Just as nations have begun to take responsibility for environmental sustainability, many industries in the business sector have begun to do the same.

Within the material handling industry, there are numerous opportunities to positively impact our environment. Our industry provides the equipment that enables the optimum flow of goods that is essential to a vibrant economy. To the extent that we can achieve this while improving air quality, reducing energy consumption, reducing waste, increasing recycling, and increasing safety, we contribute positively to environmental sustainability.

At NACCO Materials Handling Group, Inc. we are first improving efficiency and reducing waste in our own operations. Secondly, we are developing and producing lift trucks that improve efficiency and reduce energy consumption for our customers' operations. We have been a leading producer of zero emission trucks for years, and in 2009 we are rolling out a new generation of even more innovative and efficient trucks than ever before. We are collaborating on next generation alternative energy technology to enable a broader group of customers to more easily make the transition from internal combustion engine trucks to zero emission electric trucks. This same technology will ultimately enable the electrification of automobiles, reducing our dependence upon oil. We have developed tools to aid our customers in choosing among alternative power options for their applications, based on cost and emissions impacts. These initiatives aren't just good for the world -- they deliver more value to our customers, and to our own company's bottom line. Our commitment to environmental sustainability supports our responsibility to our shareholders.

Our journey toward environmental sustainability will be a long one, but we are committed to staying on the path. We are aware that we have much to learn and many improvements to make, so we will continually challenge ourselves toward greater progress and higher goals. We consider this commitment an investment in our future and in the future of this planet we all call home.



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Commitment to the Environment, Health and Safety

NACCO Materials Handling Group, Inc. (NMHG), a global leader in the development and manufacture of innovative and high performance industrial lift trucks, recognizes environmental sustainability and the highest standards of health and safety in our products, workplace and community as fundamental to its worldwide business operations. The company has a heritage of environmental stewardship in its product design choices and manufacturing operations as well as a strong safety track record. Our commitment going forward is underscored by the inclusion of incremental annual business plan objectives which support our environmental and safety goals and policies and by the steadfast pursuit of these objectives.

Key Focus Areas

- Product design which considers environment
- Environment, health and safety EH&S management system,
- Prevention of pollution and accidents
- Going beyond compliance
- Continual improvement of EH&S performance



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Commitment Demonstrated Through Practice



- **ISO 14001 registration** - All of our Americas and European manufacturing facilities have achieved ISO 14001 registration. ISO 14001 is a globally accepted blueprint for an environmental management system. It includes requirements for developing an environmental policy, assessing environmental impacts of products and processes, developing environmental goals and measurable objectives, implementation of initiatives to meet objectives, auditing, corrective action, and management review. Each of our locations closely tracks environmental and safety performance and sets objectives each year to drive continual improvement as an integral part of our business plan. ♻️ 🏠 🌱



- **OSHAS 18001 registration** - Our Greenville, NC and Sulligent, AL facilities have already achieved registration to OSHAS 18001, which requires the establishment of a defined occupational health and safety (OH&S) management system to minimize or eliminate OH&S risks and a process of continuous improvement. We are currently pursuing registration at our other manufacturing facilities. 🏠 🌱



- **Rising environmental steward recognition** - Our Greenville operations have been recognized by the State of North Carolina as a Rising Environmental Steward. We are 1 of only 14 companies to receive this distinction. Award criteria include a mature environmental management system (EMS) based on ISO 14001, a demonstrated commitment to go beyond compliance, site-specific measurable goals, including pollution prevention and process efficiency improvement, and the annual reporting of progress towards those goals. ♻️



- **Gold award and million-hour safety award** - Our Greenville operations have been presented on multiple occasions the Gold and Million-Hour Safety Awards for outstanding achievement in employee safety. 🏠 🌱



- **Star site for OSHA voluntary protection program** - We are building a culture that fosters employee ownership of the environment and safety, which will culminate in application to the OSHA Voluntary Participation Program as a Star Site for our U.S. operations in 2009. ♻️ 🏠 🌱



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Product Design

GREEN FACT:

NMHG is one of the largest volume producers of zero emission fully electric lift trucks in the North American market.

GREEN FACT:

NMHG offers lift trucks which operate on cleaner burning alternative fuels such as LP and clean diesel, as well as hydrogen fuel cells.



- **Zero emission electric powered lift trucks** – NMHG is one of the largest volume producers of zero emission electric lift trucks in the North American market. The company is among the earliest adopters of energy efficient AC motor and control technology. NMHG's continued pursuit of improved energy efficiency is affirmed by competitive testing which shows that NMHG products offer the best energy efficiency (energy used per load moved) of any lift truck manufacturer.
- **Environmentally friendly internal combustion engine (ICE) powered lift trucks** - NMHG has begun to introduce spark-ignited models that already meet or exceed CARB 2010 (California Air Resources Board) requirements. According to testing by the EPA and the California Air Resources Board (CARB), our lift truck emissions are among the lowest of any truck in the industry. Our diesel lift trucks are becoming cleaner all the time as we have ongoing development with diesel engine suppliers to meet Tier III standards and to proactively evolve towards upcoming Tier IV standards. Additionally, we have engineered our ICE products for extended service intervals in order to reduce oil change requirements for our customers.
- **Green innovations** - NMHG developed and introduced an innovative electronically controlled transmission which significantly reduces tire and brake wear for our ICE lift truck customers. For our electric trucks, NMHG has introduced a system which recaptures energy during braking and the lowering of loads. This energy is then reused, lowering the overall energy consumption of the truck. Through innovative engineering, we reduce non-productive energy use throughout the vehicle by means of weight reduction, drive train efficiency (patents applied for) and hydraulic system efficiency. Recyclability is also a prime consideration in NMHG lift truck design. Right from the design stage, NMHG actively selects materials used in its lift trucks with recyclability in mind.
- **Alternative power initiatives** – We have consistently engineered our lift trucks to be compatible with the latest in alternative power technologies over the years, including electric batteries, LP, and clean diesels. That tradition is being upheld most recently with fuel cells, as we were among the first to use working fuel cells in actual applications, dating back to 2005. In 2008, we continued facilitation of commercial deployments, selling approximately 300 trucks to be powered by hydrogen fuel cells. NMHG supports the adoptions of greener technologies through engineering collaboration, analyses and extensive internal and field validation testing. Currently, the company is investigating advanced, more efficient battery chemistries and technologies to reduce energy consumption and carbon impact, increase productivity and reduce toxic material content. Our commitment to these initiatives is reinforced through our participation in developing industry standards to adopt these greener technologies safely and reliably.

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Product Design

GREEN FACT:

Did you know that it is estimated that over 1.5M tires are consumed on lift trucks in North America every year?

- **Advanced fleet management system development** - Collaborating with a telemetry technology leader, NMHG will bring to market in 2009 an advanced lift truck fleet management system, which will support sustainability in several ways. The system enables maintenance technicians to remotely monitor the health of the truck during operation and reports lift truck fault codes to the dealer via cellular communication, such that an appropriately skilled technician with the right parts can resolve any issues in one trip, minimizing environmental impact. The system remotely reports hour meter readings, reducing unnecessary travel and enabling the precision scheduling of preventative maintenance, eliminating under- or over-servicing of trucks. Through lift truck utilization reports, the system facilitates optimum fleet sizing, and integration with dealer business systems will enable accurate cost tracking and cost performance management.
- **Lift truck life cycle cost and carbon impact model** – NMHG has developed a model which calculates lift truck life cycle costs and carbon dioxide equivalent (CO₂e) emissions impacts for various lift truck power options, including conventional and fast charge lead acid batteries, lithium ion batteries, hydrogen fuel cells, LP and diesel. This model is built upon knowledge from internal empirical testing, as well as from inputs from the Department of Energy and Argonne National Labs and is being used to enable customers to make informed choices of alternative power options for lift trucks.



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Manufacturing / Operations



- Safety performance** – NMHG continues to put top priority and focus on safety of its employees in all of its operations. 2008 saw marked improvement over already industry-leading safety performance, as NMHG fosters a work environment where all employees are deeply involved in developing and maintaining safe processes and equipment in all aspects of their work.

Safety	Units	2007	2008	Change
Recordable Injury Frequency ¹	Incidents ²	6.0	1.5	-75.0%
Lost-Time Case Frequency ¹	Incidents ³	3.7	0.8	-78.4%

¹Data for Americas only.

- Newly chartered Americas energy committee** – The Americas Energy Committee was chartered in 2008 with the objectives of reducing energy consumption and carbon footprint in NMHG Americas by identifying and standardizing best practices both internally and externally. Fully supported by executive leadership within NMHG, the committee has set aggressive environmental targets for 2009. Specific targets will be set for each month based on the same month of the prior year and will be adjusted for fixed and variable factors. This key program will serve as a model for other NMHG global regions.

2009 Americas Energy Committee Targets	2009 Target
Reduce CO2 emissions for all Americas facilities	10%
Reduce electricity consumption for all Americas facilities	10%
Reduce natural gas consumption for all Americas facilities	10%
Reduce water consumption for all Americas facilities	10%
Reduce landfill waste for all Americas facilities	5%



- Air quality enhancements** – NMHG has made great strides in the area of painting/coating, an area we have identified as having significant potential for environmental improvement. Nearly a decade ago, we began using low VOC (Volatile Organic Compound) paints. We've also gone a step further and have introduced powder coating operations in order to eliminate VOC's and waste. Our Berea and Greenville plants decreased their VOC emissions in 2008 by 31% and 22%, respectively.

Global Air Emissions	Units	2007	2008	Change
CO2 Footprint	Metric Tons	272,871	238,913	-12.4%
Volatile Organic Compounds	Metric Tons	200	181	-9.4%

Manufacturing / Operations



- Energy consumption management** - We closely monitor our electrical and natural gas usage. Efficient energy management reduces pollution, including our carbon footprint, and helps make our operations cost competitive. An example of our efforts to reduce energy consumption is our use of energy efficient LED task and overhead lighting and the use of sensors to eliminate unneeded energy consumption. Our Berea plant has begun the process of eliminating electric boilers, air conditioners and natural gas heaters and moving to a system that uses waste heat generated from the painting process.

Global Energy Consumption	Units	2007	2008	Change
Electricity	kWh	97,531,114	92,739,704	-4.9%
Coal	Metric Tons	513	585	14.1%
Natural Gas	Cubic Meters	7,341,479	8,251,938	12.4%
Gasoline	Liters	216,112	17,686	-91.8%
Diesel Fuel	Liters	604,393	590,094	-2.4%
Liquefied Petroleum Gas	Liters	4,169,049	2,230,072	-46.5%

- Hazardous and solid waste reduction** - The amount of hazardous waste generated from our painting operations is being reduced through a process of solvent distillation and reuse and by better transfer efficiency. Our ignitable hazardous wastes are sent to a disposal company, which includes them in a fuel blend used to heat cement kilns. Furthermore, we have various quality initiatives focused on reducing waste in our production processes. In our Ramos Arizpe facility, we converted 100% of our pallets from wood to durable steel pallets. In our Berea facility, we improved our sorting process, enabling us to reduce all non-recyclable landfill waste by 44% from 2007 to 2008. Globally, we reduced landfill waste 63% and hazardous waste 12% from 2007 to 2008.

Global Waste	Units	2007	2008	Change
Land-fill Waste	Metric Tons	7,616	2,817	-63.0%
Incinerated Waste	Metric Tons	905	995	10.0%
Hazardous Waste	Kilograms	589,354	517,908	-12.1%

- Recycling** - All of our sites have focused programs for extensive recycling of wood, cardboard, plastic, office paper, metals, and electronics. Similarly, we have programs to recycle lift truck batteries, tires and oil, both for our own operations, and for our customers through our distribution networks.

Global Recycling	Units	2007	2008	Change
Recycled Cardboard	Metric Tons	421	395	-6.2%
Recycled Wood	Metric Tons	1,164	2,118	82.0%
Recycled Metals	Metric Tons	14,350	17,195	19.8%
Recycled Plastics	Metric Tons	206	201	-2.4%

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Manufacturing/Operations

- **Use of solar energy** – Our Berea plant installed a roof-top solar energy system in 2008 that supplies energy for its water heating process.
- **Ecological/societal effects** - An ecological impact assessment of our sites on their surroundings is performed in order to proactively minimize any potential impact. In our Greenville facility, we eliminated outdoor, unprotected storage of oil-containing equipment to ensure protection of the environment from contamination. We use only heat-treated wood in shipping our international products to prevent transmission of pests.
- **Water and soil conservation** - Many of our sites utilize storm-water retention ponds to control run-off utilizing pollution-filtering vegetation. These areas offer havens for water fowl. One such pond was added to our Greenville facility in 2008. We utilize biodegradable chemicals and waste water treatment processes to well exceed discharge permit requirements. We also have multiple initiatives for water conservation, including reduction of landscape watering.

Global Resource Consumption	Units	2007	2008	Change
Water	Liters x 1000	239,092	217,773	-8.9%

- **Trip reduction** - Many of our manufacturing facilities operate on a modified workweek structure in order to reduce the impact of employee commuting, and we coordinate car pooling at our urban locations to further reduce total trip miles.

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Corporate



- **NMHG supplier sustainability survey** – To begin the process of engaging our supply chain in our sustainability efforts, NMHG conducted its first supplier sustainability survey in 2008. Moving forward, we will be exploring with suppliers how they too can reduce material waste, lower energy consumption and lower emissions.
- **Recycling** – Our corporate locations have rigorous recycling programs for paper, batteries, and fluorescent tubes, among other items.
- **Global carbon footprint calculation** – During 2008, NMHG conducted its first ever global carbon footprint calculation. Data was collected from worldwide operations and calculations were performed with assistance from the Rising Environmental Steward Program and from CarbonVision, LLC, an environmental sustainability consultancy. Included in the calculations were sources from scopes 1 (direct combustion) and 2 (upstream combustion associated with electricity consumption). NMHG has analyzed our carbon footprint both by energy source and by global region. The Americas Energy Committee has taken the lead in developing a strategy and objectives to make a significant reduction in our footprint in 2009.

NMHG GLOBAL CARBON FOOTPRINT 2008



ENERGY CONSUMPTION	Unit	Quantity	CO ₂ Emissions	% of Total Emissions	
Electricity	Kilowatt Hours	92,739,704	52,651.0	22.0%	Scope 2
Natural Gas	Cubic Meters	8,251,938	150,603.5	63.0%	Scope 1
Gasoline	Liters	2,236,477	183.6	0.1%	Scope 1
Diesel	Liters	167,367	7,777.3	3.3%	Scope 1
LPG	Liters	1,547,238	25,800.5	10.8%	Scope 1
Coal	Metric Tons	585	1,395.3	0.0%	Scope 1
Jet A	Liters	23,769	501.5	0.2%	Scope 1

Total CO₂ Emissions 238,912.7 Tons



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Corporate

- **Energy efficient IT management** – Our corporate data center utilizes an energy efficient climate control system. We also upgraded our HVAC system in 2008 to a high-efficiency 3-stage, split system, which will reduce our energy consumption by around 50% and eliminate total unit downtime. Our computer rooms have very tight temperature controls to avoid wasted energy. Corporately we have moved from CRT's to LCD monitors that reduce energy consumption 40-45% and increase useful life around 25% on our approximately 2,500 displays. Finally, we have a 100% recycling program for all of our computer equipment.
- **Energy consumption management** – Our buildings are equipped with timers to ensure both inside and outside lighting is conserved. We also use energy efficient lighting in all of our locations. Our facilities have computer controlled heating ventilation and air conditioning systems that maximize energy efficiency and minimize consumption.
- **Energy conscious fleet management** – At NMHG, a key purchase criterion for our corporate automotive fleet is fuel efficiency. For 2008, our fleet averaged 25.1 miles per gallon overall. Additionally, we select only vehicles which are E85 ethanol compatible.

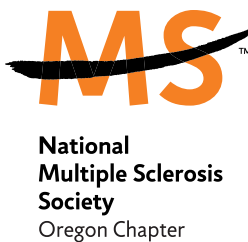


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Social Responsibility

Through gifts, donations and employee volunteer efforts, NMHG demonstrates our commitment to actively support the communities in which we live and work.

The following are among the many organizations that NMHG supports:





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