



A CATALYST FOR CHANGE

DOW'S APPROACH TO SUSTAINABILITY

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The Dow Chemical Company

US Department of Energy

Office of Health, Safety & Security

Visiting Speaker Program

The Power of the Human Element At The Dow

Chemical Company, we view chemistry as the work of humanity. We believe the most important element of all is not found on the periodic table, yet is part of every equation for the future. This element is the Human Element. With it, we are more than a chemical company, we are a difference-maker in the world.





ABOUT DOW



A science and technology leader
with annual sales of \$54 billion

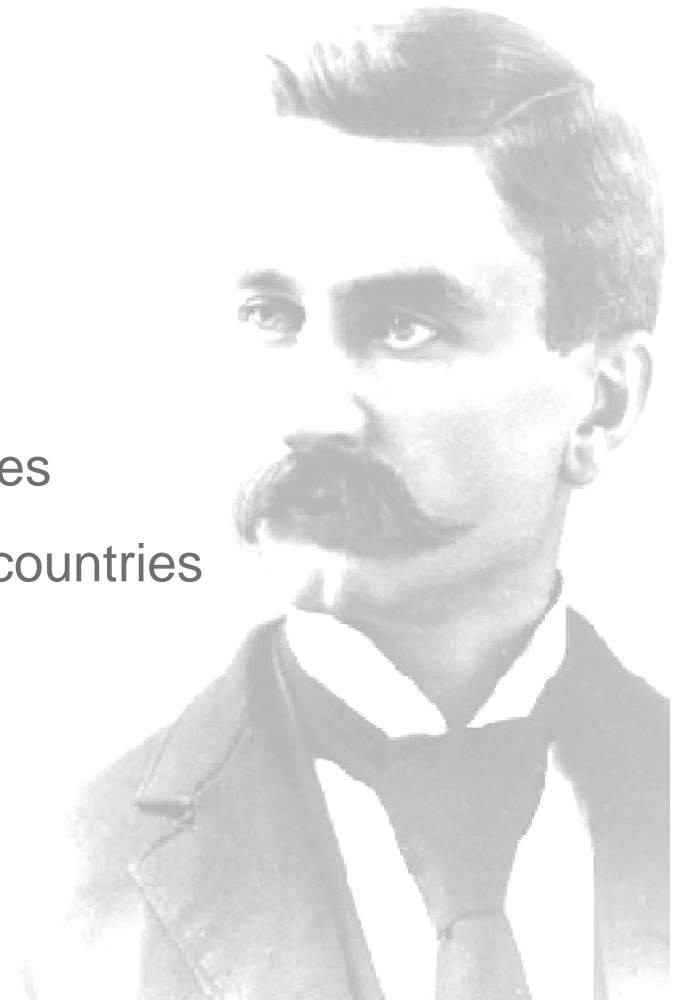
Founded in 1897 by Herbert H.
Dow in Midland, Michigan

Supplies plastics and chemical
products to customers in 160 countries

From 156 manufacturing sites in 37 countries

Employs 46,000 people globally

**"If you can't do it better,
why do it?"
-- Herbert H. Dow**



THE ELEMENT OF CHANGE



Our Vision is to be the largest, most profitable and most respected chemical company in the world.

Our mission is to constantly improve what is essential to human progress by mastering science and technology.

Sustainability requires making every decision with the future in mind. It is our relationship with the world around us – creating economic prosperity and social value while contributing to the preservation of our planet.



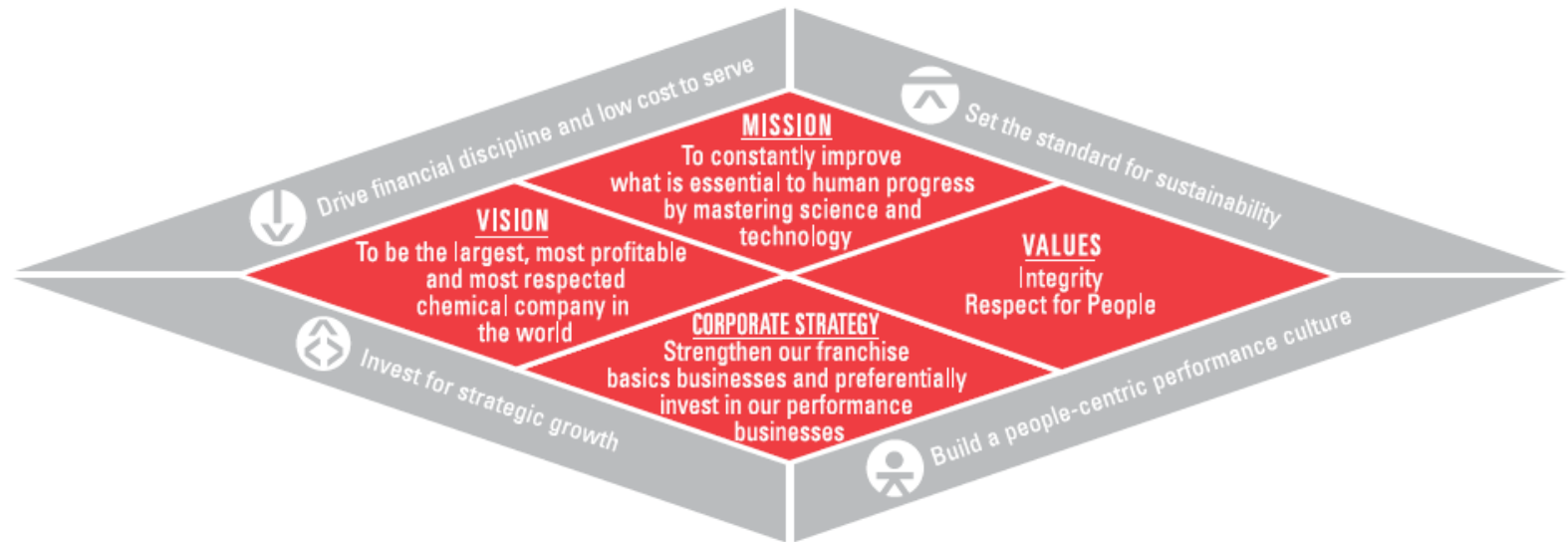
SUSTAINABILITY



Integrated into our corporate strategy

 Drive Financial Discipline
And Low Cost to Serve

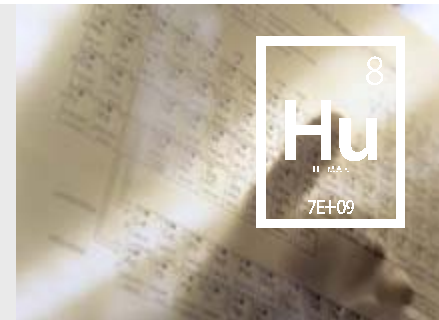
 Set the Standard
For Sustainability



 Invest for Strategic Growth

 Build a People-Centric
Performance Culture

A HISTORY OF STRIVING FOR SUSTAINABILITY



- 1897 – Dow designs “Bleach Lifters Bonnet” protective unit
- 1906 – Dow partners with George Westinghouse to develop energy saving Co-Generation
- 1934 – Mammalian toxicology research laboratory established
- 1935 – First industrial use of bacteria to degrade phenolic waste
- 1948 – First full-time industrial hygienist
- 1967 – “War on BTUs” energy conservation program launched
- 1970 – Dow publicly commits to product stewardship role
- 1979 – Dow Chemical Foundation formed; supports science education
- 1986 – Waste Reduction Always Pays (WRAP) program launched
- 1987 – Dow commits to Responsible Care®
- 1991 – Corporate Environmental Advisory Council (CEAC) formed
- 1996 – Dow Executive Claude Fussler writes *Driving Eco Innovation*
- 1997 – Dow CEO Frank Popoff pens *Eco-Efficiency: The Business Link to Sustainable Development*

SUSTAINABILITY MILESTONES



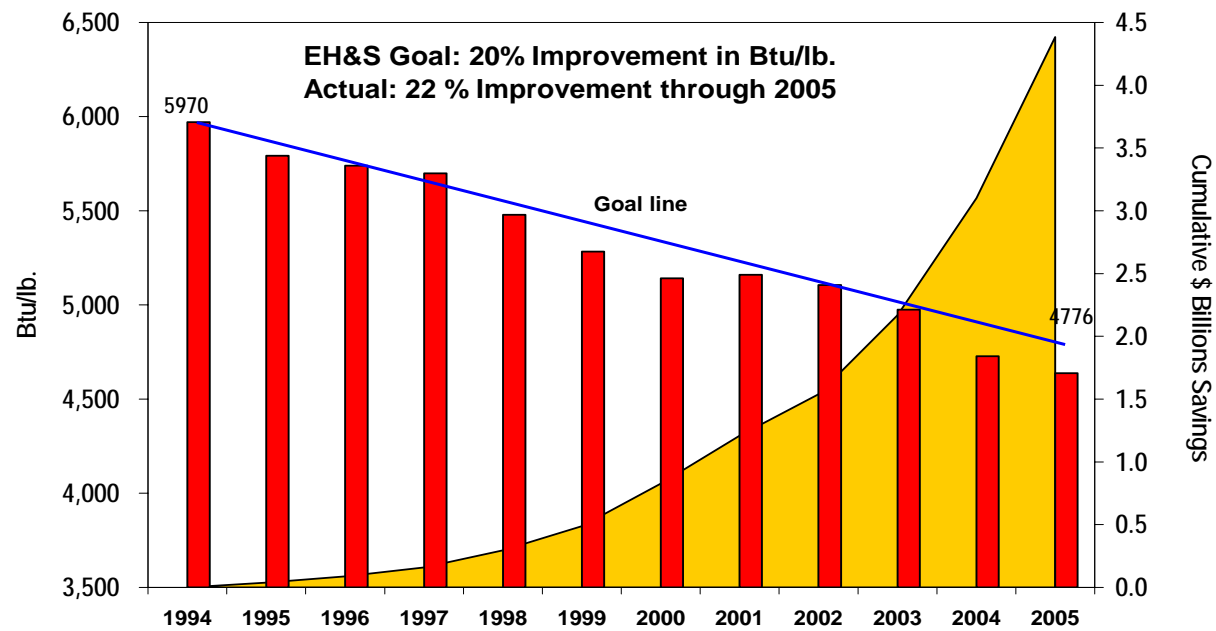
Through our first set of Sustainability Goals, our 2005 EH&S Goals, we have already:

- Saved over **\$5 billion** with a **\$1 billion** investment
- Reduced solid waste by **1.6 billion pounds**
 - Enough to fill 415 football fields one meter deep
- Reduced water use by **183 billion pounds**
 - Equal to water usage for 170,000 U.S. homes for one year
- Saved **900 trillion BTUs** of energy
 - Enough to power **8 million** U.S. homes for one year
- Reduced personal safety and health incidents by **84%**

FOCUSING ON ENERGY EFFICIENCY



Energy Intensity Performance



\$ 4.3 Billion ■ Cumulative Savings (B\$) ■ Total Actual Energy

Cumulative Energy Savings = ~900 Trillion Btu's

Cumulative Cost Savings = >\$4 Billion

CONTINUING TO MAKE AN IMPACT



Our Approach to Sustainability

Sustainable Chemistry

Breakthroughs to World Challenges

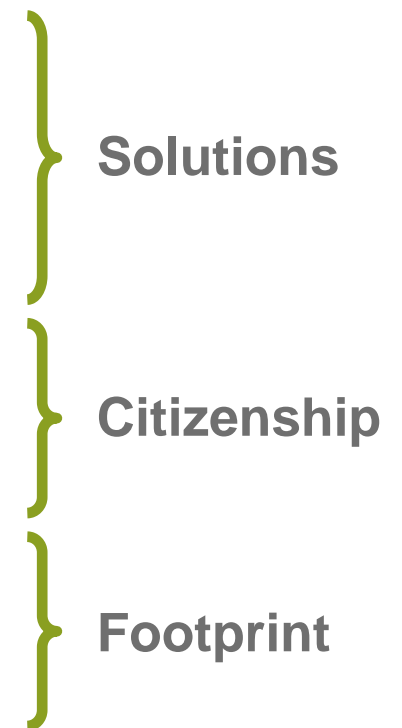
Product Safety Leadership

Local Protection of Human Health & the Environment

Contributing to Community Success

Energy Efficiency & Conservation

Addressing Climate Change



GOALS ARE POSTED ON DOW'S WEBSITE



[HTTP://WWW.DOW.COM/COMMITMENTS/SUSTAIN.HTM](http://www.dow.com/commitments/sustain.htm)



In 1995, the Dow Chemical Company set important goals to improve our environment, health and safety performance and we were recognized for our achievements.

In 2006 we set the bar even higher with the introduction of a more ambitious, next-generation set of goals. We will focus our efforts on strengthening our relationships within the communities where we operate, continuing to improve our product stewardship and innovation to solve some of the world's most pressing problems, and to reduce our global footprint.

These are Dow's 2015 Sustainability Goals:

[Setting the Standard for Sustainability](#)

[Sustainable Chemistry](#)

[Breakthroughs to World Challenges](#)

[Energy Efficiency](#)

[Addressing Climate Change](#)

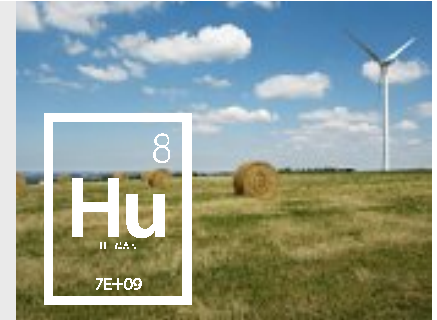
[Contributing to Community Success](#)

[Product Safety Leadership](#)

[Local Protection of Human Health and the Environment](#)

[We invite you to track our progress.](#)

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AN EXAMPLE: ONE OF THE 2015 GOALS



Local Protection of Human Health and the Environment

By 2015, Dow will achieve on average a 75 percent improvement of key indicators for EH&S operating excellence from 2005 baseline. We will also collaborate with our communities to set and commit to local sustainability goals.

By year-end 2015:

Dow will achieve an injury and illness rate of 0.08 per 200,000 hours of work, reduce the severity rate by 75 percent and eliminate fatalities.

Dow will reduce the motor vehicle accident (MVA) rate for all Dow employees combined to 1.5 incidents per million miles driven.

All sites/businesses combined will have fewer than 75 LOPCs (leaks, breaks and spills), with no more than 10 Category 2 incidents, eliminating Category 1 incidents.

Dow will reduce the number of hazardous material transportation LOPCs by 75 percent, and eliminate highly hazardous (toxic Inhalation hazard and flammable gas) material releases.

All sites will reduce process safety incidents by 75 percent and the severity rate by 95 percent, based on the 2005 baseline.

Target sites will have achieved site-specific goals addressing needs such as security, waste generation and emissions, maintaining and improving employee health, and resource conservation.

Dow will also participate in voluntary programs such as the U.S. Occupational Safety & Health Administration's (OSHA) Voluntary Protection Programs (VPPs), the U.S. Environmental Protection Agency (EPA) Environmental Indicators, Regional Air Monitoring and The People's Republic of China's State Environmental Protection Administration (SEPA) agreement.

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PROGRESS IS REPORTED QUARTERLY



Dow Latin America holds first ever Dow Sustainability Week

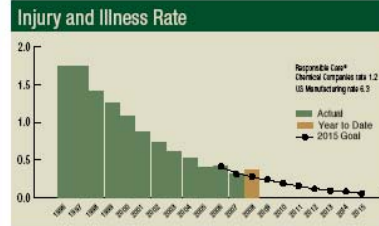
This customer-centered event in Brazil was designed to promote the debate about sustainable development, taking three crucial aspects into consideration: People, Planet, and Sustainable Business. Dow prepared a four-day agenda with activities designed to accelerate collaboration with customers, employees, partners, NGOs, the press, authorities, associations and communities. [Read more about this on dow.com.](#)

Local Protection of Human Health and the Environment

Although our performance during the first half of the year was excellent in the context of industry performance, our results did not keep pace with our 2015 Goal aspirations, and we are engaged in a variety of activities aimed at improving performance in these areas, including:

- Developing and implementing intervention plans. Underperforming sites and businesses have been charged with developing specific plans to reverse the trend in the areas of personal and environmental safety, and leaders in our manufacturing and engineering function have developed and implemented a plan specific to Process Safety.
- Identifying and leveraging common solutions. Our EH&S experts have combed through site and business plans to identify areas where they can lead in developing common solutions across all sites and businesses.

At the end of the second quarter of 2008, the Injury and Illness rate was 0.34 per 200,000 hours of work. Performance through the second quarter was 26 percent worse than the goal for the year. The 2015 Goal of 0.08 per 200,000 hours is a 75 percent improvement from 2005.





SUSTAINABLE CHEMISTRY



Sustainable chemistry is our “cradle to cradle” concept that drives us to use resources more efficiently to:

- Minimize our footprint
- Provide value to our customers and stakeholders
- Deliver solutions for customer needs
- Enhance the quality of life of current and future generations

Solutions

ENERGY ABSORBING FOAM PROTECTS DRIVERS

Environmental & Social Benefits

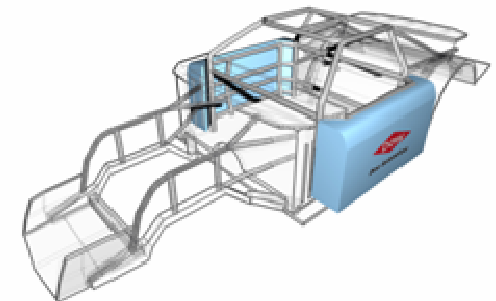
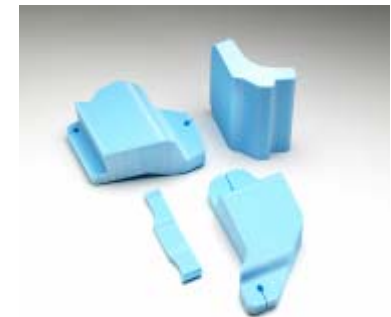


IMPAXX™ Energy Absorbing Foam

- Up to 30% more efficient than other foams
- Used in NASCAR “Car of Tomorrow” race cars
- Used on nearly 2 million passenger cars worldwide
- Consistent temperature performance
-40C to 80C
- Fast prototypes, low cost development, lower prices to drive customer cost savings

Sustainability Profile

- 100% Recyclable
- Up to 50% lighter than competitive materials, offering weight savings and fuel efficiency





RENUVA™/SOY-BASED POLYOLS

Economic & Environmental Benefits

Natural oil-based polyols

Dow's technology:

- Eliminates odors typically associated with soy-based products
- Delivers processing and performance with high levels of renewable content

Sustainability Profile

- Greenhouse gas neutral
- Uses up to 60% fewer fossil fuel resources than conventional polyol technology



BREAKTHROUGHS TO WORLD CHALLENGES



We are actively working toward, and committed to achieving, at least three breakthroughs by 2015 that will significantly help solve the challenges of:

- Adequate food supply
- Affordable housing
- Alternative energy
- Sustainable water supplies
- Improvements in personal health

Solutions

WATERHEALTH INTERNATIONAL

Economic & Social Benefits

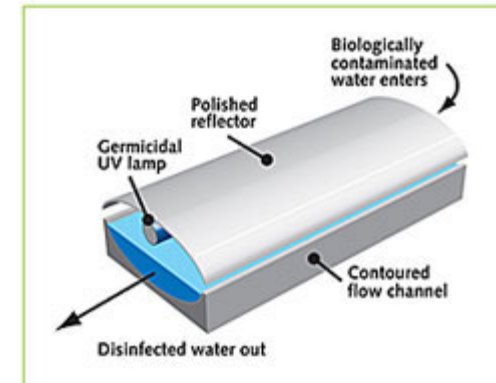


Unique Business Model

- Total service, turn key system
- System finance/operation
- Ownership passes to village in 8 years
- Patented, low cost UV technology
- Modular systems serving 2-10 thousand people
- Close working relationship with local NGO & village government

Sustainability Profile

- Affordable water for those earning \$2 per day
- Revenue stream sufficient for long term viability
- Innovative use of Dow capital to enable clean drinking water in rural areas



PRODUCT SAFETY LEADERSHIP



- We are the first chemical company to make non-technical language summaries of our product safety assessments accessible to the public on www.dowproductsafety.com.
- The assessments cover topics such as basic hazards, use, risk and risk management.
- We will complete evaluations, with third party process verification, on high priority products by 2010 and for all products by 2015.

Solutions

PRODUCT SAFETY INFORMATION AVAILABLE TO THE PUBLIC



Product Safety Assessment Finder

As part of its 2015 Sustainability Goals, Dow has committed to make publicly available safety assessments for its products globally. This product safety assessment is intended to give general information about the chemical (or categories of chemicals) addressed. It is not intended to provide an in-depth discussion of health and safety information. Additional information is available through the relevant Safety Data Sheet, which should be consulted before use of the chemical. This product safety assessment does not replace required communication documents such as the Safety Data Sheet.

[Acetochlor](#)

[Acetone](#)

[Acrylic Acid](#)

[Allyl Chloride](#)

[Aminoethylethanolamine](#)

[Aminoethylpiperazine](#)

[Aminopyralid](#)

[BIOBAN™ CS-1246](#)

[Bisphenol A](#)

[Bisphenol A Diglycidyl Ether](#)

[Butadiene](#)

[Butyl Acrylate](#)

[Calcium Chloride](#)

[Carbon Tetrachloride](#)

[Caustic Soda](#)

[CELLOSIZETM Hydroxyethylcellulose](#)

[Chlorine](#)

[Chloroacetyl Chloride](#)

[Chloroform](#)

LOCAL PROTECTION OF HUMAN HEALTH & THE ENVIRONMENT



- We lead the way across virtually every facet of environment, security, health and safety performance.
- We were one of the first companies to introduce innovative protection equipment for our workers in 1898.
- We engage our neighbors through Community Advisory Panels.
- Our ***Vision of Zero*** is a leadership attitude and a corporate culture that is committed to zero accidents, zero injuries and zero excuses.

Citizenship

October 30, 2008

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CONTRIBUTING TO COMMUNITY SUCCESS



We are an engaged corporate citizen globally and locally. Where we have a major presence, we are collaborating with local businesses and citizens to help create stronger, safer and sustainable communities through:

- Engagement
- Establishing joint goals and plans
- Taking actions for the long-term success of all involved

Citizenship



HOUSEHOLD WASTE WATER USE

Economic, Social & Environmental Benefits

Dow's Terneuzen, The Netherlands, site uses municipal household waste water

- Re-use of water previously discharged directly to the river
- Used twice at Dow

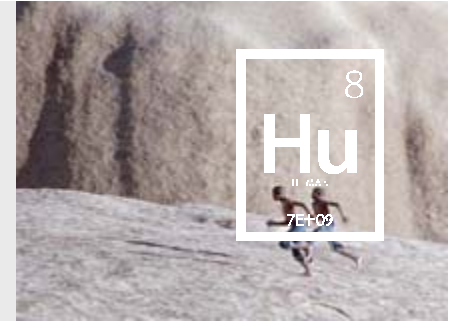
Sustainability Profile

- Almost 10 million liters of water per day
- 65% less energy than desalinating
- Sea water with the same membrane technology
 - Equal to lowering CO₂ emissions by 5,000 tons per year
 - Reduced need of chemical cleaning of membranes



Concept can be leveraged at other locations around the world

ENERGY EFFICIENCY & CONSERVATION



We are one of the largest producers of innovative products that reduce energy use through:

- Building insulation applications
- Solutions for fuel-efficient vehicles
- Technology to enable wind power
- Integrated solar systems into building materials

Using 2005's Energy Intensity base to project what energy consumption would have been, efficiency and conservation improvements have yielded savings of over ***26 trillion BTUs and \$190 million...***

...and we continue to drive more efficiencies and conservation.

Footprint



BUILDING INTEGRATED PHOTOVOLTAICS

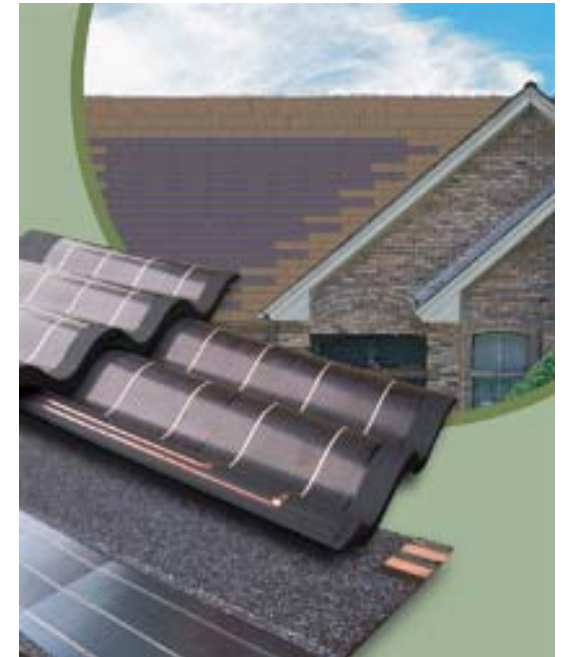
Environmental & Social Benefits

Solar collection materials incorporated directly into building materials

- Commercial and residential
- Roofing, siding & exterior finishing products
- Outer protective surface & power generation
- Products rugged and easily installed

Sustainability Profile

- Renewable energy source
- Excess energy goes to local power provider
- Allows for broader application
- Covers more roofs and more roof surface



ADDRESSING CLIMATE CHANGE



- Since 1990, we reduced our absolute greenhouse gas (GHG) emissions by over 20%; ***more than required by the Kyoto Protocol.***
- Over 96% of products involve chemistry, so no one has more at stake – or the ability to impact – energy supply and climate change issues than we do.
- Our products, across our portfolio, reduce GHGs by multiples more than our own emissions on an annual basis.

Footprint



SUGAR CANE TO POLYETHYLENE

Economic, Social & Environmental Benefits

Dow joint venture in Brazil

- Less fossil resources than traditional hydrocarbon processes
- Biomass (bagasse) produces heat, electricity and steam for ethanol, ethylene and polyethylene plants

Sustainability Profile

- Produces 1/7th the amount of CO₂
- Most “waste” is used in the process
- Harvesting rainwater
- Trees adjacent to fields reduce soil erosion
- Recyclable using existing infrastructure
- Economic development



COMMITTED TO SUSTAINABILITY



- Industry Leader on Dow Jones Sustainability Index
- ENERGY STAR Partner of the Year for 2008, U.S. Environmental Protection Agency
- More U.S. Presidential Green Chemistry Awards than any other company, U.S. Environmental Protection Agency
- Global Citizenship Award, The Whitehead School of Diplomacy and International Relations
- Award for Energy Efficiency, Alliance to Save Energy (ASE)
- 100% rating on the Corporate Equality Index, Human Rights Campaign
- Best Global Company Performing CSR in China, Foreign Investment in China Magazine
- New Freedom Initiative Award for our programs pertaining to people with disabilities, U.S. Department of Labor

COMMITTED TO SUSTAINABILITY



- Awarded \$20 million in funding from the U.S. Department of Energy to develop next generation solar energy technology that can be directly incorporated into flexible building materials
- Indonesian Nehemiah Award, Habitat for Humanity
- Platinum Award for Healthy Lifestyles, National Business Group on Health
- “100 Most Technologically Significant New Products of the Year” for IMPAXX™, R&D Magazine
- “Safety Innovation of the Year” Award for IMPAXX™, Professional MotorSport World Expo
- Signatory of UN Global Compact, Caring for Climate and CEO Water Mandate
- Corporate sponsor UN Environment Programme Champions of the Earth & Business for the Environment Summit



COMMITTED TO SUSTAINABILITY



- Joined with the UN Foundation and The Alliance to Save Energy to promote energy efficiency
- Active member of the U.S. Climate Action Partnership
- Supporter of Habitat for Humanity International since the early 1980s. Last year alone, Dow supplied building and construction materials for more than 3,000 Habitat for Humanity homes
- Founding member of Global Water Challenge for awareness of clean drinking water issues
- Working with Lawrence Berkeley National Labs and China's Energy Research Institute to improve the energy efficiency of small- and medium-sized companies in China
- Sponsor of the national pilot project with China's State Environmental Protection Administration recognizing the project's economic benefits of \$13 million, and reduced gas emissions, energy consumption, liquid and solid waste
- Helped Live Green, Live Smart's *The Sustainable House* achieve LEED Platinum Status

COMMITTED TO SUSTAINABILITY



- Collaborative partner with China's State Administration of Work Safety for a national demonstration project on the safe management of hazardous chemicals promoting a better understanding and awareness among small- and medium-sized enterprises
- Collaborative partner with International Aid to provide 2.1 million pounds of plastic for 300,000 light-weight bio-sand filters giving 2 million people access to clean drinking water over the next 3 years
- Investor in Water Health International and provided \$30MM loan guarantee to help finance local water treatment systems and make clean drinking water available to 10 million people in rural India
- Dow Automotive is exclusive provider of energy absorbing foam solutions for NASCAR's new safety-driven "Car of Tomorrow" Project

INTERNAL NEWS ITEMS REINFORCE CULTURE OF SUSTAINABILITY



Dow Collaborates for Sustainability in China – A [landmark agreement](#) between China’s Ministry of Environmental Protection, the United Nations Environment Programme and Dow was signed on September 16 in Beijing creating a project that will increase the promotion of chemical safety and emergency preparedness in China’s chemical industry.

The first of its kind in China, the tripartite agreement demonstrates Dow’s continued commitment to working with global stakeholders to create partnerships that advance sustainability efforts around the globe.

Dow Leads Fortune 50 and S&P 100 in Sustainability Reporting - At Dow it’s not enough to just say we’re a sustainable company – we prove it through our transparent sustainability reporting. And now because of this reporting, Dow is being recognized as a leader in the industry for sustainability measurements.

Over the past few weeks, Dow has received recognition from several third-party organizations – imc2, Brigham Young University and KDPaine & Partners, Sustainable Investment Research Analysis Network and ERM Consulting – for its commitment to tracking and communicating the Company’s sustainability progress.

INTERNAL NEWS ITEMS REINFORCE CULTURE OF SUSTAINABILITY



The Balanced Equation: A New Formula for Classroom Chemistry - Dow recently partnered with The Keystone Center to develop “The Balanced Equation,” a high school-level curriculum designed to encourage students to use chemistry to solve global sustainability problems. Specifically, The Balanced Equation focuses on generating sustainable water solutions.

Dow Receives 2008 C. Everett Koop National Health Award for Employee Health Program - The Health Project (THP) will award Dow the prestigious C. Everett Koop National Health Award for promoting a healthy workplace and for providing employees with the tools, knowledge and environment that encourage a healthy lifestyle for themselves and their families.



TRACK OUR PROGRESS



At Dow, we have always believed that the role of chemistry is to do more good in the world.

- We've set aggressive 2015 Sustainability Goals in *each* area of our sustainability program.
- Seen this way, the work of chemistry suddenly moves from focusing on the basics of business – products and bottom lines – to life itself.
- In short, we are committed – through chemistry – to the betterment of global humanity. And it is this commitment that drives all of our strategy for growth and profitability.
- Track our progress at www.dow.com/commitments

Responsibility Begins Here

“**Sustainability** begins at home, but its destiny is to engage the problems of the world. We will build on our company’s rich legacy of leadership in solving the world’s most pressing problems.”

-- Andrew Liveris,
Chairman & CEO
The Dow Chemical Company



References to "Dow" mean The Dow Chemical Company and its consolidated subsidiaries unless otherwise expressly noted

October 30, 2008

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