Science for a Sustainable World
Dow people are the world’s best problem-solvers focusing on the world’s biggest challenges. Our commitment to Innovations for Tomorrow, Partners for Change, Smart Solutions for Today and Responsible Operations delivers results that are good for business and good for the world.

Innovations for Tomorrow
We contribute to the sustainability of society and our planet by developing innovative technologies for current and future markets.

Partners for Change
We are leaders in advancing all aspects of sustainability, openly collaborating with customers, suppliers, communities, civil society and governments.

Smart Solutions for Today
Our technologies enable our customers, and their customers, to develop more sustainable products and services.

Responsible Operations
Our infrastructure has a positive impact on our company, our communities and ourselves. Our operations are a model for others, wherever we operate.
Innovations for Tomorrow

Dow’s 2009 Investor Day Focused on Innovation

Dow’s technology and innovation took center stage at the 2009 Investor Day in New York. The Investor Day and Innovation Gallery Walk featured the theme “Elements of Success,” which was brought to life by 26 exhibits in a gallery walk that covered the global breadth and depth of Dow’s innovation and R&D. The gallery walk demonstrated how Dow is finding sustainable and commercial solutions that help solve the world’s biggest problems. The event brought together approximately 200 investors and analysts and more than 30 journalists, who saw firsthand some of Dow’s most exciting new technological breakthroughs grouped around the four megatrends – Energy, Health and Nutrition, Transportation and Infrastructure, and Consumerism. Dow executives from the R&D and business teams were on hand to share their insights with the investors, analysts and media. Visitors to the Dow display heard from Dow’s executive team about Dow’s future and saw many of the tangible results of the Company’s investments in R&D. 2009 Investor Day and the Gallery Walk were opportunities to share Dow’s achievements and provide additional insight into how we are building our future. Summaries of each Gallery Walk exhibit are available online, and they provide data, context and proof points outlining how and why Dow will win in each of the respective businesses.

Read more about this on dow.com.

Dow Introduces Next Generation Impact Modifier for PLA and PLA Blends

Dow launched the next generation PARALOID™ BPM-515 Acrylic Impact Modifier formulated to impart toughness to and maintain clarity of polylactic acid (PLA). In response to the needs of manufacturers of sustainable bioplastic packaging and durable products, Dow’s PARALOID BPM-515 modifier enables lower cost toughened PLA compounds for manufacturers trying to penetrate these markets with environmentally advanced solutions for sustainable growth. This combination of imparted toughness and reduced cost will enable greater innovation and growth in the automotive, medical and electronics industries. Bioplastics have the potential to reduce petroleum consumption in plastics by 15 to 20 percent by 2025. The launch of PARALOID BPM-515 modifier serves to reinforce Dow’s commitment to providing environmentally enhanced technology solutions for sustainable growth. The development of PARALOID BPM-515 modifier for PLA modification supports the development of the bioplastics industry towards greater sustainability in consumer and industrial applications. The combination of improved performance with lower use cost will further open new markets and applications for our customers in automotive, medical and electronic industries. For more than 30 years, Dow Plastics Additives has brought a wealth of scientific and industrial experience in toughening thermoplastic and thermoset resins. PARALOID BPM-515 modifier is but one example of this continuing tradition. Read more about this on dow.com.

Dow AgroSciences Collaborates with Danforth Center to Enhance Food Security in the Developing World

Researchers working at the Donald Danforth Plant Science Center have entered into research collaboration with Dow AgroSciences to study how its EXZACT™ Precision Technology can help improve the root crop cassava for millions of people living in developing countries. Dow AgroSciences’ EXZACT Precision Technology provides a versatile and comprehensive toolkit for targeted genome modification in plants. Its demonstrated ability to specifically and efficiently add, edit or delete genes at targeted locations in plant genomes delivers a means for engineering multi-gene stacks, editing native genes and more efficiently producing crops with enhanced plant performance and value-added traits such as improved nutrition. Cassava serves as the primary food source for more than 750 million people. Read more about this on businesswire.com.
“Jaipur Foot on Wheels” Initiative Helps More Than 1600 People

The multi-state 2009 “Jaipur Foot on Wheels” initiative, organized by Dow India in association with Bhagwan Mahaveer Viklang Sahayata Samiti (BMVSS), drew to a close in New Delhi after giving more than 1,600 physically challenged people a new lease on life. The initiative provided a fully equipped mobile workshop that traveled through Chennai, Bengaluru and rural Maharashtra distributing free Jaipur Foot prosthetics and callipers to the physically challenged. The Dow India “Jaipur Foot on Wheels” mobile workshop began its journey in October 2009 with camps held in Chennai, Bengaluru and Amravati. The change of polymer material to PU reduced the manufacturing cost by approximately 25 percent, increased longevity, enhanced the consistency of quality through the use of a computer-controlled injection molding process, and increased manufacturing productivity from one limb per hour to eight limbs per hour.

Read more about this on dow.com.

Partners for Change

Dow Launches Largest Global Water Initiative in History to Help Solve World Water Crisis

The Dow Live Earth Run for Water – taking place April 18, 2010 – will consist of a series of 6 km run/walks (the average distance many women and children walk every day to secure water) taking place over the course of 24 hours in countries around the world, featuring concerts and water education activities aimed at igniting a tipping point to help solve the water crisis. Jessica Biel, Alexandra Cousteau, Pete Wentz, Angelique Kidjo and Jenny Fletcher will lend their names and their time in support of this important cause.

One in eight people don’t have access to safe, clean drinking water. Eighty-eight percent of diarrheal cases worldwide are linked to inadequate and unsafe water. These cases result in 1.5 million deaths each year, mostly among children under five. Some women and children are forced to walk 6 km (3.7 miles) each day to secure water that is likely unsuitable for drinking. Through a cross-platform global fundraising effort, all donations raised by the Dow Live Earth Run for Water will be disseminated to fund sustainable and scalable water programs. A growing global network of NGO partners including Global Water Challenge, A Child’s Right, Akvo, Fondo Para La Paz, Indonesia Water Partnership, Lien Aid, Pump Aid, Wildlands Conservation Trust and many others will implement water and conservation projects around the world. For the comprehensive list of Live Earth’s NGO partners, visit http://liveearth.org/runforwater/partners.

Read more about this on dow.com.

Dow and Denbury Sign Memorandum of Understanding for Industrial CO₂ Capture

The Dow Chemical Company and Denbury Onshore, LLC have signed a memorandum of understanding to capture by-product CO₂, a greenhouse gas (GHG), from Dow’s ethylene oxide (EO) plant in Plaquemine, Louisiana. The project with Denbury is capital- and cost-efficient for Dow and will significantly contribute to Dow’s annual GHG reduction goal. By-product CO₂ from the EO plant would be provided via pipeline for use in Denbury’s enhanced oil recovery (EOR) operations. EOR operations are designed to economically recover additional crude oil from fields where primary and secondary production methods have run their course. Denbury would transport the CO₂ stream from Dow’s EO plant via its 320-mile “green” pipeline, which is targeted for completion in 2010. The 320-mile pipeline will run from Donaldsonville, Louisiana, to the Hastings Oil Field, south of Houston, Texas, and is designed to transport CO₂ from natural sources as well as industrial supplies of CO₂. Dow would be the first industrial CO₂ supplier to the new pipeline.

Read more about this on dow.com.
Dow Water & Process Solutions and Bayer Technology Services Sign Worldwide Licensing Agreement

Dow Water & Process Solutions, a business unit of Dow, and Bayer Technology Services GmbH (BTS), announced a licensing agreement for the worldwide marketing of BayFAME technology, a continuous process developed by BTS for the esterification of free fatty acids (FFA) to biodiesel based on the DOW™ AMBERLYST™ BD20 catalyst. With BayFAME, customers will be able to turn FFA-containing feedstock into FAME (fatty acid methylester) without worrying about yield loss, acids and waste. Current manufacturing costs of biodiesel have been dominated by feedstock costs. Prices for soybean and rapeseed oil, which can be easily turned into biodiesel (FAME), reached record highs in 2008. Less expensive potential feedstocks contain a significant amount of FFA, which cannot be processed in conventional biodiesel plants. Overall, the savings of using an FFA-rich feedstock with the joint esterification BayFAME technology are significant compared to conventional feedstocks. Read more about this on dow.com.

Smart Solutions for Today

Cradle to Cradle Certification for Dow Building Solutions

Dow Building Solutions has completed a rigorous, external assessment of its building insulation products conducted by McDonough, Braungart Design Chemistry, LLC (MBDC), a global sustainability consulting and product certification firm. STYROFOAM™ Brand Extruded Polystyrene (XPS) Foam Insulation, STYROFOAM SIS™ Brand Structural Insulated Sheathing, THERMAX™ (ci) Exterior Insulation, STYROFOAM™ Brand Spray Polyurethane Foam (SPF) Insulation, and SAFETOUCH™ Fiberglass-Free Insulation have all achieved Cradle to Cradle Certification, a process that evaluates products in five categories: material health, material reutilization, renewable energy use, water stewardship and social responsibility. Cradle to Cradle Certification by MBDC permits an organization to verify and market its products’ sustainability attributes and guide future improvements. Read more about this on dow.com.

World Series Logos Use Water-Based Technology from Dow Coating Materials

The 2009 World Series had a hidden, but very visible, connection to Dow. The water-based, acrylic paint used to create the huge Philadelphia Phillies and New York Yankees logos on the field includes technology developed and supplied by Dow Coating Materials. The paint is strong enough to endure tremendous downpours, blistering sun and cleated foot traffic, but gentle enough not to harm the blades of grass it covers during the games. Acrylic paints contain little or no solvents, which emit harmful and polluting volatile organic compounds (also known as VOCs) as they dry. The water-based paints include both RHOPLEX™ acrylic emulsions from Dow Coating Materials and KATHON™ biocides from Dow Microbial Control. Water-based, emulsion technology was invented by the scientists of Dow’s recently acquired Rohm and Haas Company in Philadelphia more than 50 years ago. It quickly transformed the worldwide painting industry as it gave consumers high-quality paint that is durable, easy to clean up, and less harmful to the environment. Read more about this on intranet.dow.com.

Dow Wolff Cellulosics’ Food & Nutrition Division Launches New Gluten-Replacement Solution

Dow Wolff Cellulosics (DWC) Food&Nutrition’s METHOCEL™ Cellulose Ethers launched a gluten replacer that promises to put an end to flat and stodgy or dry and tasteless gluten-free food options — a bonus for manufacturers and gluten-intolerant consumers alike. DWC Food&Nutrition launched METHOCEL gluten replacement as part of an ongoing drive to develop innovative products that benefit consumer health. The demand for gluten-free foods is on the rise with increasing numbers of people being affected by celiac disease, while others are eliminating gluten from their diets through personal choice. Finding a suitable replacement for the important properties of gluten has been a significant challenge for food manufacturers. The benefits of METHOCEL gluten replacement go far beyond simple replacement. The product can actually enhance food — providing moistness throughout its shelf-life, preventing collapse during baking, and avoiding the gas or bloating effects associated with many other sources of fiber. When METHOCEL gluten replacement is used, gluten-free food tastes, feels and looks great — allowing consumers to satisfy their dietary needs and freeing manufacturers from process performance or quality restrictions. Read more about this on dow.com.
Dow Insulation Products Recognized for Green Building

Dow Building Solutions (DBS) has brought home the “green” from Building Products magazine’s second annual Green Product Awards contest. DBS earned the coveted awards for two different continuous insulation wall systems - STYROFOAM SIS™ Brand Structural Insulated Sheathing and the THERMAX™ Wall System. This is the first time in the competition’s history that a company has won for two products in the same year. Because builders, contractors and architects recognize the value of insulation in making a structure greener and more energy efficient, Dow is helping to make green-built homes and buildings even better by developing and bringing to market new technologies that perform better, save more energy and are easier to install. The winners of the 2009 Green Product Awards represent product introductions that excelled in three areas: sustainability, value to the contractor, and innovation.

Read more about this on dow.com.

Responsible Operations

Dow Wetlands Win International Award

Employees at The Dow Wetlands Preserve received international recognition for their contributions to wildlife habitat conservation at the Wildlife Habitat Council’s (WHC) 21st Annual Symposium, "Evergreen: A Celebration of Conservation in a Changing World." Dow demonstrates its commitment to environmental stewardship and increasing native biodiversity by achieving Wildlife at Work and Corporate Lands for Learning (CLL) re-certification at The Dow Wetlands Preserve. The 471-acre Dow Wetlands Preserve is located in the San Francisco Bay Area, between Pittsburg and Antioch, California. The site contains diverse habitat types, including estuarine tidal marsh, emergent marsh, seasonal wet meadows, savannah, scrub shrub and forested fringe. The site serves as a nature preserve and environmental buffer zone and 220 acres are actively managed for wildlife. Read more about this on dow.com.

India Manufacturing Site Receives the National Energy Conservation Award

The Rohm and Haas India manufacturing plant in Taloja, an integral part of Dow Advanced Materials Division, was awarded first prize in the chemical sector at the National Energy Conservation Awards 2009, held in Delhi. The annual affair is organized by the Ministry of Power, Government of India, and assessed by the Director of the Central Electricity Authority, a unit of the Ministry of Power. The awards recognize outstanding achievements made by organizations to reduce energy consumption through innovative processes and efficient equipment. The Taloja manufacturing facility has undertaken a wide variety of measures to reduce energy consumption, including more efficient management of plant fuels, improved planning and management of production processes, and improved efficiency of all machinery and equipment at the facility. This has resulted in a 10 percent reduction in energy consumption. Read more about this on dow.com.

Dow Recognized for Comprehensive Sustainability Reporting by SIRAN

The number of S&P 100 companies producing sustainability reports with performance data jumped by more than a third in the past year, according to a new report from the Sustainable Investment Research Analyst Network (SIRAN), a working group of the Social Investment Forum (SIF). Moreover, 93 of the S&P 100 now provide at least some sustainability information on their websites. While most S&P 100 companies release some sustainability data, SIRAN recognized the following six firms as publishing the most comprehensive reporting: American Electric Power, Dow, Ford, GE, IBM and Weyerhaeuser. Dow issued its 2008 Global Reporting Initiative (GRI) Sustainability Report with UN Global Compact Communication on Progress in June of 2009, earning an “A+” from the GRI for the second year in a row. SIRAN supports the wider adoption of the GRI reporting framework by U.S. firms. GRI was established to develop standardized indicators for reporting on environmental, social and governance (ESG) factors, and continues to evolve over time through a public, transparent, multi-stakeholder standards-setting process. GRI is one of the most comprehensive reporting standards available, and use of the GRI guidelines also facilitates comparability and consistency across sustainability reports. Read more about this on siran.org.
Dow Completes External Responsible Care Audits

The American Chemistry Council requires member companies to be externally audited by authorized auditors. The Dow Chemical Company is audited by Lloyd’s Register Quality Assurance (LRQA) per the requirements of the Responsible Care® Management System (RCMS). The 2008-2010 re-certification cycle required that the Midland Headquarters plus eight sites be audited and certified over the three-year period. The Midland Headquarters received the RCMS certificate at the end of 2008. In 2009 four sites were audited by LRQA. Three of the four sites were Dow AgroSciences (DAS) sites that completed the external audit by LRQA and received the Responsible Care Certification. These sites included Indianapolis as Dow AgroSciences (DAS) Headquarters and Research & Development, and two Dow AgroSciences production sites: Pittsburg and Harbor Beach. The fourth site to receive the certificate was Hanging Rock, a Dow Building Solutions site. All sites were audited utilizing Dow’s operating management standard to successfully demonstrate conformity. The re-certification cycle will be complete when the remaining four sites are audited in 2010. These include the Louisiana sites of Saint Charles and Greensburg as well as Seadrift and the heritage Rohm and Haas site at Deer Park in Texas.

Dow Receives Leading Awards in China

The Ocean Conservancy held its 24th annual International Coastal Cleanup (ICC) at various locations across North America and around the world. The 2009 ICC will mark the 23rd year Dow has worked with the ICC, supplying and distributing all the cleanup bags in the U.S. and encouraging volunteers for cleanup sites in places such as the U.S., Canada, Brazil and Thailand.

- “Top 20 Companies with Outstanding Achievements in Corporate Citizenship” – presented by China Business News, one of China’s top business newspapers. The award goes to corporate citizenship role models for their progress in pursuing environmental protection, community contribution and employee safety and talent development. Dow was the only winner from the chemical industry.
- “Best Corporate Citizen Award” – presented by The 21st Century Business Herald, a leading business publication with national coverage. Dow was recognized for its endeavors to “set the standard for sustainability” – helping Chinese SMEs to improve performance in clean production, work safety and emergency preparedness through partnerships with Chinese government functions. Read more about this on intranet.dow.com.

Goal Updates

Sustainable Chemistry

Dow continues to deliver breakthrough improvements to our existing products, processes and technologies. Dow’s Sustainable Chemistry Index (SCI) will help drive innovation and measure our progress. It will help us use sustainable chemistry to optimize every aspect of sustainability, including environmental, social and economic factors, to deliver smart solutions to our customers.

The SCI forms the basis of the goal target to double to 10% for products that have sustainable chemistry advantages. Sales that have sustainable chemistry advantages are those focused on:

- Solving environmental challenges like climate change and water availability
- Addressing social needs like affordable housing and improved food production
- Mitigating issues like chemicals of concern, manufacturing/distribution hazards and product end-of-life issues
The SCI was 18.7 in 2007, and dropped to 18.1 in 2008. This decrease in score occurred largely due to a decrease in manufacturing efficiency. In 2008, many of Dow's manufacturing facilities were operated at less efficient, low production rates due to the effects of the global economic crisis. On the U.S. Gulf Coast, hurricanes Ike and Gustav also led to unplanned shutdowns and plant idling. These events reduced the production efficiency of many of Dow’s facilities, which is reflected in the lower SCI score for 2008.

Sustainable chemistry encompasses all facets of sustainability for a chemical company. Two stories of sustainable chemistry in action are below:

**Dow and BASF Win IChemE Award for Jointly Developed HPPO Technology**

Dow Chemical and BASF announced that they have received the Institution of Chemical Engineers’ Innovation and Excellence Award in Core Engineering for their jointly developed Hydrogen Peroxide to Propylene Oxide (HPPO) production technology. The annual award recognizes the project or process that best demonstrates a chemical engineering solution to improve resource efficiency, lifetime value and/or process optimization. The Dow-BASF innovation offers distinct economic and environmental benefits when compared to conventional propylene oxide (PO) process technologies. A joint eco-efficiency study conducted by the two companies in 2007 revealed the new HPPO process reduces wastewater by 70 to 80 percent and energy use by approximately 35 percent, compared with existing PO technology. PO plants using the HPPO technology also require up to 25 percent less capital to build than conventional technologies, as they have reduced infrastructure, a smaller physical footprint and simpler raw materials integration. In 2008, Dow and BASF successfully started up the first commercial-scale production plant based on the novel HPPO technology at BASF’s Antwerp, Belgium, facility. A second plant based on this technology, being built by Dow, is scheduled to begin production in Map Ta Phut, Thailand, in the first half of 2011. Read more about this on dow.com.

**Eco-Paint Produced in Mexico**

In association with Berel, a Mexican company that produces paints and coatings, Dow developed the product trademarked “Berelex™” – an ecological painting product formulated with the highest quality standards. Developed by Dow Advanced Materials, “Berelex™” is different from other products due to its 100 percent acrylic compound called “Primal 2050 LO (Low Odor),” a material that helps reduce odor. The compound also reduces the levels of VOCs (Volatile Organic Compounds) that can contribute to environmental emissions.
In 1994, Dow set a goal to increase the efficient use of energy by reducing its energy intensity (the amount of energy per pound of product produced) by 20 percent. That goal was exceeded as the energy per pound of product was driven down by 22 percent. The improvement resulted in a cumulative savings of $4.3 billion over the 10-year goal period. With the increasing cost of energy, savings have continued to accrue rapidly and, through the end of 2009, savings due to improved energy intensity now exceed $9.2 billion. The energy that has been saved since 1994 is now in excess of 1,700 trillion Btu.

By 2025, we aspire to reduce absolute emissions within the company. The chart above demonstrates that we have begun to do just that — absolute emissions have been reduced in 2007, 2008 and 2009. The estimate for Dow’s absolute GHG emissions in 2009 is 41.4 million metric tonnes. This is 4 percent less than the GHG emissions in 2008.

The greenhouse gas information above includes the emissions of the operations acquired from the Rohm and Haas Company in 2009.

The other direct emissions are primarily related to foaming agents used in the manufacture of insulating materials.
By 2015, we have a goal to achieve a 25-percent reduction in the global Energy Intensity (Btu/lb) of Dow operations. The average Energy Intensity of year 2005, adjusted for mergers and acquisitions, is the basis for calculating performance against this target. Our target for Energy Intensity for the full year of 2009 is 5,100 Btu/lb, or 90 percent of the value in 2005. Our actual performance during 2009 was 5,584 Btu/lb, which is 99 percent of the 2005 baseline. Beginning in 2009, the Energy Intensity metric is based on production output that leaves the company fenceline, rather than all production.

The estimate for Dow’s greenhouse gas (GHG) emissions intensity during 2009 is 0.88 metric tons per metric ton of production. This is about a 5-percent increase in intensity from 2008. The increase is largely due to the impact of operating at lower rates throughout 2009 compared to prior years. By improving energy efficiency and implementing technology improvements, Dow’s goal is to reduce GHG intensity 2.5 percent per year from 2005 to 2015.

Kyoto GHG intensity is the sum of CO₂-equivalent direct and indirect emissions of the Kyoto family of greenhouse gases divided by production. Indirect emissions are the consequence of Dow’s consumption of energy, but are emitted from sources controlled by another company. This report is the first time that the GHG intensity metric is being reported based on defining production as the total volume that leaves the site of company operations.

Every quarter, Dow continues to demonstrate commitment to our climate change, energy efficiency and conservation goals. Below are some proof points of our commitment in action:

Dow ICCA Study Shared with EU Parliament

Dow experts presented to members of the European Parliament the findings of a life-cycle analysis study sponsored by the International Council of Chemical Associations. The report, which was developed by McKinsey & Co., revealed that for every unit of greenhouse gas emitted by chemical companies, the chemical industry prevents two units of greenhouse gases from entering the atmosphere. This positive ratio is based on the number of energy-saving products manufactured by the industry and sold to society. In addition, the report projected that by 2030 the ratio will be 4 to 1 in favor of reducing greenhouse gas emissions by the chemical industry.
Dow and Caltech Announce Next Generation Photovoltaics Research Initiative

- Dow and the California Institute of Technology (Caltech) recently announced the signing of a multi-year research collaboration that is strategic to both organizations’ interests in solar energy. The arrangement is aimed at aligning Dow’s capabilities in CIGS-based materials with Caltech’s research in next-generation photovoltaics. Together, we expect to develop new, ultra low-cost, high-efficiency photovoltaic materials. Read more about this on dow.com.

Dow Sponsors U.S.-India Energy Summit

Dow co-sponsored the U.S.-India Energy Summit in Washington, D.C. Hosted by The Energy Resource Institute (TERI) and Yale University, the first-ever Summit addressed questions of rising greenhouse gas emissions, energy, technology and collaboration between the two nations. More than 200 participants, including leaders from government, academia, business and the nonprofit world, debated issues and led discussions for bilateral partnerships between the two countries on energy and climate change challenges. Rajendra Pachauri, chair of the United Nations Intergovernmental Panel on Climate Change and director of TERI, and Richard Levin, president of Yale University, convened the Summit.

Product Safety Leadership

Cumulative Product Safety Assessments

At the end of 2009, there were 231 Product Safety Assessments (PSAs) posted at www.DowProductSafety.com with the addition of 19 new PSAs during the fourth quarter. We have surpassed our 2009 goal to post 50 new PSAs to the website by adding a total of 80. Dow’s goal for 2010 is to post 110 new PSAs to the website. The 2015 Goal is to have publicly available PSAs for all applicable Dow products.

Dow’s Sustainability Leadership Highlighted at Product Safety Forums

Dow’s leadership in sustainability was highlighted at two forums where Dow’s corporate director of product responsibility led discussions on our commitments related to product safety and sustainable chemistry. The events, a webinar hosted by the Product Stewardship Institute (PSI) and the Annual Conference of the North American Hazardous Materials Management Association (NAHMMMA), offered Dow a platform to engage and educate a variety of stakeholders on Dow’s 2015 Sustainability Goals, its chemicals management leadership, product stewardship practices and perspective on today’s regulatory environment.

John Warner, founder of the Warner Babcock Institute for Green Chemistry, joined the PSI webinar to explore a range of issues related to the advancement of sustainable or green chemistry and Dow’s industry leadership in sustainable product development and life-cycle management. At the NAHMMMA conference, Dow’s keynote address provided the audience a transparent look into Dow’s leadership efforts in product safety, its global chemicals management practices and areas of collaboration with industry and government stakeholders.
Breakthroughs to World Challenges

Dow continues to make solid progress in addressing the world challenges of water, health, housing, food and energy/climate change. Harnessing Dow’s unique strengths in science and technology to find solutions to these challenges inspires our employees to innovate and drive business success.

After working with Dow’s corporate Sustainability External Advisory Council (SEAC), we refined the process for identifying and determining if a product or business model qualifies as a breakthrough to a world challenge. Pictured is the screen for evaluating potential candidate products or business models.

This screen includes the following elements for consideration:
- Alignment
- Significance
- Benefits
- Life Cycle View
- Transparency
- Sustainable Chemistry Index (SCI) Alignment
- Stakeholder Engagement

If a product or business model shows promise after initial evaluation, a more thorough analysis will be conducted. If the candidate continues to look encouraging, a “case for breakthrough” document will be developed. The case is then vetted by the SEAC, and with the final “case for breakthrough” in hand, a breakthrough candidate is presented to the Chief Sustainability Officer, the Chief Technology Officer and finally the Corporate Sustainability Team for approval and elevation to “breakthrough” status.

Every quarter, Dow continues to deliver improvements to our existing products, processes and technologies, as in this example:

People Served by Dow’s Reverse Osmosis to Exceed 50 Million

Dow Water & Process Solutions delivers the science behind sustainable and plentiful supplies of water and other products critical for the 21st century, creating economic, environmental and social benefits for customers and communities around the world. One of DW&P’s enabling-component technologies, reverse osmosis (RO), is hard at work in applications like seawater desalination, contaminant removal and industrial water reuse that produce clean water. DOW FILMTEC™ desalination elements have been providing supplemental supplies of fresh water from brackish and ocean water sources in Australia, Florida and France. They are now bringing affordable, clean and safe water to communities in the Middle East, India and the Philippines.

Since 2005, the people being served each year with residential water using DOW FILMTEC RO elements has increased fourfold. The chart below shows that by 2015 the number being served annually by this growing Dow technology is estimated to exceed 50 million people. Dow’s Water & Process Solutions business is working to lower the energy requirements and capital needed to install and maintain these systems, resulting in increased access for areas where water quality problems make routine household water availability a challenge.
Contributing to Community Success

As we enter the halfway point of the Contributing to Community Success goal, we can reflect on the accomplishments that have been made. Ten strategic sites were selected around the globe, surveys were performed, information was gathered and analyzed, and community success plans continue to be implemented.

In essence, Dow’s community relations program is literally transforming sites from being “in” the community to becoming “of” the community. The transformation is a direct result of each site’s strategic community success plan. Successful breakthrough strategies within these plans include strong community employee engagement, re-alignment of philanthropic strategies that directly affect the critical issues identified by our communities, and effective site leadership that continues to be a critical element in the success of this goal.

Dow Brazil provided an example of how employee engagement plays a major role in addressing the critical needs of a community. On September 19, Dow Brazil, in a partnership with the Ocean Futures Society Brazil, Unaerp, Água Crystal, Neoplastic and the Guarujá City administration, participated actively on the International Coastal Cleanup Day, in seven beaches of Guarujá, São Paulo. Volunteer brigades exceeded the organizers’ expectations. There were more than 870 volunteers, of whom 100 were Dow employees.

As we move forward implementing our community success plans, our focus will be re-measuring strategic sites in an effort to show progress towards the goal. Progress will be reflected by each site’s scorecard, which measures the site’s favorability (“glad to have Dow in my community”) with how Dow plays a positive role in making the community a better place to live (“impact on quality of life”). As an example, Midland’s 2008 scorecard is 84 percent (favorability) / 62 percent (“better place to live”) with a benchmark on achieving over 70 percent (better place to live) by 2015.

An internal process has been implemented, including an internal site progress survey, to assist us in determining what strategic sites are ready for re-measure. Re-measuring each site will not only assist in defining each site’s progress towards the goal, but will also allow strategic sites to make the appropriate changes needed to adapt to changing community needs.
Local Protection of Human Health and the Environment

For the Local Protection of Human Health and the Environment goals that follow, the incident experience of the acquired operations of Rohm and Haas are included, where available, beginning in 2005. For the Motor Vehicle Accident goal, the acquired operations are included beginning in 2009 and will continue to be reflected that way in future reporting.

### Injury and Illness Rate

At the end of 2009, the Injury and Illness rate was .29 per 200,000 hours of work. This represents 27 percent improvement compared to our performance for all of 2008. The rate of .29 is 13 percent better than the goal for all of 2009. The 2015 Goal of .12 per 200,000 hours is a 75-percent improvement from 2005.

### Injury and Illness Severity Rate

At the end of 2009, the Injury and Illness Severity rate was 1.15 per 200,000 hours of work. This is a 40-percent improvement compared to our performance for all of 2008. The rate of 1.15 is 23 percent better than our goal for all of 2009. The 2015 Goal of .67 per 200,000 hours is a 70-percent improvement from 2005.
Through the end of 2009, 459 Loss of Primary Containment incidents have occurred. This is 40 percent better than our performance in the prior year. The total of 459 events for the year is 29 percent better than our goal for all of 2009. The 2015 Goal of 130 or fewer incidents is a 90-percent reduction from 2005.

Through the end of 2009, Process Safety performance shows improvement of 38 percent compared to our 2008 result. The total of 44 events for the year is 14 less than our target for all of 2009. The 2015 Goal of 25 or fewer incidents is a 72-percent reduction from 2005. Process Safety incidents are classified in terms of the new Center for Chemical Processing Safety and American Chemistry Council Process Safety Incident (PSI) definitions.

At the end of 2009, the Severe Motor Vehicle Accident (MVA) incident rate was .26 accidents per million miles driven. This represents a rate that is 30 percent lower than our rate in the prior year. The rate of .26 is 27 percent better than our goal for all of 2009. Our 2015 Goal is to reduce the Severe MVA rate to no more than .28 accidents per million miles driven. This target represents a 33-percent improvement in our performance by 2015.
Through the end of 2009, Dow experienced 31 Hazmat Transportation Loss of Primary Containment events. This total is 39 percent lower than the 2008 performance. There were three Highly Hazardous LOPC events in 2009. Our 2015 Goal to reduce all Hazmat Transportation incidents to 14 or fewer is a 75-percent improvement from 2005.

Dow believes it is part of our corporate responsibility to reduce the volumes of Highly Hazardous Materials that need to be transported. As such, we have set a 2015 Goal to reduce the number of tonne-miles (a measure of how much we’re shipping and how far) by 50 percent from our levels in 2005, which was 1,400 million tonne-miles. We will accomplish this by looking at ways to redesign our supply chain to reduce or eliminate many shipments or the distances they must travel. (A tonne-mile is one metric ton of freight moved 1 mile or 1.6 km.)

By reducing the number of tonne-miles of these materials, we will reduce the chance of in-transit incidents that could impact communities and areas through which our products travel. It is important to recognize that supply chain redesign is a long-term strategic business effort that may not show annual change. Strong progress toward this goal has been made over the last four years.

Through the end of 2009, there were 743 million tonne-miles of Highly Hazardous Materials shipped via road and rail. This total is 34 percent lower than the 2009 target of 1,130 million tonne-miles.

Dow remains committed to continuously improving our performance and to publicly reporting our progress. Please visit www.dow.com for the latest Dow sustainability, business and performance news.