London 2012 Olympic Games Achieved Sustainability Goals with Help from Dow

Annual Sustainability Report Earns "A+" Rating

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London 2012 Olympic Games Achieved Sustainability Goals with Help from Dow

Sporting enthusiasts from around the world gathered in London this past summer for the London 2012 Olympic Games, which aimed to be the most sustainable Olympic Games in history. To assist organizers in achieving this goal, Dow provided science-based solutions that improved the sustainability of the Olympic experience for the Host City, athletes and fans.

Dow solutions helped to enable more sustainable Games in several ways. The resin flooring system for the Eton Manor water sports facility was created from Dow epoxy products with low volatile organic compounds (VOCs), which reduces health risks and improves environmental safety. The resin flooring system will remain at Eton Manor following the Games as the center transforms into a unique mix of sporting facilities.

Dow adhesives were used at the running track at London’s Olympic Stadium; they helped to provide sprinters and long-distance runners with the perfect balance of hardness and elasticity. Dow’s VORAMER™ technology binds together rubber particles that make up the track, and is developed to extend the average lifetime of finished tracks.

Dow resins were used in the design and production of 3,600 litter and recycling bins that were used at more than 30 Olympic venues throughout London. The Dow resins helped meet London Organising Committee of the Olympic and Paralympic Games’ standards for strong, durable plastics needed to withstand heavy usage and exposure to sunlight during the Games. Coca-Cola® supported the development of the three-bin system that included colorful hoods (black, orange and green) that made it easier for the general public to identify each category of recyclables.

Through the power of science and innovation, with a strong focus on sustainability, Dow demonstrated an unwavering commitment to delivering the key infrastructure components that had a positive impact on the Olympic Movement, for London and beyond. Read more.
Annual Sustainability Report Earns "A+" Rating

The Dow Chemical Company issued its 2011 Global Reporting Initiative (GRI) Sustainability Report with UN Global Compact Communication on Progress. Dow utilizes GRI’s reporting guidelines to communicate the Company’s sustainability efforts and achievements. Through a consistent and balanced summary on progress on Dow’s 2015 Goals, this report underscores the Company’s commitment to addressing social and environmental challenges through chemistry and innovation.

“This year, Dow reported to the expanded requirements of the GRI 3.1 format,” said Mark Weick, Dow’s director of Sustainability Programs. “Dow also made the report more engaging for readers with enhanced graphics and navigation options, including the ability to navigate by materiality. Dow continues to have the report assured by a third party.”

For the fifth year in a row, the report achieved an "A+" designation. The "A" signifies that the report reaches the highest level of completeness and the "+" assures stakeholders of the report’s accuracy through verification by an external third-party. The GRI framework assists reporters in basing their communication on the following principles: balance, comparability, accuracy, timeliness, clarity and reliability.

GRI is the globally recognized sustainability reporting framework with a mission to make sustainability reporting a standard practice for all organizations. This year marks the eighth time Dow has published a report using the GRI framework. A summary of the report is also available, which highlights 2011 progress and many of the metrics used to track Dow’s 2015 Sustainability Goals. Read more.
Innovations for Tomorrow

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

Arabian Water & Power Forum’s Innovation in Sustainability Award

Dow Water & Process Solutions (DW&PS) has won the prestigious “Innovation in Sustainability Award” at the Arabian Water & Power Forum 2012. Winning this award is an honor for Dow and testament to the company’s relentless focus on innovating solutions in the water arena. DW&PS has been at the forefront of efforts to help promote wastewater recycling in the Middle East as a means of addressing the region’s water concerns. The award recognized the role of two Dow Integrated Technology products used in unique water recycling projects at the Al Ain Dairy Farm and the Park Hyatt Dubai, both in the United Arab Emirates. The advanced, integrated membrane technology purifies the water to remove organics, suspended solids, viruses and other particles through the DOW™ Ultrafiltration technology and then rejects soluble species using the Dow innovation extra fouling resistance reverse osmosis membranes. Read more.

New Technology for Ballast Water Treatment

Ocean-going vessels use ballast water from the sea to balance cargo and maintain stability during transit. Water taken from one port and discharged in another can result in the inadvertent spreading of invasive aquatic species with serious ecological, economic and public health impacts. In 2004, the International Maritime Organization (a United Nations agency) adopted the International Convention for the Control and Management of Ships’ Ballast Water. Shipping vessels will need a Ballast Water Treatment System (BWTS) installed by 2018. There are approximately 70,000 vessels in the world affected by the regulations, yet only a few hundred have a ballast water treatment system. Dow is developing a new BWTS featuring unique ozone-based technology. Ozone is a natural product created from electricity and air, which is a powerful non-chemical biocide with a favorable environmental profile. With shipboard trials planned for 2013, Dow’s innovative BWTS system is expected to deliver a more environmentally responsible solution and lower cost of ownership than existing alternatives.

Global Technical Partnership Formed to Improve Photovoltaic Solar Energy Products

Dow Chemical (China) Company Limited signed a Memorandum of Understanding for cooperation with Changzhou Trina Solar Energy Company Limited on a Global Technical Partnership at the Dow Center in Shanghai. The two companies will cooperate in areas of photovoltaic product development programs and photovoltaic technical research programs by leveraging Trina Solar’s technology capability, market information and production facilities with Dow’s research capability from its diversified technical platforms, industry know-how, advanced new materials development technology and global technical resource network. Dow and Trina Solar will work together to develop photovoltaic products with increased cost-effectiveness, higher output efficiency and longer durability. Read more.

Solid Waste Management Project Presented at Latin America Sustainability Challenge

On September 20, Dow presented a project case study entitled “Multisectorial Agreements for Urban Solid Waste Management” at the American Chamber of Commerce Sustainability Challenge Annual Forum held in Buenos Aires. The forum was attended by local and international experts in public, corporate and academic areas. The innovative project was initiated in Bahia Blanca, a city of over 300,000 people. In August 2010, Dow took the initiative to create a multi-stakeholder team inviting government officials, non-government organizations, two universities, national scientific organizations, the National Solid Waste Management Association and recycling experts to improve the urban waste solid management in the city. The project conducted a baseline study, technical analysis, regulatory and environmental review — as well as preparing community awareness tools. It is anticipated that the results of the project will lead to significant improvements for the local people, environment and economy. Read more.
Commercial Agreement for Desalination Research Collaboration Signed

Dow and the Saline Water Conversion Corporation (SWCC) recently signed a commercial agreement for research collaboration. SWCC is a Saudi government body responsible for desalinating sea water to augment the supply of potable water to coastal and inland cities in the Kingdom. It is the largest desalinated water producer in the world, with 32 plants that are responsible for 18 percent of the world’s desalinated water production.

Dow and SWCC’s first action after this agreement will be to launch a pilot project to test the suitability of innovative desalination technologies for conditions in the Arabian Gulf. The two companies will partner to test state-of-the-art technologies developed by Dow Water & Process Solutions, evaluating their performance in the Arabian Gulf’s unique environment, including their ability to effectively handle factors such as high salinity and high temperatures. The tests will be conducted by the Saline Water Desalination Research Institute in Al Jubail, Saudi Arabia, over a period of one year. Read more.

U.S. Ambassador and AmCham Spain Honor Dow for Most Innovative Initiative

On September 19, the American Chamber of Commerce in Spain (AmCham Spain), held its “Trade & Innovation Awards 2012” to recognize the excellence and outstanding work of Spanish or foreign companies that have shown exceptional performance in the area of trade and innovation. Nine awards were presented in three categories, with Dow Chemical Ibérica being recognized for the most innovative initiative, highlighting the importance of the new Global Water Technology Development Center located in Tarragona. The award recognized Dow’s commitment to innovation, especially in developing technologies and products for the water market, working towards goals that help meet global water challenges. The United States Ambassador to Spain and the president of AmCham Spain presented the awards to the winning companies during a ceremony held at the Spanish Stock Exchange in Madrid. Read more.

World’s Brightest Chemistry Students Convene for 44th International Chemistry Olympiad

Nearly 300 of the brightest young minds in chemistry from 72 countries convened at the University of Maryland for the 44th International Chemistry Olympiad (IChO). The International Chemistry Olympiad is an outstanding opportunity to help inspire the next generation of highly educated and bright scientists who will help contribute to a sustainable future. Dow is the sole corporate sponsor of this year’s Olympiad, which was held in the U.S. for only the second time in the 44-year history of the event. The week-long event was packed with examinations and lectures that covered analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, physical chemistry, and spectroscopy. Dow’s sponsorship further expands the Company’s mission to highlight the importance of chemistry and STEM (science, technology, engineering, and math) education. It comes on the heels of a successful year as a sponsor of the International Year of Chemistry and many other education initiatives. Dow has launched a Facebook platform called Dow Solutionists in School. Read more and visit www.facebook.com/dowsolutionistsinschool.

Dow Receives Ringier Technology Innovation Award in Packaging Industry

Dow received the Ringier Technology Innovation Award for its development of ROBOND™ L-95D, a single component water-based laminating adhesive. The award, one of the packaging industry’s most prestigious honors, was presented at a ceremony during ProPak China 2012 trade fair in Shanghai. ROBOND™ L-95D utilizes Dow’s unique acrylic emulsion technology with a focus on the balance between product performance and operational convenience while creating sustainability benefits for packaging manufacturers. The adhesive was developed specifically to address the growth in Asia’s flexible packaging market where there is a direct need for sustainable packaging. Dow is the global leader for water-based adhesive technology and is leading the way in packaging solutions that reduce environmental impact. Read more.
Partners for Change

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

Dow Partners with Acumen Fund to Benefit Social Enterprises in Africa

At the 2012 Clinton Global Initiative Annual Meeting, Dow and Acumen Fund, a non-profit global venture fund addressing poverty across Africa and South Asia, announced a collaboration to scale innovative social enterprises in East and West Africa. The region is impacted by systemic challenges including lack of access to energy, agriculture inputs and safe drinking water that limit opportunity at the household level and hamper economic growth. Today, more than 75 percent of the population lives in rural areas; the majority work small farms and live on less than $2 a day. Poverty is also pervasive in urban areas, with more than half the population of some major cities lacking basic services like water, sanitation and electricity. The partnership will work with social enterprises aimed at serving poor communities to accelerate the development and distribution of crucial products and services in agriculture, water, sanitation and energy. The enterprises in Acumen’s portfolio will gain access to Dow’s expertise and technical resources to help scale their businesses and better serve their customers. The collaboration will create shared learning among social enterprises and global corporations focused on serving critical needs – and opens an avenue for Dow to put its talent, expertise and financial resources to work for sustainable change. Read more.

Hawkins Honored for Global Business Sustainability Leadership

The Corporate Eco Forum (CEF), an elite membership organization for corporations that demonstrate a commitment to environment as business strategy, has presented Neil Hawkins, Dow’s Vice President of Sustainability and Environment, Health & Safety, with the 2012 C.K. Prahalad Award for sustainability leadership by an individual. Created in honor of the late Dr. C.K. Prahalad, one of the world’s most influential business strategists, the award celebrates globally significant private sector action that exemplifies the fundamental connection between sustainability, innovation and long-term business success. Hawkins was recognized for his long track record of exceptional sustainability leadership, including forging a breakthrough collaboration with The Nature Conservancy to help Dow and other companies recognize, value, and incorporate nature’s services into global business strategies. Former U.S. President Bill Clinton congratulated Hawkins and the 2012 winners in a special video prepared for the awards ceremony. To view a video about the 2012 C.K. Prahalad Award, visit: http://bit.ly/Nun2WG. Read more.

Wishing Well International Foundation Completes First Phase of Bagliga, Ghana, Project – Dow Continues Support

In collaboration with Safe Water Team and its partner Safe Water Ghana Inc., Wishing Well International Foundation (WWIF) has implemented the first phase of its safe drinking water project in Bagliga, Ghana. The 100-family project was partly funded by the children of St. Paul Lutheran School in Boca Raton, Florida. WWIF efforts got a boost recently when Dow donated its eighth shipment of plastic resin for use in Hydraid® BioSand water filters. The eight-pound plastic filter can provide a family of four with up to 50 gallons a day of clean water. The filter uses gravity, so it requires no power, has no moving parts to replace, and lasts about 10 years. It removes more than 99.9 percent of parasites and more than 90 percent of all bacteria and viruses in water. Each filter can be installed in most countries for less than $1 (USD) per person per year. When Dow joined the team in 2008, the Company committed to donating enough resin to make 300,000 filters. More than 50,000 Hydraid filters have been distributed around the world since 2006. Read more.
Roundtable Report for Governments to Improve Science and Regulatory Decision Making

Government agencies need scientific data and review processes that they can trust to make the best possible regulatory decisions. Dow contributed support for a new groundbreaking report aimed at improving the science behind regulatory decision making. The company is among a diverse group of leaders from industry, environmental and consumer advocacy groups, professional associations and government that helped author the report entitled, Model Practices and Procedures for Improving the Use of Science in Regulatory Decision-Making. It is the culmination of more than 18 months of deliberations by the Research Integrity Roundtable and builds upon the work of the Bipartisan Policy Center in its 2009 Science for Policy Project. The Roundtable was formed in 2011 by the American Chemistry Council and The Keystone Center. The cross-sector nature of the Roundtable project is a novel approach that has yielded valuable recommendations and remarkable consensus in spite of differences in expertise, ideology and background. The ultimate objective of the effort is to better protect consumers, workers and the environment. Read more.

New Strategic and Expanded Collaborations for Dow AgroSciences

Australian Centre for Plant Functional Genomics – Dow AgroSciences and the Australian Centre for Plant Functional Genomics have entered into a crop improvement research, option, and license agreement to discover and develop new traits for crop improvement. Both companies will utilize their trait capabilities to create plants with improved environmental stress response and agronomic performance. The collaboration will mean that Australian growers have greater access to international resources and know-how—and has the potential to bring valuable new solutions to the agricultural market and farmers around the world. Read more.

Victoria Department of Primary Industries – Dow AgroSciences announced that it has entered into a new research collaboration with the Victoria Department of Primary Industries to develop novel plant genetics tools designed to increase crop performance for the benefit of farmers in Australia and around the world. The collaboration builds upon the current research and development program in plant genomics between the companies. Read more.

The Royal Barenbrug Group – Dow AgroSciences (DAS) and The Royal Barenbrug Group announced a global strategic relationship for the development and commercialization of advanced germplasm in forage seeds. Barenbrug will form a new entity in Brazil to build a state-of-the-art cleaning, coating, and packaging facility to process hybrid Brachiaria for DAS, as well as produce other tropical grasses and legumes. This collaboration will build upon DAS’s current seed portfolio by expanding into forage grass seed, a very important global crop. Read more.

Restoring Children’s Smiles in Thailand

Dow Thailand, together with its partners and employees, donated to Operation Smile Thailand to help children who suffer from facial deformities in Rayong province. Approximately 1 in 500 Thai children are born with oral-facial clefts annually. Most patients need more than one surgery. The funds were donated by the Dow South East Asia Charity Challenge, Dow Thailand and caring employees. The program kicked-off with dozens of patients registering, including a 10-day old baby, whose grandmother was brought to tears after learning that treatment would be provided. The program will facilitate life-changing medical support for as many as 70 children struggling with the social stigma of facial deformities by providing surgeries and post-operative care.

Good Job Training Builds Opportunity and Hope in Argentina

One sure way to achieve success is to ensure that cooperation, coordination and common goals are part of any sustainable solution. For Dow and other businesses in Bahia Blanca and Ingeniero White, Argentina, the extensive involvement of community, government, education and business was vital to the success of “Buen Trabajo” (Good Job), a job training program started in 2007. With high unemployment rates in the communities, especially among young people, jobs are a key to improving people’s lives, the local economy and the strength of the community. The need for a creative and effective solution was obvious, so the “Buen Trabajo” training program was developed to match qualified employees to available jobs. The program’s training courses are certified by the National Technology University, Bahia Blanca Regional Facility and continue to be free of charge. A training facility was constructed to house classrooms and equipment for students. To date, more than 600 students have graduated from the program, a 90 percent graduation rate.
Coastal Clean Up Around the World

**Taiwan:** Dow volunteers participated in the 2012 International Coastal Cleanup Day on September 15 at Nanliao Beach, Hsinchu, Northern Taiwan. The 115 staff members from Chiayi, Nantou and Hsinchu and their families took part in the activity to clean the beach and waterways. Despite the strong wind and prolonged drizzle, the dedicated volunteers worked for three hours removing 4.5 tons of trash. In addition to the beach cleaning, Dow volunteers helped to categorize the collected trash, and the collected data will be used to publish a report that will in turn help the public understand the original sources of the waste and how to better protect the ocean. Read more.

**Argentina:** A group of 30 volunteers dedicated three hours to cleaning the coast of the “Reserva Ecológica Costa Sur” near Dow’s offices in Buenos Aires. Cascos Verdes (Green Helmets), a non-profit organization dedicated to raising environmental awareness through the implementation of social inclusive programs, was invited to participate, adding more community volunteers to the effort.

**Texas:** Dow employees, their families, and other community members joined together on September 22nd to make local beaches safer and more beautiful. These beaches are critical to Gulf Coast marine ecosystems and the local economy. The work was part of the annual Texas Adopt-A-Beach Fall Cleanup at Surfside Beach in Surfside, Texas. Read more.

You Be the Chemist Challenge Promotes STEM Education

Chemical industry members and educators recently gathered in Philadelphia, Pennsylvania, for the national You Be The Chemist (YBTC) Challenge, where 22 of the nation’s best and brightest students competed for the title of 2012 Champion. Dow was the Diamond sponsor of the event. Created by Chemical Educational Foundation (CEF), the Challenge is a national question-and-answer competition that uses the drama of competition to promote science, technology, engineering, and math (STEM) education for students in grades 5–8. Dow’s partnership allows CEF to integrate all of the YBTC programs, focus on implementing the programs nationwide, and actively encourage Dow employees to use and grow CEF programs in the areas where they live and work. The program is a key part of Dow’s overall STEM education program that is focused on nurturing and developing the next generation of scientists and leaders. Read more.

Habitat for Humanity Houses in Kenya

The collaboration between Dow and Habitat for Humanity in Kenya brought new hope to the families of the Maai Mahiu community, near Naivasha in Kenya. In July, members of the Dow Africa team came together alongside customers and local volunteers to build houses for families who lost their homes due to the national conflict following the presidential elections in 2007. Working side-by-side, volunteers gave 25 families the chance to start new lives in a safe environment where they could live in stable and secure homes. During the day, participants worked on setting the foundations of five houses. The remaining build was completed by Habitat for Humanity. The official house handover ceremony took place in September. Dow’s support of Habitat for Humanity is one of its several initiatives in Africa. As Habitat for Humanity’s first corporate sponsor over 30 years ago, Dow has funded programs, donated products that reduce energy use and CO₂ emissions and provided volunteer support in the construction of more than 25,000 houses in over 20 countries.

Bringing Colors and Science to China Hope Primary School

Dow and Nippon Paint, a leading paint manufacturer and sponsor of “Color, Way of Love,” celebrated the completion of a decorative coat of paint recently completed at the Songhuajiang (Dow) Central Primary School located in Dehui city, Jilin province, China. Nippon Paint launched the initiative in 2009. By the end of 2012, the initiative will have helped paint the exterior walls of more than 130 schools and made donations to build 33 Nippon Paint Hope primary schools and more than 135 Happiness art classrooms. As part of the celebration, employees from Nippon Paint and Dow brought art and science classes to the children, who received them as if they were magic. New colors were made by mixing the three primary colors in different ways; small crayons delineated big imaginary spaces; and they even found magic in plain water! Dow has donated through the China Youth Development Foundation to build 13 Project Hope schools. Read more.
Smart Solutions for Today

Our technologies enable our customers, and their customers, to develop more sustainable products and services.

Olympic Stadium Wrap to be Recycled into Shelter for Developing World

London’s Olympic stadium is a feat of science and engineering. A number of Dow innovations were used in the building that helped 80,000 sports fans witness the world’s top athletes going for gold. The iconic fabric “wrap” that surrounded the Olympic Stadium – Dow’s most visible contribution to Olympic Games – will live on. Dow announced a partnership with Article 25, a leading UK building and development charity, and Axion Recycling to repurpose the entire wrap. Dow developed the material to meet the London Organising Committee of the Olympic and Paralympic Games’ Sustainable Sourcing Code and Temporary Material Guidelines. Dow Elastomer technology made it possible for the wrap to achieve a unique combination of durability, flexibility and fire performance. The total wrap system, including steel cables and fixtures, accounts for less than half of one percent (<0.5%) of the stadium’s total carbon footprint, making it a low carbon solution for enclosing and decorating the structure. The 306 individual textile wrap panels, each approximately 25 meters high and 25 meters wide, are slated for recycling and reuse projects in the UK, and shelter solutions for at-risk children in Uganda and Rio. Read more.

Dow Proactively Replaces Mercury Catalyst for Superior Results

As part of Dow’s commitment to providing more sustainable solutions for customers and consumers, Dow has voluntarily completed a program to replace mercury-based catalysts used in a product portfolio acquired from another company. The results of the 18-month, complex program enabled Dow Formulated Systems to remove all organo-mercury catalysts from its polyurethane elastomer products prior to the European Union’s formal recommendation to phase out these catalysts, and five years before such compliance is mandated. Dow launched its complete suite of re-engineered polyurethane elastomer products at UTECH Europe 2012 in March. The success of the effort sets a new standard for the polyurethane industry and puts Dow customers ahead of the competition for years to come. Read more.

Turning Production Waste into Raw Material

Dow Coating Materials’ Min-Hsiung plant in Taiwan had a problem: what to do with waste polymer generated from the production process when landfill capacity is limited and incineration is just too costly an alternative? The solution is both sustainable and cost effective. A tenacious cross-functional team found a manufacturer, and together through tests and trials, created a way to use the polymer as the raw material for their brick production process. Working closely with the manufacturer, Dow was able to turn what was once a waste product into a valuable raw material. Along with receiving the Waste Reduction Always Pays (WRAP) award, this revolutionary solution saves Dow an estimated US $170,000 in annual disposal costs while reducing the site’s carbon footprint by 500 tons per year.

Green Apple Award Goes to Home Insulated with STYROFOAM-A

A housing scheme insulated with STYROFOAM™-A has won a Green Apple Environment Award after competing against more than 500 nominations. The group of homes at Wimbish, Essex, has already won the residential category of the first ever UK Passivhaus Awards. The Wimbish Passivhaus project, developed by Hastoe Housing Association, consists of 14 dwellings that deliver extremely low energy bills with minimum carbon emissions. It was the first rural affordable housing development in the UK to achieve Passivhaus certification. The buildings are insulated below the concrete floor slabs with STYROFOAM-A insulation FLOORMATE™ 300-A from Dow Building Solutions, a highly effective method of insulating residential buildings. Read more.
New Technologies for Solar Panel Makers Reduce Total Lifetime System Costs

Dow introduced new polyolefin-based technologies to help harness the power of the sun and turn it into cost-effective energy to help address the world’s growing needs. ENLIGHT™ Polyolefin Back Encapsulant Composite Films use patent-pending technology to create a single structure that provides “2-in-1” functionality, serving as both the back encapsulant and backsheet for solar panels. These next generation films offer excellent electrical insulation properties, increased resistance to the effects of Potential Induced Degradation (PID) and extended module efficiency levels. Dow continues to demonstrate its commitment to the solar panel industry by bringing new technology to the marketplace – and by backing it with manufacturing capacity to deliver innovative polyolefin films to customers across the globe. Read more.

Dow AgroSciences Launches Innovative Five-Gene Stacked Corn Trait

Dow AgroSciences announced the launch of POWERCORE™ in Argentina to control major pests in corn. The new corn hybrid combines two herbicide-tolerant genes plus three genes resistant to pests of economic importance to Argentina and is the first product approved in Argentina with five genes stacked in corn. The trait incorporated into Dow AgroSciences’ hybrid portfolio will be available for sale in late 2012 in Argentina and Brazil. POWERCORE will provide increased corn yield between five and 10 percent, depending on the technological level of crops and weather conditions. This exciting new product enables Argentinean growers the opportunity to adopt new traits and higher yielding hybrids from Dow AgroSciences. Read more.

Greater Capacity to Harness the Power of the Sun

Dow’s ENLIGHT™ Polyolefin Encapsulant Films plant in Map Ta Phut has been completed – and the first product samples have been shipped to customers for approval. Construction of the plant, which began in late 2011, was completed with no recordable injuries or process safety incidents. The Map Ta Phut plant more than doubles Dow’s capacity to make innovative encapsulant films, which are used to help manufacture solar panels. Completing this site is an important next step in the growth of this important business that enables Dow to continue to help customers meet global demand for solar energy. ENLIGHT Films help solar panels last longer and maintain electrical current longer than the current industry standard. Dow is also building a plant in Schkopau, Germany to help increase capacity. Read more.

Imagine Homes to Offer Solar Shingles for All New Construction

DOW POWERHOUSE™ announced a major new collaboration with Imagine Homes, a San Antonio-based homebuilder leading the nation in high-performance green building technology, to offer the cutting-edge DOW POWERHOUSE Solar Shingle roof system to all new homebuyers in six San Antonio area residential communities. Additionally, DOW POWERHOUSE will be a standard feature on all homes in the Willis Ranch community, scheduled to open in September 2012. This expands the channels for San Antonio homeowners to obtain the nation’s first solar shingle roof product, making it easier to transform their roofs into a power source that offsets a significant percentage of home energy costs. Made in the USA and backed by a 20 year warranty from Dow, the DOW POWERHOUSE Solar Shingle is certified as both a solar and roofing product. It has received seven performance and safety certifications and is proven to withstand rain, hail and wind uplift. Read more.
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.

Green Cross for Safety Medal from National Safety Council

Honoring Dow for its comprehensive commitment to safety excellence, the National Safety Council (NSC) presented the Company with its 2012 Green Cross for Safety medal. As a recipient, Dow will actively serve as an ambassador for promoting safer operations across multiple industrial segments, including the chemical industry. This award highlights Dow’s strong commitment to safe and sustainable operations, and adds to the prestigious Robert W. Campbell Award received in 2010 for world-class operational safety performance. The Council announced Dow as the 2012 Green Cross for Safety medal recipient in October 2011 at the NSC Congress & Expo, among thousands of its peers. Read more.

Named for 12th Time to Dow Jones Sustainability World Index

The Dow Jones Sustainability World Index recently announced its rating of Dow as one of the top performers in the global chemical industry – marking the 12th time Dow has received this recognition since the launch of the index. In addition to improving its rating from last year, Dow achieved the highest score in the sector for Environmental Policy Management System. The Company’s overall score was 88 percent – 33 percentage points higher than the average for the industry group. Dow was one of only 11 chemical companies to be recognized in the World Index. Dow is ranked at the 97th percentile for all companies in the sector. Dow people live its corporate values of Integrity, Respect for People, and Protecting the Planet every day by delivering science and innovation to benefit customers, communities, and society. The Dow Jones Sustainability World Index is a highly regarded benchmark of sustainability performance and progressive business strategy. Read more.

Energy Conservation to Boost Bottom Line in Germany

The average German four-person household uses around 4,500 kilowatt hours of electricity per year. Dow Germany consumes about 18 million kilowatt hours per day, much of it for energy-intensive chlorine electrolysis. Consuming about one percent of Germany’s total energy output, Dow is one of the country’s largest industrial current consumers. Dow is proactively taking aggressive steps to take advantage of new legislation that allows a cost-saving exemption for companies with ISO 50001 certification. The intent is to institutionalize a comprehensive energy management system. So, in addition to savings promoted by the German Renewable Energy Act exemption, implementation of ISO 50001 will strengthen Dow Germany’s energy management and provide tools that will lead to long-term energy efficiency and conservation. Once the Company implements the plan and receives certification, reoccurring annual cost savings are estimated at over $120 million dollars.

Recovering the Energy in Plastic Packaging

Dow’s Performance Packaging business has the largest packaging franchise of any global materials supplier. Dow’s broad portfolio of resins and films offer machine manufacturers, converters, brand owners, retailers, and consumers advantaged options to help improve operational efficiencies, economics, functional performance, aesthetics, convenience, and sustainability across a variety of high-value packaging market segments. Successful strategies to expand the potential of plastic packaging must now proactively address end-of-life options. Energy recovery helps divert used plastic packaging from landfills and converts it into a valued source of fuel or feedstock. Dow conducted the second phase of a pilot program to include six additional energy recovery trials using non-recycled plastics from Dow Michigan Operations to displace natural gas. These trials turned 100 tons of material into 2 billion BTUs of energy. Read more.
Junior Achievement China Names Dow Best Volunteer Engagement Company

After winning the 2010–2011 Best Partner Award, Dow has now been highly recognized by Junior Achievement China as the 2011–2012 Best Volunteer Engagement Company. Dow was acknowledged for the passionate devotion and extensive involvement of volunteers from every level of the Company. Since 2008, Dow Greater China employees have volunteered for multiple Junior Achievement programs, including Our City, the More Than Money Workshop and the Career Go Workshop. From September 2011 to June 2012 alone, 192 Dow volunteers contributed 2,347 total hours to Our City, Dow Greater China’s signature corporate social responsibility program that provides sustainability-themed education to primary school students. With support from Dow, Our City has extended its reach and impact to benefit 17,191 students from primary schools in Beijing, Shanghai, Guangzhou, and Zhangjiagang in the last 12 months. Read more.

Dow Launches Supplier Sustainability Training Program

In partnership with UniEthos, Dow has created a unique supplier sustainability program that kick-starts training activities focused on social and environmental responsibility for company suppliers. The program will drive significant progress by applying complementary knowledge and technologies, as well as sharing best practices. Suppliers learned the details during the official launch of the Training Center at the 2012 International Ethos Conference in São Paulo in June. The 12-month program began in August and includes in-class activities, workshops and shared information resources. The first wave of the program includes participation by representatives from 20 suppliers. Program contents address alignment with corporate social responsibility and sustainability, training on how to use Ethos metrics, and evaluation and compliance with Dow’s Code of Conduct for Suppliers. These efforts are expected to produce positive results in operational reliability, supply chain resiliency, safety performance and more.

One of the Greenest Companies in Brazil

Época Magazine, one of the largest weekly publications in Brazil, organized the 6th edition of Época Green Company Awards. In 2012, Dow was recognized as one of the 20 greenest companies in Brazil. The award celebrates projects that minimize environmental impacts and add value to final products. Among the good environmental practices acknowledged were the replacement of hazardous components in some product lines and the development of resins to produce plastic from renewable sources, such as sugar cane.

Goal Updates

2015 Goal

- Increase the percentage of sales to 10% for products that are Highly Advantaged by sustainable chemistry

Sustainable Chemistry

The percentage of sales from Dow products that are Highly Advantaged by sustainable chemistry increased from 4.3% in 2010 to 4.8% in 2011. Most of the 2010 Highly Advantaged sales remained Highly Advantaged for 2011, and as a group their sales grew by an impressive 27% from 2010 to 2011. Highly Advantaged sales new for 2011 were achieved due to improved manufacturing efficiency and growth in sales with sustainable chemistry advantages. A series of business review meetings was conducted with businesses having sales that are close to becoming highly advantaged. This engagement with business leadership continues to help further integrate sustainability into business discussions.

The Sustainable Chemistry Index (SCI) increased to 21.8 for 2011. The aggregate scores of sales with environmental and social benefits continued to increase from 2010 performance, and the manufacturing efficiency score recovered some of the ground lost in the previous year. The SCI continues to be an important point of discussion during business strategy reviews, as business interest and engagement around the SCI has reached unprecedented levels.
Dow was a leading contributor at the LCA XII conference held September 25-27 in Tacoma, Washington. This conference, organized by the American Center for Life Cycle Assessment (ACLCA), is the premier international Life Cycle Assessment (LCA) conference held in North America, regularly attended by 300 LCA users and practitioners from industry, government, and academia. Dow scientists delivered four presentations and a poster, covering an evaluation of the USEtox model, use of quick LCA tools to guide R&D, applying life cycle thinking to corporate metrics, the critical review process for LCA, and the principles of sustainable chemistry and engineering. This marks the 5th straight year that Dow has presented at the ACLCA conference, demonstrating Dow’s commitment to engage and help advance the international LCA community.

Addressing Climate Change, Energy Efficiency and Conservation

In the first quarter of 2012, Dow added an absolute Greenhouse Gas commitment to Dow’s Climate Change goal — Dow will maintain GHG emissions below 2006 levels on an absolute basis for all GHGs. Dow will find ways to grow, but not grow GHG emissions. Related to this additional metric to manage our Dow’s footprint, Dow is investing in the development of a Net Impact Tracking Tool. This technique will sharpen Dow’s focus on the full life-cycle benefits of Dow products.

A sustainable energy future requires constant manufacturing efficiency improvement inside the Company, while maximizing the contributions of Dow products to improve efficiency and expand affordable alternatives. Energy is an enabler of global economic growth, and energy efficiency remains critical to meeting the world’s energy demands. Dow’s innovation engine is driving energy solutions that meet society’s needs and provide a competitive advantage to Dow and Dow’s customers.

Dow’s manufacturing energy intensity, measured in BTUs per pound of product, has improved more than 40% since 1990, saving the Company a cumulative $25.4 billion and 5,400 trillion BTUs. This is roughly equivalent to the annual energy consumption of 48 million single-family homes. Dow estimates that 2015 Energy Intensity Goal efforts will yield a cumulative savings of more than $1 billion and 190 trillion BTUs. This is equivalent to the annual energy consumption of over 1.7 million single-family homes. Dow’s portfolio transformation, coupled with global economic conditions, has impacted the scale and speed of anticipated energy intensity reductions. Dow expects additional energy efficiency progress from in-flight projects that will see results after 2015.

**2015 Goals**

- Maintain absolute greenhouse gas emissions below 2006 levels
- Reduce our energy intensity 25%
- Use 400 MW of clean energy by 2025

### 2015 Goals

<table>
<thead>
<tr>
<th>Year</th>
<th>Highly Advantaged Sales</th>
<th>Dow Aggregate SCI</th>
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</thead>
<tbody>
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<td>2007</td>
<td>10%</td>
<td>20.4</td>
</tr>
<tr>
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<td>8%</td>
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</tr>
<tr>
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<tr>
<td>2011</td>
<td>2%</td>
<td>21.8</td>
</tr>
<tr>
<td>2012</td>
<td>0%</td>
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</tr>
</tbody>
</table>

### Energy Efficiency Savings

Cumulative Savings in Billions ($)

- 1990: 0
- 2000: 10
- 2010: 20
- 2012: 30

Cumulative savings in billions ($): 25
Between 1990 and 2005, the Energy Intensity (Btu/lb) of global operations was improved by 38%. By 2015, Dow has a goal to achieve an additional 25% improvement. The average Energy Intensity of year 2005, adjusted for mergers and acquisitions, is the basis for calculating performance against this target. Dow’s goal for Energy Intensity for the full year of 2012 is 3,436 Btu/lb, or 82.5% of the value in 2005. Dow’s actual performance through Q3 2012 was 4,067 BTU/lb, which is 97.7% of the 2005 baseline.

Greenhouse Gas Reduction

Dow has reported to the Carbon Disclosure Project (CDP) since 2006. The CDP is a not-for-profit organization working to understand the risks and to drive greenhouse gas emissions reduction from business. In 2012, Dow reported on its 2011 Greenhouse Gas performance and commitment to being a solution provider to the Climate Change challenge. The report scored 91 out of a possible 100 points. This excellent result highlighted Dow’s commitment to strong Governance and complete disclosure through transparent Emission Reporting.

Dow’s energy efficiency and chemicals management efforts have significantly reduced the Company’s greenhouse gas (GHG) emissions footprint. As a result, Dow has prevented over 200 million metric tons of GHG emissions from entering the atmosphere since 1990. This is equivalent to the annual emissions of more than 16 million single-family homes. Dow’s goal is to maintain GHG emissions below 2006 levels on an absolute basis for all GHGs, thereby growing Dow not the carbon. Dow will continue to focus on managing Dow’s footprint and delivering solutions to help customers manage theirs. For example, Dow’s insulation products contribute to greater energy efficiency, helping avoid millions of metric tons of GHG emissions per year.
Product Safety Leadership

At the end of 3Q 2012, 433 Product Safety Assessments (PSAs) had been posted at www.dowproductsafety.com. Dow’s published Product Safety Assessments now cover products accounting for over 82% of Dow’s annual revenue. Additionally 100% of Dow’s 224 High Priority chemicals are now covered by a PSA. Dow is on-track to meet the 2015 Goal to have a Product Safety Assessment publicly available for all Dow products.

PSAs are written for the lay public and cover topics such as basic hazards, exposure potential and risk management measures. They complement other product safety, handling and stewardship documents, which are part of the product responsibility “package” Dow offers to strengthen relationships with communities and customers. This holistic approach enables Dow customers and the communities in which Dow does business to stay informed about the Company’s products and the plants that produce them. Dow is dedicated to providing the public with accurate information and building trust as it uses technology to develop better products.

Breakthroughs to World Challenges

Sustainable Livestock Innovation in Brazil

Dow AgroSciences identified the opportunity to create a positive agenda for Sustainable Livestock through the creation of a coalition – the Sustainability Livestock Working Group. The group aims to bring widespread change by:

- Demystifying livestock as a villain in the process of environmental degradation, showcasing how appropriate production models have the potential to stop the expansion of deforestation areas and reverse the carbon balance
- Encouraging the recovery of degraded pastures
- Driving sustainability in all spheres of influence, including producers, meatpackers, retailers, financial institutions, governments and NGOs.

The project encompasses technical initiatives, including qualification of producers in grassland management techniques that dramatically increase pasture productivity with Dow AgroSciences technology, as well as funding and scientific knowledge dissemination. This initiative is expected to help restore 15 million hectares of degraded pasturelands in Brazil, and reduce by 39% the CO2 equivalent emissions in the country.

Contributing to Community Success

The 2015 Goal of Contributing to Community Success continues to demonstrate great progress. Freeport, Texas, became the sixth site to be re-measured against its baseline, and although Dow is still in the early stages of analyzing the data, it shows positive progress towards the goal. Also underway is the re-measure of St. Charles, Louisiana, which positions the goal at 70% of re-measures completed to date.
The goal continues to pay close attention on several important metrics, two of which are closely tied to Dow’s overall community reputation and the remaining focused on quality of life in Dow’s communities. The first metric is a community’s “general impression” of Dow. This measurement is taken from those that are at least a little familiar with Dow. The second measurement is the community’s impression related to Dow “playing a positive role on the impact of quality of life.” This second measurement is derived from those that have a generally good impression of Dow and have firsthand knowledge, or at least an awareness, that Dow has positively impacted their community in some way. These favorability scores — along with the communities identified “quality of life issues” — continue to serve as key data points that influence the realigning of Dow sites community success plans. The metrics allow us to strategically develop an up-to-date plan that assists us in addressing community challenges. The company refers to these identified quality of life issues as Dow’s “rightful roles.” The chart at right depicts Dow’s “rightful roles” across the world, including all ten pilot sites. These results are gathered from direct responses to open-ended questions related to Dow’s “rightful role” in the community.

The chart clearly illustrates the environment, economy and education as Dow’s top three “rightful roles” across the world. In many cases, these issues have always been a priority of Dow’s. However, this data allows us to engage these issues with a greater focus, aligning sites and priorities directly with those organizations that can assist us in driving positive impact in Dow’s communities.

The important concept to note regarding “rightful roles” is that they are not always the most important issues facing a community but rather a community’s decision about issues where Dow can play a role with the greatest impact.

**Local Protection of Human Health and the Environment**

Dow leads the way across virtually every facet of environment, security, health and safety performance. Dow was one of the first companies to introduce innovative protection equipment for workers — in 1897 — and today Dow engages our neighbors through Community Advisory Panels and more. Dow’s Vision of Zero is a leadership attitude and a corporate culture that is committed to zero accidents, zero injuries and zero excuses.

Dow announced 2015 goals to achieve on average a 75% improvement of key indicators for Environmental Health & Safety (EH&S) operating excellence from a 2005 baseline. These indicators include personal injury/illness of Dow employees and contractors, loss of primary containment incidents, process safety, severe motor vehicle accidents, emissions and transportation related incidents.

During the first 10-year goal period, the Company reduced the rate of injury and illnesses per 200,000 hours of work time by more than 80%. During the 2005 to 2015 timeframe, the goal is to achieve a similar reduction in the rate. Excellent progress is being made; Dow workers are now 15 times less likely to experience an injury or illness than the U.S. manufacturing rate reported for 2010.

**Injury and Illness Rate**

At the end of Q3, the Injury and Illness rate was 0.21 per 200,000 hours of work. This is a 30% improvement compared to 2011. The 2015 Goal of 0.12 per 200,000 hours is a 75% improvement from 2005.
At the end of Q3 of 2012, the Injury and Illness Severity rate was 0.74 per 200,000 hours of work. This is 32% better than Dow’s performance for all of 2011. This performance places the company on target towards the 2015 Goal of 0.67 per 200,000 hours, which is a 70% improvement from 2005.

At the end of Q3 of 2012, the company had experienced 186 Loss of Primary Containment incidents. When annualized, the implied total is 263 incidents for 2012, slightly under the target for the year but on track towards the 2015 Goal of 130 or fewer incidents. The 2015 Goal is a 90% reduction from 2005.

At the end of Q3 of 2012, the company had experienced 12 Process Safety Incidents (PSIs). When annualized, the implied total of 16 incidents for 2012 would be similar to Dow’s excellent performance in 2011 and well below the 2015 goal. The goal in 2015 is to be experiencing less than 25 PSIs. PSIs are classified in terms of the new Center for Chemical Processing Safety and American Chemistry Council PSI definitions.
At the end of Q3 of 2012, the Severe Motor Vehicle Accident (MVA) incident rate was 0.17 accidents per million miles driven. This has increased compared to last year, but remains better than the target for 2015. Severe MVA was not measured in the heritage Rohm and Haas Company. The 2007-2009 values represent the heritage Dow population.

This quarter, Dow is providing an update for metrics that target achieving a 30% reduction in emissions levels by 2015. In each case, the results are better than Dow’s goal line as of the end of 2011.

**VOC Emissions**

Volatile organic compounds (VOCs) are found in the air as a result of naturally occurring processes and a variety of chemical processes.

**NOx Emissions**

Nitrogen oxides (NOx) are produced during combustion, especially at high temperature, and contribute to acid rain.

**Priority Compound Emissions**

Priority compounds are a category of chemicals defined by Dow. These emissions are composed of chemicals with persistent, bio-accumulative and toxic hazards, and chemicals with carcinogenic, mutagenic or reproductive hazards.
To effectively steward raw materials and limit waste, Dow set a goal to implement 300 million pounds of by-product synergy between 2005 and 2015. As of the end of 2011, Dow has identified and redeployed over 310 million pounds of useable material, reaching Dow’s 2015 commitment three years early. The by-product synergy effort matches under-valued by-product streams from one facility with potential users at another facility to create new revenues or savings with potential social and environmental benefits instead of disposing as waste.

At the end of Q3 of 2012, Dow had experienced 18 Hazmat Transportation Loss of Primary Containment (LOPC) events. When annualized the implied total for 2012 is 24, potentially above the 2012 target. Dow’s 2015 Goal to reduce all Hazmat transportation incidents to 14 or less is a 75% improvement from 2005.

By reducing the number of tonne-miles of Highly Hazardous materials, Dow reduces the chance of in-transit incidents that could impact communities and areas through which Dow’s products travel. Supply chain redesign is a long-term effort and changes in sourcing points sometimes take multiple years to implement. Tonne-miles annualized indicate that Dow would experience about 725 million tonne-miles for 2012. The goal for 2015 is to reduce these shipments to less than 705 million tonne-miles, which would be a 50% reduction from the baseline in 2005.
Dow remains committed to continuously improving its performance and publicly reporting its progress. Please visit www.dow.com for the latest Dow sustainability, business and performance news, and to share your comments or submit questions.

Science for a Sustainable World

We only have one planet, with limited resources. So everything we do and how we do it matters.

Dow is committed to minimizing our own footprint and to delivering solutions that help our customers and the rest of society do the same. The world needs solutions for big challenges like energy, climate change, water, food, housing and health. And Dow has some of the world’s best scientists and engineers dedicated to solving world challenges through innovation. When we do that, it’s not just good for the planet, it’s good for business.