



2015 Sustainability Goals

4Q 2014 Update



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Dow Helps Deliver Breakthrough Hygiene Solution

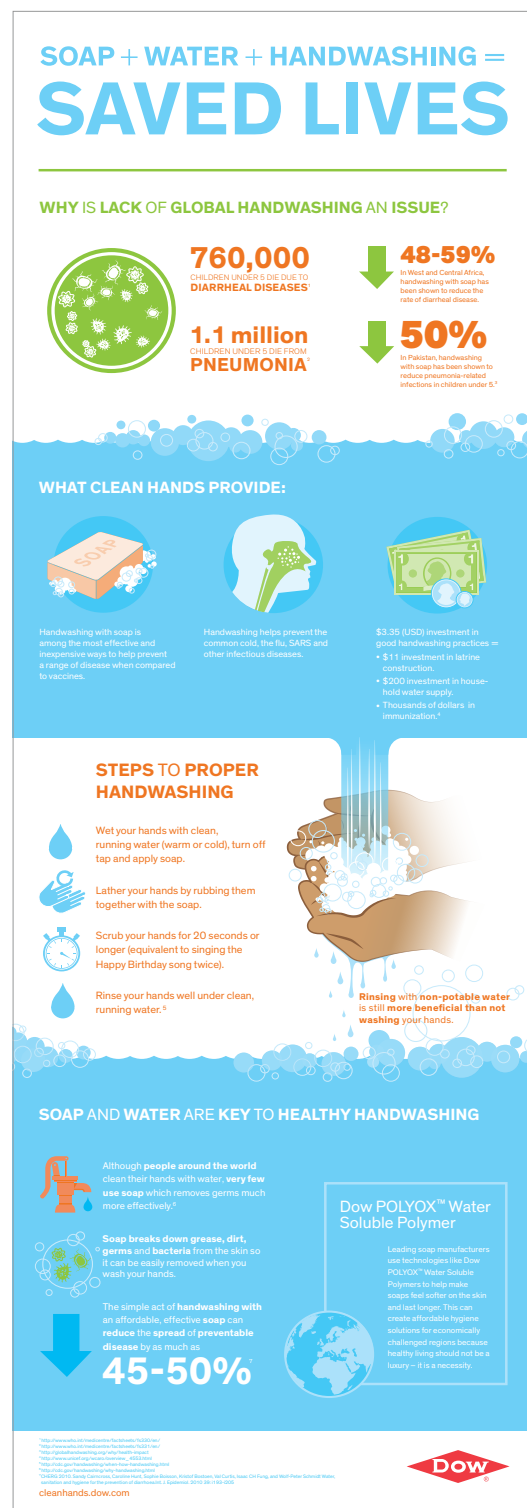
Handwashing with soap is a proven way to prevent the spread of life-threatening diseases, especially among children. In fact, nearly two million children under the age of five die each year from infectious diseases. In recognition of Global Handwashing Day, Dow is shining a light on its technology leadership through a research and development (R&D) collaboration on Lifebuoy™ Soap from Unilever, which is expected to deliver a positive impact on health and hygiene around the world. Due to its broad global impact on health and hygiene, Dow has named the technology as its fourth “Breakthrough to World Challenges.”

Lifebuoy™ Soap, the world’s #1 germ protection soap, is formulated with POLYOX™ Water-Soluble Polymers from Dow, resulting in a soap that lasts longer, provides better value and feels great on your skin. Lifebuoy™ Soap equips more people with a first line of defense against illnesses through handwashing. By enabling a longer lasting and better quality bar of soap, POLYOX Polymers support Unilever’s Sustainable Living Plan targets. Dow collaborated with the Unilever R&D team on controlled release technology to design a bar of soap formulated to stay intact while releasing ingredients slowly and at the right time.

Global Handwashing Day is dedicated to raising global awareness of the importance of handwashing with soap and water. Dow joined forces with the Global Public-Private Partnership for Handwashing with Soap to promote this simple, healthy practice on an international scale. The campaign was initiated to reduce childhood mortality rates related to respiratory and diarrheal diseases by introducing a simple lifestyle change. Every year, 1.7 million children die before the age of five as a result of diarrhea and pneumonia. With regular handwashing, the mortality rate from preventable diseases can be reduced by nearly 50 percent. Handwashing with soap is among the most effective and inexpensive ways to stop the spread of preventable diseases, which can save lives – cutting deaths from diarrhea by almost one-half and deaths from acute respiratory infections by nearly one-quarter.

With this breakthrough, Dow exceeds the target established in 2006 as part of its 2015 Sustainability Goals. Dow’s “Breakthrough to World Challenges” commitment identifies products and technologies that deliver significant contributions to societal challenges over time. To be selected, breakthrough technologies are subjected to a rigorous evaluation process that measures many candidates in Dow’s business

portfolio against a variety of criteria, from positive impact on millions of human lives, to minimal environmental impact throughout the product’s lifecycle. Dow’s previously announced breakthroughs include Omega-9 Oils, DOW FILMTEC™ ECO Reverse Osmosis Elements and BETAMATE™ Structural Adhesives. For more information, visit www.cleanhands.dow.com. Read More.



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The Lasting Legacy of Ed Carney

After the untimely passing of Dr. Ed Carney this year, Dow would like to pay tribute to Ed by celebrating the lasting impact he had on his family, friends, colleagues and the more sustainable world he leaves behind.

Dr. Ed Carney was a loving husband and father, passionate and talented musician and distinguished toxicology scientist at Dow. He passed away suddenly early this year, much too soon for those who knew him personally and professionally. Ed was a loving, thoughtful and supportive husband who counted his family as his greatest success and took great pride and enormous joy in his sons. He was liked, respected and admired for his mind, creativity and spirit as well as the kind, deliberate and caring way he interacted with others.

Carney was a creative and gifted musician with wide-ranging interests, including saxophone, clarinet, jazz, classical and world music. He played in local bands and shared his love of music with his children, as well as serving on the Board of Directors of the Grove Music Festival. He supported musical education at local high schools and was the founder of Michigan Jazz Trail Jam sessions.

Ed was born in 1959 in Staten Island, N.Y., later attending Cornell University. He earned his B.S. in Animal Science from Cornell University, a M.S. in Veterinary Science from the University of Wisconsin-Madison, and a Ph.D. in Reproductive Physiology from Cornell University.

Carney's career at Dow spanned 22 years. He excelled with the highest level of intellectual rigor and integrity, but also with humility, humanity and a deep commitment to ensuring that scientific advances and technologies were as safe and sustainable as possible for people and the environment. Carney served as a Research Fellow within the Toxicology and Environmental Research and Consulting (TERC) group at Dow and served as Scientific and Founding Director of the Dow Predictive Safety Assessment Center. Carney earned Dow's "Best of the Best" Responsible Care® Award in 2013, published more than 100 peer-reviewed papers and held a variety of external positions, including:

- U.S. Environmental Protection Agency (EPA) Chartered Scientific Advisory Board and Board of Scientific Counselors
- Adjunct professor at the University of Michigan
- European Centre for the Validation of Alternative Methods Science Advisory Board
- Lecturer at the University of Surrey in the U.K.
- Hamner Institute's Board of Directors
- Teratology Society (past-president)
- Society of Toxicology (past specialty-section president)
- U.S. Humane Society's Human Toxicology Project Consortium

Ed constantly sought ways to make a difference in the world, whether at home, at work, with fellow musicians or in the community in which he lived. He was known by everyone he met for his warm way and generous spirit that permeated everything he did. He will truly be missed.



Ed's Lasting Sustainability Legacy

Ed's collaborative approach delivered groundbreaking results in advancing the body of thought in predictive toxicology worldwide. Predictive toxicology is a mixture of strategies used to forecast the interaction between chemical structures and biological systems. Carney always challenged conventional wisdom and entrenched beliefs, as he looked for new and more effective ways of arriving at a better conclusion.

"Carney's vision and leadership within the Company has advanced our understanding of traditional and predictive toxicology – and what it could mean for our broader industry," said Mike Witt, global director, Toxicology and Environmental Research and Consulting for Dow. "Ed's work has positioned Dow as a thought leader in this area and resulted in a significant elevation of the role of predictive toxicology in our research, products, operations and future Sustainability Goals."

Ed will be remembered as a leader who cared about people and the sustainable development of our society. The impact of his work will be felt for generations, as we continue to strive to realize his vision.

Innovations for Tomorrow

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

Rio 2016's Carbon Mitigation Program



Dow recently introduced its tailor-made carbon mitigation program for the next Olympic Games to more than 30 Brazilian journalists and international correspondents in Rio de Janeiro, Brazil. The event also marked the launch of Rio 2016's first carbon report, which includes several contributions from Dow. The event included an overview of the most recent findings and international discussions around climate change and carbon dioxide (CO₂) emissions around the globe. It also presented the Rio 2016 Organizing Committee's efforts to develop a thorough carbon inventory, and its ongoing efforts to reduce emissions while working on the preparations to organize and host the Olympic Games. CO₂ emissions – direct and indirect – related to the Rio 2016 Games are now estimated to be 3.6 million tons CO₂ equivalents (CO₂eq), with actual numbers to be confirmed after the Games, as Rio 2016 is continuing to implement a series of measures aiming to reduce the overall footprint. As the Official Carbon Partner of Rio 2016, Dow will mitigate 500,000 tons of CO₂eq from organizing and hosting the Games through third party-verified emissions reductions. [Click here](#) to read Rio 2016's press release on the carbon report event.

Dow R&D Recognized for Market-Driven Innovations

R&D innovations from Dow are driving higher profitability and are recognized throughout the industry globally for their significant impact on solving critical marketplace needs. Recognized as a **Top 100 Global Innovator** by Thomson Reuters for four consecutive years, Dow has delivered a significant number of innovations as a result



of strategically aligning its R&D efforts against key, high-growth markets. Representing a \$350 billion addressable market, opportunities abound in consumerism, health and nutrition, infrastructure and transportation, and energy. In 2013, Dow's R&D efforts resulted in more than 560 U.S. patents granted – the highest number in the Company's recent history – and Dow is on track to exceed this level again in 2014. This has a direct impact on the Company's financial growth. [Read more.](#)

Best Open Innovator Award in Europe

Dow was recently recognized with the Best Open Innovator Award at Innovation 2014, one of the most renowned Innovation Conferences in Europe. The award was based on a six-month innovation study conducted by Zeppelin University's Dr. Manfred Bischoff Institute for Innovation Management of Airbus Group. The institute has been the center of the research cluster on innovation and technology management since 2008. To learn more, visit www.zeppelin-university.com.

Three Dow Scientists Recognized as ACS Rising Stars

Dr. Jaime Curtis-Fisk, Dr. Melinda Keefe and Dr. Beth Lorsch are among 10 women honored with the Women Chemists Committee of the American Chemical Society's 2015 Rising Star Award.

The annual award was created in 2011 to recognize outstanding women scientists who are approaching mid-level careers and have demonstrated outstanding promise for contributions to their respective fields. Dr. Jaime Curtis-Fisk is currently working in the field of formulation development for the delivery of active ingredients in application areas including pharmaceuticals, microbial control, and packaging. Dr. Melinda Keefe is an expert in



polymer synthesis, paint formulation design and testing, with an active research interest in art conservation science. Dr. Beth Lorsch is an expert in synthetic organic chemistry, as well as agricultural molecule synthesis and scale-up. [Read more.](#)

Nippon Paint China Technical Collaboration with Dow

Nippon Paint China and Dow Microbial Control signed a memorandum of understanding in which the two companies formally reaffirmed their commitment to collaborate on sustainable coatings products research and development. The collaboration is expected to fuel innovation in coating technologies and meet the growing demand for microbial control. Coatings producers have an urgent need for active, efficient microbial control to meet stringent environmental, health and safety regulations.

Named 2014 Innovative Company in China

Dow has been honored with the "2014 Innovative Company in China" award by the China Petroleum and Chemical Industry Federation and China Chemical Industry News, a leading industry newspaper. A panel of industry professionals, government officials, leading research scholars, business experts and media leaders selected Dow as the leading winner of the innovative company awards from among hundreds of other leading companies.

Partners for Change

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

Trash Bag Material Donation to Keep America Beautiful

Dow recently donated the raw materials needed to make trash pick-up bags to partner Glad®, which will manufacture and donate three million bags to Keep America Beautiful (KAB). The initiative works to build and sustain vibrant communities by transforming public spaces into beautiful places. The donation will provide trash pick-up bags across the U.S. for clean-up efforts in 2015. The donation will supply trash bags for one full year of clean-up activities. Along the same lines, Keep Chicago Beautiful recently honored Dow for



its food and safety packaging solutions with the *Sustainability Vision Award*. The award recognizes Dow's leadership in sustainability by continuously raising the bar to meet its 2015 Sustainability Goals through sustainable chemistry, breakthrough technologies and product safety stewardship.

The Proof is in the Packaging

Did you know that enough food is produced to feed the estimated 805 million people around the world who are going hungry each day? While this is true, unfortunately 1.3 billion tons – or one-third of the food produced in the world – goes to waste each year. High-performance food packaging from Dow and conscientious consumer behavior in the supermarket and at home can help reduce food waste. In support of this year's World Food Day, Dow launched the *Make It Last* campaign to bring awareness to the reality of the global food crisis and ask consumers worldwide to make a commitment to help reduce food waste. Pledge your personal commitment to Make it Last through Dow's interactive website, which shares facts about the global food crisis and tips on how you can help cut down on food waste. Follow @DowPackaging for facts on food waste as well as inspiring, shareable videos. [Read more.](#)



SolidariDow Makes a Difference in Mexico

Launched in 2010 in Latin America, SolidariDow is a community-engagement initiative that allows employees to volunteer in activities that support community development and through voluntary monetary contributions toward education, child development and low-income driven programs. Recent efforts have been focused in environmental conservation activities and science, technology, engineering and math (STEM) education initiatives, including science-driven workshops in Asilo Primavera, a school for low-income boys. The group recently facilitated a trip to Dow AgroSciences' experimental field in Nextipac, Jalisco, where the group discussed the role of genetically modified organisms with



more than 100 elementary school students. The group's conservation activities have focused on reforestation efforts, with almost 300 volunteers planting over 2,000 trees in the Mexican states of Tlaxcala and Jalisco, where the Company is located.

New Resin Compatibilizer Gives Film Scrap a Second Life

Dow recently launched RETAIN™ Polymer Modifiers, a portfolio of compatibilizers that make it easier to recycle post-industrial barrier films without compromising performance or aesthetics. RETAIN™ Polymer Modifiers allow pelletized barrier films containing materials like ethylene vinyl alcohol or polyamide to be more evenly dispersed into a polyolefin matrix. The technology is helping make packages clearer, maintain mechanical properties and significantly reduce gels in films produced from barrier film recycle streams. In addition to these sustainability benefits, RETAIN Polymer Modifiers demonstrate impressive optical and physical properties, as well as improved processability. For more information about RETAIN™ Polymer Modifiers, AMPLIFY TY tie layers and plastic packaging technologies, please visit www.dowpackaging.com. [Read more.](#)

Korea Green Foundation Climate Change Education Kits

Dow recently signed an agreement with the Korea Green Foundation's Eco Children's Center on a project to research and develop education kits about climate change. The education project targets elementary school students and aims to raise their awareness about climate change, reducing their carbon footprint and energy independence. Unlike previous knowledge-focused booklets, the new education kits incorporate STEM education ideas into the content in a multidisciplinary, creative learning approach.



10-Year Anniversary of Projeto Sementes in Brazil

Projeto Sementes – or the Seeds Project – was launched in 2004 by Dow employees as a volunteer project based on the needs of the local community near Sao Paulo, Brazil. Since then, the initiative has directly impacted more than 700 children as well as almost 3,000 individuals indirectly. The effort relies on assistance from Dow volunteers, who help with project management and provide support for classes. The project teaches concepts related to citizenship and the environment, empowering students to change their behavior and that of their families and friends. Children also become ambassadors for the environment by sharing the content learned with others. The 10th anniversary celebration began with a graduation ceremony for students and concluded with tree planting in the local municipal nursery.



Grassroots Community Collaboration to Address Food Insecurity

Dow AgroSciences employees grew, harvested and donated more than 1.5 tons (3,000 lbs.) of fresh fruit and vegetables to local community food pantries served by Gleaners Food Bank of Indiana. Dow's first Harvest for Hunger Garden was developed by two employee-led groups – the Hunger Solutions Network and the Lawn and Landscape Club – to help tackle the local food insecurity problem. The garden consisted of six large plots and 36 small plots. In its first year, more than 100 employees volunteered on the garden project, spending weekends working the soil and planting 34 varieties of different fruits and vegetables. The success of the program was made possible through the support of several community partners.

Taiwan Employees and Families Help Keep Ocean Clean

Ocean trash presents a global problem to ocean and human health. To help protect our oceans, more than 200 Dow Taiwan employees and families joined International Coastal Cleanup activities in Taipei, Hsinchu and Chiayi, Taiwan. Collaborating with the Society of Wilderness, volunteers helped remove more than 3,000 kilograms (more than 6,600 lbs.) of trash. Dow has collaborated with the Ocean Conservancy for more than 24 years to remove debris and pollutants from oceans and waterways. In Taiwan, Dow paired up with the Society of Wilderness to start Protect Ocean in 2012, hosting a series of seminars, films, outdoor tours and coastal cleanup events.

A Gift That Keeps Giving Takes Root in India

In celebration of Diwali, the festival of lights, Dow India leaders planted trees in honor of key stakeholders. Dow partnered with grow-trees.com, a unique organization dedicated to plant trees on government-designated land on behalf of others. The species of the saplings were selected to complement the local ecosystem in the Amaravati district in Maharashtra, India. Planting a tree as a gift not only symbolizes the nurturing of relationships with stakeholders; it also highlights the Company's strong commitment to sustainability and protecting the planet for the future.

Dow Observes World Habitat Day 2014

Dow recently joined Habitat for Humanity International, the United Nations and organizations around the world in observing World Habitat Day. World Habitat Day brings awareness to the need for adequate shelter around the world and respond to the fact that 1.6 billion of the world's population live in inadequate shelter. This year, more than 50 Dow volunteers participated in the Jimmy and Rosalynn Carter Work Project in Dallas and Fort Worth, Texas, where more than 100 homes were built, repaired or painted. Dow also recently committed to support Impact Asia, the most recent and ambitious Habitat for Humanity campaign to date, which aims to ensure 15 million people live in safe and affordable homes and to engage another 10 million people as volunteers,



advocates and supporters in Asia-Pacific by 2020. As the organization's first national corporate partner, Dow has supported the construction of more than 41,000 homes in more than 26 countries worldwide since 1983. [Read more.](#)

Smart Solutions for Today

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

New Eco-Friendly Washing Machine

Dow and Haier Group have commercialized the first eco-friendly washing machine enabled by DOW™ Ultrafiltration (UF) Technology.



The washing machine is designed and built with the new DOW PURINZE™ Ultrafiltration Module, which facilitates a more than 30 percent reduction in water consumption while improving water quality. The improved water quality of the new machine delivers exceptional cleaning performance. PURINZE™ UF modules remove as much as 99 percent of common bacteria during washing, which significantly improves hygiene and brings healthier clothes to the users. [Read more.](#)

Chromium-Free Etch for More Sustainable Plastics Plating

Dow has developed a novel, chromium-free ECOPOSIT™ Etching Solution to replace chromic acid etching used in the pre-treatment of Acrylonitrile Butadiene Styrene (ABS) and PC-ABS in the plating on plastics industry. The new solution helps manufacturers meet the September 2017 sunset date set by REACH to eliminate the use of chromium trioxide. Dow has been granted a U.S. patent for this novel chrome-free etch, laying the platform for the move toward commercialization and the road to elimination of hexavalent chromium in plating on plastics pre-treatment. [Read more.](#)

First Seawater Desalination Project in Korea

More companies are turning to Dow as they look for additional water supplies to run power plants. To address the need for fresh feedwater for a power plant in Gwang-Yang, Korea, POSCO E&C, one of Korea's leading construction companies, turned to Dow to supply DOW™ Ultrafiltration (UF) Technology and DOW™ Reverse Osmosis (RO) Technology to desalinate seawater. Recently, area residents celebrated the successful start-up of Korea's first seawater desalination facility, used to convert seawater into a high-quality feedwater source for the city's power plant. The newly constructed desalination plant has a capacity of treating 30,000 cubic meters of seawater per day.

PacXpert™ Technology Wins Sustainable Package Technology Award in China

Dow won the China Sustainable Package Technology Award for PacXpert™ Technology at the 5th annual China Packaging Innovation and Sustainability Forum held in Xiamen, Fujian Province, China. PacXpert™ Packaging Technology is a cutting-edge



application for utilization across the packaging industry, enabling the transition from larger, traditional, rigid containers to flexible packaging. Stand-up pouch packaging technology is higher-performing, with greater flexibility and sustainability benefits. In addition to this recent recognition, PacXpert™ Technology has previously received two prestigious awards: the ABRE Gold Award from the Brazilian Packaging Association and The WorldStar Packaging Award from the World Packaging Organization.

Smart City Model Features Advanced Dow Technologies

As part of the Smart Chemistry Smart Future initiative, Dow exhibited its latest advances in technologies and products that contribute to the development of smart cities at the Expoquímia 2014 in Barcelona, Spain. Dow presented its Smart Cities scale model, which recreates a city that features numerous Dow products and technologies that play an everyday role in a smart city. The



model shows multiple applications of Dow's products in daily life, including business, farming, water treatment and roads. Dow displayed solutions from fields as varied as drinking water treatment and water reuse, flooring, insulation, energy efficiency, efficient packaging, green and cool roofing, gas treatment and latest power-generation technologies, among others.

Better Insulating STYROFOAM™ FG Technology Launched in Japan

Dow Kakoh successfully developed a higher R-value extruded polystyrene (XPS) foam product and recently launched STYROFOAM™ FG Technology. Key to the success has been the development of an advanced blowing agent and infrared attenuator technologies. STYROFOAM™ FG Technology has insulating characteristics that perform about 20 percent better than existing XPS products. STYROFOAM™ FG Technology is classified in the



highest rank of insulation performance rating in Japan, delivering superior energy savings in the building envelope.

Milestone for FASTRACK™ Binder-based Paints in Barcelona

Water-based paints produced with FASTRACK™ Binders from Dow are now being widely utilized in Barcelona, Spain, following the completion of a successful pilot project carried out with the city council. Barcelona is driving the adoption of technologies with improved environmental profiles as part of the Smart City initiative, designed to push forward innovations that can improve the economic fortunes, durability, environmental profile and the comfort of inhabitants. FASTRACK™ Binder-based paints offer significant environmental advantages since they contain up to 90 percent fewer volatile organic compounds and reduce



carbon dioxide (CO₂) emissions by 60 percent compared to existing materials. It is estimated that, if FASTRACK™-formulated, water-based paints are applied widely, the city's carbon footprint could be reduced by 63 tons of CO₂ and annual emissions of harmful solvents could be reduced by 31 tons – roughly equivalent to eliminating the CO₂ footprint associated with a 15,000-km (or more than 9,300-mile) stretch of road-freight traffic.

New Acrylic Polymer in a Dry, Redispersible Powder

Dow recently launched a new, high-performance, 100-percent acrylic redispersible powder, DLP-500. With this innovation, Dow enters a new market with a dry acrylic powder that performs as well as its highly regarded acrylic emulsion products. The product provides all of the performance benefits of a traditional wet acrylic, along with enhanced sustainability benefits and savings from lower shipping and packaging costs. Designed specifically for exterior insulation finish systems and stucco finishes, DLP-500 enables a dry mix with exceptional early rain and dirt pick-up resistance while maintaining the workability and feel of traditional wet-formulated products. The product enables more sustainable building practices by allowing for packaging in bags instead of pails or buckets, with packaging cost savings in excess of 60 percent. Without the presence of water, customers can potentially also cut their shipping costs and fuel use in half. [Read more.](#)

One of the Most Sustainable Companies in Brazil

For the fourth consecutive year, Dow was chosen by Guia Exame de Sustentabilidade (Sustainability Assessment Guide) as one of the most sustainable companies in Brazil. One of the Company's greatest innovations in 2014 was the improvement of water treatment technologies. The magazine specifically noted



DOW™ Ultrafiltration Technology and IntegraPac™ Ultrafiltration modules installed in the São Lourenço area by providing drinking water suitable for human consumption. The advanced system has a capacity to produce 90,000 liters of water per hour, benefiting a population of 10,000 residents. This year, more than 200 companies competed for the award.

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.



Teich and Nelson Elected 2015 AIChE Officers

Dr. Cheryl Teich, Engineering Solutions' Reaction Engineering Expertise Area Leader, was recently elected president of the American Institute of Chemical Engineers (AIChE), and Dr. Alan Nelson, global R&D director for Performance Monomers, will join her on the AIChE board of directors. Dow's strong and broad technical expertise is highly recognized across our industry. Holding prestigious positions in industry organizations as Cheryl and Alan have is a proof point to the value of our people and how Dow values technical excellence. It's important we continue to invest in our people and their capabilities as that is the foundation of Dow's success. [Read more.](#)



Global 10-year Health Risk Improvement Results

In 2004, Dow set global, decade-long targets to improve the health of its employee population across 11 different health risks. The result was both an increase in the percentage of the population at low risk and a decrease in the population at high risk. Most notable were improvements in physical activity (47-percent reduction in population defined as sedentary), tobacco use (29-percent reduction) and weight management (15-percent reduction in the percent of the population defined as obese and 27-percent increase in the population defined as having a healthy body mass index).

S⁴TAR in Southeast Asia for Performance and Sustainability Excellence

The Dow S⁴TAR Program is a collaborative partnership between Dow Supply Chain and strategic logistic partners. The program enables Dow Supply Chain partners to achieve advancements in safety, sustainability, social responsibility and service. Dow intends to raise the bar in the industry for the four focus areas of the S⁴TAR program by exchanging best practices and sharing the company's expertise in Responsible Care®. Since its launch in 2011, the S⁴TAR program has been fully implemented in China, India and Japan, with significant improvements in each of the four key areas. With the Southeast Asia program recently started in Singapore, Malaysia, Indonesia, Philippines and Vietnam, the Company and its partners are taking another important step to increase performance in the future. The S⁴TAR awards will be presented annually to the Best Carrier, Best Warehouse Operator and Best Freight Forwarding Service Provider.

Erica Ocampo: Lessons from the 2014 CEF Sustainability Leadership Development Challenge

Recently, Erica Ocampo, sustainability manager for Dow Packaging & Specialty Plastics, was selected as one of 13 winners in the 2014 Leadership Development Challenge hosted by the Corporate Eco Forum (CEF), an invitation-only membership organization comprised of large, global companies that demonstrate a serious commitment to the environment, of which Dow is a member. As part of the program, Ocampo traveled to the Comon Yaj Noptic organic coffee cooperative on the steep slopes of the Sierra Madre in Chiapas,



Mexico, meeting with the women and families that grow, harvest, roast and pack the beans. Erica also hiked into the El Triunfo Biosphere to trace the path of the water to learn about how companies and communities are dependent on functioning "natural infrastructure" to ensure fresh water supply, sustain agricultural production, ensure resilience to drought, and protect from flooding and erosion. [Read more.](#)

Greece Volunteers for Coastal Cleaning Day in Lavrion



Recently, employees and family members of Dow Greece joined forces with the Hellenic Marine Environment Protection Association in World Coastal Cleanup Campaign activities that took place all over Greece. Dow volunteers chose to clean the beach of Agios Nikolaos, which lies right next to the Company's Lavrion facilities.

CSR Excellence Award in Thailand

Dow Thailand received the silver-level 2014 Corporate Social Responsibility (CSR) Excellence Recognition Award from the American Chamber of Commerce in Thailand for the fourth consecutive year. The Company also received a U.S. Creative Partnerships Program certificate for its CSR efforts and collaboration. The 2014 CSR Excellence Recognition Awards honor organizations that operate their business in accordance with the principles of transparency, corporate governance and sustainability and serve as role models for other organizations.

Recognized as "Best Place to Work" for LGBT Employees

Dow was recently honored by the Human Rights Campaign for achieving a 100-percent rating on its corporate equality index – a national benchmarking tool on corporate policies and practices related to LGBT employees. The Company has participated in the index since its inception in 2002, and, in 2005, was the first in the chemical industry to receive a perfect score. Dow offers best-in-class practices of LGBT inclusion in the workplace, including equal benefits to same-sex partners for everything from health, dental and life insurance to bereavement leave, relocation and dual-career assistance. Dow also recognizes survivor benefits for its pension plan for LGBT employees and provides transgender benefits as well. [Read more.](#)



Transforming the Essence of Community Engagement

Community outreach has been an essential element of operations at Dow since our founding in 1897. The Company's mission has always centered on being a good neighbor and a trusted partner, making sure we leave a positive impact on every community in which we operate.

Dow believes effective community engagement occurs through collaboration, conversation and transparency with stakeholders on many levels. We understand that our "rightful role" will be different in every community, and our activity should be based on solid data and well defined parameters. We encourage our partners to think of us as solution-oriented collaborators who work proudly with them side-by-side to identify and implement long-term solutions to community challenges.

In 2005, this mindset led us to design and implement our Contributing to Community Success process as part of our 2015 Sustainability Goals. Today, a decade after the global pilot program was first implemented, the results are in: average Community Acceptance Ratings for all Dow sites surveyed increased by 25 percent, signaling that Dow is truly recognized as playing a positive role in improving these communities. A deeper look at the process and results follows below.

2015 Goal

- By 2015, 100% of Dow's selected manufacturing sites will have achieved their targeted individual community acceptance ratings, which measure community favorability with the role Dow plays in making the community a better place to live; and, by 2015, 100% of Dow sites are actively engaged in implementing the "Contributing to Community Success" best practices in their respective communities.

Process Overview

To develop the community success model we envisioned more than a decade ago, Dow created a survey process to establish a baseline and gain qualitative and quantitative input on Dow's reputation and quality of life concerns in 10 Dow communities. We collected data through this anonymous community assessment, which identified priorities related to several different issues such as, safety and security, health, environment, economy and education, to name a few. We asked for, and received, detailed feedback about Dow's appropriate role in addressing those needs, and then created strategies for influencing change.

Where Are We Today?

Based on the results, Dow developed a community success plan for each community surveyed, working closely with site leadership, local Community Advisory Panels and other stakeholders.



Our focus at every site was on the same objectives: addressing the most relevant needs of the community while developing and fostering new relationships to nurture community success. Through this process, we harnessed Dow's spirit of innovation to stimulate locally grown solutions to pressing challenges.

Witnessing a Transformation

Dow site and community leaders agree that the Contributing to Community Success process has transformed community interaction and collaboration at our sites. Their conclusion is based on data gathered from the 20 surveys globally and includes insights from a set of 13 metrics we term “brand builders” due to their far-reaching business and community attributes.

The table below shows each site’s benchmark and re-measured progress against three significant metrics gauging familiarity, favorability and positive impact in the respective community. Note the last column lists the community’s view of Dow’s “rightful role.” With few exceptions, education, economy and the environment are listed as top priorities identified by our communities for Dow to address.

Site	Familiarity		Favorability		Impact		Rightful Roles
	Base	Re-measure	Base	Re-measure	Base	Re-measure	
Aratu, Brazil	100%	60%	64%	82%	37%	56%	Education, Economy, Community Engagement, Environment
Freeport, Texas	98%	98%	80%	85%	71%	81%	Environment, Economy
Midland, Michigan	92%	94%	72%	86%	62%	72%	Environment, Economy, Education
Louisiana Operations Plaquemine, Louisiana	87%	90%	74%	84%	60%	65%	Environment, Economy, Education
Louisiana Operations St. Charles, Louisiana	74%	64%	64%	71%	40%	46%	Environment, Economy, Education
Pittsburg, California	70%	75%	62%	71%	35%	45%	Environment, Economy, Education
Stade, Germany	89%	92%	57%	75%	58%	76%	Education, Environment
Terneuzen, The Netherlands	80%	64%	57%	60%	42%	48%	Environment, Economy
Rhine Center, Germany/France	39%	90%	54%	73%	39%	66%	Environment, Community, Education
Zhangjiagang, China*	8%**	6%**	18%	56%	24%	61%	Environment, Economy, Education

A Model for the Future

Dow believes the result of the Contributing to Community Success work in the 10 pilot communities is a best practice and a breakthrough model for all sites globally. This disciplined approach to data gathering, information sharing and strategic implementation is a reputational game-changer for the company and a life-changer for residents of the communities in which Dow operates.

As leaders continue their assessment of the impact of the Community Success process, a new wave of implementation has begun at smaller sites around the Dow world. In late 2013, Dow launched its newly developed Community Success Toolkit to help define appropriate actions to implement the Community Success Goal locally. Now any site, regardless of size and resources, can apply the disciplined process to its outreach.

The future presents unlimited opportunity for Dow sites globally, as they continue to engage with communities using the novel Community Success process. For more stories of impact and ongoing updates about implementation, visit our [website](#).



Goal Updates

Sustainable Chemistry

The 2015 Goal for Sustainable Chemistry is to increase the percentage of total Company sales to 10 percent for products that are "highly advantaged" by Sustainable Chemistry, as measured by Dow's Sustainable Chemistry Index (SCI). Sustainable chemistry is Dow's "cradle-to-cradle" concept that drives the Company to use resources more efficiently, minimize its footprint, provide value to its customers and stakeholders, deliver solutions for customer needs and enhance the quality of life of current and future generations.

The SCI is an internal index based on Dow's analysis of eight sustainability factors of the Company portfolio at a detailed level and is updated annually. In 2013, the percentage of sales from Dow products that are highly advantaged by sustainable chemistry increased from 7.1% to 10.0%. Most of the 2012 highly advantaged sales remained highly advantaged for 2013, and as a group these sales grew faster than the Company. New highly advantaged sales were achieved due to improved manufacturing efficiency and opportunities realized in the areas of agriculture, water, automotive, infrastructure, energy and consumer products.

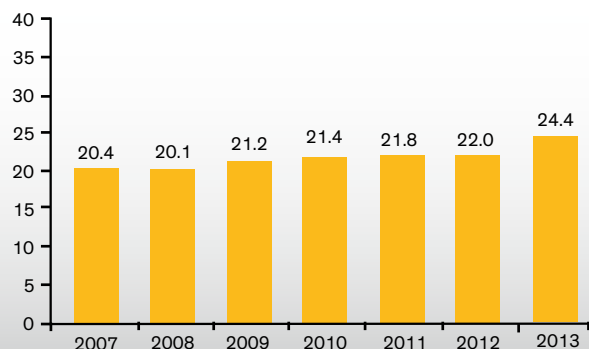
In 2013, the Company's aggregated SCI increased from 22.0 to 24.4. All index factors were improved from 2012 performance, except resource management, which remained the same. The SCI continues to be an important point of discussion during business strategy reviews, as business interest and engagement around sustainability continues to increase and deepen across Dow's portfolio.

Dow recently presented its SCI work to a very receptive audience of sustainability professionals at an international conference. The abstract and presentation can be found [here](#). A detailed white paper on the SCI and its impact can also be found [here](#).

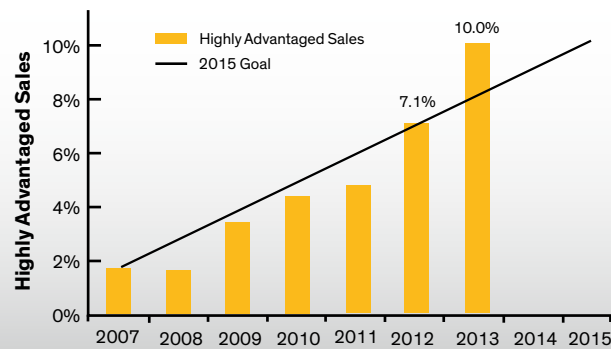
2015 Goal

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

Dow Aggregated SCI



Highly Advantaged Sales



Addressing Climate Change, Energy Efficiency and Conservation

In 1Q 2012, Dow added an absolute greenhouse gas (GHG) commitment to its own Climate Change goal: Maintain GHG emissions below 2006 levels on an absolute basis. Dow will find ways to grow without growing GHG emissions. Related to this additional metric to manage our footprint, Dow is developing a Net Impact Tracking Tool, a technique that will sharpen the Company's focus on the full life-cycle benefits of our products.

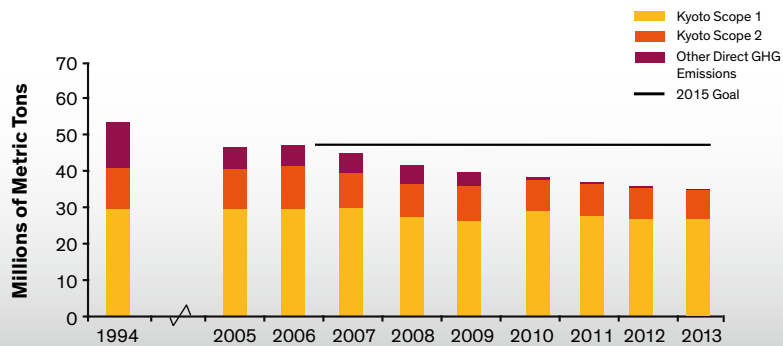
A sustainable energy future requires constant improvement in manufacturing efficiency, while maximizing the contributions of products to improve efficiency and expand the availability of affordable alternatives. Energy is an enabler of global economic growth, and energy efficiency remains critical to 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 the Company and our customers.

2015 Goal

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

Greenhouse Gas Reduction

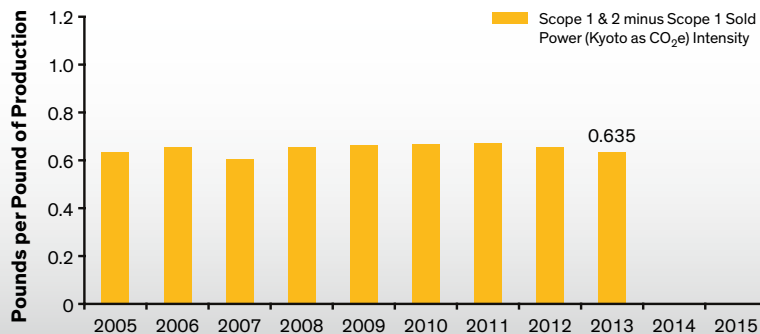
Absolute Greenhouse Gas Emissions as CO₂ Equivalent



Dow's goal is to maintain GHG emissions below 2006 levels on an absolute basis for all GHGs, thereby growing the Company without increasing its carbon footprint. Dow will continue to focus on managing the Company'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.

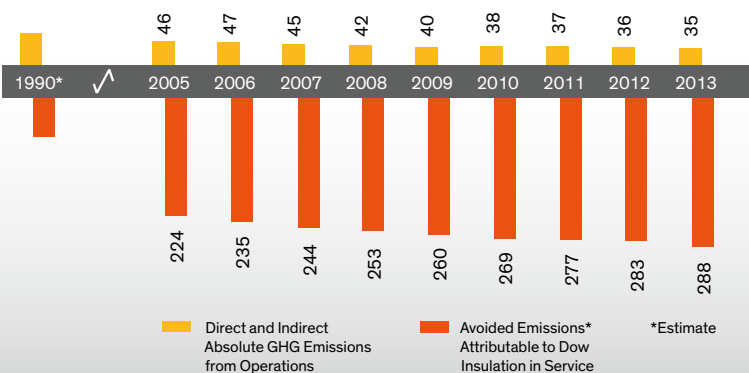
Dow's energy-efficiency and chemical-management efforts have significantly reduced the Company's GHG emissions footprint. As a result, Dow has prevented over 324 million metric tons of GHG emissions from entering the atmosphere since 1990.

Intensity of Kyoto GHG as CO₂ Equivalent



Dow regularly reports on a target to grow the use of clean power to exceed 400 megawatt (MW) equivalents by 2025. At the end of 2014, Dow has approximately 266 MW that are either low-carbon or from renewable sources. Additionally, Dow has identified future prospects that could yield as much as 200 MW of additional clean power. This goal is helping the Company pursue opportunities to incorporate economically viable, clean-technology energy alternatives into its operations.

Greenhouse Gas Emissions (million metric tons of CO₂-equivalent, Kyoto and non-Kyoto)

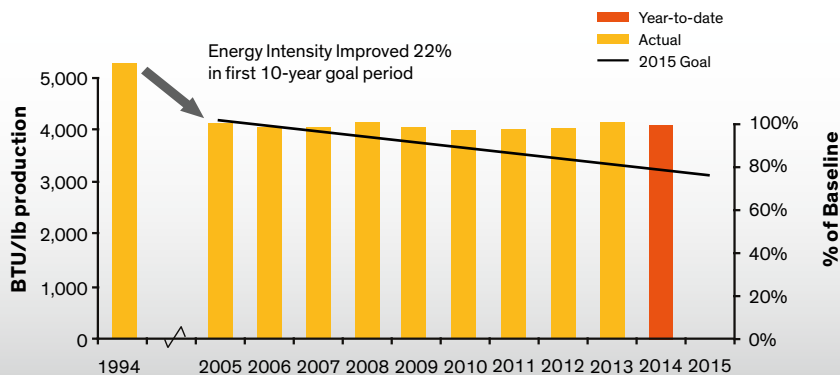


Since 2003, Dow has reported to the Carbon Disclosure Project (CDP), a not-for-profit organization working to understand the risks and to drive GHG emissions reduction from business. In 2014, Dow reported on its 2013 GHG performance and commitment to providing solutions for the climate change challenge. The report scored 85 out of a possible 100 points, highlighting the Company's commitment to strong governance and complete disclosure through transparent emissions reporting.

Avoided emissions resulting from the use of Dow products are important contributions to reduce the overall footprint of human activities. A Life Cycle Assessment documented that emissions saved by Dow insulation products are about seven times greater than total Company direct and indirect Kyoto and non-Kyoto GHG emissions. This calculation was made by quantifying the GHG emissions at all stages of the life cycle of the Dow insulation product and comparing these with the GHG emissions savings from the use of the insulation products in buildings and pipe systems. The estimated GHG avoided emissions for 2013 from the use of Dow's insulation products is 288 million MT CO₂eq.

Energy Intensity

Energy Intensity Performance 1994–2015



By 2015, Dow has a goal to achieve an additional 25% improvement in Energy Intensity (BTUs/lb produced), with average Energy Intensity for the year 2005, adjusted for mergers and acquisitions, used as the basis for calculating performance. Dow's goal for Energy Intensity for the full year of 2014 is 3,220 BTU/lb, or 77.5% of the value in 2005. Dow's actual performance of 2014 was 4,102 BTU/lb, which is 98.7% of the 2005 baseline.

Dow has reduced annual energy use by 20% since 2005; however, we do not expect to achieve the level of performance we anticipated when our Energy Intensity goal was established. Dow's products can lead to significant energy reductions for our customers, and virtually

every industry becomes more efficient through what we make and do. However, the Company is shifting toward higher-value, more technology-driven specialty products that are by nature more energy-intensive, and operating rates have also been reduced to match demand, resulting in less efficient asset use.

Product Safety Leadership

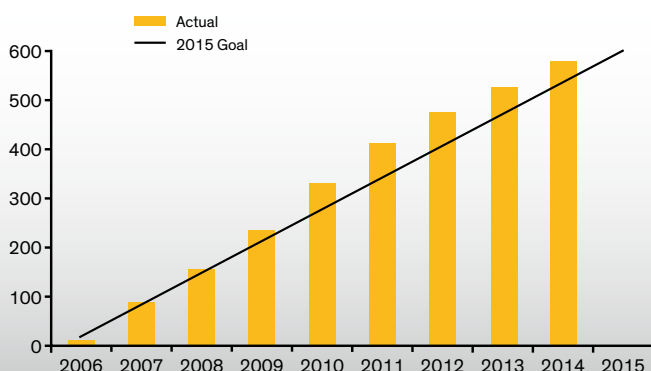
In 2014, 579 Product Safety Assessments (PSAs) were posted to Dow's product safety website, with PSAs completed now accounting for 95% of Dow's annual revenue. Additionally, all of Dow's 185 High-Priority Chemicals are now covered by a PSA. Since 2Q 2014, the number of High-Priority Chemicals has decreased due to divestitures and the discontinuation of several High-Priority Chemicals. We are on track to meet our 2015 goal to have a PSA publically available for applicable 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 offered by Dow to strengthen relationships with communities and customers. Dow is dedicated to providing the public with accurate information and building trust as we use technology to develop better products, and 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.

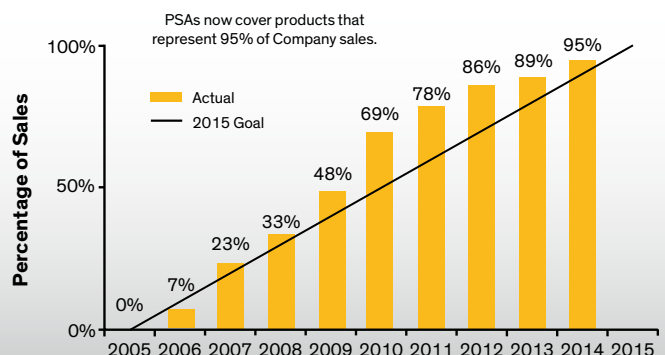
2015 Goal

- Publish Product Safety Assessments for all products

Cumulative Product Safety Assessments



Sales Covered by Assessments



Breakthroughs to World Challenges

2015 Sustainability Goal Surpassed!

Dow has surpassed the target established in 2006 as part of its 2015 Sustainability Goals. Dow's "Breakthrough to World Challenges" commitment identifies products and technologies that deliver significant contributions to societal challenges over time.

DOW POLYOX™ Water-Soluble Polymers

DOW POLYOX™ Water-Soluble Polymers used in Lifebuoy™ Soap from Unilever will deliver a positive impact on health and hygiene around the world. Lifebuoy™ Soap, the world's #1 germ protection soap, uses DOW POLYOX™ Polymers in its unique formulation, creating a soap that lasts longer, provides better value and yet still feels great on the skin. [Read more.](#)

BETAMATE™ Structural Adhesives

BETAMATE™ Structural Adhesives are an enabling technology for optimized steel structures and dissimilar material assembly, where traditional joining techniques such as welding and riveting are limited in their applicability. Since their introduction in 1999, BETAMATE™ Adhesives have already contributed to an estimated 23.3 million metric tons (MT) of CO₂ emission avoidance and 10 billion liters of gasoline savings. [Read more.](#)



DOW FILMTEC™ ECO Reverse Osmosis (RO) Elements

FILMTEC™ ECO RO Elements are a breakthrough in polymer chemistry that surpasses the last three decades of incremental change in RO technology, representing some of the most advanced water purification science available in the fight against global water scarcity. Delivering 40 percent better purification with 30 percent less energy in industrial operations, Dow anticipates that as the new technology is adopted it will deliver trillions of metric tons of clean water, billions of kilowatt-hours (kWh) of energy savings, and reduce CO₂ emissions by more than a million metric tons in its first 10 years of use alone. [Read more.](#)

Omega-9 Oils

Omega-9 Oils play a critical role in enhancing nutrition and lifestyle. Nutrition experts correlate trans and saturated fats in diets as contributing to increased risk of heart disease and Type 2 diabetes. Derived from NEXERA™ Canola and Sunflower Seeds from Dow, Omega-9 Oils have zero trans fat and are among the lowest in saturated fat. Since 2005, the use of Omega-9 Oils has eliminated more than 1.5 billion pounds of trans and saturated fat from the North American diet. [Read more.](#)

2015 Goal

- Achieve at least three breakthroughs that will significantly help solve world challenges

Contributing to Community Success

Community Improvement in Action

Dow has living examples that demonstrate the power and progress associated with the Contributing to Community Success approach. Our stories of positive outcomes span the globe; a few are listed below to provide an idea of the breadth and scope of the impact.

Matarandiba Island

Matarandiba, Brazil, is an island inhabited by low-income residents with limited access to information, poor living conditions and incomes based on street commerce. Community members have struggled for years to strengthen their local economy, encourage local collaboration and preserve their unique culture. In 2007, Dow began conversations with local leaders in Matarandiba and the Federal University of Bahia (UFBA) with the goal of fostering growth and development and strengthening the local community. The Company has maintained a strong relationship with the community, especially via bimonthly meetings with the Matarandiba Community Council. Dow and UFBA developed a plan called

"Ecosmar," an umbrella project designed to raise awareness, participation and engagement of community members. Project efforts have led to the creation of an Information Center, a cultural center, a community bank and even local currency.



Responding to a Need

Recently a new Emergency Operations Center (EOC) in St. Charles Parish, LA, was opened. The new EOC is 13,000 square feet and offers five times more floor space than the current structure, which is more than 30 years old. The new EOC has sleeping quarters for 40 men and women, an operations room for 30 officers, a commercial kitchen and two 600 kilowatt diesel generators. Even with \$2.8 million in state and federal grants, the Parish still needed \$870,000 of the \$5.1 million cost. Dow stepped up to cover the shortfall since the project was a natural fit based on community assessment feedback.



2015 Goal

- Achieve individual community acceptance ratings for 100% of Dow sites where we have a major presence

Local Protection of Human Health and the Environment

Dow maintains a sharp focus on environment, health, safety and security. Through 4Q, Dow continued to improve its total EH&S unplanned events – injuries, loss of primary containment incidents, process safety incidents, and motor vehicle accidents – recording a 4% improvement from 2013. As an evidence that our leaders, employees and contractors are committed to building and sustaining a safe work environment, 2014 marks a year with zero fatalities for Dow.

Injury performance improved 5% over the previous year, although not enough to achieve the target for 2014. As a result, Dow is using “Save a LIFE” initiative to raise awareness and focus our efforts to reduce the most severe injuries.

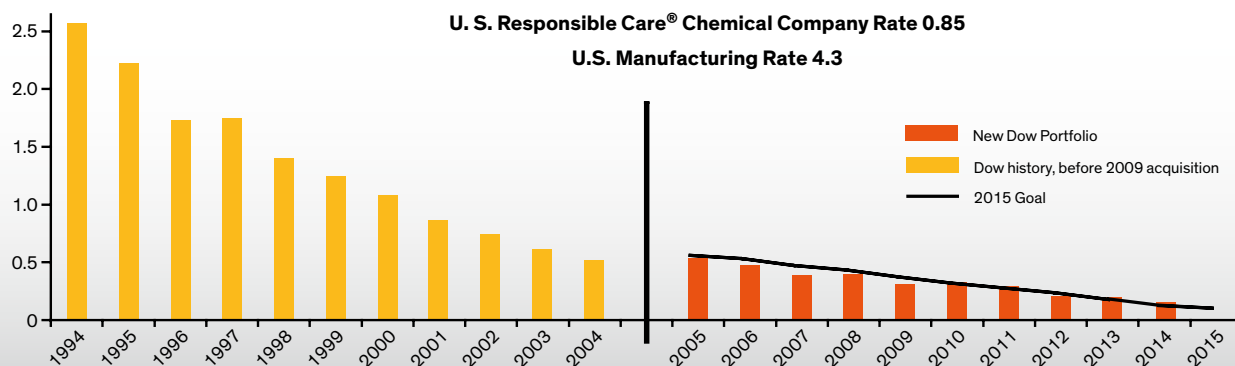
2014 was Dow’s second-best year ever for Process Safety Incident performance, and for the first year ever, the Company did not experience any high-severity incidents. Loss of Primary Containment (LOPC) incidents are typically a leading indicator for PSIs, so Dow is concentrating on reducing LOPCs through improved operational and maintenance procedures.

Severe motor vehicle accidents were at an all-time low. Dow’s performance in this area is powered by Dow’s “Drive It!” initiative in Latin America’s Dow AgroSciences, which is designed to increase driver awareness.

2015 Goal

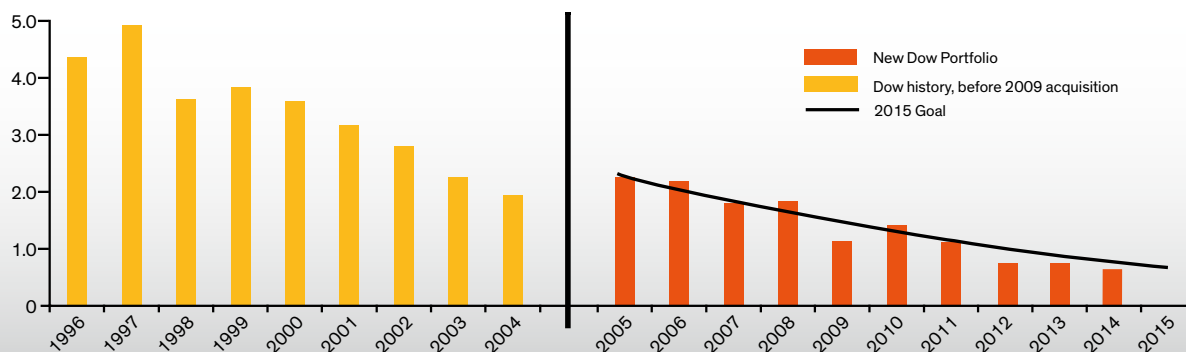
- Achieve on average a 75% improvement in key indicators for Environment, Health & Safety operating excellence from a 2005 baseline

Injury and Illness Rate



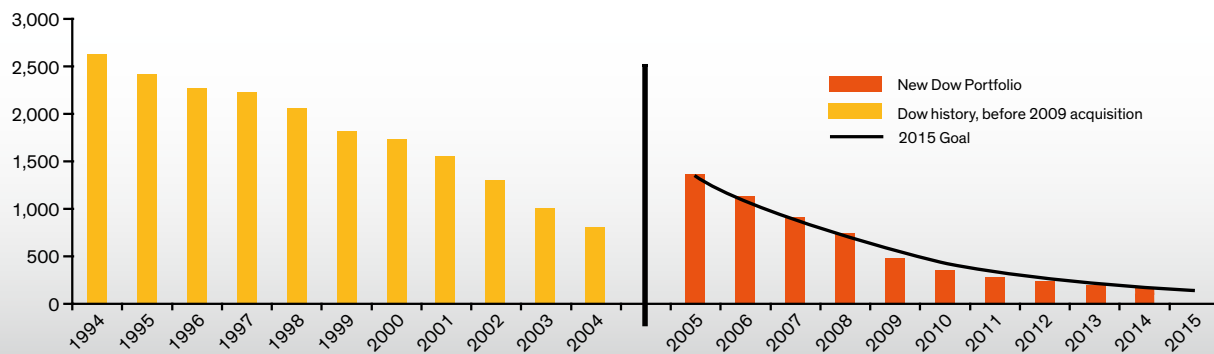
In 2014, the Injury and Illness rate was 0.19 per 200,000 hours of work. This is a 6% improvement compared to 2013. The 2015 goal of 0.12 per 200,000 hours is a 75% improvement from 2005.

Injury and Illness Severity Rate



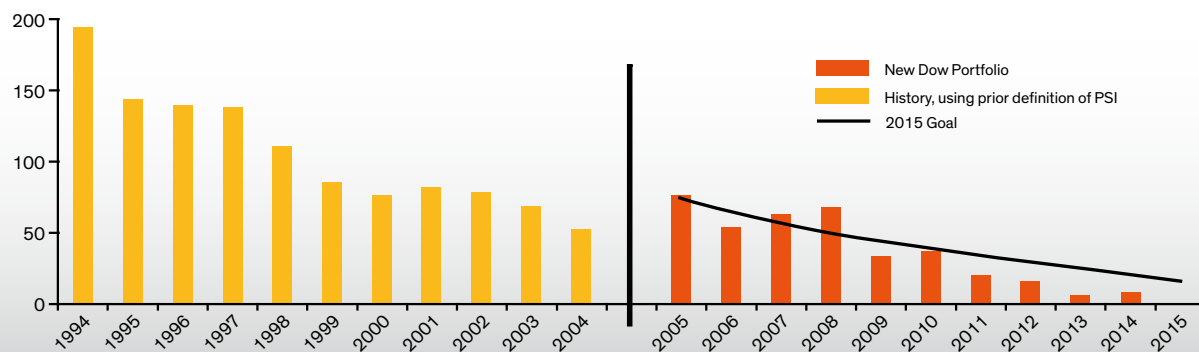
In 2014, the Injury and Illness Severity rate was 0.63 per 200,000 hours of work. This is 17% better than 2013 and is on track towards the 2015 Goal of 0.67 per 200,000 hours. The 2015 goal is a 70% improvement from 2005.

Loss of Primary Containment Incidents



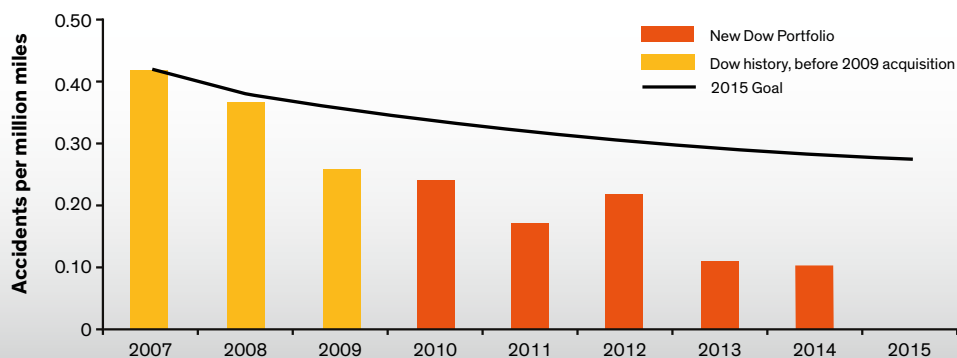
In 2014, the Company experienced 177 Loss of Primary Containment incidents. This is an improvement from the 186 Incidents at the end of 2013. The 2015 goal of 130 or fewer incidents is a 90% reduction from 2005.

Process Safety Incidents



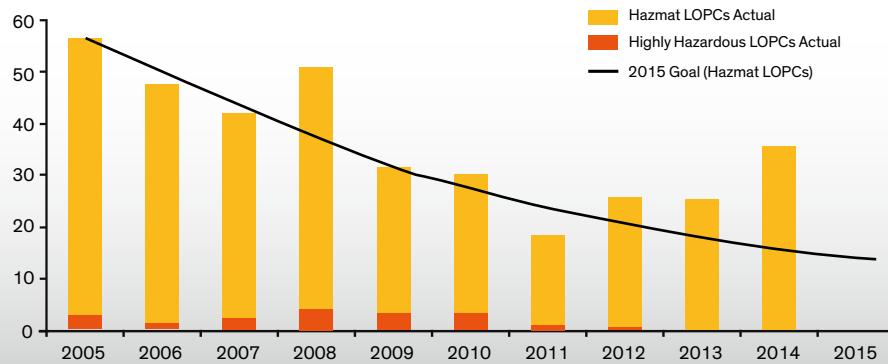
In 2014, the Company experienced 10 Process Safety Incidents (PSIs). This is an increase from the seven incidents experienced in 2013, but remains significantly below the 2015 goal. The 2015 goal is to be experiencing less than 20 PSIs. Process Safety Incidents are classified in terms of the Center for Chemical Process Safety and American Chemistry Council definitions.

Severe Motor Vehicle Accident Rate



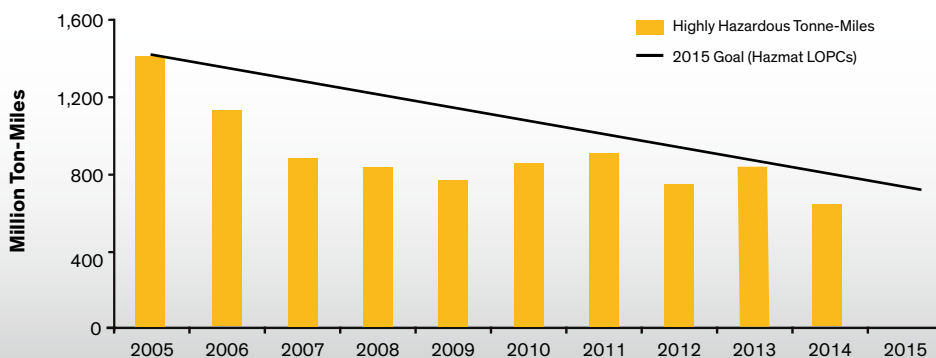
In 2014, the Severe Motor Vehicle Accident incident rate was 0.11 accidents per million miles driven, which remains better than the target for 2015. Severe Motor Vehicle Accident rate was not measured in the heritage Rohm and Haas Company. The 2007–2009 values represent the heritage Dow population.

Hazmat Transportation LOPC Count



In 2014, Dow experienced 36 Hazmat Transportation Loss of Primary Containment events, one classified as highly hazardous. The 2015 goal to reduce all Hazmat Transportation incidents to 14 or fewer is a 75% improvement from 2005.

Highly Hazardous Material Tonne-Miles



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.

In 2014, 631 million tonne-miles were shipped via road and rail. The 2015 Goal is to reduce these shipments to less than 705 million tonne-miles, which would be a 50% reduction from the baseline in 2005.

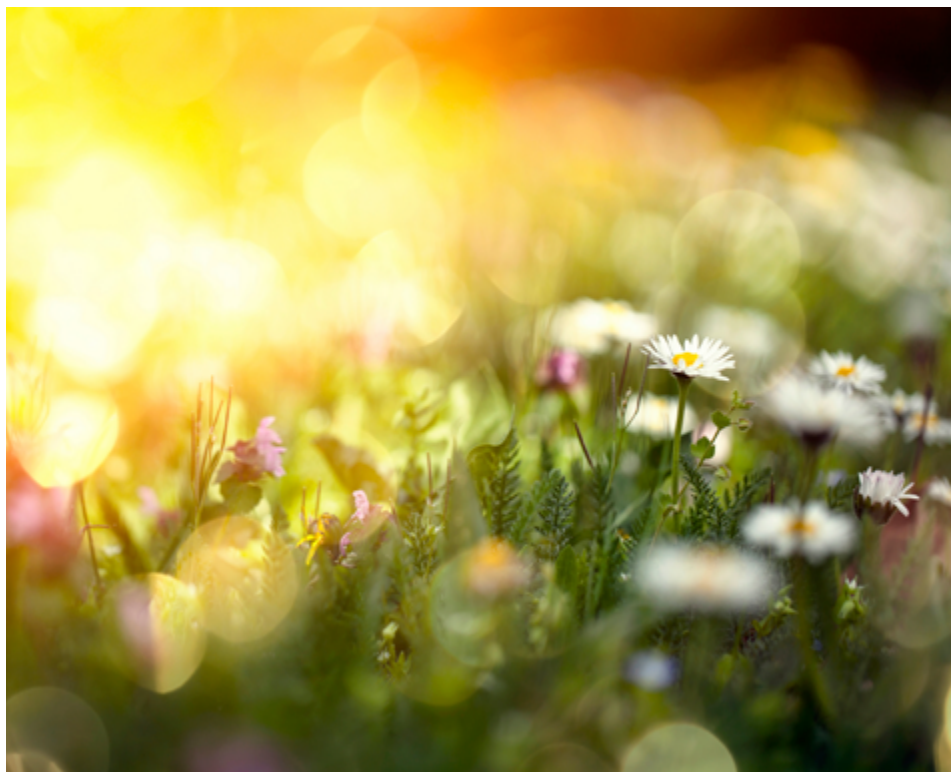




Science for a Sustainable World

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 also good for business.

Dow remains committed to continuously improving its performance and publicly reporting its progress. Please visit dow.com for the latest Dow sustainability, business and performance news, and to share your comments or submit questions.



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