# 2015 Sustainability Goals Update 4Q 2008



This report provides an overview of fourth quarter progress on Dow's 2015 Sustainability Goals and other significant sustainability highlights.

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## Highlights

#### **Dow Announces Energy Plan for America**

In November, Dow announced its Energy Plan for America. The plan calls for a bolder, comprehensive, bipartisan national energy policy that will help stabilize prices, strengthen the economy, address climate change, clean the environment and revitalize U.S. manufacturing. The document provides a blueprint of recommendations to Congress and the new Administration to combat the volatile energy situation. During the rollout, the Energy Plan was shared with President Obama's transition team and members of Congress.

#### Emissions Saved by Dow Insulation Products Several Times Greater Than Total Company Emissions

Using a third-party validated life cycle assessment (LCA), we are pleased to report the net reduction in greenhouse gas (GHG) emissions resulting from the use of Dow thermal insulation in residential and commercial buildings and in industrial pipe applications. The graph below displays the avoided emissions and shows that impact from the use of these products is several times greater than the total GHG emissions (Direct, Scope 1) from The Dow Chemical Company.



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 addition of thermal insulation to a structure reduces the energy that has to be expended to maintain a constant internal temperature and, hence, reduces the emission of GHG from fuels combusted to provide energy to heat and/or cool the building or pipeline. For each application, the rate of heat transfer was determined with and without the Dow insulation product. The Dow products assessed in this LCA were:

- Extruded polystyrene foam (XPS) (STYROFOAM<sup>™</sup> brand insulation), used as thermal insulation in residential and commercial buildings.
- Rigid polyisocyanurate (ISO or ISO boardstock) foam (THERMAX<sup>™</sup> brand insulation) used as thermal insulation in residential and commercial buildings.
- Rigid polyisocyanurate foam (TRYMER<sup>™</sup> polyisocyanurate foam) and extruded polystyrene foam (STYROFOAM<sup>™</sup> brand pipe insulation billets) used as thermal insulation in commercial pipe applications.

This LCA study will be submitted for external publication in 2009.

#### **Dow Launches Sustainability Student Innovation Challenge**

The Dow Sustainability Innovation Student Challenge has been launched at key strategic universities globally. The universities selected for the inaugural 2008-2009 program are Peking University, Cambridge University, University of São Paulo, Northwestern University, University of Michigan, and Tufts University. This award program of three prizes per year at each university recognizes graduate-level student projects that address global sustainability challenges that are related to the thinking and priorities of Dow's 2015 Sustainability Goals and that have the potential for solving significant issues. Some of the winners have already been selected, with projects relating to issues as diverse as photovoltaics, low sulfur fuel, urban sustainable food supplies, vaccines for honeybees, and using rice hull as a feedstock for insulation.

#### Dow Joins "First Clean Industrial Park" Effort in Tlaxcala, Mexico

Dow is making history in Tlaxcala and Mexico as an important leader for sustainable development, setting an example and joining efforts to become the "First Clean Industrial Park" in the country and to create the first "Clean Basin" along the Zahuapan-Atoyac River. The initiative has letters of intent from 15 companies of the Industrial Park of Xicotencatl and 26 municipalities. These 15 companies joined the 12 companies already certified as Clean Companies, in which Dow is included.

#### Dow Invests in Next-Generation R&D Facility for Solar Technology

A significant milestone in the company's investment in solar technology was reached when a highly anticipated piece of equipment arrived at the gates of Dow's Michigan Operations manufacturing site in Midland. The equipment – a 1,350-ton tandem clamp injection molding machine – is part of a \$50 million investment by Dow that will enable solar energy generation materials to be incorporated directly into the design of commercial and residential building materials. Construction is underway on a state-of-the-art market development plant and R&D facility at the site. Solar technology today is based on mounting silicon-based solar cells packaged within heavy glass panels on the roof. Today's panels are expensive and difficult to install and, while they produce electricity, the cost is many times higher than conventionally generated electricity sold by utility companies. Dow's innovative technology is based on a much more cost-effective photovoltaic material, called CIGS, and these cells are "packaged" within the roofing product, creating a "solar shingle."



#### Dow Corning Announces Multi-Billion Dollar Investments to Serve Emerging Global Solar Power Industry

Dow Corning Corporation, a joint venture between Dow and Corning, Incorporated, announced several billion dollars of investment to provide critical materials to the fast-growing solar technology industry. Dow Corning will begin manufacturing high purity monosilane, a key specialty gas used to manufacture thinfilm solar cells and liquid crystal displays (LCDs). This investment includes construction of a new monosilane manufacturing facility in Hemlock, Michigan, adjacent to Hemlock Semiconductor Corporation's polysilicon manufacturing site. In addition to the monosilane plant investment, Dow Corning's joint ventures, Hemlock Semiconductor Corporation and Hemlock Semiconductor LLC, announced up to \$3 billion of investment to expand Hemlock Semiconductor Corporation's existing Michigan manufacturing facility and build a new Hemlock Semiconductor, LLC site in Clarksville, Tennessee, to increase manufacturing capacity for polysilicon – the historical cornerstone material used to manufacture most commercial solar cells.



#### **Dow Venture Capital Extends Support of WaterHealth International**

Support from Dow Venture Capital, a Dow business unit, helped WaterHealth International, Inc. (WHI) raise \$10 million in venture capital. WHI is a water purification company focused on developing countries, and hopes to raise another \$10 million to expand to new regions. For more details on Dow's involvement with WHI, please visit http://www.dow.com/commitments/studies/whi.htm.

#### Dow Showcased at the 4th International Forum for Work Safety in China

Neil Hawkins, vice president for Sustainability, was the keynote speaker at "The 4th International Forum for Work Safety" in Beijing about how Dow considers worker safety a critical part of corporate social responsibility. The forum was hosted by China's State Administration of Work Safety (SAWS) and was attended by a high-profile audience, including the Chinese Vice Premier, Ministers of Labor from the United States, Norway, Finland, Poland and Vietnam, among others. Dow has a strategic relationship with SAWS and is recognized for its leading position in sustainability. In 2006, Dow and SAWS began working together on a three-year pilot project to promote the safe management of hazardous chemicals in Chinese small- and medium-sized enterprises.

#### **Dow Recognized for Dedication to Safety and Enforcement of EH&S Policies**

The Company's commitment to safety – including its Drive to Zero policy – earned Dow the 2008 Construction Industry Safety Excellence (CISE) Award from the Construction Users Roundtable (CURT). As an owner firm, Dow's Engineering Solutions collaborates with others, such as independent contractor firms across the globe, to successfully create a safe place for employees and contractors to work. According to data from the U.S. Bureau of Labor Statistics, the incident rate achieved by Dow was less than 10 percent of the U.S. national average.

## Local Protection of Human Health and the Environment

The fourth quarter proved to be our best overall performance of 2008, reversing a trend of the previous three quarters. Dow people delivered on the aggressive intervention plans enacted, resulting in improvement in our Injury/Illness rate and Loss of Primary Containment performance, as well as one of our best quarterly performances in Process Safety (tied with third quarter 2007 as best ever).

As we look toward the start of a new year, our focus is to build on the performance of the fourth quarter and continue our journey toward our 2015 goals. Notable changes for 2009 include:

- Introduction of a new Motor Vehicle Accident (MVA) metric targeted at reducing severe events that result in, or have a high potential to result in, injury (see MVAs section on page 7).
- Incorporation of Site Specific Goals into other elements of Sustainability Goals such as Contributing to Community Success to better align site activities with the Sustainability Goals on which they can have the most impact.



For the year of 2008, the Injury and Illness rate was 0.33 per 200,000 hours of work. Performance through the fourth quarter was 21 percent above our targeted goal for the year, but the fourth quarter performance was the best on record, reflecting a positive response to interventions enacted. The 2015 Goal of 0.08 per 200,000 hours is a 75 percent improvement from 2005.



For the year of 2008, the Injury and Illness Severity rate was 1.18 per 200,000 hours of work. Performance through the fourth quarter was 19 percent above our targeted goal for the year. However, the fourth quarter performance was an improvement over the third quarter results. The goal in 2008 was a rate of 0.99. The 2015 Goal to accomplish a rate of 0.39 per 200,000 hours is a 75 percent improvement from 2005.



## Loss of Primary Containment Incidents



For the year of 2008, the Loss of Primary Containment (LOPC) incidents performance reflected our best annual results on record. The count of 431 incidents was 8 percent above our targeted 2008 goal of 400 or fewer incidents. The 2015 Goal of 75 or fewer incidents is a 90 percent reduction from 2005.



For the year of 2008, there were 54 Process Safety incidents. This was 64 percent above our targeted 2008 goal level, which was not to exceed 33 incidents. However, fourth quarter 2008 performance – five (5) incidents – represented a significant improvement over third quarter results – 21 incidents – tying our best ever quarterly performance set in third quarter 2007. The 2015 Goal of 14 is a 75 percent improvement from 2005.



At the end of 2008, the Motor Vehicle Accident (MVA) rate was 3.4 accidents per million miles driven. A new metric has been implemented, effective January 1, 2009. Data from the last 10 years show that MVAs accounted for a large proportion of Dow employee work-related fatalities. The new metric is focused on preventable MVAs that take place off-site while on company business and result in an injury or have high potential to cause an injury. The severe MVA performance will be reported beginning in the next quarterly report.



In 2008, Dow experienced 24 Hazardous Materials (HazMat) Transportation Loss of Primary Containment (LOPC) events. This is 8 percent better than our target for such incidents. We continue to implement strong programs focused on continuously improving transportation safety and security. In 2008 there were four (4) LOPC events involving Highly Hazardous Materials (Toxic Inhalation Hazard and Flammable Gas), which was above our goal of zero such incidents. There were no injuries, illnesses or environmental damage. We remain committed to eliminating any releases of these materials.



## Highly Hazardous Material Tonne-Miles



Dow believes it is part of our corporate responsibility to reduce the volumes of Highly Hazardous Materials that need to be transported. So, we've set a 2015 Goal to reduce the number of tonne-miles (a measure of how much we're shipping and how far) by 50 percent from our level in 2005, which was 1,410 million tonne-miles. We'll accomplish this by looking at ways to redesign our supply chain to reduce or eliminate many shipments or the distances they must travel. (A tonne-mile is one metric ton of freight moved 1 mile or 1.6 km.)

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

In 2008, there were 844 million tonne-miles of Highly Hazardous Materials shipped via road and rail. This was 32 percent better than the 2008 target of 1,202 million tonne-miles.

### **Contributing to Community Success**

Community Success surveys have now been conducted at 10 strategic sites to identify the quality of life issues which are most important to residents. Focusing Company resources and expertise on these priority issues, and collaborating with community stakeholders to address them, is foundational to the Community Success Goal work. The 10 sites are: Pittsburg, California; Terneuzen, The Netherlands; Zhangjiagang, China; Freeport, Texas; Plaquemine, Louisiana; Hahnville, Louisiana; Midland, Michigan; Stade, Germany; Rhine Center, Germany; and Aratu, Brazil.

Priority community issues are defined as those which are highly important to residents while their satisfaction with those community conditions is low. This is the "sweet spot" that Dow is identifying in these communities globally. The issues are fairly similar around the world.

"High Importance-Low Satisfaction" issues for Dow communities are:

- Sustainable Jobs, Sustainable Businesses: Residents want economic stability for their communities. This means that residents want jobs that are challenging and well-paid, and that will exist far into the future. They want quality opportunities for their children.
- Environmental Protection and Natural Resource Enhancement: Residents expect that a chemical company will protect the environment. Beyond that, they strongly desire that companies will enhance and preserve the natural resources of their community for generations to come.
- Support for Education: As an employer of well-educated, technical employees, Dow is recognized as having a strong
  interest in a viable education system in its communities. Its employees and retirees are welcomed as volunteers in
  the schools. Funding for the math and sciences curricula is considered to be a "sweet spot" for helping schools and
  the company, which has a vested interest in ensuring that students do pursue chemistry, engineering, or business
  degrees and professions.
- Community Safety/Security: Dow is recognized as having expertise in safety and security practices, as well as
  in health programs for its employees. Leveraging this expertise to the communities whether for hurricane
  preparedness on the Gulf Coast in the U.S. or for SARS planning in Asia is a way for Dow to aid its communities in
  ways its residents value.



## Quality of Life Issues for Dow Communities

Community Success Plans are being implemented to address these identified Quality of Life issues. By 2015, success will be measured by improvement in residents' satisfaction with these issues and evidence of Dow's commitments and actions.

Even when business strategy requires the shutdown of a Dow site – such as in Sarnia, Ontario, Canada – Dow's Community Success Goal commitment has been evident. In 2008, The Dow Chemical Company Foundation gave a \$1 million donation for the Dow Sarnia Legacy Project to create a community center for youth development in the city. Youth development and family support have long been important community priorities in Sarnia, and Dow is helping with Community Success as it exits Sarnia.



## Product Safety Leadership

At the end of 2008, there were 157 Product Safety Assessments (PSAs) posted on www.dow.com/productsafety/finder/, including 17 that were added in the fourth quarter of 2008. This excellent performance enabled us to meet our target to add 70 PSAs to the web site in 2008. Our target for 2009 is to add 50 more PSAs to our web site. The 2015 Goal is to have all applicable Dow products covered by publicly available PSAs.



A new phase in the European Union's chemical legislation – the Registration, Evaluation and Authorization of Chemicals (REACH) – began on December 1. The registration period follows the pre-registration period, during which Dow successfully pre-registered the REACH-relevant substances that are contained in our products. In another REACH milestone, in October 2008, the EU Commission published a list of 15 substances that are candidates to be made subject to the Authorization process. The list contains several substances of interest to Dow. Where required, Dow Safety Data Sheets have been updated with statements that the Dow product contains substances listed on the candidate list. Dow also remains actively engaged in various REACH Implementation Projects initiated by the European Commission. These projects aim to develop the specific practical implementation guidelines to ensure the successful implementation of REACH.

Dow Latin America played a key leadership role in the first South American Conference on Responsible Care<sup>®</sup> and Product Stewardship in October. The conference, which was held in Bogotá, Colombia, provided current information related to chemical safety, both globally and regionally, and discussed what companies and national associations in South America can do to improve their product stewardship activities under Responsible Care. About 60 industry and trade association representatives attended the two-day event.

As a global voluntary initiative, Responsible Care strives to continuously improve health, safety and environmental performance within the chemical industry. Over the past 20 years, Dow has been leading the way and playing an instrumental role in elevating this initiative within the industry.

Dow continues to lead the chemical industry in advocating for chemical management policy that is consistent with Dow's principles for chemicals management and provides a more predictable business environment. The Board of Directors of the American Chemistry Council (ACC) approved a new advocacy position for Chemicals Management in November. ACC embraces a proactive approach to advocate for change in U.S. federal chemical policy so that the public's needs are met and industry is better positioned for success in the discussion.



### Sustainable Chemistry

In order to determine progress against its 2015 Sustainable Chemistry Goal, Dow has developed a proprietary Sustainable Chemistry Index. The Index comprehensively assesses attributes of Dow products such as renewable or recycle content, resource abundance and management, manufacturing and distribution safety, application characteristics and end-of-life issues. Improvements can be made in a variety of ways. Examples include improving manufacturing efficiencies, reducing energy or waste, better managing the route of the products from manufacture to consumption, increasing renewable content, emphasizing applications that help solve global challenges like climate change or affordable housing, just to name a few. Dow will be reporting the 2007 baseline, 2008 results and the goal target in 2009.

Dow was awarded the first ever "Most Innovative Corporate Social Responsibility Project" in the 2008 ICIS Innovation Awards for its novel reuse of municipal wastewater at the Terneuzen, The Netherlands site. The award recognizes innovative approaches being taken by chemical companies to address issues of the environment and, ultimately, their long-term sustainability. The Terneuzen site reuses treated household wastewater twice at its production plant – once to produce high pressure steam and then again as recycled water in its cooling tower. This reduces energy demands and climate impact. This is the first time municipal wastewater is being reused on such a large scale within the industry. Reuse of the water exceeds 2.6 million gallons per day and is the result of collaboration between Dow, water treatment provider Evides and the Zeeuws-Vlaanderen Water Board. In October, the Institution of Chemical Engineers (IChemE<sup>1</sup>) in Birmingham, UK, recognized this project as "Highly Commended."

Dow presented a life cycle assessment study, titled "Life Cycle Assessment of Sugarcane-Based Polyethylene," at the Life Cycle Assessment VIII conference held in Seattle in early October. This study was based on Dow's project to produce sugarcane-based polyethylene in Brazil. The talk highlighted greenhouse gas savings, other advantages, and tradeoffs of sugarcane-based polyethylene when compared to conventional petrochemical-based polyethylene.

Dow's Amerchol business introduced SolTerra<sup>™</sup> Boost, a new ultraviolet (UV) protection-boosting polymer. Formulators will now be able to achieve very high sun protection factor (SPF) ratings like SPF 50+, with all zinc oxide or all inorganic sunscreen filters. This eliminates the need to use oil, or sticky and tacky organic filters, which are potentially irritating to the skin.

Dow Wolff Cellulosics' Food & Nutrition business introduced SATISFIT<sup>™</sup> Weight Care Technology, an innovative new technology that, in pre-clinical studies, shows promise for weight care. In pre-clinical studies, SATISFIT Weight Care Technology has shown the ability to reduce absorption of saturated and trans fats, reduce weight gain, and promote healthy fat metabolism in laboratory animals. These animal study results cannot necessarily be extrapolated to people. Dow is working to identify development partners for clinical trials (in people) to further validate the benefits of SATISFIT in final food formulations. SATISFIT was designed to be easily formulated into food and beverages.



Dow's advanced amine-based scrubbing technology will be used in a pilot carbon capture and storage (CCS) plant built by Alstom Power, Inc. at the Belchatow power plant in Poland – Europe's largest coal-fueled thermal power station. This effort is part of a Joint Development and Commercialization Agreement between Dow and Alstom announced in 2008, which would capture approximately 65,000 metric tons of CO<sub>2</sub> annually using the advanced amines technology co-developed by Dow, a global leader in gas treating technology. The pilot will be jointly operated by Alstom and Elektrownia Belchatow and is expected to be in operation by mid-2011.

RENUVA<sup>™</sup> Renewable Resource Technology from Dow is now being used by one of the world's largest mattress manufacturers. Simmons recently launched a line of Natural Care<sup>®</sup> mattresses, which are endorsed and designed by environmental lifestyle expert Danny Seo and incorporate foam derived from sustainable resources. For this new bedding line, Simmons collaborated with Dow Polyurethanes, a business group of Dow. This choice has enabled Simmons to increase the level of renewable content in the mattress without compromising comfort or durability. The bio-based foam, which is used in the base and edge encasement of the Natural Care mattresses, helps enhance the benefits of the latex core, provides a firmer seating edge and maximizes the sleeping surface.

The sixth generation Volkswagen Golf, one of Europe's best-selling cars, will use IMPAXX<sup>™</sup> energy absorbing foam from Dow. IMPAXX foam will be fitted under the carpet in order to complement the standard driver-side knee airbag system, by providing improved ankle protection to the driver in the event of a frontal impact. The IMPAXX parts weigh only 4 grams, providing improved safety with weight reduction benefits.

Case studies of how Dow is contributing to sustainability through chemistry continue to be added to our web site.

### Breakthroughs to World Challenges

Major global trends, including population growth and increasing standards of living in emerging markets, continue to exacerbate societal and environmental challenges around the world. In order to better search for solutions, Dow continues to explore and better define the challenge areas on which it has chosen to focus: water, affordable housing, food supply and nutrition, energy and climate change, and public health. Simultaneously, Dow has focused business development on areas in which Dow's capabilities align to these same global trends; these themes include health and nutrition, energy, and infrastructure and transportation. It is Dow's belief that it is from the intersection of these challenges and our business development efforts that breakthrough solutions will emerge – within every grand challenge lays tremendous opportunity to provide solutions.

Dow's effort to better define these global challenges is a critical step in our search for solutions and relies on tapping expertise and knowledge far beyond our fence lines. As Dow deepens its understanding, the priority needs in each of these areas, whether it be improvements in technology, reductions in cost, or innovations in business models, are the inspiration for business development.

This "outside-in" focus on understanding these global challenges is complementary to Dow's ongoing internal efforts to leverage its technology and expertise to address these issues from the "inside-out." Dow is developing tools with which to assess new ventures and business development initiatives on the basis of "triple bottom line" values: financial viability, positive social impact, and sustainable resource use. Building on Dow's existing efforts in life cycle assessment and sustainable chemistry, Dow aims to better understand the net impacts of its products and businesses on society and the environment, as well as on the balance sheet.

Some examples of Dow's efforts in the fourth quarter include:

- Dow India inaugurated water purification plants in three villages in Dahej, in the state of Gujarat. The water purification plants, set up on Dow Water Solutions' Reverse Osmosis (RO) technology, will provide pure and safe drinking water to more than 9,500 residents of Jolva, Ambheta and Vadadla and will allow evaluation for expansion. Participating in the inauguration of each of the plants were officials from Dow India, Gujarat Alkalies and Chemicals Ltd (GACL), and the Anarde Foundation, as well as the local heads from each of the villages, who drank the first glass of clean drinking water at each location.
- Dow AgroSciences LLC (DAS), a Dow subsidiary, and DuPont business Pioneer Hi-Bred have received regulatory
  approval granted by the Brazilian National Commission on Biosafety, CTNBio, for cultivation of the HERCULEX<sup>®</sup> I
  insect protection trait in Brazil. The HERCULEX I trait is the only biotechnology trait that provides the highest level of
  protection available to Brazilian growers against fall armyworm and sugarcane borer, which can devastate Brazilian
  corn yields. HERCULEX XTRA has been named AgriMarketing magazine's 2008 Product of the Year.
- Dow AgroSciences announced a research collaboration with Brisbane-based Cooperative Research Center for Sugar Industry Innovation through Biotechnology (CRC SIIB). This collaboration will allow DAS to work with the most progressive groups in the Australian sugar industry. The organizations will combine technologies and capabilities to accelerate discovery and development of novel sugarcane products. Sugarcane is an important crop in the bio-based energy area, and DAS is pleased to be working with the CRC and its members.
- Dow has worked with IBM in their unique collaborative innovation process, Global Innovation Outlook (GIO), focused on Water and Oceans. The GIO brought together almost 200 global thought leaders to work together to explore the business of water and the role innovation can play in understanding, predicting, leveraging and sustaining the world's water supplies. In the second half of 2008, seven sessions were held around the world to come to an in-depth analysis of the topic and to identify areas where innovation can help solve the problems. A report with the findings of the GIO on Water will be published by the end of the first quarter, 2009.

Through the Sustainable Products and Solutions (SPS) program at the University of California, Berkeley, The Dow Chemical Company Foundation is supporting the search for solutions to social needs:

- Q-H<sub>2</sub>O Household Consumer Products for Low-Cost Drinking Water Treatment: The goal of the Q-H<sub>2</sub>O project is to develop a new class of household consumer products for disinfecting water using surface-bound cationic antimicrobial compounds. This technology has the potential to produce devices that are effective against a broad range of waterborne pathogens, which are very inexpensive to manufacture and that can be optimized for ease-of-use and adoptability.
- Electrochemical Arsenic Remediation for Rural Bangladesh: Today, 30-80 million Bangladeshis are slowly being poisoned as they drink water from arsenic-contaminated wells. Electrochemical Arsenic



Remediation (ECAR) is a technique that can be used affordably, reliably, and on a small-community scale with little preexisting infrastructure, allowing for potential rapid dissemination into Bangladesh. With support from the SPS, the project team will develop a pilot community-scale water center using ECAR to demonstrate clean water at an affordable price (~ US 2.5¢ per person per day) to a Bangladeshi village with full cost recovery.

#### Energy Efficiency and Conservation Addressing Climate Change

Energy efficiency is the cheapest, cleanest form of energy available. Back in 1994, Dow set a goal to increase the efficient use of energy by reducing its energy intensity (the amount of energy per pound of product produced) by 20 percent. That goal was exceeded as the energy per pound of product was driven down by 22 percent. That improvement resulted in a cumulative savings of \$4.3 billion over that 10-year goal period. With the increasing cost of energy, savings have continued to accrue rapidly and, through the end of 2008, our savings due to improved energy intensity is now over \$8.6 billion. The energy that has been saved since 1994 is now in excess of 1,600 trillion Btu.



The 2015 Sustainability Goal for Energy Efficiency and Conservation challenges the company to continue the pace of efficiency improvement, striving to reduce energy intensity by another 25 percent by 2015, compared to the 2005 base.

Our corporate target for Energy Intensity for the full year of 2008 was 3,657 Btu/lb or 92.5 percent of the value in 2005. Our actual performance for 2008 was 3,942 Btu/lb, which is 99.7 percent of the 2005 baseline. This result is largely due to the impact of operating at low rates in the fourth quarter when production dropped by 30 percent compared to last year's average.



## Energy Intensity Performance 2005-2015

Rich Wells, vice president, Energy, was elected to the position of Board Secretary for the Alliance to Save Energy. The Alliance to Save Energy promotes energy efficiency worldwide with a goal to achieve a healthier economy, a cleaner environment and greater energy security.

Dow participated in the U.S.-China Green Energy Conference in Beijing, China in November. The conference represented the first time that business, technology, academia and government leaders from China and the United States came together to discuss energy issues of mutual interest. Neil Hawkins, vice president, Sustainability, delivered a keynote speech on global energy strategies, while Donald Chen, director, Hydrocarbons & Energy, served as a panel moderator as well as presented on Dow's best practices for energy management.

Russel Mills, director for Global Energy & Climate Change Policy, presented on Dow's successful energy efficiency program during the United Nations Climate Change Conference in Poznan, Poland in December. During the session, titled "Energy Efficiency in the Post-2012 Framework: Key Issues and Challenges," Mills reported on the benefits of energy efficiency and noted Dow has prevented 70 million metric tons of CO<sub>2</sub> from entering the atmosphere since 1995.

In addition, Mills participated in a World Business Council for Sustainable Development (WBCSD) panel session during the UN Climate Change Conference. In this session, which focused on business and its contribution to a new global climate agreement, the WBCSD presented its work on the Copenhagen Road Map, including views on sectoral approaches, technology transfer, energy efficiency and the role of carbon markets. Mills represented the chemical sector during the WBCSD event.





During 2007 Dow's greenhouse gas emissions (GHG) were 0.549 metric tons per metric ton of production. Compared to the base year 2005, this is about a 2 percent improvement in intensity. By improving energy efficiency and implementing climate friendly technologies, Dow's goal is to reduce GHG intensity 2.5 percent per year from 2005 to 2015.

Kyoto GHG intensity is the sum of CO<sub>2</sub> equivalent direct and indirect emissions of the "Kyoto" family of greenhouse gases divided by unit of production. Indirect emissions are the consequence of Dow's consumption of energy but are emitted from sources controlled by another company.

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



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