



2012  
*Sustainability*  
SUMMARY



# Sustainability Overview

## 2012

The year 2012 marked best-ever performance on many of Dow's 2015 Sustainability Goals, some consistently achieving results better than the 2015 target itself. We are discovering new opportunities through increased awareness of how the sustainability megatrends impact the economy, and announced the Company's first Breakthrough to World Challenges. While macroeconomic headwinds prevailed in 2012, the company continued to make marked improvement in almost all sustainability metrics. We remain focused on developing solutions to make the planet a good place to live for future generations while being responsible for economic, environmental and the social dimensions of our pursuits.

### Highlights

- Best-ever performance on multiple EH&S Metrics:  
A comprehensive set of safety metrics is tracked and performance carefully scrutinized to help make Dow as safe a place to work as possible. We are nearing the ambitious 2015 performance targets on many metrics and two in particular continue to beat 2015 targets, multiple years early.
  - 16 Process Safety Incidents, down from 19; beating the goal for the year 2015 (25)
  - 0.22 Severe Motor Vehicle Accident rate; beating the goal for the year 2015 (0.28)
- Dow was honored by the National Safety Council (NSC) with the 2012 Green Cross for Safety Medal.
- Dow announced Omega-9 Oils as the Company's first Breakthrough to World Challenges in the area of health, a key milestone in achieving Dow's 2015 Sustainability Goals
- Marked the second year of the collaboration with The Nature Conservancy, completing pilot site work in Freeport, TX and starting work at the second pilot in Brazil.

### Challenges

- The world continued its rocky recovery in 2012, with volatility and uncertainty proving to be the new normal. Persistent weakness in Europe was a continued drag on global GDP growth, while dramatic declines in China, Brazil and other emerging geographies introduced new risks to a sustained recovery.
- The Energy Intensity performance of the company has lagged behind our 2015 goal due to the profile of Dow's operations and substantial capital required for improvements. It is clear that the 2015 Energy Intensity goal will not be achievable.
- Strong, coherent energy policy sets the foundation for helping countries overcome some of the world's most pressing challenges. Too often, one side of the debate focuses solely on fossil fuels, while the other focuses on renewables and alternatives. This is a false choice – we need both. Meeting the world's need for clean, sustainable, affordable and abundant energy will require getting beyond partisanship and self-interest.

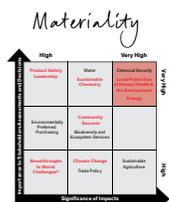




# Year-end Update on 2015 Sustainability Goals

Goal Progress

## Local Protection of Human Health and the Environment

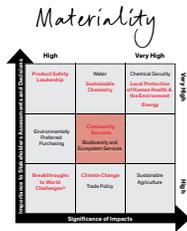


In our ten-year goal period from 2006 to 2015 we have challenged ourselves to achieve breakthrough improvements in traditional Environmental Health and Safety metrics. We are building upon the improvements accomplished in the 1995-2005 Dow goal period. For three improvement goals, we have already achieved a performance superior to our target for the end of the goal (2015).

Key Performance Metric	2012 Actual	2011 Actual	Reduction over 2011	Comment
Process Safety Incidents	16	19	16%	Outperformed the 2015 Goal target of 25.
Severe MVA Rate (accidents per million miles)	0.22	0.19	-16%	Reduction in performance versus best-ever year of 2011, but we continue to outperform the 2015 Goal target of 0.28.
By-product Synergy	312	310	NA	Outperformed the 2015 Goal target to exceed 300 million lbs. This 2015 goal was met in 2011 (four years early) and continues to increase.
Injury/Illness Rate All Reportable Incidents (per 200,000 hours of work)	0.20	0.30	33%	There were 204 people hurt (Dow Employees and Contractors) in 2012 ,80 fewer than the year before.  The non-fatal Injury/Illness rate for U.S. Manufacturing in 2011 was 4.4, which is 37 times higher than Dow's 2015 Goal of 0.12.
DAWC Days Away from Work Cases (per 200,000 hours of work)	0.05	0.08	38%	We reduced more serious incidents where the injury caused the employee to miss work by 38%
Leaks at manufacturing plants (Leaks, Breaks, Spills)	225	262	14%	We are on track to cut these events in half by 2015 from 2005 levels.
Leaks of Hazardous Material (During Transportation)	25	17	-47%	When we started reporting on this goal in 2005, there were 56 annual events. Reduction improves safety and reduces the risk to the environment.

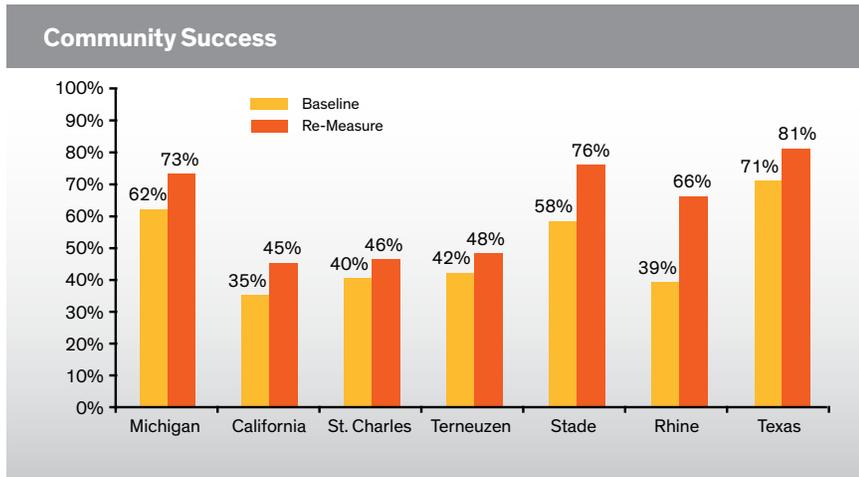
Additional Local Protection of Human Health and the Environment metrics are reported starting on page 52 in the section describing Dow's approach to managing the environment.

## Community Success



Dow continued to make strong progress on the 2015 Goal of Contributing to Community Success. Freeport, Texas, was re-measured in Fall 2012 and results exceeded expectations. The site's general favorability scores increased 5%, from an already high 80% to 85% favorability. This measure is taken from respondents who are at least familiar with Dow.

The site also made important gains in the community's perception of whether Dow plays an important role in impacting "quality of life." Freeport saw a 10% increase in community favorability for that measure. This second measurement is derived from those that have a generally good impression of Dow and have firsthand knowledge, or at least awareness, that Dow has positively impacted their community in some way. Globally, all Dow sites to date that have been re-measured have improved on this indicator. The chart below indicates their progress.



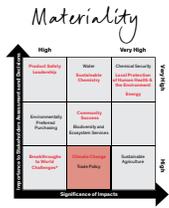
These Community Success measures continue to serve as important data points as Dow sites determine the best way to engage with the community for success. Survey results are being tabulated in first quarter 2013 for Dow's St. Charles Operations, Louisiana and early indications are that the site will join its counterparts globally in posting strong progress toward its community success goals. Plans also are underway to re-measure Zhangjiagang, China as well as Aratu, Brazil.

## 2015 Goal

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



## Climate Change



In 2012, Dow expanded our goal to include limiting global Green House Gas (GHG) emissions to the level that Dow experienced in 2006, growing our Company, but not the emitted carbon. The Company will continue to report GHG intensity.

Additionally we are now regularly reporting on a target to grow the use of Clean Power to exceed 400 megawatt equivalents by 2025. At the end of 2011

Dow had identified 215 megawatts that are either low carbon or from renewable sources. This goal is helping us pursue opportunities to incorporate economically-viable, clean-technology energy alternatives into our operations. Examples of projects that will help increase our Clean Power portfolio include:

- Dow's Pittsburg, California facility utilizes solar energy
- Electricity from recaptured landfill gas being used as a partial source of power to Dow's Midland, Michigan Headquarters
- In 2013, Dow will begin use of eucalyptus biomass as a source for steam to serve its Aratu, Brazil site. Upon project completion, the Aratu site will be more than 75 percent sourced for power and steam from clean energy, relying in large part on hydroelectricity.



Another improvement has been initiated to develop understanding and effectively communicate about the impact of Dow products. We will quantify the impact of our products both in the supply chain, before Dow operations, and during the use phase by our customers and ultimate end users. This assessment will be accomplished with an Impact Tool that quantifies the energy and GHG profile of products and helps convey the benefits by communicating a ratio of burden compared to benefit. For example, we report in EN17 that the ratio of benefit throughout the life of the STYROFOAM insulation product line is seven times the GHG emissions involved in the manufacturing and construction phases of making a homes and other applications more energy efficient.

More information about addressing Climate Change is found in the Environmental Summary, (page 53) and in indicators EN 16, EN17 and EN18.

## 2015 Goal

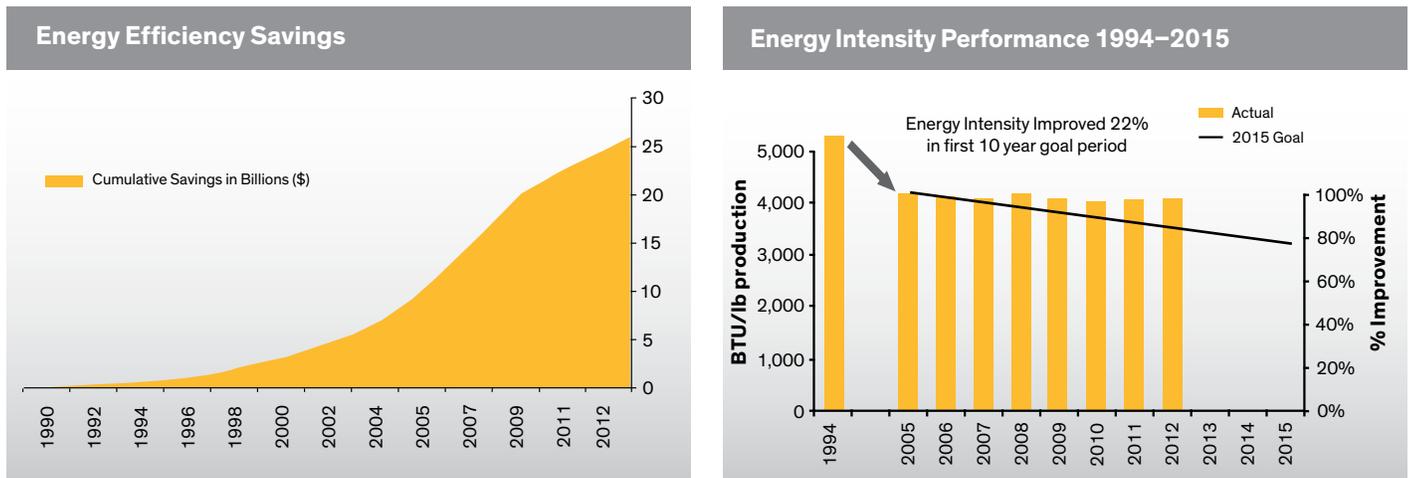
- Maintain absolute greenhouse gas emissions below 2006 levels
- Reduce our energy intensity 25%
- Use 400 MW of clean energy by 2025



## Energy Efficiency and Conservation

Related to Dow's absolute Green House Gas (GHG) metric added in the first quarter of 2012, Dow is investing in the development of a Net Impact Tracking Tool.

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



Dow's manufacturing energy intensity, measured in BTUs per pound of product, has improved more than 40% since 1990, saving the Company over \$25 billion and about 5,500 trillion BTUs. This is roughly equivalent to the annual energy consumption of 48 million single-family homes. Dow estimates that 2015 Energy Intensity Goal efforts will yield a cumulative savings of more than \$1 billion and 190 trillion BTUs. This is equivalent to the annual energy consumption of over 1.7 million single-family homes. Dow's portfolio transformation, coupled with global economic conditions, has impacted the scale and speed of anticipated energy intensity reductions. Dow expects additional energy efficiency progress from in-flight projects that will see results after 2015.

Between 1990 and 2005, the Energy Intensity (Btu/lb) of global operations was improved by 38%. By 2015, Dow has a goal to achieve an additional 25% improvement. The average Energy Intensity of year 2005, adjusted for mergers and acquisitions, is the basis for calculating performance against this target. Dow's goal for Energy Intensity for the full year of 2012 is 3,436 BTU/lb, or 82.5% of the value in 2005. Dow's actual performance through Q4 2012 was 4,058 BTU/lb, which is 97.4% of the 2005 baseline

For more information on this and other Dow Energy initiatives: [www.dowenergy.com](http://www.dowenergy.com)

## Product Safety Leadership

At the end of 2012, 470 Product Safety Assessments (PSAs) had been posted to [Dow's product safety website](#).

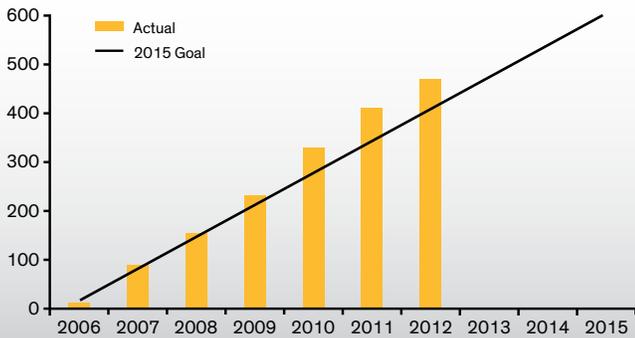
Dow's published Product Safety Assessments now cover products accounting for over 86% of Dow's annual revenue. Additionally 100% of Dow's 224 High Priority chemicals are now covered by a PSA. We are on-track to meet our 2015 Goal to have a Product Safety Assessment publically available for applicable 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" Dow offers to strengthen relationships with communities and customers. This holistic approach enables Dow customers and the communities in which Dow does business to stay informed about the Company's products and the plants that produce them. Dow is dedicated to providing the public with accurate information and building trust as it uses technology to develop better products.

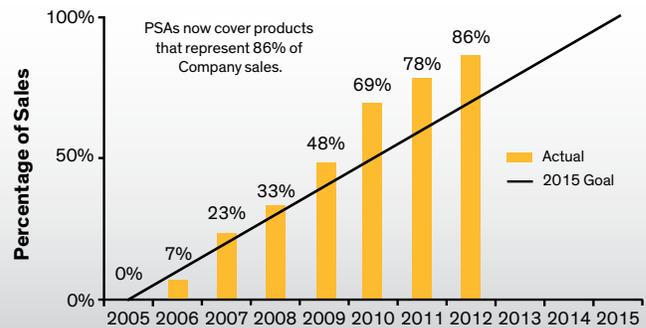
2015 Goal

- Publish Product Safety Assessments for all products

### Cumulative Product Safety Assessments

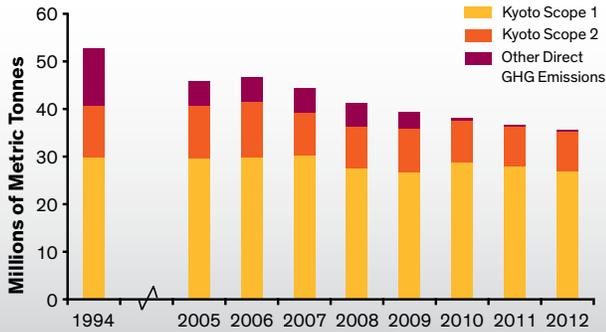


### Sales Covered by Assessments



## Greenhouse Gas Reduction

Absolute Greenhouse Gas Emissions as CO<sub>2</sub> Equivalent



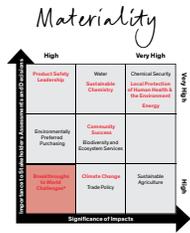
Dow has reported to the Carbon Disclosure Project (CDP) since 2006. The CDP is a not-for-profit organization working to understand the risks and to drive greenhouse gas emissions reduction from business. In 2012, Dow reported on its 2011 Greenhouse Gas (GHG) performance and commitment to being a solution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

Dow's energy efficiency and chemicals management efforts have significantly reduced the Company's GHG emissions footprint. As a result, Dow has prevented over 270 million metric tons of GHG emissions from entering the atmosphere since 1990. This is equivalent to the annual emissions of more than 16 million single family homes. Dow's goal is to maintain

GHG emissions below 2006 levels on an absolute basis for all GHGs, thereby growing Dow, not the carbon. Dow will continue to focus on managing Dow's footprint and delivering solutions to help customers manage theirs. For example, Dow's insulation products contribute to greater energy efficiency, helping avoid millions of metric tons of GHG emissions per year.



Breakthroughs to World Challenges



In June of 2012, Dow announced Omega-9 Oils as the Company’s first Breakthrough to World Challenges in the area of health, a key milestone in achieving Dow’s 2015 Sustainability Goals. Set in 2006, these Goals included a commitment to achieving at least three breakthroughs that will significantly help solve world challenges in the areas of energy and climate change, water, food, housing and health.

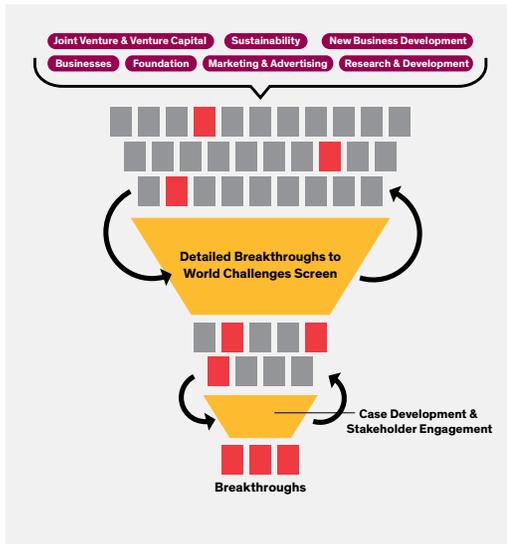
2015 Goal

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

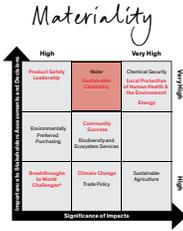
Derived from Dow AgroSciences’ NEXERA™ canola and sunflower seeds, Omega-9 Oils have zero trans fat and the lowest amount of saturated fat among commonly used cooking oils. Since 2005, the use of Omega-9 Oils has eliminated more than one billion pounds of trans and saturated fat from the North American diet.

In order to be designated as a Breakthrough to World Challenges, Omega-9 Oils passed a rigorous, transparent evaluation by Dow scientists and external stakeholders. Omega-9 Oils, like other candidates in Dow’s R&D pipeline, were evaluated for positive impact on millions of human lives, as well as minimal environmental impact from development through manufacturing, distribution, use and end-life.

We have a robust pipeline of candidates for further Breakthroughs to meet our goal, and look forward to announcing more Breakthroughs as they meet the criteria.

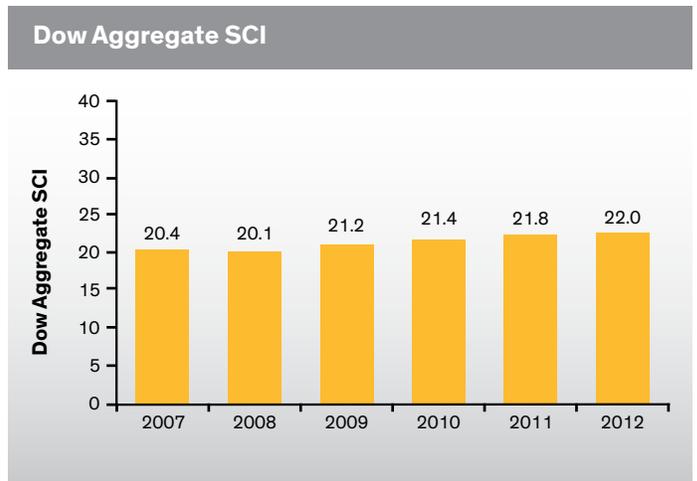
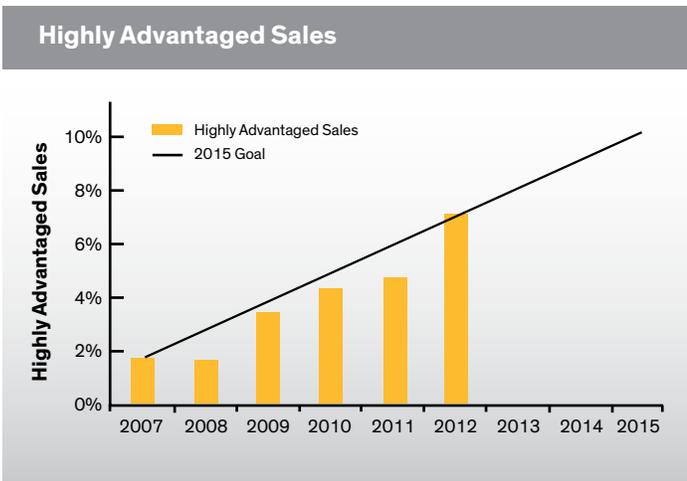


## Sustainable Chemistry



The 2015 Goal for Sustainable Chemistry is to increase to 10% the percentage of total Company sales that are highly advantaged by sustainable chemistry, as measured by our Sustainable Chemistry Index (SCI). The SCI is updated annually and involves assessing sustainability attributes of the Company portfolio at a detailed level. During 2012 the SCI increased from 21.8 to 22.0. The portion of Company revenue that was from Highly Advantaged products grew to 7.1%, up from 4.8% as measured for 2011, the largest ever year-over-year increase. A significant number of opportunities have been identified towards enabling additional products to be included in the Highly Advantaged category. Engagement is ongoing to further integrate these opportunities into the business strategies.

Find information about our ongoing implementation of the 2015 Sustainability Goals each quarter at our [Reporting Center](#).





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