



# From Success to Significance: Dow's Journey Toward Sustainability

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"We commit to do these things not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win."

- President John F. Kennedy

*on the challenge of going to the Moon*





## Dow's Vision

To be the largest, most profitable  
and most respected chemical  
company in the world





# 2005 EH&S Goals A Record of Success





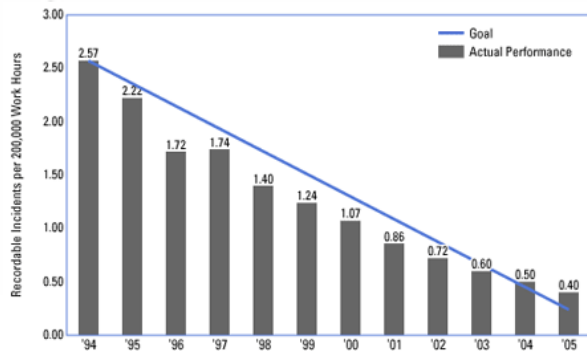
## Dow's Record of Success: 2005 Goals

In 1995, Dow's leadership team set long-term goals that would shape the company's future.

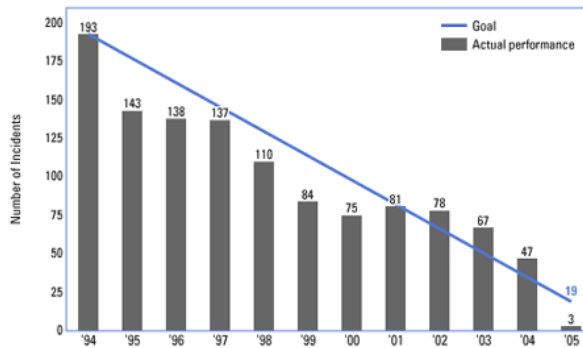
- Reducing fatalities (Dow employees and contractors)
- Reducing injuries and illnesses per 200,000 work hour by 90%
- Reducing transportation incidents per 10,000 shipments by 90%
- Reducing repeat incidents with Dow product at customer facilities by 50%
- Reducing loss of primary containment incidents (leaks, breaks and spills) by 90%
- Reducing motor vehicle incidents per one million miles by 50%
- Reducing chemical emissions by 50%
- Reducing waste and waste water by 50%
- Reducing energy used per pound of production by 20%



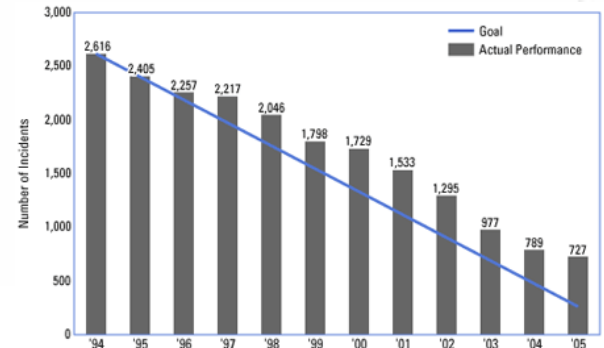
# Dow's Record of Success: 2005 EH&S Goals



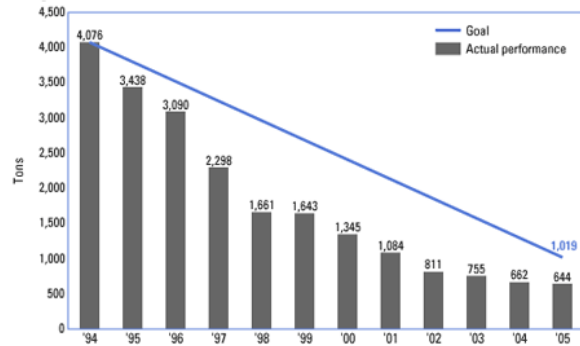
Injury & Illness Rate



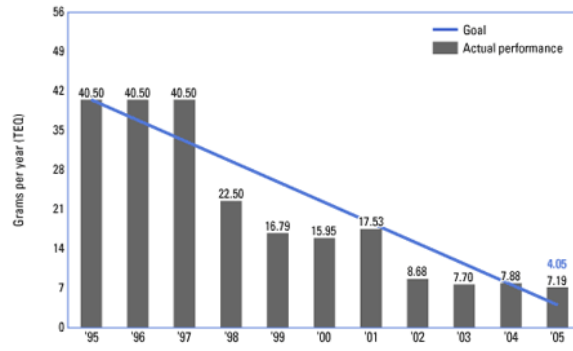
Process Safety Incidents



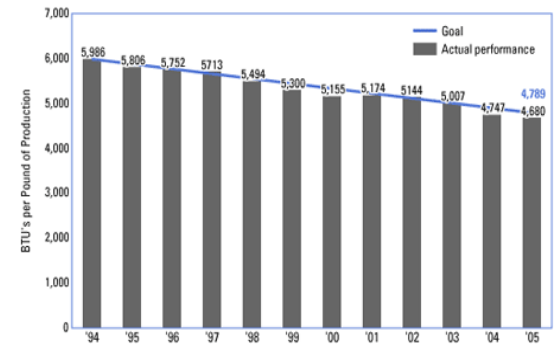
Leaks, Breaks & Spills



Emissions – Priority Compounds



Dioxin Emissions



Energy Use



## Dow's Record of Success: 2005 Goals

By evaluating processes, adopting new technologies, and enhancing manufacturing techniques, Dow has met many of these aggressive goals

- Saved \$5 billion on an investment of \$1 billion in technology and processes to increase resource productivity
- Reduced solid waste by 1.6 billion pounds - enough to fill 415 American football fields one meter deep
- Reduced waste water by 183 billion pounds - equal to water usage for 170,000 U.S. homes for one year
- Saved 900 million BTUs of energy - enough to power 8 million U.S. homes for one year

The result is:

- A workplace that is 20 times safer than working in a supermarket
- Cleaner facilities
- More efficient energy use
- Stronger and more vigilant corporate governance





# From 2005 Success to Significant Change in 2015







Our perspective ....



*At Dow, sustainability is about our relationship with the world and how we contribute to solving its many challenges.*





## 2015 Sustainability Goals - Technology Solutions

### ➤ **Strengthening Local Community**

- Local Protection of Health and the Environment
- Contributing to Community Success

### ➤ **Reducing Global Footprint**

- Energy Efficiency and Conservation
- Addressing Climate Change

### ➤ **Providing Technology Solutions**

- Sustainable Chemistry
- Products Designed to Solve World Challenges
- Product Safety Commitment





# 2015 Sustainability Goals - Local Community

## ➤ Local Protection of Human Health & Environment

- By 2015, Dow will achieve on average a 75% improvement of key indicators for EH&S operating excellence from 2005 baseline and community collaborative sustainable commitments
- By year-end 2015:
  - Dow will achieve an injury and illness rate of 0.08 per 200,000 hours of work, reduce the severity rate by 75 percent and eliminate fatalities.
  - Dow will reduce the motor vehicle accident (MVA) rate for all Dow employees combined to 1.5 incidents per million miles driven.
  - All sites/businesses combined will have fewer than 75 LOPCs (leaks, breaks and spills), with no more than 10 Category 2 incidents, eliminating Category 1 incidents.
  - Dow will reduce the number of hazardous material transportation LOPCs by 75 percent, and eliminate highly hazardous (toxic Inhalation hazard and flammable gas) material releases.
  - All sites will reduce process safety incidents by 75 percent and the severity rate by 95 percent, based on the 2005 baseline.
  - Target sites will have achieved site-specific goals addressing needs such as security, waste generation and emissions, maintaining and improving employee health, and resource conservation.
- Current examples include:
  - Improvements in injury and illness rate, loss of primary containment and hazardous material transportation LOPCs
  - Challenges continue in the areas of process safety incidents and motor vehicle accident rate



# 2015 Sustainability Goals - Local Community

## ➤ Contributing to Community Success

- By 2015, 100% of Dow sites where we have a major presence will have achieved their individual community acceptance ratings.
  - Dow will evaluate its impact on site communities and will implement local community success plans that will be measured, re-evaluated and adjusted periodically.
  - Dow will conduct quality of life surveys to identify and define areas where Dow can contribute to improving the quality of life in our communities.
  - Community goals will be established, describing specific activities and measurement objectives mutually by Dow and community representatives.
  - Dow will adhere to the Responsible Care® Code of Management Practices and will take into consideration various sustainability ratings, such as the Dow Jones Sustainability Index.
- Current examples include:
  - Of four pilot sites,
    - All community surveys have been completed.
    - One community success plan has been completed, one drafted and the others are in progress.



## 2015 Sustainability Goals - Global Footprint

### ➤ Energy Efficiency and Conservation

- Reduce energy intensity by 25% from 2005 to 2015.
- Current examples include:
  - 5% reduction in energy intensity since 2004



# 2015 Sustainability Goals - Global Footprint

## ➤ Addressing Climate Change

- A 25% reduction in greenhouse gas emission intensity by 2015
  - Dow's developments in the area of Integrated photovoltaics, will generate power to bring current photovoltaic energy expense to \$0.05-\$0.10 per kWh by 2015, a price that is competitive in markets nationwide and will also serve as the outer protective roofs and siding of buildings.
  
- Current examples include:
  - GHG emission reductions already achieved through the use of Dow insulation products more than offset the GHGs produced during the manufacture of those products.
    - Dow Building Solutions products save energy. One square foot of one-inch-thick Styrofoam will save one ton of CO<sub>2</sub> emissions over the average life of a house.
  - Solutions provided by Dow Automotive reduce vehicle weight, thus improving fuel economy.
  - Dow reduced its absolute greenhouse gas (GHG) emissions since 1990 to a level that exceeds Kyoto targets. Overall, emissions of Kyoto GHGs were reduced by over 20% during this time period



## 2015 Sustainability Goals - Technology Solutions

### ➤ Sustainable Chemistry

- In 2008, Dow will set a specific target percentage of total revenues generated from new or enhanced products or services that deliver additional sustainable chemistry benefits and will have achieved this target by 2015.
- Current examples include:
  - Commercializing a process to produce propylene oxide (PO) in a way that reduces environmental impact by reducing in waste water by more than 70 percent, lowering energy use by 35 percent, requiring 25% less capital, using only hydrogen peroxide (HP) and propylene as raw materials, and produces only PO and water, thus avoiding the formation of co-products.
  - Announcing plans for a world-scale facility to manufacture polyethylene from renewable sugar cane in Brazil jointly with Crystalsev, a leading ethanol producer.





## 2015 Sustainability Goals - Technology Solutions

### ➤ Products Designed to Solve World Challenges

- By 2015, Dow will achieve at least three breakthroughs that will significantly improve the world's ability to solve the challenges of: affordable and adequate food supply; decent housing; sustainable water supplies; or improved personal health and safety.
- Examples include:
  - *Health* -- funding a Double Fortified Salt initiative in Sri Lanka. Dow's donation will establish infrastructure to supply Iron and Iodine supplemented salt to address anemia, a significant health issue in the developing world, caused by poor diet.
  - *Housing* -- Dow Building Solutions is a recipient of a \$20 million Solar America Initiative Pathways award by the U.S. Department of Energy focusing on incorporating photovoltaics directly into the design of commercial and residential building materials.







## 2015 Sustainability Goals - Technology Solutions

### ➤ Product Safety Commitment

- By 2015, Dow will make publicly accessible safety assessments for its products globally, and in doing so will address relevant gaps in hazard and exposure information and will continue to take appropriate action based on the assessments to further protect human health and the environment throughout the lifecycle.
- Examples include:
  - >35 product safety assessments in non-technical language on [www.dowproductsafety.com](http://www.dowproductsafety.com) with detailed information links.
  - Dow will close gaps in hazard and exposure information to meet requirements to register a substance for compliance with EU REACH (Registration, Evaluation and Authorization of Chemicals) legislation for its products globally.
  - Dow will conduct product risk characterizations for all of its saleable products globally and initiate any risk management, including evaluation of potential for human exposure throughout the life cycle of Dow products.





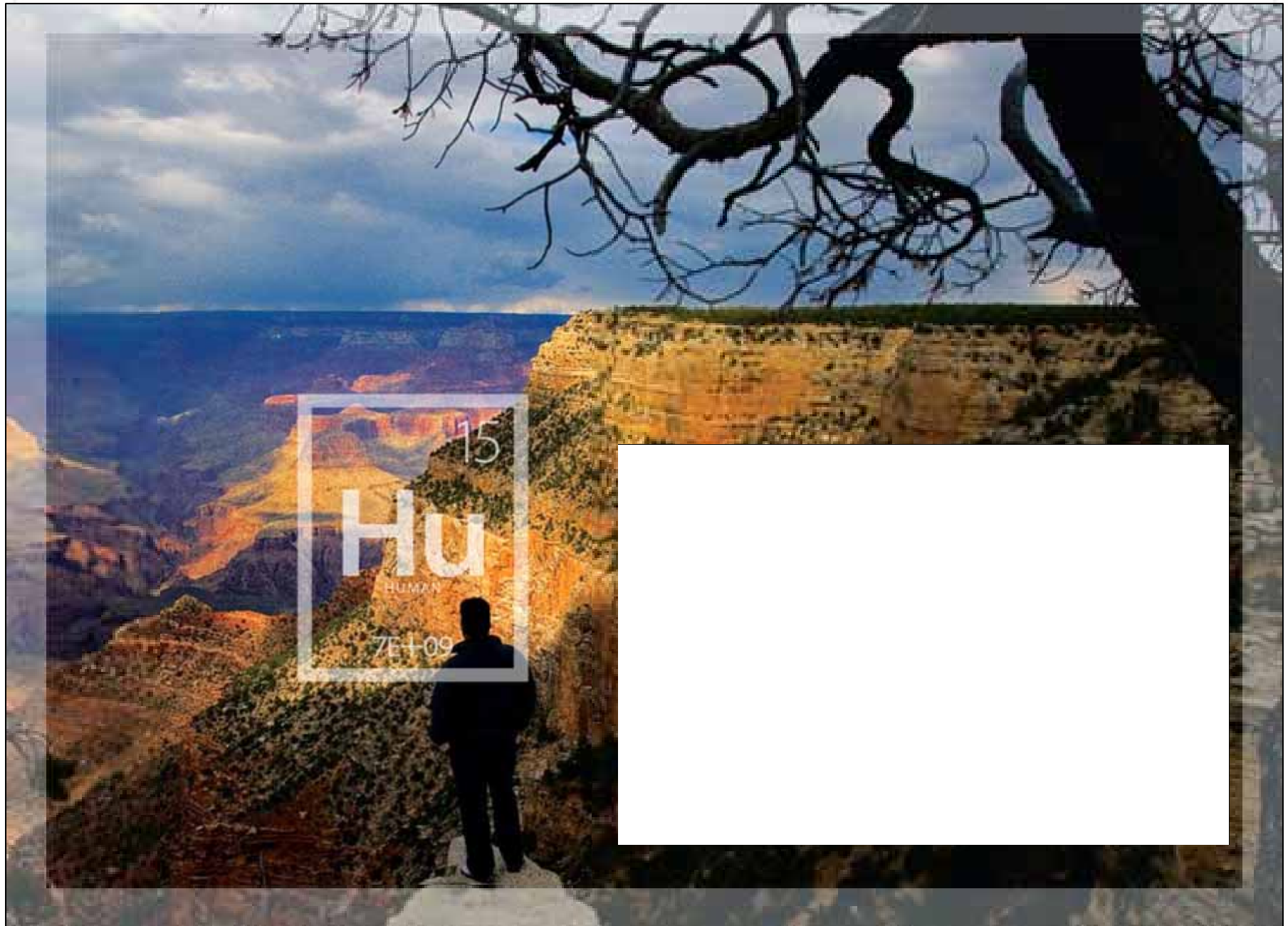
# Reaching the Goals - Making an Impact

Striving to reach Dow's sustainability goals provides

- united direction and vision
- business opportunities
- structure and focus

Striving to reach Dow's sustainability goals

- drives collaboration internally and externally
- spurs innovation and forward thinking
- creates novel solutions



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