



DELIVERING VALUE TO THE VALUE CHAIN: SUSTAINABILITY, INNOVATION AND COLLABORATION

Dr. Anne Wallin, Director of Sustainable Chemistry,
The Dow Chemical Company



THE ELEMENT OF CHANGE



Our Vision is to be the largest, most profitable and most respected chemical company in the world.

Our mission is to constantly improve what is essential to human progress by mastering science and technology.

Sustainability requires making every decision with the future in mind. It is our relationship with the world around us – creating economic prosperity and social value while contributing to the preservation of our planet.



A HISTORY OF STRIVING FOR SUSTAINABILITY



- 1897 – Dow designs safety protection equipment for workers
- 1906 – Dow partners with George Westinghouse to develop energy saving Co-Generation
- 1934 – Mammalian toxicology research laboratory established
- 1935 – First industrial use of bacteria to degrade phenolic waste
- 1948 – First full-time industrial hygienist
- 1967 – “War on BTUs” energy conservation program launched
- 1970 – Dow publicly commits to product stewardship role
- 1972 – Introduced “Life is fragile, handle with care”
- 1986 – Provided smoke-free work environment
- 1987 – Dow commits to Responsible Care®
- 1991 – Corporate Environmental Advisory Council (CEAC) formed
- 1996 – 10-year global EH&S Goals launched
- 2006 – Launched “Drive to Zero” global safety campaign
- 2006 – 2015 Sustainability Goals launched

OUR APPROACH TO SUSTAINABILITY



Local Protection of Human Health & the Environment

Contributing to Community Success

Energy Efficiency & Conservation

Addressing Climate Change

Sustainable Chemistry

Product Safety Leadership

Breakthroughs to World Challenges



SUSTAINABLE CHEMISTRY

Sustainable chemistry is our “cradle to cradle” concept that drives us to use resources more efficiently to:

- Minimize our footprint
- Provide value to our customers and stakeholders
- Deliver solutions for customer needs
- Enhance the quality of life of current and future generations

PRODUCT SAFETY LEADERSHIP



- We are the first chemical company to make non-technical language summaries of our product safety assessments accessible to the public on www.dowproductsafety.com.
- The assessments cover topics such as basic hazards, use, risk and risk management.
- We will complete evaluations, with third party process verification, on high priority products by 2010 and for all products by 2015.

POLYOLEFIN DISPERSIONS FOR CARPET APPLICATIONS

Environmental & Social Benefits

HYPOD™ Polyolefin Dispersions

- Thermoplastic carpet backing
- Enabled by BLUEWAVE™ Technology
- No new coating equipment required
- Excellent physical properties
- Variety of end use carpet applications
- Excellent wet strength, tuft lock strength

Sustainability Profile

- Easier recycling
- Low odor and VOCs
- Lighter weight end-product



SUGAR CANE TO POLYETHYLENE

Economic, Social & Environmental Benefits

Dow project in Brazil

- Less fossil resources than traditional hydrocarbon processes
- Biomass (bagasse) produces heat, electricity and steam for ethanol, ethylene and polyethylene plants

Sustainability Profile

- Produces 1/7th the amount of CO₂
- Most “waste” is used in the process
- Harvesting rainwater
- Trees adjacent to fields reduce soil erosion
- Recyclable using existing infrastructure
- Economic development



ADVANCED AMINES TO ENABLE CO₂ REMOVAL FROM POWER PLANT EMISSIONS

Environmental & Social Benefits

UCARSOL™ FGC3000 solvent

- Project with Alstom
- Dow supplies the technology and solvent, Alstom provides process engineering and construction for power plant
- Removes greenhouse gas from power plant emissions
- Plans in place to build pilot plant



Sustainability Profile

- Removes 90% or more of CO₂
- Uses 20% to 30% less energy to remove CO₂ compared to current traditional amine technology

AERIFY™ DIESEL PARTICULATE FILTERS

Economic, Social & Environmental Benefits

Improved emission control & diesel engine performance

- Use of fewer raw materials
- Ability to provide a smaller packaging size



Sustainability Profile

- 30 to 50 percent lower back pressure than competing filters
- 95 percent reduction in soot emissions relative to no filter
- Diesel is 25 to 35 percent more fuel efficient than gasoline



DOW PRODUCTS HELP IMPROVE AUTOMOBILE PRODUCTION

Economic, Environmental & Social Benefits

Dow Products used in variety of automobile applications

- BETAMATE™ low energy substrate adhesives (LESA) enable lighter-weight solutions used in automobile front end carriers
- BETAFOAM™ cavity-filling foam expands to fill auto body cavities, helping to make cars safer, quieter and more fuel efficient
- PULSE™ PC/ABS engineering resins enables use of plastics in seat backs

Sustainability Profile

- BETAMATE enables light weight solutions to improve vehicle fuel efficiency
- BETAFOAM improves structural safety of vehicles replacing steel structures
- PULSE can lead to mass reduction of up to 20 percent on a total seat, leading to greater fuel economy



RESPONSIBILITY BEGINS HERE

“**Sustainability** begins at home, but its destiny is to engage the problems of the world. We will build on our company’s rich legacy of leadership in solving the world’s most pressing problems.”

-- Andrew Liveris,
Chairman & CEO
The Dow Chemical Company



References to "Dow" mean The Dow Chemical Company and its consolidated subsidiaries unless otherwise expressly noted