



PRACTICE MAKES PROGRESS
the smart use of resources

smart application of science and technology

Theo Walthie

September 1, 2005

Andrew thank you very much for this introduction and thank you all for the opportunity to be here today-at this important venue-to bring to life how our commitment to sustainability has led to results and to progress.

It is especially meaningful to me as I started my Dow career here in the Netherlands, in fact, here in Rotterdam, 35 years ago. Many things have changed over the decades, but Dow's commitment to be a world leader in business and a leader in championing and finding sustainable solutions has not.

Today, we celebrate the anniversary of one of Dow's important divisions, Dow Benelux and 50 years of operation in the Netherlands. 50 years of partnership with key stakeholders in the region and a shared objective to the 3 pillars of Sustainability: a strong **economic base**, continued **social progress** and enhanced **environmental protection**. Gerard van Harten has addressed our position in the region earlier this afternoon. Today, we are also here to explore the challenges and opportunities ahead regarding how to create a sustainable future. Let me start though with the fundamentals of the industry I am proud to represent...



The chemical industry originated here in Europe more than 150 years ago and is today a global industry worth 1.6 trillion dollars including pharmaceuticals. This industry has traditionally grown at a rate of 1.5 times of GDP and in the OECD now slightly less than 1 times GDP. But more than just shear numbers (economics, employment, and downstream investment), it's an industry that enables our way of life.

Our industry takes molecules, rearranges them and gives them functionality and purpose--the products that are created through chemistry are all around you—from the chairs you sit on, the cars you drive and the electronics you carry with you to stay “connected,” to the freshness of the food you enjoy and life saving healthcare products. All products that meet the needs of society.



We are an integral part of society and we are proud to do our work with the greatest attention to environment, health and safety. In my own business we call for a “drive to zero”—meaning our vision is for **no environmental impact and no injuries**. At Dow, we were one of the first to set ambitious, voluntary targets and to start the journey toward greater transparency and openness about who we are and what we do. We are mindful of our responsibilities and of the fact we have made mistakes.

It’s taken us and our industry long to get to where we are today, and we know the path forward must include even **more engagement with society** as a whole.

In the next 15 minutes I want to set the stage for the future—how we must **collectively** address the growing needs and demands of the world community related to creating a sustainable future. I want you to leave believing what I believe: **The chemical industry is an integral part of your community, of the world community and we are part of the solution to the challenges and opportunities ahead.**

Chemistry and Sustainability

That inextricable link between Chemistry and Sustainability—a combination that some may question, but one that I feel strongly about—is a reality that is critical for progress—for not just our company or the industry, but for sustainability.

Sustainability is a “simple enough” word to say, but we all know it is a far more challenging reality to achieve since true success is predicated on the ability to balance its 3 pillars.

While most agree on the objective, how we achieve it is the subject of heated debate and calls for action by governments, businesses, organizations and ordinary people around the world. Our industry has a key role to play. And we are contributing vigorously to the debate while developing solutions to help make Sustainable Development a reality.

Let me talk with you about the following:

1. The history of **Sustainability in Dow** - our achievements and what we have learned
2. The concept of being “**part of society**” and “part of the solution”
3. and **Energy** as an example of our focus on the future

Sustainability and Dow!

It was Herbert H. Dow, a chemist, who founded our company over 107 years ago, who said, “**If you can't do it better**, why do it.” It's that spirit to innovate, to “do it better,” that has motivated us in the past and is motivating us today in our drive towards sustainability.

Of course over time we have questioned our role; can **business and environmentalism co-exist?** Already in the 1960s, Carl Gerstacker, Dow's chairman, said that “industry should concentrate on minimizing or even eliminating waste product, thereby cutting down on the pollution problems at the same time it boosted its own profits.” We still think the two -- business success and the environment -- are inseparable when wanting to ensure a sustainable future.

Achievements... and the commitment to constantly improve

When we look on the Dow side, I want to address the question of what practice has brought us so far? Here I also want to focus on what we call our 2005 goals. In 1996, we implemented the world's first 10 year public, voluntary **stretch goals for environment, health, and safety** performance improvement. We did this at a time when taking such steps was seen as groundbreaking—we took the initiative as a leader in the chemical industry, in Europe and in the world. Not only did we set targets, we have been communicating our progress... and early next year the final numbers for a decades' work will be in.

The point is that progress starts with **recognizing the challenges**, then **setting targets** and being willing to **continuously raise the bar**. Our first attempt was “daring” ... now I am proud to share with you that much has been accomplished:

	2005 Goals	Results (end 2004)
Chemical emissions	minus 50 %	down 50%
Priority compounds	minus 75 %	down 84%
Waste water generated/ pound of production	minus 50	down 35%
Energy use/pound of production	minus 20 %	down 21%
Loss of primary containment incidents	minus 90 %	down 70%,
Reduction in injuries and illnesses	minus 90 %	down 80 %



Dow 2005 goals

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We are one of the top safety performers in the chemical industry. In fact, people often are not aware that the **chemical industry is one of the safest** in the world. As a means of comparison, consider the fact that the typical worker in the chemical industry is one-and-a-half times safer than in general industry - safer even than the average worker in retailing.

All this has been made possible thanks to people, technology, and processes. But we're not declaring success, we're not finished, in fact at Dow we are now at a **cross road**. Our new goals for the next decade will be published shortly—we've seen the challenges, we're setting the targets and we're committing ourselves to delivering.

Part of Society

The chemical industry is an **integrated part of society**. Meeting the needs of society for products and progress **without damaging** the environment and all the while ensuring we have a healthy business -- requires creativity and willingness to **new ways of thinking**. Our industry and our company have a strong record of innovation - in products that meet customers' needs; in manufacturing processes that protect the environment and human health; and in solutions that directly address environmental problems.

By 2050 our planet will need to **support some ten billion people** - compared to about six billion today. This raises huge challenges and opportunities to all sectors of society. How will there be enough food, clothing and shelter for this rapidly growing population **without accelerating the depletion of the world's resources** and eroding the inheritance of future generations? We can't go on at an ever increasing rate ... but the challenges are indeed daunting.

There is one thing I am sure of though, that's that the chemical industry and Dow will be part of the solutions.

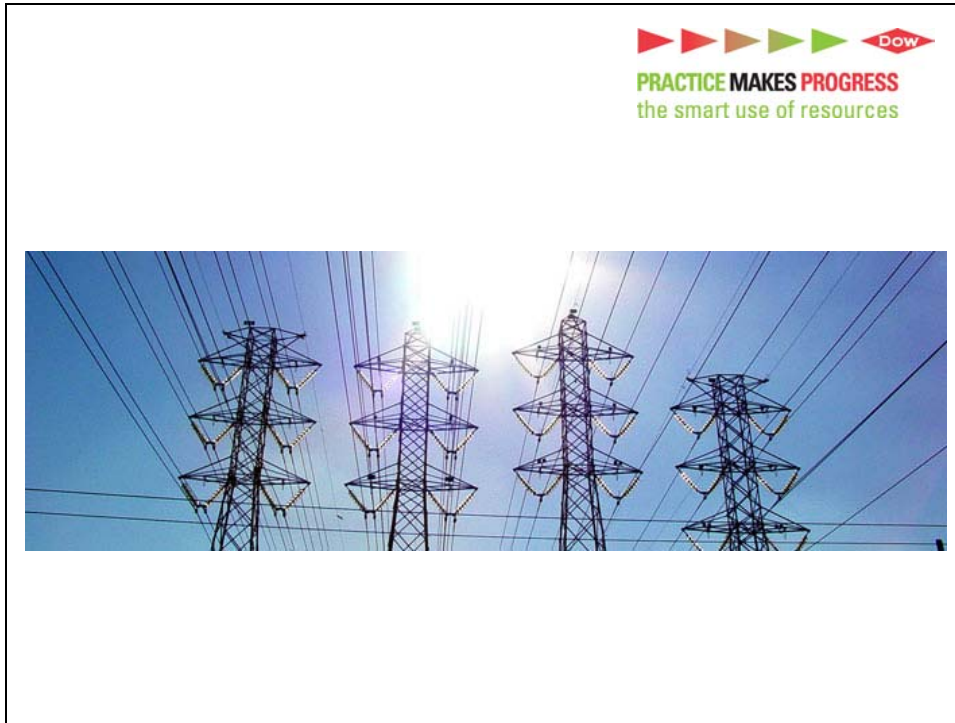
Part of the Solutions

Addressing the opportunities in front of us must be done in a collective and coordinated approach. **All stakeholders must be at the table** and that includes the chemical industry—there needs to be even more interaction with society at large, and I want you to know that we aren't standing still or staying quiet in a backroom.

Let me share with you some highlights of how we're addressing the challenges:

- We are focused on the Efficient Use of Resources; a key aspect of which is **energy**
- And we are being Innovative-- pursuing **alternative and renewables AND new technologies**

I will start with energy as it is nearest and dearest to my heart--as that's the business I lead for Dow.



Global energy demand is increasing relentlessly—and there is no doubt that fossil fuels coupled with nuclear will remain the prime source of energy for decades to come. Although we as Dow and the chemical industry as a whole are **large energy users**; we use energy sources and therefore fossil fuels – derived from crude oil, natural gas -- with the greatest respect since they are the raw materials that we **transform into essential goods**. We know that **fossil fuels are finite, some more than others**, and therefore share with society the need for **reliable, affordable and Sustainable energy**.

One reality of using fossil fuels are of course CO2 emissions. We believe that increasing atmospheric concentrations of greenhouse gases is a cause for concern and warrants efforts to reduce these emissions to protect the world community from the adverse effects of climate change while at the same time balancing the need to foster healthy businesses and economies. Dow is **committed to contributing to the solution of climate change**.

Therefore we need **new technologies** and remain committed to **increase energy efficiency** as a key area of focus. We want to develop sustainable, climate-friendly products and technologies and we will reduce greenhouse gas emissions per unit of product. To find solutions we at Dow focus on the following areas:

- **Energy Efficiency Improvement**
 - Since 1994, Dow has reduced its energy use per pound of production by 21%
 - Today, **cogeneration** (of steam and electricity) delivers almost 85% of Dow's electricity in the United States and 70% worldwide
- **Optimized Use of Fossil Fuel**
 - A diverse and secure supply of energy is critical for our operations
 - We lobby governments to enable a competitive business environment in which industry can operate, create jobs and therefore support society
 - We are working on technology and activities to optimize the use of the world's fossil fuels
 - We are evaluating the use of clean coal in certain geographies and we encourage governments to consider nuclear as a mode of energy production
- **Renewables & Alternative Energies**
 - We continue to work with stakeholders on a variety of projects and initiatives exploring the options... from **biomass to wind, biosynthesis to solar**. There is no one silver bullet but we work with select partners to progress research and explore the opportunities
 - We are a strong supporter and advocate for getting the **JI/CDM (Joint Implementation and Clean Development mechanisms)**, which are part of the Kyoto regime, operational and unleash their potential to reduce emissions while incentivizing R&D and innovation to create win-win solutions
- **Product & Technology Solutions**
 - Our **products themselves** contribute to solutions: from housing insulation to lighter weight cars, they reduce the energy burden at societal level
 - We also are engaged with partners such as General Motors to help further research into potential solutions such as **fuel cell technology** in industrial applications. We are pleased to be able to support GM in their efforts to look for solutions in the automotive industry. Dow could eventually use up to 35 megawatts of electricity from 400 fuel cells. That's enough electricity for 25,000 homes!
 - With this pilot project, we seek to help validate the technology and demonstrate the robustness of fuel cell applications

- We are also evaluating natural, renewable *products as potential replacements for hydrocarbons*

Energy Efficiency though is key! I am encouraged to see the US government focusing on energy efficiency in their new Energy Bill and the EU's Energy Efficiency greenpaper. The drive for efficiency in society is critical to give the world the time required to work on new solutions and technologies which will bring about paradigm shifts. Isolated, regional legislation will not work. **Global solutions** are needed for global challenges and the power of society as a whole committing itself to conserve will make the difference as solutions are actively pursued. Therefore I am very pleased to be at this symposium where later today we will reward an excellent energy saving initiative with the Dow Energy Award 2005.

Energy and Beyond

But first let me share some other examples of technologies, products and opportunities that further the solutions for tomorrow. Mostly based on substitution of synthetic products by natural ones.



There is a focus on **BIO based technologies**, which although not “new” are a key part of the future:

- One of our product examples is BIO-BALANCE*: A soy-based polyol carpet backing
- Another is our involvement in the production of BIODIESEL fuel for World Energy, a premier supplier of biodiesel fuel in the U.S. It is made from soybeans and other vegetable oils. We are looking at similar solutions in EU and we will produce biodiesel at our location in Kallo in Belgium. I fully realize that biodiesel is a incentivized reality—a choice by society but with clear ramifications.
- We make Methocel – a wood / cellulose derivative – a Dow invention which is used in many applications including as a thickener in food and an enabler in the coating of medication
- Today, about 5% by value (15 million tons) of industrial chemicals are bio-based, this is mainly alcohols, amino acids, vitamins, pharmaceutical ingredients and other specialty chemicals. Depending on advances in genetic engineering and medium term feedstock costs, this could double by 2010.
- Economies of scale will be key driver for growth into the larger volume segments of the petrochem value chain.

These are just some examples that show our approach to sustainability: **applying technology and setting numerous practical steps** to improve overall results.

The answer for sustainable growth

We all agree on the objective to work on Sustainable Development and not to overload the world's eco-system. I hope you value our work, our achievements for a sustainable future. Today we are pleased to be here together with you contributing to the debate. Again, it will take all of us -- governments, businesses, scientists, NGO's, ordinary people -- working collectively to move in the right direction. And to that end we will focus the next hour on a mind mapping session - where together we can brainstorm ideas for making sustainable growth a reality.

This industry is and will be part of the solution and that's I hope you take away from my presentation today... and to support the theme of today's meeting, let me close with saying that... We are convinced that in the future **Practice will make Progress - and making Smart use of Resources** will be key.

Thank you!