Introduction to Dow

Connecting, Cultivating, Commercializing

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Outline

Introduction to Dow

Innovation at Dow

- Ventures and Business Development
- Research and Development

Megatrends

Opportunity Analysis

Sustainability

Recent Partnerships

New Products and Projects

Questions and Answers

Who We Are

- Founded in 1897 by Herbert H. Dow in Midland, Michigan
- A science and technology company with annual sales of US$60 billion
- Supplies a broad range of products and services to customers in 160 countries
- Production facilities in 36 countries with 52,000 employees worldwide
- Industry-leading portfolio of specialty chemical, advanced materials, agrosciences and plastics businesses

Global Reach

Approximately 52,000 employees are working in manufacturing plants, business centers, sales offices and research & development facilities located in more than 50 countries around the world.

Dow's Operating Segments

Advanced Materials

Electronic & Functional Materials

- Dow Electronic Materials
  - Semiconductor Tech
  - Interconnect Tech
  - Display Technologies
  - Growth Technologies
- Functional Materials
  - Dow Wolff Cellulosics
  - Dow Home & Personal Care
  - Dow Microbial Control
  - Performance Additives
- ***JV:*** *Dow Corning*

Coatings & Infrastructure Solutions

- Dow Building & Construction
  - Dow Building Solutions
  - Dow Construction Chemicals
  - Dow Solar Solutions
- Dow Coating Materials
  - Architectural Coatings
  - Industrial Coatings
- Dow Water & Process Solutions
- Performance Monomers
- ***JV:*** *Dow Corning*

Agricultural Sciences

Agricultural Sciences

- Dow AgroSciences
  - Agricultural Chemicals
  - Seeds, Traits, & Oils
- AgroFresh

Performance Materials

Performance Materials

- Amines
- Automotive Systems
- Chlorinated Organics
- Dow Formulated Systems
- Dow Oil & Gas
- Dow Plastics Additives
- Epoxy
- Oxygenated Solvents
- Polyurethanes
- Polyglycols, Surfactants and Fluids
- Dow Haltermann
- SAFECHEM
- ***JV:*** *BASF Dow HPPO B.V.*
- ***JV:*** *Saudi Acrylic Monomers Company LLC (SAMCO)*
- ***JV:*** *SCG-Dow*
- ***JV****: AKSA-Dow*

Performance Plastics

Performance Plastics

- Polyethylene
- Plastics Licensing & Catalyst
- Dow Packaging & Converting
- Dow Elastomers
- Dow Electrical & Telecommunications
- ***JV:*** *EQUATE*
- ***JV:*** *Equipolymers*
- ***JV:*** *The Kuwait Olefins Company K.S.C.*
- ***JV:*** *SCG-Dow*
- ***JV:*** *Univation Technologies*

Feedstocks & Energy

Feedstocks & Energy

- Chlor-Alkali/Chlor-Vinyl
- Energy
- Ethylene Oxide/Ethylene Glycol
- ***JV:*** *EQUATE*
- ***JV:*** *MEGlobal*
- Hydrocarbons (Olefins, Aromatics, Aromatic Derivatives)
- ***JV:*** *Compañia Mega*
- ***JV:*** *SCG-Dow*
- ***JV:*** *The Kuwait Olefins Company K.S.C*

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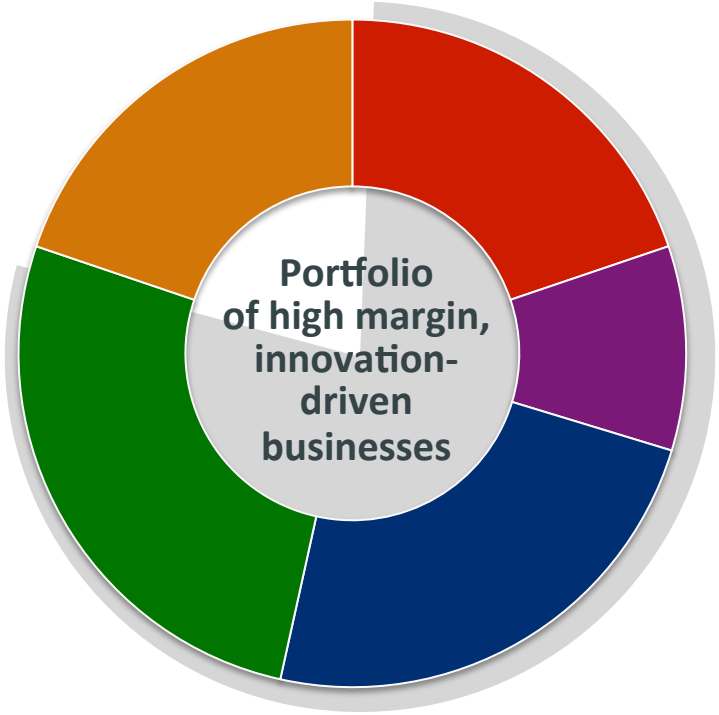
Dow Business Segments



Advanced Materials	$11.8
Agricultural Sciences	$5.7
Performance Materials	$14.7
Performance Plastics	$16.3
Feedstocks & Energy	$11.9

Note: All figures represent 2011 pro forma sales, in billions of dollars

Feedstocks & Energy

Low-Cost Power & Feedstocks • Significant Scale & Reach • Strategic Partnerships




- World's largest and most experienced ethylene, chlorine, caustic soda and purified ethylene oxide producer
- Leading consumer and producer of propylene
- Essential feedstocks for downstream specialties
- Cost-advantaged energy
- Global feedstock flexibility creates sustainable competitive advantage
- Value-added renewable energy solutions for specialties
- By-product recovery and re-use provides cost advantage
- Right-sized manufacturing footprint to match downstream demand
- Strong complement of strategic JV partnerships for growth

Sales Growth Rate: GDP x 1 **Normalized EBITDA Margin: 8 – 12%**

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Accelerating Dow's Innovation Agenda

Ventures & Business Development

- Identifies / analyzes ***new technologies*** and quantifies ***new market opportunities*** for Dow
- Serves as an ***innovation pipeline*** to supply Dow with a flow of new concepts for evaluation
- Seeks interaction with ***emerging technology sources***, focusing on developing strategic relationships
- Staff includes ***technical, commercial, and financial analysts***
- Uses ***Technology Scouting group*** to identify, interact with emerging technology-based opportunities

Research & Development

- Our growth has been built on a ***100 year-history*** in R&D
- Dow is developing new technologies and methods, including breakthrough technologies for existing processes, concentrating on ***over 500 major projects***
- Dow practices the fundamentals of R&D – deep expertise in ***analytical science, biotechnology, catalysis, ceramics, materials science, polymer science, separation science and high throughput research***
- We employ ***more than 6,000 people dedicated to R&D*** with specialized skills and experience
- In 2008, ***one-third of Dow's sales*** were from products introduced in the past five years
- With the acquisition of Rohm and Haas, Dow has ***one of the largest R&D investment programs in the industry*** with combined spending of more than $1.6B for 2009

Alignment & Collaboration

Venture Capital

Responsibility

- Accelerate Dow's new business growth through investing in high growth potential, private companies where Dow is a differentiated, strategic investor

Screening Criterion

- Financial parameters and strategic business objectives

V&BD

Responsibility

- Cultivate the innovation pipeline and manage a portfolio of technology and business opportunities that position Dow for growth

Screening Criterion

- Value creation and strategic fit with Dow

Licensing

Responsibility

- Provide leadership, management and expertise in the transfer of intellectual assets and technology inside and outside of Dow

Screening Criterion

- Financial parameters
- IP and Freedom to Operate

Cultivating the innovation pipeline and managing a portfolio of technology and business opportunities that position Dow for growth

Research & Development

What we do…*Enable business growth through the use of fundamental & applied research*

Product Research	Process Research	Application Development
• Invent new molecules and materials	• Invent new processes and catalyst technologies • Process Scale up	• Understand customers' needs in current and emerging markets. • Develop new applications & markets for Dow products. • Drive customer intimacy

Dow R&D Structure

80% is Business R&D

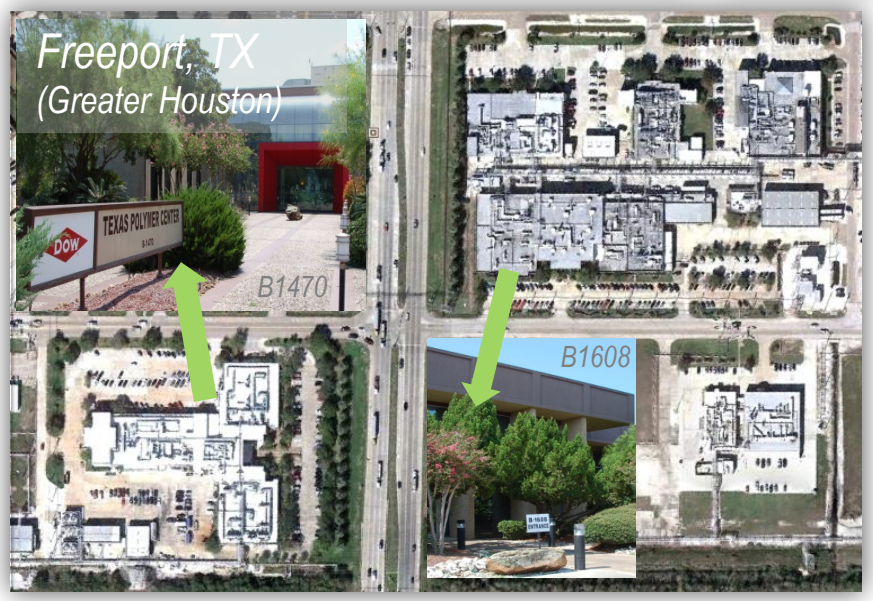
20% is Core/Unallocated R&D

- Long-term and cross-business projects
- Dow Corporate Venturing
- Capabilities
  - Analytical Sciences
  - Engineering & Process Science
  - Formulation Science
  - Organics, Polymers & Organometallics
  - Inorganic Materials and Heterogeneous Catalysis
  - Materials Science and Engineering
- Technologies
  - Materials Engineering Center
  - High Throughput Research
- External Research
- Information Research

Dow R&D Sites


Agro Sciences, Indianapolis, IN


Collegeville, PA
(Greater Philadelphia)
North Wing
South Wing


Freeport, TX
(Greater Houston)
TEXAS POLYMER CENTER
B1470
B1608


Shanghai, China

Megatrends: The Focus of Our Market-Driven Strategy

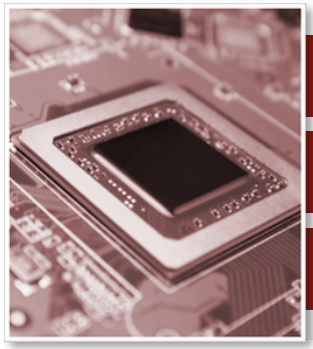
AGRICULTURAL SOLUTIONS

- Agriculture
- Functional Foods
- Healthcare

ENERGY SOLUTIONS

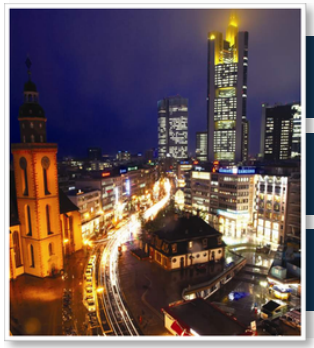
- Alternative Energy & Feedstocks
- Energy Production & Efficiency
- Energy Storage

CONSUMER & LIFESTYLE SOLUTIONS



- Electronics & Communications
- Home & Personal Care
- Appliances

TRANSPORTATION & INFRASTRUCTURE SOLUTIONS



- Construction
- Water
- Automotive

Megatrends: The Focus of Our Market-Driven Strategy

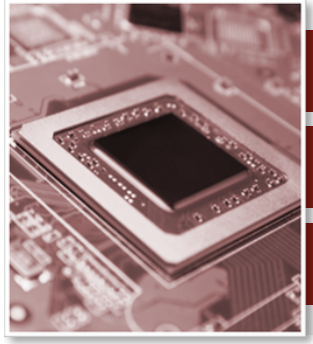
AGRICULTURAL SOLUTIONS

- Population increases will drive demand for diverse diets
- Seeds & Traits sector expected to increase 7%
- Anticipate 4% growth in crop protection industry

ENERGY SOLUTIONS

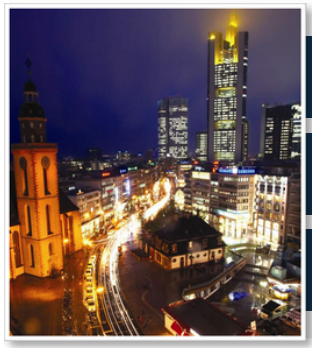
- >$2 trillion clean-tech addressable market by 2020
- Solar and wind energy expected to grow double-digits
- Energy storage devices will also drive growth

CONSUMER & LIFESTYLE SOLUTIONS



- Double-digit growth rates for electronics over the medium-term
- Anticipate retail sales growth rate >2.5% in 2012
- Emerging economies will show strongest gains

TRANSPORTATION & INFRASTRUCTURE SOLUTIONS



- Double-digit growth for transportation in top 15 countries
- Investment in aging infrastructure networks
- Growing populations seek sustainable water solutions

Dow's Four Pillars of Sustainability

Smart Solutions For Today

Our technologies enable our customers, and their customers, to develop products and services.

Innovations For Tomorrow

We contribute to the sustainability of society and our planet by developing innovative technologies for current and future markets.

Responsible Operations

Our infrastructure has a positive impact on our company, our communities and ourselves; our operations are a model for others, wherever we operate.

Partners For Change

We are leaders in advancing all aspects of sustainability, openly collaborating with customers, suppliers, communities, civil society and governments.

Recognitions for Sustainability

Seven Presidential Green Chemistry Awards

more than any other company

Named Eleven Times

Dow Jones Sustainability Indexes

China's "Most Innovative Corporation" Award

MOST INNOVATIVE CORPORATION AWARD
中国杰出创新企业评选

for sustainable innovation of corporate ecosystem, CEO CIO Magazine and the Research Center for Technological Innovation

2010 Robert W. Campbell Award and 2012 Green Cross for Safety Medal

NATIONAL SAFETY COUNCIL ®

#7 on Corporate Knights 2012 Clean Capitalism Ranking

Corporate Knights
The Magazine for Clean Capitalism
corporateknights.ca

A+ rating on Annual GRI Report - Four Consecutive Years

Global Reporting Initiative™

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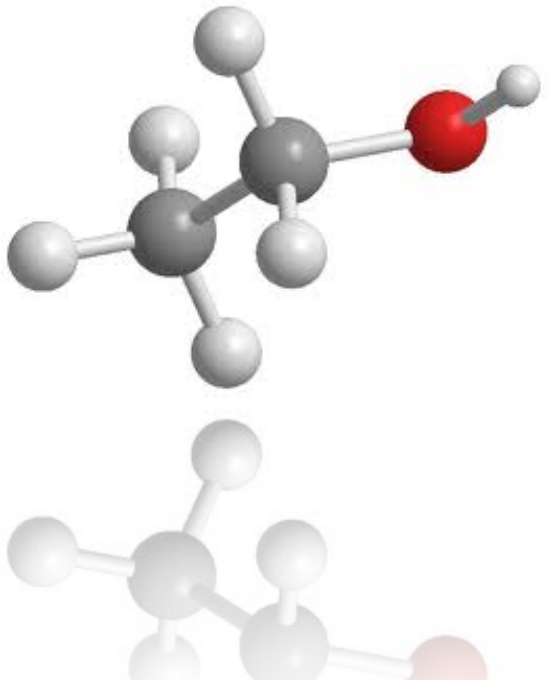
New Chemistry Through Collaboration

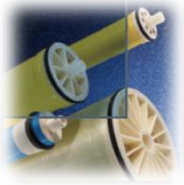
Our Methodology

- We are constantly scouting the world for strategically enabling technologies and opportunities to drive Dow's growth strategies.
- We serve as a collaborative catalyst for Dow businesses.
- We incubate promising business opportunities by creating the necessary conditions to cultivate business growth opportunities.
- We commercialize and then integrate growth options into existing or new operating businesses.



Collaboration With Powerful Results

Clean Filtration Technologies LLC



DOW Energy Materials

Advancing Energy Storage

LIGHTSCAPE materials, inc.

solazyme

opxbio good chemistry.

POWERHOUSE™ DOW SOLAR

DOW KOKAM™ Power to move the world

DOW

DOW POWERHOUSE ™ Roof Shingles

Description

Building integrated photovoltaic (BIPV) design combines roofing protection and power generation in one product.

Sustainability Profile

- Aesthetically pleasing and neighborhood- friendly, designed for asphalt rooftops
- Installed by a roofer along with standard asphalt roofing materials which eliminates additional steps and costs
- Interconnected system design allows for a single power connection
- Launched in October 2009, the POWERHOUSE™ Solar Shingle is commercially available today from selected professional roofing providers.

TIME Magazine
"50 Best Inventions of 2009"

2010 AWARD WINNER
GLOBE Foundation
"Environmental Excellence in Emerging Technology"

AIRSTONE™ Systems for Wind Energy

Description

- Applying technologies to make wind blades stronger, lighter and easier to produce, AIRSTONE™ Systems for Wind Energy is an innovative growth catalyst for alternative energy solutions.

Sustainability Profile

- AIRSTONE™ Systems enable wind blades to achieve the same strength with less weight than polyester-based composites
- Multiple product grades allow customers to tailor their final product based on specific market and environmental conditions
- Proprietary technologies help manufacturers improve cycle time and make longer blades – increasing energy production

Gluten Replacement

Description

Foods containing METHOCEL™ gluten replacement taste, feel and look great, allowing consumers to improve and satisfy their dietary needs.

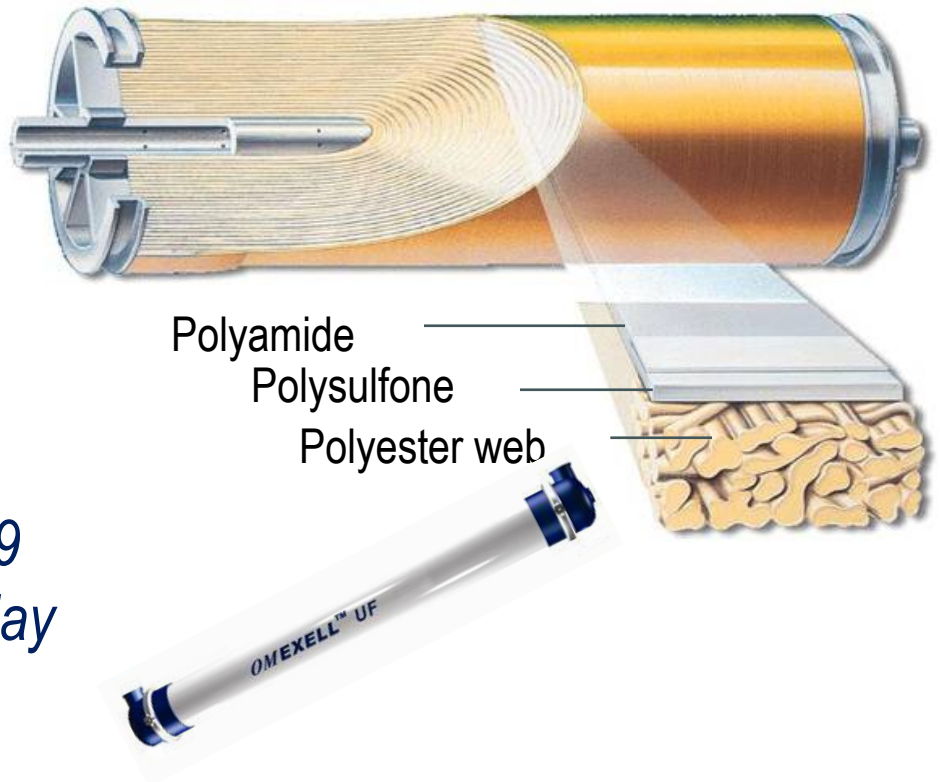
Sustainability Profile

- Dietary needs satisfied without compromise
- METHOCEL™ gluten replacement binds water in bread, pasta and beyond, resulting in better taste and enduring moistness
- Farewell to flat and stodgy or dry and tasteless gluten-free food options
- Peace of mind: plant-based, not animal-based
- Allows food manufacturers to easily expand into this growing health category

Dow Water & Process Solutions

- Reverse Osmosis
- Ion Exchange
- Ultrafiltration
- Arsenic Removal
- Boron Removal

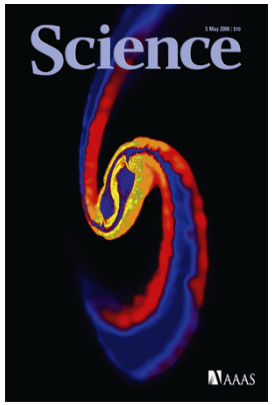
FILMTEC Reverse Osmosis Membrane

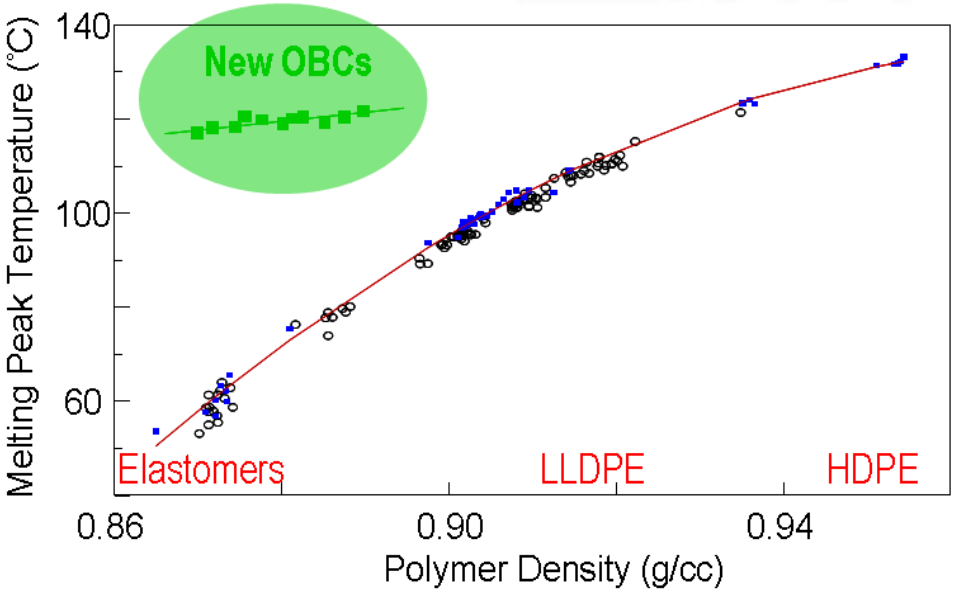


Dow's technology treats over 9 billions gallons of water every day

Olefin Block Copolymers

- One-pot synthesis of designer olefin copolymers
- From **Science** article to commercialization in the same calendar year
- 2009 R&D100 Award Winner for Materials





Plastics to Energy

Description

Dow successfully demonstrated a pilot test measuring how plastic that has been reused and recycled to the full extent possible can be used as fuel for an ultimate end-of-life option, instead of going to a landfill for disposal.

Sustainability Profile

- 96 percent of available energy was recovered
- Energy recovered was equivalent to 11.1 million BTU's of natural gas
- The recycle-to-energy recovery trial provided concept validation for submission and approval of one of several energy efficiency projects chosen to receive Dow's energy intensity improvement funding

What We need?

Talented and highly motivated PhD level professionals

- Chemical Engineers
- Chemists
- Material Scientists
- Other disciplines

College of Chemistry Recruiter
Pete Nickias
PNNickias@dow.com

Materials Science Recruiter
George Jacob
Gjacob@dow.com

Thank You!