





Dow Thailand Public Report



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About this Report

Dow Thailand has embraced Dow's 2015 Sustainability Goals, which are a voluntary 10-year commitment to efficient use of resources. We are determined to apply science and technology to product development in a move to enhance people's quality of life, placing priority on the environment, safety and sustainable development.

Therefore, Dow Thailand has published this Public Report with an aim to present Dow's performance in 2013 that helped shape the country's sustainability.

Not only does the report provide evidence of Dow's commitment, it also encourages the employees to adhere to the company's guidelines on sustainable development. In addition, it reflects the determination of Dow Thailand to make a meaningful contribution to society and communities in order to further promote the notion of eco-industry.

Message from the Managing Director

2013: Year of Success

Over the past few years, we have laid the foundation for Dow Thailand to sustainably grow the business and be widely recognized by the Thai society and local communities as a leading company with high environmental and safety standard. The year 2013 marked another year of success and pride for Dow Thailand comprising companies of Dow Chemical Thailand and SCG-DOW Group.

To reaffirm our commitment to Thailand, we are constructing a new Polyol plant at the Asia Industrial Estate which will start the production in the first quarter of 2015. Our continual expansion has contributed to the Thai economy in various aspects such as job creation, technology transfer, service business expansion, and community economics.

We adhere to our Responsible Care[®] commitment in the manufacturing and management of chemicals worldwide and it plays a critical role in our sustainability. Our environmental, health, and safety operations have been our way of living since the founding of the company. We continue to make progress toward the vision of zero accidents, injuries, and environmental harm. We have applied state-of-the-art technologies to monitor and control our operation processes to reduce waste, enhance energy efficiency, and control emissions. From our dedicated efforts, Dow Thailand received several safety and environmental awards in 2013. These included the Gold Level Award of the '2013 Zero Accident Campaign' from the Ministry of Labor, 'Green Industry Awards' from the Ministry of Industry, as well as the 'Good Governance for Excellent Environmental Management - Gold Star Awards' for six plants and 'Green Star Awards' for nine plants.

The 'Human Element' is another key driving force that enables the company to achieve its challenging goals. We promise to build a strong, diverse organization driven by a capable workforce and are committed to developing individual employees to be a part of Dow's energetic and strong global community. From Thailand's Top Graduate Employers and Employers of Choice Survey last year, Dow was selected to be 'Employer of Choice' for the chemical industry, which is a proof point of our dedicated efforts of people and work environment development.



Knowing that the company has responsibility towards its community, we aim to create value for society by being a good corporate citizen through our various corporate social responsibility and community outreach programs focusing on the environment conservation, youth education, and community well-being. In 2013, we conducted 18 key CSR projects and community relations activities, which you can find more details in the pages that follow. Our employee volunteers contributed around 4,800 man-hours in those programs which benefited more than 170,000 people in the communities and society to help them have better quality of life. With our strong commitment to community success, we have received the 'CSR Excellence Recognition' from the American Chamber of Commerce for three consecutive years. All the achievements we made in 2013 were without a doubt a result of great cooperation from our employees and all partners. I would like to express my sincere thanks to all of them for their great efforts and contributions given to the company. We will continue to achieve higher results while being a reliable business partners and contributing to society and community success.

Jirasak Singmaneechai Managing Director Dow Thailand

About Dow Thailand

Developing Scientific Innovations and Partnership for Sustainable Business and Society

Dow first came to Thailand in 1967 and set up Dow Chemical Thailand Limited for importing and distributing chemical products through an office in downtown Bangkok. In 1978, Dow established its first manufacturing facility in Phrapadaeng district of Samutprakarn province to produce Polystyrene after having identifying the growth potential of the local market and those across Southeast Asian region.

In 1987, Dow signed its first joint-venture agreement with Siam Cement Company, one of Thailand's most recognized industrial conglomerates, to set up SCG-DOW Group. The Group moved into Map Ta Phut by starting up a Styrene-Butadiene Latex plant and a Polyurethane plant in 1993. Over the next six years, the company embarked on series of investments and constructed more integrated, world-scale manufacturing facilities such as Polystyrene, Ethylbenzene and Styrene Monomer, and solution Polyethylene plants.



At present, Dow Thailand is the largest manufacturing base of Dow in Asia Pacific. Apart from operating the manufacturing, Dow Thailand is a leading importer of chemicals for diverse industries in Thailand, including those for agriculture and household pesticides.

At present, Dow Thailand is the largest manufacturing base of Dow in Asia Pacific. We are committed to developing scientific innovations and, as a major partner, put our best effort into effectively coordinating collaboration and connection among all sectors in order to bring about business and social sustainability.

Vision

To be the most valuable and respected science company in the world

Mission

To passionately create innovation for our stakeholders at the intersection of chemistry, biology and physics

Dow's Values

Integrity

We believe our promise is our most vital product – our word is our bond. The relationships that are critical to our success depend entirely on maintaining the highest ethical standards around the world.

Respect for People

We believe in the inherent worth of all people. The employees of Dow are the engine of value creation; our imagination, determination, and dedication are essential to growth.

Protecting Our Planet

We believe in protecting the world's resources. Dow's sustainability journey involves the world's best problem solvers working on the world's biggest challenges. The decisions we make, the innovations we deliver and the goals we achieve are all driven by our intent to "Set the Standard for Sustainability", making the world safer, cleaner and greener for generations to come.

Code of Business Conduct

In December 2010, Dow's Board of Directors adopted a new Code of Business Conduct, called The Diamond Standard. This new Code puts a framework around the Values that is multifaceted and clear, setting expectations and guiding behavior. The Code applies to all Dow employees and our subsidiaries, as well as joint ventures that adopt the Code.

The Diamond Standard, Dow's Code of Business Conduct, can be found on our website or http://www.dow.com/company/aboutdow/ code_conduct/ethics_conduct.htm



Milestones of Dow Thailand



1967

1978

1987

1990

First sales office established in Bangkok Start up of Polystyrene plant in Phra Pradaeng Joint-venture with SCG (SCG-DOW Group) Plant construction at Map Ta Phut Industrial Estate







2001

Acquisition of Union Carbide Chemical Co., Ltd.

2007

Dow and Solvay's a joint-venture announcement for a Hydrogen Peroxide plant project at the Asia Industrial Estate

2009

Acquisition of Rohm and Haas

Inauguration of the new operation complex at Asia Industrial Estate

2012



Business Structure of Dow Thailand

Company	Plant	Products	Use of Products			
	Companies of Dow Chemical Thailand					
	Map Ta Phut Industrial Estate • Polyol and Formulated Polyol plant	 Polyol Formulated Polyol 	 Flexible Polyurethanes ✓ Mattresses & pillows ✓ Bath sponges ✓ Couch and sofa cushions ✓ Automotive seat cushions ✓ Automotive seat cushions Rigid Polyurethanes ✓ Insulators in refrigerators and electrical appliances ✓ Foam insulation for wall & building 			
	Map Ta Phut Industrial Estate • Polyolefin Encapsulant Films plant	• Polyolefin Encapsulant Films	• Materials for solar cell production			
Dow Chemical Thailand Ltd.	Asia Industrial Estate • Propylene Glycol plant	• Propylene Glycol	 Antifreeze, coolant, and aircraft deicing fluids Heat transfer fluid in the industrial processes Industrial solvent for paint and coating businesses Food and flavoring Pet food and animal feed Moisturizing substances for cosmetics, personal care products, and fragrance Pharmaceuticals Reactive components and/or chemical intermediates in Urethane business Hydraulic and break fluids Plasticizers Thermoset plastic formulation 			

Company	Plant	Products	Use of Products			
	Thailand					
	• Import business	• Other Dow's products that serve diverse Industries such as chemicals and plastics for automotive industries, filter materials (resin) for ion exchange and membrane materials used in the reverse osmosis water filtration system.				
Carbide Chemical (Thailand) Ltd.	Hemeraj Eastern Industrial Estate • Emulsion plant	Synthetic Latex Water-based emulsion paint Roof-tile coating Adhesive Fabric coating				
Rohm and Hass Chemical (Thailand) Ltd.	Hemeraj Eastern Industrial Estate • Poly-Acrylic Acid (PAA) Plant	 Acrylic Emulsion Poly-Acrylic Acid Solutions Water-based emulsion paint Adhesive for tape and stickers Fabric coating 				
Dow AgroSciences (Thailand) Ltd.	Bangkok OfficeImport business	Agricultural chemicals and urban pest management products (herbicides, insecticides, and fungicides)				
		SCG-DOW Group				
Siam Synthetic Latex Co., Ltd.	Map Ta Phut Industrial Estate • Styrene-Butadiene Latex plant	• Styrene-Butadiene Latex	 Paper and packaging industry such as toothpaste or soap boxes Mixture of colors used in glossy magazine cover coating Binders used in concrete modification for cracking prevention Adhesive used in carpet backing 			
	Asia Industrial Estate • Specialty Elastomers plant	 AFFINITY[™] Polyolefin Plastomers ENGAGE[™] Polyolefin Elastomers 	 Industrial packaging Automotive thermoplastic applications Product molding 			

Company	Plant	Products	Use of Products					
	SCG-DOW Group							
Siam Polystyrene Co., Ltd.	Map Ta Phut Industrial Estate • Polystyrene plant	 Polystyrene ✓ General Purpose Polystyrene (GPPS) ✓ High Impact Polystyrene (HIPS) 	 General Purpose Polystyrene (GPPS) ✓ CD boxes ✓ Packages such as boxes and foam packaging ✓ Plastic containers such as forks, spoons, plates and glasses High Impact Polystyrene (HIPS) ✓ Composition of consumer electronics and electrical appliances such as external frames of air-conditioners, televisions, computers or refrigerators ✓ Plastic containers and packages ✓ Toys 					
Siam Styrene Monomer Co., Ltd.	Map Ta Phut Industrial Estate • Styrene and Ethyl Benzene plant	• Styrene Monomer	 Raw material supplied to Polystyrene plant and Styrene-Butadiene Latex plant Feedstock for Dow Chemical Thailand's Emulsion plant and Poly-Acrylic Acid (PAA) plant Sold to other customers as raw materials for intermediate and finished products for domestic and re-export markets 					
Siam Polyethylene Co., Ltd.	Map Ta Phut Industrial Estate • Polyethylene plant (Train I) • Polyethylene plant (Train II)	• Linear Low-Density Polyethylene (LLDPE)	 Food packaging (i.e. stretch cling film, food overwrap, and sealant layer for flexible food packaging such as tomato sauce) Component of diapers Drip irrigation for agriculture 					
MTP HPPO Manufacturing Co., Ltd.	Asia Industrial Estate • Propylene Oxide plant	 Propylene Oxide Propylene Glycol (technical grade) 	 Feedstocks for various industrial products such as vehicle foam cushions, refrigerator insulation, food packages, etc. Components in food and drug industries. 					

Company	Plant	Products	Use of Products			
Joint-Venture between Dow and Solvay S.A. (operated by Solvay S.A.)						
MTP HP JV (Thailand) Ltd.	Asia Industrial Estate Hydrogen Peroxide plant 	• Hydrogen Peroxide	• Versatile chemical with various applications in the paper industry, textile industry, electronics industry, chemical industry, effluent and wastewater treatment, food industry, and disinfectants and consumer products			
	Joint-Ventures	between Dow and S	CG (operated by SCG)			
Rayong Olefins Co., Ltd.	Rayong	EthylenePropylene Mixed C4BenzeneToluene	• Materials for thermoplastics production			
Map Ta Phut Olefins Co., Ltd.	Rayong	 Ethylene Propylene Benzene Toluene Mixed Xylene 	Materials for thermoplastics production			
Rayong Terminal Co., Ltd.	Rayong	• Storage and port facilit	ies service provider			



Sustainability Overview

Living in the today's world of limited resources, Dow recognizes everything we do and how we act is matters. We thereby mind every single step we advance and dedicate our expertise and resources, including our best scientists and engineers, to tackle some of the world most pressing problems through innovation. Our ultimate aim is to contribute sound science for a sustainable world. Dow adopts the principle of sustainable development to every our undertaking following our promise to sustainability. We are committed to using resources more efficiently, providing value to our customers and stakeholders, delivering solutions for human needs and enhancing the quality of life of current and future generations.

In 1995, Dow set important goals to improve environment, health and safety performance, and were recognized for

our achievements of the initiative. We proceeded further with even greater ambition by introducing the 2015 Sustainability Goals in 2006. The more ambitious and next-generation set of goals focus firmly on strengthening relationships within the communities where we operate, continuing improvements of product stewardship and innovation to solve some of the world's most pressing problems without depleting the world's resources, and reducing our footprint on the globe.

Dow's Sustainability Pillars

As a world leader in applied chemistry, Dow is uniquely positioned to drive change by delivering sustainable and innovative solutions that contribute to human progress and the growth of our business. Dow organizes its sustainability focus around four key pillars.

Smart Solutions for Today	Innovations for Tomorrow	Responsible Operations	Partners for Change
Our technologies enable our customers, and their customers, to develop products and services for a more sustainable future.	We contribute to the sustainability of society and our planet by developing innovative technologies for current and future markets.	Our infrastructure has a positive impact on our company, our communities and ourselves; our operations are a model for others, wherever we operate.	We are leaders in advancing all aspects of sustainability, openly collaborating with customers, suppliers, communities, civil society and governments.

Dow's 2015 Sustainability Goals

Dow's 2015 Sustainability Goals cover seven areas of operations:

Sustainable Chemistry

By 2015, Dow will increase the percentage of sales to 10% for products that are highly advantaged by sustainable chemistry.

Dow will publicly report on our progress by:

- Reporting our overall annual assessment of our sustainable chemistry index, and performance against our percentage of sales having sustainable chemistry advantages.
- Presenting and/or publishing life cycle assessments that are validated independently by an external stakeholder, on existing or planned Dow products.

- Providing ongoing updates on promising areas of research and investments and collaborations that spur sustainable chemistry innovation.
- Promoting sustainable chemistry internationally through student prizes and Dow employee awards under The Dow Sustainability Innovation Challenge Award program.



Breakthroughs to World Challenges

We are actively working toward, and committed to achieving, at least three breakthroughs by 2015 that will significantly help solve world challenges.

- Energy and Climate Change
- Water
- Food
- Housing
- Health



Energy Efficiency & Conservation

We will reduce our energy intensity 25% by 2015 from a 2005 baseline.

- Our manufacturing energy intensity, measured in BTUs per pound of product, has improved more than 40% since 1990, saving the company more than \$24 billion and 5,200 trillion BTUs.
- We are one of the largest producers of innovative products that reduce energy use: building insulation applications, solutions for fuel-efficient vehicles, technology to enable wind power, and integrated solar systems into building materials.



Addressing Climate Change

We will maintain all greenhouse gas emissions below 2006 levels.

- We will use 400 MW of clean energy by 2025.
- We will find ways to grow our company, but not grow our GHG emissions.
- Dow's insulation products in service reduce GHGs by multiples more than six times our own emissions on an annual basis.
- We will report the contributions of our products and solutions to increased energy efficiency and emissions reduction through the development of our Net Impact Tool, which will quantify the energy and GHG profile of products across the life cycle.



Product Safety Leadership

We will publish product safety assessments for all products by 2015.

- The assessments cover topics such as basic hazards, use, risk and risk management.
- We further commit to the equivalent of REACH-like testing on all our products or product families whether they are sold directly in the European Union or not.
- We will make product safety assessments accessible to the public at www.dowproductsafety.com.
- We will complete evaluations, with third party process verification, on high priority products by 2010 and for all products by 2015.





Contributing to Community Success

By 2015, 100% of Dow sites where we have a major presence will have achieved their individual community acceptance ratings.

We are collaborating with local businesses and citizens to help create stronger, safer and sustainable communities through:

- Engagement
- Establishing joint goals and plans
- Taking actions for the long-term success of all involved

Local Protection of Human Health & the Environment

By 2015, Dow will achieve on average a 75% improvement of key indicators for EH&S operating excellence from 2005 baseline.

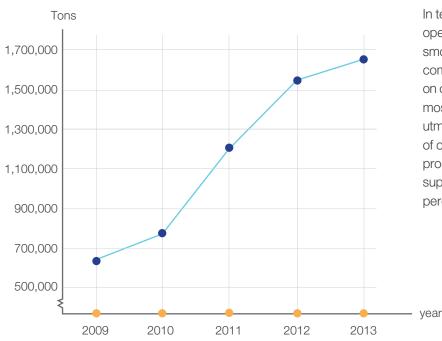
- We lead the way across virtually every facet of environment, security, health and safety performance.
- Dow is one of the first companies to introduce innovative protection equipment for our workers in 1897 and today we engage our neighbors through Community Advisory Panels.
- Our Vision of Zero is a leadership attitude and a corporate culture that is committed to zero accidents, zero injuries and zero excuses.

Contribution to Thai Economy

For almost half a century of Dow's operations in Thailand, we have focused not only on the growth of our business through continuous investment, but we have also placed great emphasis on the development of the Thai economy.

2013 Performance

Although several external factors including global economic fluctuations and a quiet economy and political instability in the country presented themselves as obstacles to our operations in 2013, Dow Thailand managed to push through these challenges and achieved a satisfactory performance in terms of overall production and sales thanks to its employees' focus on goals and planning, unity and financial discipline.

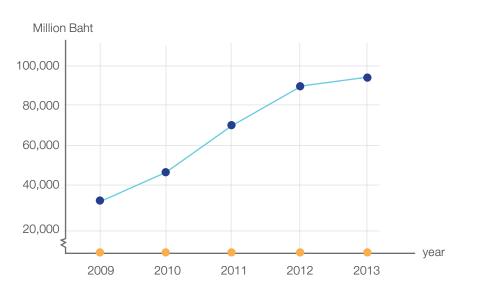


Total Production of Dow Thailand in 2013

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In terms of production, last year's operations of Dow Thailand went smoothly and were in line with the company's goal. We had set our sights on outstanding product supply reliability as most of our plants were able to achieve utmost reliability while meeting the needs of our customers in terms of delivery and product quality control. The product supply reliability rate in 2013 was 96 percent.

Net Sales of Dow Thailand in Past Five Years





The latest addition to Dow's production is the Polyol plant in the Asia Industrial Estate. With its construction beginning in the first quarter of 2014, the plant has scheduled its commercial production for the first quarter of 2015. The facility uses most advanced technology in the designing of its continuous production process to produce Polyol, the material used by the continuous industry to produce Polyurethane, which is used to produce mattresses and beds, furniture and automobile cushions, coating, and anti-leakage materials.

Technology Transfer

Wherever we build our plants, Dow Thailand always embraces state-of-the-art technologies and those that exceed the environmental standards specified by laws. These technologies enable us to implement our environmental protection policy with utmost efficiency throughout our production process and optimize the use of raw material and resources in our production. The advanced and highly complicated technologies require experienced and skillful persons to operate them. Dow's experienced engineers, who have successfully started up Dow facilities around the world, have worked closely with Thai engineers to transfer their knowledge and know-how to ensure safe and reliable operations for the long run. Today, it is our pride that the operational workers and managers in charge of operating these state-of-the-art plants are all Thai.

In addition to technology transfer, we also share our knowledge in technology management, health, environmental and safety practices, and energy management with other governmental and private agencies, especially industrial entrepreneurs who can apply the knowledge and further develop their own industries and the country's overall industrial sector.

Dow facilities around the world, have worked closely with Thai engineers to transfer their knowledge and know-how to ensure safe and reliable operations for the long run.

Adding Value to Thai Industries

Combining the elements of science and the human element, Dow is committed to creating innovations and solutions for the future. As a business partner who focuses on mutual sustainability with its customers, we develop new technologies and products with added value and serve industries such as paint, home appliances and electronics, food and food processing, packaging, and medicine, meeting the various needs of the market.

The success of Dow business in Thailand is also showcased in ThinkAsiaInvestThailand.com of the New York office of the Board of Investment of Thailand to promote Thailand among the foreign/ international investors.



Job Creation and Professional Skills Development

Dow Thailand puts importance on the skills development of all employees. Training is regularly provided to our own employees as well as contractors and sub-contractors.

Job Creation

The number of employees at all the companies of Dow Chemical Thailand and SCG-DOW Group increased from 700 in 2009 to over 900 in 2013 as a result of investments in new plants. The company also hires contractors to support the completion of projects and can be hiring over 10,000 workers for on-site construction at a particular time.

Number of Employees of Dow Thailand in Past 5 Years

Year	2009	2010	2011	2012	2013
Number of Employees	764	901	930	956	922

Extensive Professional Skills Development

We invest in enhancing the potential of our employees through various approaches, including overseas training in countries such as Canada, Germany, Belgium and the United States for employees in major positions. This allows the employees to learn about cutting-edge technology and have the opportunity to take on regional roles. As for new employees, they will receive training based on Dow's best practices and work with Dow experienced staff or in-house experienced professionals so that they can smoothly integrate into the company's operations. We provide tools, resources, and various training programs including global training, specific role training, and other professional training to enhance employees' expertise and leadership and to become future leaders.

Skills Development for Construction Contractors

Skill Assessment Program

In 2009, we initiated the 'Skill Assessment Program' aimed at enhancing our skilled workforce and ensuring safety in all operations. Since the implementation of this program, the company has experienced improved safety statistics. The 'Skill Assessment Program' not only contributes to the company's safety performance, but it also contributes to industry safety and professional standards.

Training Center

At our training center, contractors and sub-contractors are trained with topics ranging from Dow safety standards to skills necessary for safe operations. The training provided to our contractors and sub-contractors do not only enhance their current skills and capabilities but also contribute to their better career future. In 2013, a total of 8,987 contractors and sub-contractors were certified by ten training programs.

Promoting Growth in Locality

The successes of Dow Thailand have encouraged the growth of business derivatives, especially in Rayong where we base our production facilities. Our operations provide business opportunities to suppliers and contractors as well as local residents in nearby communities.

Boosting Car Rental Business

All the cars rented by Dow Thailand for its operations in Rayong have been registered in the province and have Rayong registration plates.

Boosting Growth and Development of Logistics Business

The expansion of our Propylene Glycol manufacturing site, which was completed and began its operations in 2012, had a great impact on logistics activities in Rayong and Chonburi. The project helped boost the food-grade ISO tank container

business, the general container business as well as the drumming business for food-grade and non food-grade industry, thus significantly increasing employment.

The rental of a warehouse in Laem Chabang as its new logistics center allowed Dow Thailand to manage the transportation between Map Ta Phut and Laem Chabang effectively and reduce the daily congestion at both sites.

In addition, the site expansion led to the training and development of third party logistics service providers in safety standards and quality control specifically for the food industry, which helped improve the country's workforce and their potential as a whole.

At the same time, the company placed emphasis on its logistics standards. Dow's efforts in this area included the promotion of knowledge in health and safety management among logistics operators, the monitoring of vehicles' speed, the installation of the GPS to track the vehicles and regular inspection of the system. This was to ensure safety and reduce risks from incidents.



Supporting Community Economy

We are part of the communities we operate in and always contribute and provide support to our neighborhoods. Since the start of our operation in Thailand in 1967 and followed by our business expansions for more than 40 years of presence here, we have engaged in countless business and social activities that involved the consumption

of goods and services. The company has decided to choose products and services developed by our neighboring communities following our aim to support the economy of those localities. In 2013, Dow Thailand spent more than 30 million baht to purchase products and services in the Map Ta Phut and Ban Chang districts. Our expenditures have helped increase the cash flow in the community economy.



Taxes and Funding

Every year, Dow Thailand delivers a significant amount of corporate taxes to the country. In addition, we annually pay other taxes to the administration of the localities where we base as well as offer financial support to community and social development projects.

Tax Payments

Dow Thailand annually pays a combined amount of around 8 million baht of taxes, comprising property and land, local maintenance and signboard taxes, to Map Ta Phut and Ban Chang Municipalities.

Financial Support for Energy and Power Funds

Dow Thailand provides financial support to relevant funds following our policy on the promotion of co-existence between business organizations and neighboring communities. One of the funds we contribute to every year is the Power Development Fund, whose objective is to promote the development of communities surrounding the sites of the power plants in the area.

Funds for Community and Social Development Projects

In 2013, the company spent over 15 million baht to support several community and social development projects in Thailand.

Responsible Operations

Dow strives to create products and services that make life better for people around the world. We adhere to our Responsible Care[®] commitment in the manufacturing and management of chemicals worldwide and it plays a critical role in our sustainability. At Dow, our environmental, health, and safety operations have been our way of living since the founding of the company. We continue to make progress toward the vision of zero accidents, injuries, and environmental harm and publicly report our safety, health, and environmental performance. Our commitment to Responsible Care® is to ensure all involved parties that our operations, wherever they may be, have a positive impact on our company and nearby communities and serve as a model for others.

Each Dow employee has the responsibility to ensure that our products and operations meet all applicable government and/or Dow standards, whichever is more stringent. Dow Thailand achieves manufacturing excellence through effective implementation and leveraging of Most Effective Technology and Operating Discipline practices, both within our organization and with business partners. Environmental, health, and safety requirements are among the drivers for continual improvement of manufacturing processes and most effective technologies, with experts from functions and businesses collaborate closely to improve our performance and ensure sustained progress against the 2015 Sustainability Goals.

We are committed to the elimination of all injuries, prevention of adverse environmental and health impacts, reduction of waste and emissions, and promotion of resource conservation throughout our manufacturing. Our employees are required to participate in training programs that range from manufacturing specific safety processes and emergency response procedures to environmental practice programs such as Waste Reduction Always Pays (WRAP) and the safety performance campaign such as Drive to Zero.

ENVIRONMENTAL, HEALTH AND SAFETY POLICY



At Dow, protecting people and the environment will be a part of everything we do and every decision we make. Each employee has a responsibility in ensuring that our products and operations meet applicable government or Dow standards, whichever is more stringent.

Our goal is to eliminate all injuries, prevent adverse environmental and health impacts, reduce wastes and emissions and promote resource conservation at every stage of the life cycle of our products. We will seek to continually improve our performance, we will report our progress and we will be responsive to the public.

Health and Safety Operations

Dow Thailand is confident that its safety efforts are second to none across Dow's operations worldwide and are the responsibility of all employees. We believe in zero accidents and, therefore, each employee must strictly and continuously follow Dow's safety policies and the Vision of Zero.

Drive to Zero

As part of the Vision of Zero, the Drive to Zero safety program was introduced in Thailand in 2006 to enhance the awareness of local employees and contractors on the importance of the Drive to Zero goal, which aims to see everyone returns home safely every day. The program reflects our emphasis on safe behavior among our employees, contractors, and members of the nearby communities. We expect our employees and contractors to not only act safely, but also to look out for their colleagues' safety.

The Drive to Zero concept is applied to every activity at Dow and its importance is reinforced to all Dow employees and contractors as the Drive to Zero logo is extensively presented on documents at meetings, the flags raised in front of the plants and the badges and helmets that the employees wear at manufacturing sites. All these



efforts under the Drive to Zero campaign are designed to achieve its ultimate goal that everyone returns home safely every day.

With shared commitment and joint effort from everyone, the Drive to Zero program in Thailand has continuously thrived. We have been very successful in our safety operations.

Health and Safety Performance



Recordable Personal Safety Rate

According to the above table showing the annual recordable personal safety rate, the recordable incident rate per 200,000 hours of Dow Thailand in 2013 stood at 0.11, which meets the Dow's Sustainable Goal of achieving the rate at 0.12 or less by 2015. Meanwhile, the average recordable incident rate for the U.S. manufacturing industry is 5 while the chemical industry is the safest, achieving an average rate of 2.4. Therefore, Dow Thailand's safety efforts have been more than impressive.

Environmental Stewardship

Dow Thailand puts importance on 'Protecting Our Planet', a core value shared by Dow across the world, and keeps it in mind at every level of our business. We particularly emphasize environmental conservation at our business bases, trying to minimize waste at all stages, optimizing the use of resources, and reducing impacts on surrounding environments and communities.

Reduce, Reuse, Recycle

Dow Thailand closely monitors and controls waste from the beginning of the processing cycle to the end point to ensure that there is no impact on surrounding environments and communities. We work hard to minimize waste through the 3Rs – reduce, reuse, recycle. We use advanced technology to help us reduce the amount of waste from production, then we reuse and recycle our waste to the most possible level. Waste that cannot be reused or recycled, meanwhile, will be utilized as alternative fuel or raw material at cement kiln facilities. The secured landfill is the least desirable alternative.

Apart from strict compliance to local regulations such as application for a waste transportation permit and the issuance of a document accompanying hazardous waste transportation, we have our own stringent waste disposal procedures and inspection. We evaluate the performance of our waste disposal service providers and specify that their vehicles use the Global Positioning System (GPS) so that we can track their routes until the waste is disposed of properly and safely.

We are determined to reduce waste, waste water, and drain water and constantly monitor the quality of the water with an online system that can measure the pH level, the total organic carbon (TOC), and the chemical oxygen demand (COD) to ensure that the water we discharge from our production will not cause environmental impacts. Thanks to our attention to environmental care, Dow Thailand has received the ISO 14001 standard for environmental management and has always maintained and improved its standard since.

Continuous Emission Monitoring System (CEMS)

Dow Thailand has adopted the Continuous Emission Monitoring System for its facilities in Rayong, which is an online analysis system of the quality of air emitted from the combustion stack. The system closely inspects the air quality to ensure that the emitted compounds are within the limits set by government standards and do not cause adverse impacts on the environment and surrounding communities. Our CEMS is connected to the computerized systems of the Industrial Estate Authority of Thailand for real-time reports to government agencies 24 hours a day. Such system brings about trust in our environmental disclosure by guaranteeing transparency and accountability and benefits the company by allowing for effective monitoring and proactive prevention.

Volatile Organic Compounds Controlling System

Dow Thailand pays a great deal of attention to the controlling of volatile organic compound (VOC) emissions in every process, starting with the designing of plants. We also adopt the best available technologies and strictly follow the guideline on VOC emissions to ensure that our operations do not harm the environment.

Dow Thailand has adopted close-system technology for chemical loading and unloading (vapor return line, dry-break coupling connection, etc.), sealless or double mechanical seal pumps and a close sampling system for hydrocarbon materials, and the Continuous Emission Monitoring System (CEMS). In addition, we also have a fugitive emission program to regularly monitor minor fugitive leaks from pumps, valves, flanges, connectors, etc. and are committed to rapid repair to any detected leak. We also encourage our employees and contractors to actively report potential leaks or small drips and take corrective action to prevent big leaks from occurring.



Energy Efficiency and Conservation

As we aim for sustainable growth, Dow Thailand places great emphasis on energy efficiency and conservation. Each of our plants carries out various programs to reduce energy consumption, including improvements to the production process to reduce electricity and natural gas utilization, setting up the variable frequency drive (VFD) to reduce pump speed, implementing air recirculation, and adopting the best energy-saving equipment and technologies at our plants and offices.

The installation of the Energy Recovery Units at the Propylene Oxide plant is one outstanding example of Dow Thailand's attempt to effectively reduce energy consumption. In August 2013, the plant installed Energy Recovery Units to use excess heat from the thermal oxidizers to 50 million tons of steam an hour and allows the company to save US\$10 million, or about 300 million baht, a year from this energy recovery effort.

In addition, Dow Thailand has strategically participated in the Energy beyond Standards project, which was jointly launched by the Ministry of Energy's Department of Alternative Energy Development and Efficiency, the Thailand Environment Institute, and the Thailand Business Council for Sustainable Development.



Thanks to its commitment and the aforementioned operations, Dow Thailand had an impressive performance in reducing energy consumption, as shown in the table below.

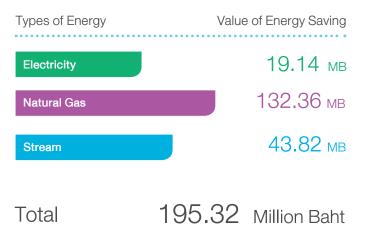
Dow	Thailand's	Manuf	acturing	Enerav	Intensitv

Production Unit: BTU per Pound of Product							
Year	2009	2010	2011	2012	2013		
Dow's Manufacturing Energy Intensity at Map Ta Phut Industrial Estate	2,821	2,694	2,492	2,537	2,497		
Dow's Manufacturing Energy Intensity at Asia Industrial Estate	-	-	6,149	6,116	4,893		
Total	2,821	2,694	3,038	3,719	3,448		

Remark

- In 2012, the manufacturing energy intensity at the Dow Thailand's Map Ta Phut Industrial Estate included the energy consumption of the Polyethylene plant (Train II), which began its operations in 2010. Each plant continues to reduce its energy consumption.
- The manufacturing energy intensity at Dow Thailand's Asia Industrial Estate consists of data of the commissioning and the operations (and includes the energy consumption by the Specialty Elastomers plant, the Propylene Oxide plant, and the Power, Utilities & Infrastructure unit).
- The Speciality Elastomers plant began its operations in April 2011.
- The Propylene Oxide plant began its operations in October 2011.

Dow Thailand has developed a variety of programs to effectively reduce energy consumption. For example, MTP HPPO Manufacturing Co., Ltd. has reduced gas emissions from waste incineration by 61,137.5 megawatt-hours/year, or an equivalent of an almost 130 million baht saved on energy, and has reduced steam consumption by the T-5400 by 27,375 megawatt-hours/ year, or an equivalent of an almost 30 million baht saved. Meanwhile, Siam Styrene Monomer Co., Ltd. has cut 13 million baht worth of energy consumption for its production of Ethylbenzene. In 2013, the company succeeded in saving different types of energy as indicated in the table below.



Environmentally – Friendly Technologies

The stage of designing our plants and planning each production process is crucial for Dow Thailand. To ensure the best environmental management possible, we use the best available technologies during this stage. Some of our major achievements are:

- The construction of a world-scale Propylene Oxide (PO) plant at the Asia Industrial Estates (AIE) in Rayong affirms Dow's commitment to breakthroughs in technologies for the environment. The facility uses an innovative technology jointly developed by Dow and BASF to extract Propylene Oxide from Hydrogen Peroxide (HPPO). The innovative HPPO technology won the Presidential Green Chemistry Challenge Award from the U.S. Environmental Protection Agency in 2010 and the Innovation and Excellence Award in Core Engineering from the Institution of Chemical Engineers in the United Kingdom in 2009. This innovation enables:
 - Reduction of waste water by 70-80% compared to the existing technology;
 - Reduction of energy consumption by 35% compared to the existing technology;
 - Reduction of infrastructure and physical foot print with simpler raw material integration and avoidance of co-products, resulting in optimized use of resources and environmental friendliness
- The Specialty Elastomers plant at the Asia Industrial Estate has adopted the most advanced technology to produce Polyolefin Plastomers and Polyolefin Elastomers in a more environmental friendly manner comparing with other conventional technology. Our technologies include:
 - Close system which vapor derived from production process is accumulated for elimination at the flare.
 - No involvement of carcinogens and volatile organic compounds (VOC's) in the production process as required by the National Environment Board's announcement in 2007.
 - No sulfur oxide emission.
 - Utilization of Ultra Low NOx technology for burner and water heater to reduce the release of nitrogen oxide from production process.
- Our operations at the Asia Industrial Estate utilize the best available technology for Waste Water Treatment Plant (WWTP). WWTP is designed to use biological treatment as a main mechanism for treatment. The facility utilizes an advanced treatment unit, such as Dynasand Filters and Activated Carbon Filters, to ensure that the quality of its effluent meets regulations. There are online



analyzers at the discharged point of WWTP to monitor the wastewater discharges. The online Chemical Oxygen Demand (COD) monitoring at WWTP discharged point is installed and continuously send signal to the responsible unit at the Industrial Estate Authority of Thailand. Odor Treatment Plant (OTP), involving OTP blowers and activated carbon filter units, is installed to minimize odor in WWTP. All odor concern process areas, including Equalization tank, Diversion tank and Bio-reactor basins, are covered. The air from these processes is used as alternative air in the biological treatment. The excess air will be treated by activated carbon filter unit. Since the



first start up of OTP, there has never been any odor issue in WWTP.

New Advanced Analysis Laboratory

Dow Thailand set up a new advanced analysis laboratory, the sixth facility for Dow globally, at the Hemaraj Eastern Industrial Estate (Map Ta Phut) in mid 2012 to support the company's growth in the Asia Pacific region. The new facility, which is named the Map Ta Phut ATC Non-Routine Analysis Laboratory, is different from our other laboratories in the sense that it does not focus on quality control only.

The setup of the new advanced analysis laboratory will focus on using state-of-the-art technologies for the following objectives:

- 1. To identify types and analyze the proportions of chemical components in a sample. This was not possible with existing analyses.
- 2. To develop new analysis techniques for more effectiveness and for tests on substances that can disrupt the production process.
- 3. To solve production problems, improve performance and handle emergencies, such as leakage and substance identification during an emergency.

For the past two years, the laboratory has played a critical role to enhance the production process which includes the following.

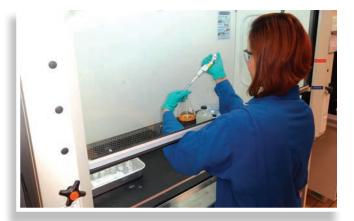
- A method for analyzing glycol ether acid in waste water for the redesigning of the discharge system.
- A method for testing residual monomers in products in order to ensure legal compliance.
- An analysis method for inspecting chemical components in production process for the improvement of waste and energy management.

Strengthening Environmental, Health and Safety Standards

Dow Thailand puts a lot of effort into the improvement of our environmental, health, and safety standards. In 2013, the company conducted the following programs:

Environmental, Health, and Safety Standards

- Effective environmental, health, and safety management system are strictly and continuously applied at all plants.
- Life Critical Standards are designed to improve safety awareness and behavior in a global effort to further improve our safety performance.
- Return to Operation Policy is designed to ensure that we have proper commissioning of process equipment returning to service to prevent any possible Logs of Primary Containment (LOPC) incident.
- Management of Change is a discipline that ensures review by experts and proper communication and training for all changes. This is to make certain that changes have been implemented effectively and smoothly.
- Injury and LOPC Prevention Workshop is held to provide Dow Thailand's employees an opportunity to review learning and knowledge about EH&S



experienced during year-round operations. In this workshop, the employees brainstorm and share ideas on risks and measures to prevent any possible incidents from happening.

• Dow Thailand applies similar EH&S standards used by Dow Chemical Company in the United State to contractor management. We place a stringent screening process and ensure effective training and the use of effective safety programs. All contractors are also subjected to our annual performance assessment.

Environmental, Health and Safety Training

• We continue our intensive EH&S training program and qualification to make sure that our employees and contractors are competent and that they have good safety awareness to perform their job.



- We build the strong culture of intervention for any unsafe behavior and/or condition through the Behavior Based Performance (BBP) program, site inspection (plant safety walkthrough), and on-spot recognition.
- We organize training in cardiopulmonary resuscitation (CPR), use of the automated external defibrillator (AED), and first aid such as how to use sterile dressing, transport patients who suffer a broken bone, stop bleeding, and treat patients suffering from burns or scalds, for our Bangkok employees.

Promoting Environmental, Health, and Safety Awareness

- Dow Thailand conducted the 2013 Safety and Green Day at our office in Bangkok and the production sites in Rayong to raise awareness about safety and promote its position as first priority in our operations. The annual event also underlined our commitment to the Drive to Zero program and included activities such as an exhibition on safety, video presentation, and games. Last year, a total of 1,010 employees, contractors, and other invited guests participated on the day.
- Sharing Best Practices

Responsible operations at Dow Thailand not only mean setting a good example, but also sharing our best practices with the neighboring communities, partners and society at large. Here are some of our major activities organized in 2013.

- Dow Thailand is a key member of the Responsible Care Club in Thailand as well as the Federation of Thai Industry. The membership serves as a channel through which we publicize our good practices for sustainable development. Over the years, Dow Thailand have hosted many visits from private companies, manufacturers, and industrial allies for them to tour our sites and meet with our EH&S management team and learn about the EH&S practice at Dow.
- Dow Thailand collaborated with other leading industrial companies in establishing Community Partnership Association (CPA). As a founding member of CPA, we have opportunity to share good practices for the benefit of the industry and the community.
- Dow Thailand collaborated with the Thailand Environment Institute, Krungthep Turakij Newspaper, the Department of Industrial Promotion, and the Thai-U.S. Creative Partnership to organize a seminar titled "Sustainability Trends: Keys for Green Business in AEC" to exchange knowledge in business operations for sustainability.

 Dow Thailand communicated our safety performance and emphasized the importance of safety among the employees through the quarterly employees communications session at the Bangkok Office and the production sites in Rayong province.



At this event Dow's EH&S management gave a talk on the application of sustainability principles to create applicable industrial and environmental standards.

- Dow Thailand joined a talk on "Process Safety Management Standard and Audit Guidance" at the National Engineering Conference and Thailand Engineering Expo organized by the Industrial Estate Authority of Thailand in conjunction with The Engineering Institute of Thailand under H.M. the King's Patronage (EIT).
- The company led a group of Dow Volunteers to educate students in Grades 4-6 at Ban Khao Huay Mahad in Rayong about safety in daily life while raising their awareness about safety at home and school and care for the environment. The activity was part of the Safety School project, which was initiated by Dow Thailand and is organized annually. Since 2008, the project has been implemented in 17 schools.



A Great Place to Work



Adhering to its "Respect for People" value, Dow places great emphasis on the Human Element. It is our belief that humans are an important driving force that enables an organization to achieve its challenging goals and position itself as a global leader.

At Dow, we believe in diversity and inclusion, which are apparent in our working environment, and the value of different experience and backgrounds and how the diverse perspectives of our employees will lead to innovation and invaluable creativity. We promise to build a strong, diverse organization, one that is driven by a capable workforce and committed to developing individual employees to be a part of Dow's energetic and strong global community.

For Dow Thailand, we also believe that by creating a happy workplace that values its employees, teamwork, and retention and development of a talented workforce, and by building an organization to be an employer of choice, we can grow with strength and sustainability. All these are key strategies for us.

Employer of Choice

Dow Thailand focuses on working together for positive impact on our customers, communities, and the planet. We offer competitive remuneration and rewards for competence and achievements as well as the opportunities for the employees with talent and commitment to advance in their career. The company expects and encourages all employees to show their leadership as we believe they have the potential to rise to the top of their chosen path.

1) Reputation and Recognition

• Employer of Choice: In 2013, a survey carried out by PROMPT Professional Resources & Services in conjunction with leading Thai companies and universities around the country named Dow Thailand the "Employer of Choice". The respondents were 1,563 students at leading universities who were graduating, those studying international programs at a Master's level, and office workers aged not over 28 years old.



 Company Introduction and Recruitment: Dow Thailand presents itself and makes recruitment at job expo events while also organizing talks and road shows at target educational institutions, making annual recruitment leaflets, and offering sponsorships at target educational institutions in the forms of scholarships and internships with an aim to forge relationships with students and meet with potential job applicants.



• Dow Employee Volunteers: Dow regularly organizes voluntary work and encourages its employees to give up their precious time outside work to participate in social activities. This brings pride to both the employees and the company as we contribute to the betterment of communities and quality of life and promote our corporate citizenship.

2) Employee Benefits

- Competitive welfare and remuneration packages: They are offered to the employees based on their performance and contributions. The packages include several additional benefits and follow these principles:
 - Competitive compensation programs benchmarked against top companies in our industry. This allows Dow Thailand to attract and retain the best talents.
 - A superior remuneration policy compared to market standards when the employees and the company itself exceed goals and objectives.



• Flexible Benefits: Adopted in 2011, this initiative was a result of a two-year study to boost employees' professional satisfaction. It allows individuals to fulfill their diverse needs and demands while still retaining core benefits. In 2013, a total of 875 employees, or an equivalent of 94%, participated in this program.



 AccelerateGreat@Dow: At Dow, we believe in showing appreciation to our employees who meet the job requirements, celebrate those who exceed expectations and go beyond what is required of them, and express gratitude towards those who support the company's activities or help out their colleagues in different ways. Both supervisors and employees can nominate and reward their co-workers for their outstanding efforts. The recognition ranges from a simple congratulation card to cash rewards of different values. To make it easy for the employees to say "Thank You" or show their appreciation for one another, Dow has established an internal web-based tool called AccelerateGreat@Dow.

3) Employee Care

- Safety: Dow Thailand adopts best practices in occupational health and safety to ensure the protection of our human resource, which is the most valuable asset for the company. We provide knowledge in ergonomics to the employees and contractors by organizing orientation for new employees, providing individual and group consultation, and hosting the Safety Day.
- Health: As part of our sustainability efforts, we focus on the occupational health and well-being of our employees. Our health programs include an annual medical check-up program, medical checkups for specific health risks, health evaluation following a change of the working environment, and examinations after a long leave, etc.



 Employee Assistance Program (EAP): This counseling program is a confidential service provided by experts, offering the employees and their families guidance on personal matters, including psychological health as well as legal and financial advice. The aim of this program is to prevent and resolve the employees' personal issues that may affect their health or work.

Happiness@Dow

With the belief that when the employees are happy at work, they can perform their roles effectively and the organization can grow sustainably, Dow Thailand seeks to organize activities that develop employee engagement and loyalty and create a happy working environment. In 2013, we organized the following activities:

1) Employee Engagement Programs

- The One Family @ Dow Program: This is a series of activities promoting employees' morale and strengthening their relationship with the idea of one family. The company is ready to stand by and support employees through their critical moments. The series of activities includes congratulating employees on their new born babies, wedding, graduation; visiting employees when they are hospitalized, etc.
- Long Service Celebration: It is a way to recognize the employees who have been contributing to the company for a long time and who are part of the company's success. In 2013, we awarded a total of 127 employees.



• The Get Wealthy Program: The company provides financial management education and counseling to help employees plan their money effectively to ensure their financial security for themselves and their families by inviting experts from leading banks to give advices on financial management, saving, debt management, tax reduction, etc.



- Recreational Activities: The company organized various aspects of recreational activities for employees based on their interests such as Songkran Festival activity, the New Year Party, and annual excursion programs.
- Family Day: Dow values the family unit, the fundamental principal institute that plays a critical role in the creation of talented and ethical people for society. Every year, the company organizes the Family Day to allow the employees together with family members to join the company's activities such as attending the performance shows and trips to historical sites or amusement parks in order to provide opportunities for their families to meet their colleagues and strengthen the relations between the management and employees.

2) A Happy Working Environment

Dow Thailand emphasizes creating a working environment that is friendly, energetic, and creative for employees. We value diversity and respect each other. We believe that a good working environment will enable the organization to increase the retention rate. Some of key activities implemented in 2013 included the following programs;

- Global Employee Opinion Action Survey (GEOAS) and Leadership Effectiveness Survey (LES): The GEOAS
 measuring employee engagement and satisfaction, gives employees the opportunity to provide feedback, and
 provides leaders with insights into how to improve Dow's working culture. Meanwhile, the LES is another tool that
 helps evaluate leadership and what leaders need to improve on and brings about the making of plans to achieve
 the suggested improvements. The two surveys have their main goal in creating a happy working environment.
- The Employee Listening Session: It is the session to offer the employees the opportunities to make known their problems, frustration over certain issues as well as their opinions and suggestions on the solutions to these matters. This activity enables the company to understand its employees better and develop the most appropriate solutions while reducing tension and increasing happiness for the employees.





- The Mentoring Club: Dow believes that new employees should receive help from mentors who can share their knowledge and experience in order to help the new employees to adjust themselves to the new environment quickly. Thus, the new employees will be able to grow their career path and have morale towards the company. Meanwhile, the mentors will be proud of themselves for receiving trust from the company to do this role.
- Attitude Change for Good Health: in 2013, Dow Thailand invited a yoga instructor and health expert to talk about attitude change that resulted in improved physical and psychological health.
- Inspiration for Employees: The first Thai to ever reach the top of Mount Everest, was invited to share his inspiring story about being on the world's highest mountain. This activity aimed to create inspiration for the employees while widening their perspectives and building their confidence in human potential.

Employee's Success Development

Dow Thailand puts a strong emphasis on providing promising career paths to our employees with the goal of retaining and attracting quality people to join our growing team.

Globally, we have established a variety of learning and development centers for the employees, offering programs and facilities such as online learning, formal and informal career counseling, classroom workshops, and a strong and enthusiastic employee network. These factors allow our employees to grow professionally based on their strengths and interests. Our employee development efforts can be categorized into three levels as follows:

1) Leader Development

This is an integral part of Dow Thailand and worldwide. Our leaders play an important role in Dow's success. In 2013, the company organized the following leadership development programs:



• The New Dow, New Asia Strategy Acceleration Session: 40 Dow Thailand executives came together to make business plans based on the New Dow, New Asia Strategy.

 New Leader Development: It is an ongoing leadership program which aims to equip new leaders with necessary information for them to perform their roles and develop their leadership skills. Last year's major activities under this program included the Leading Success Program, the Leader Sharing Session, and the Unleashing Leadership Potential Program.



• The Global Leadership Program: It is organized for leaders at different stages of their career. The program provides learning resources and development tools to improve leadership skills, including on-site training, online classrooms, reading materials, and self-training programs.

2) Employee Development

- Training in Thailand: The training programs in Thailand are developed based on our business needs and are in line with the specific needs of individual employees. Some of the training topics include quick thinking and problem-solving, building team culture and the power of influence In 2013, a total of 590 employees participated in 25 training programs.
- The English Day 2013 English Is Easy: The activity was organized for our employees in Bangkok and Rayong to give them the opportunity to improve their English and get tips from a speaker and host of English Breakfast. At the event, the employees also received consultation at the English Clinic and had fun with games at the Vocabulary Station.



 English Courses: As a multinational company, Dow uses English as the main language for communication. We expect all of our employees to communicate effectively in English and have developed a variety of English courses that match the employees' varying needs and skills. Some of the major courses are English for Specific Purposes, English Intensive Course, and E-Learning. In addition, we provide resources that promote a good learning environment, including the Development Library, the English Newsletter, the English Day and the Toastmaster Club. In 2013, a total of 120 employees attended 11 English courses organized in Thailand.







3) New Employee Development

 Great Start@Dow: This is an orientation course designed to equip new employees with tools and work guidelines as quickly as possible. The course provides information about Dow's history, strategies, missions, values as well as other knowledge and tools such as how to use IT and accounting software programs. It also gives counseling on personal matters so that the new employees can adapt themselves to the organization as smoothly and quickly as possible.

Corporate Citizenship

Right from the beginning of Dow over a hundred years ago, Herbert H. Dow, the company's founder, recognized the interwoven relationship between the company's success and that of society. As important as creating a successful business may be, Dow realized that the company had responsibility towards its community. This idea has been growing simultaneously with the growth of the company ever since, with focus being put on minimizing environmental impacts, bringing sustainable development to local communities and creating innovative products that respond to human progress. Most importantly, the company aims to create value for society by being a good corporate citizen through its social programs around the world.

Likewise, since founding the company in Thailand, Dow Thailand has committed itself to the principles of corporate citizenship, a mission we carry out with earnestness so as to improve the quality of life of the communities around our operational sites and help these communities create sustainable success.

The corporate citizenship policy of Dow Thailand reflects our promise to take care of society in accordance with Dow's 2015 Sustainability Goals. Wherever we operate, we have to be well-accepted by the nearby communities and achieve specific goals created for these areas. Dow Thailand has been successively conducting development projects for the success of communities, paying particular attention to the areas of education, the environment and the community well-being. The company encourages its employees to participate in these projects to cultivate a sense of social responsibility. The company's employees across all levels have helped make a difference, bringing themselves a feeling of pride to be part of society.

In 2013, Dow Thailand conducted the following social activities and community development projects:

National-Level Social Responsibility Activities



1. Dow Chemical for Sustainable Industry

Dow Thailand began its collaboration with the Thailand Environment Institute Foundation and the Ministry of Industry's Department of Industrial Promotion to launch a long-term project called the "Dow Chemical for Sustainable Industry" in 2011. The project aims

to apply the Lean Management for the Environment to organization with the hope of improving the industrial sector's environmental and manufacturing standards.

In 2012, the project developed the curricular of six training programs along with the manuals in order to support the operations of major industries in Thailand, including the pharmaceutical, textiles, beverages, metal, ceramics and general industries. A "Sustainable Environmental Management and Pollution Prevention" training program was conducted for the six industrial groups. Throughout the year, there were a total of 33 training groups with 2,311 people from 843 government and private agencies participating.

The project expanded its scope in 2013 by developing three new training programs, namely 1) Integrated Organizational Management Based on Lean Management for the Environment, 2) Development of Green Products for Environmental Sustainability and 3) Green Business Operations for Sustainable Development. The three training programs were organized 15 times with 667 people from 407 government and private agencies participating.

As for 2014, the Dow Chemical for Sustainable Industry project has a plan to further disseminate the knowledge on environmental management and production quality improvement using the Lean Management for the Environment and offers in-depth coaching by a team of experts. This is to give the participating organizations concrete results and help the Thai industrial sector, both large corporations and SMEs, adapt themselves and create business opportunities and competitiveness in preparation for the coming of the ASEAN Economic Community in late 2015.

2. Science & Technology Initiative and Sustainability Awards (STISA)



Dow Thailand in collaboration with SCG

Chemicals, The Thai Institute of Chemical Engineering and Applied Chemistry (TIChE), the Thailand Research Fund (TRF) and the National Innovation Agency (NIA) initiated the Science & Technology Initiative and Sustainability Awards (STISA) in 2009. The project aims to encourage students to think out of the box and develop innovations based on scientific and technological methods. The project highlights collaborative thinking with a focus on social and environmental responsibility and awareness on the power of responsibility and enthusiasm from all the participating students and professors. By 2013, STISA has been organized for six consecutive years with students from leading universities nationwide having submitted a total of 220 projects.

Support for Community Success

Education

Dow believes that efforts in educational development will help foster new innovators as well as future leaders, equipping them with all-rounded skills that can lead to better living for people in the future. We place our focus on STEM education (science, technology, engineering and mathematics) for the social responsibility activities we organize and continue to expand these activities globally, including in Thailand.

Dow Thailand has developed several educational programs, particularly in the science field, both on national and local levels. It is our belief that science education can give a strong foundation for the development of the country and this is in line with Dow's policy on corporate citizenship worldwide. Therefore, the company has partnered with leading organizations and educational institutes to initiate educational programs that will benefit Thailand's educational system.

1. Dow Chemistry Class

With our commitment to promoting science education among the youth, Dow Thailand has collaborated with the Chemical Society of Thailand under the Royal Patronage to set up the Dow Chemistry Class. The project promotes education in chemistry and the use of the small-scale chemistry laboratory technique, which offers higher safety, requires a lesser amount of chemicals, shortens



experiment time and reduces waste from experiments. Also, learners will have the opportunity to conduct real experiments, not only listening to the lectures, thus gaining more experience. The technique has been recognized by the UNESCO and has widespread use on an international level. Countries that adopt this technique in their education include the U.K., Germany, Austria, Mexico, the Philippines, Japan, China and Cambodia. This is the first time the private sector has applied the technique to the Thai educational system.

The Dow Chemistry Class can be divided into four parts: 1) introduction to safety chemical experiments, 2) the small-scale chemistry laboratory workshop for science teachers at 25 secondary schools in Rayong, 3) follow-ups and evaluation of safety chemical experiments at school and 4) reporting on learning and teaching results. The four parts have been carried out from late 2013 to 2014.

2. Vocational Chemical Engineering Practice College Project (V-ChEPC)

The Vocational Chemical Engineering Practice College Project or "V-ChEPC" is our collaboration with the Petroleum Institute of Thailand and the Petrochemical Club of the Federation of Thai Industries (FTI). Its objective is to develop a new teaching initiative for a new generation of technicians so that they will have specialized skills needed by the industrial sector, particularly the petroleum and petrochemical industries. Piloted at the Map Ta Phut Technical College, the two-year high vocational program adopts two new learning concepts: "learn how to learn" and "learning by doing". Since 2009, Dow Chemical Thailand has given 5 million baht to this project and has recruited four graduates from this program as new employees. Also, the company's employees also volunteer as guest lecturers.



3. Safety Schools

As safety is the first priority at Dow, our employee volunteers contribute their time to cultivate safety awareness among children and help improve the safety in neighboring community schools to ensure the students have a good and safe learning environment. Each year, Dow volunteers organize activities to provide basic safety knowledge to students in elementary and secondary educations with an aim to make their schools safer. The students will work with the volunteers to inspect school safety and make a report. After the survey, Dow Thailand will help support the improvement of unsafe areas according to the report by repairing equipment or facilities with a budget of about 50,000 baht per school. In 2013, the company conducted the Safety School activity once in December. Since 2008, we have already implemented this program in 17 schools.





4. Adopt-A-School

For over a decade, Dow Thailand has been working with the American Chamber of Commerce (AMCHAM) to carry out the Adopt-A-School project in Rayong. Its objective is to improve the basic infrastructure and the hygiene and the environment of schools and to provide educational support to students. The project includes funding for the construction or renovation of school facilities, such as toilets, kindergarten rooms, classrooms, libraries and playgrounds, and also provides other necessary educational equipment. From 2008-2013, the facilities of nine schools have been renovated including Wat Phala School, Ban Khao Huay Mahad School, Ban Payoon School, Ban Klong Phai, Ban Map Ta Phut School, Wat Ta Kuan School, Wat Kiripawanaram School, Prachummit School and Wat Ban Chang School.

5. Scholarships

Dow Thailand has been giving scholarships to students at various institutes every year since 1975. The scholarships are awarded to third- and fourth-year students who study chemical engineering, electrical engineering, mechanical engineering, instrumentation engineering, chemical science, environmental science and technology, agriculture and commerce and accountancy. The program provides students with a good academic performance and determination to pursue university degrees. In 2014, the company awarded a total six scholarships. Since 2005, Dow Thailand has already provided 72 scholarships to students nationwide.



The Environment

Dow's commitment to the protection of people and the environment is the common thread that runs through everything we do. Dow Thailand has demonstrated this commitment in major environmental programs, including:

1. International Coastal Cleanup (ICC)

Dow Thailand in cooperation with the Industrial Estate Authority of Thailand, the Tourism Authority of Thailand, communities surrounding our plants and local businesses has sponsored and carried out the International Coastal Cleanup program in Map Ta Phut for 11 years. This activity not only helps save marine lives but also raises awareness of coastal protection and the environmental conservation among the locals.



Statistics of International Coastal Cleanup Program (2009-2013)

Details	2009	2010	2011	2012	2013
No. of Volunteers (persons)	1,822	2,500	2,600	2,300	3,000
Areas (km)	6.5 (Baan Kon Aow – Sa- pan Kong Hua Rot)	17.5 (Laem Charoen Beach – Phala Beach)	17.5 (Mae Ram Pueng- Beach)	7.5 (Mae Ram Pueng- Beach)	11.5 (Mae Ram Pueng Beach – Num Rin Beach – Phayun Beach)
Weight of Collected Garbage (tons)	5.1	13	8.17	15.3	10.5



2. Tree Planting and Protection Strips

Dow Thailand has long organized and supported many tree planting activities building green protection strips and increasing green areas to improve a community's quality of life and also cultivate the environmental conservation awareness among its employees and communities. For the past five years, the company has increased green areas by planting more than 44,000 trees. Tree planting activities are often organized on various special occasions, including Their Majesties the King's and Queen's birthdays.



Statistics of Tree Planting (2009-2013)

Venues	Areas	No. of Trees	
Within the company's complex at the Map Ta Phut Industrial Estate	24,835 sq.m.	295 (perennial plants)	
Within the company's complex at the Asia Industrial Estate	69,449 sq.m.	32,181	
Outside the company's complex on I-10 Road at the Map Ta Phut Industrial Estate	16,500 sq.m.	451	
Mangrove forest at the Prasae Reservoir	50 rai (or 80,000 sq.m.)	7,500	
Huay Mahad Mountain with the Chaklukya Forest Conservation Club	5 rai (or 8,000 sq.m.)	5,000	

Community Well-Being

The spirit, belief and commitment of Dow to improve the quality of life of its communities have been our intrinsic value for more than a hundred years. We focus on true needs of these communities and initiate our community development projects accordingly. The communities not only participate in our activities but also play a part in the development of the projects in order to create a sustainable success together.



1. Habitat for Humanity

In cooperation with the U.S. based Habitat for Humanity, Dow Thailand's executives and staff have helped to build houses for people in several areas in Rayong, including the Ban Chang, Map Ta Phut and Map Chalood communities. In 2013, the company helped build five homes for low-income people in the Phala, Islam and Samnak Thon communities. Since 2006, the company has built 23 homes for low-income families.

2. Ban Chang Development Plan

With its focus on community success, Dow Thailand has invited residents in 22 villages in three sub-districts in the Ban Chang District, Rayong, to participate in the development of the "Ban Chang Development Plan", which aims to bring sustainable development to the community. The plan identifies projects necessary for the development of the area and indicates which of them can be carried out by the community itself or with the cooperation and assistance from the government and private sectors. This also enables the community to access other resources. In June 2013, Dow and the Ban Chang community finally completed the plan that will be implemented and delivered it to community representatives.



3. Water-Purification Machine Fund

To enable communities and students to have clean drinking water, Dow Thailand has donated and installed more than 80 water purification machines in Rayong communities and schools. This project also helps communities learn how to manage the income from the vending machines to benefit their communities and operate the machines in a sustainable way. In addition, the company has set aside a budget for the maintenance of these water purification machines to ensure that the communities will always have clean drinking water.



4. Community Partnership Association (CPA)

Dow Thailand was one of the founding members of "Community Partnership", the first major group effort of industrial companies in Thailand that consisted of five partners, namely Dow Thailand, PTT, SCG, BLCP and Glow. Their objectives were to develop an environmentally-friendly industry together, offer solutions to problems, share knowledge and experience and regulate each other in order to ensure sustainable co-existence between the companies and their communities. At present, the effort has been elevated into the Community Partnership Association and has a total of 12 members. In the future, the association expects to have more partners, which will bring about a network of sustainable environmental management. Its ultimate goal is to transform Rayong into an eco-industry town.

Major activities of the association in 2013 included the provision of mobile clinics for Map Ta Phut and Ban Chang communities, English and science tutoring camps, scholarships in nursing, promotion of community enterprises and workshops for knowledge in volatile organic compounds.

Community Engagement





1. Community Advisory Panel (CAP)

Dow Thailand's Community Advisory Panel (CAP) provides an important outside-in perspective on the environment, health and safety issues as well as sustainability for the company. CAP members include local government officials, community leaders, the media and other community representatives. Currently, Dow Thailand has two community advisory panels. The first one, formed in 2010, is at the Asia Industrial Estate and the other, formed in 2011, is at the Map Ta Phut Industrial Estate. Since the first formation of CAP, there have been 24 meetings. In 2013, the company conducted 8 community meetings.

2. San Sum Phan (Community Meetings)

Community meetings are unofficial meetings organized to strengthen the company's relationship with communities. They provide an arena for discussions about the company's operations with the communities and listening to their concerns and suggestions. This program has been implemented in 49 neighboring communities in Ban Chang Sub-District Municipality, Muang Ban Chang Municipality, Phala Sub-District Municipality, and Muang Map Ta Phut Municipality. In 2013, we conducted 48 community meetings.



Philanthropic Efforts

Besides our investment in community success, Dow Chemical Thailand also carries out philanthropic efforts in several areas.

1. Operation Smile

Since 1997, Dow Thailand has been providing financial support to 'Operation Smile', a project that performs surgeries and post-operative care for children suffering from cleft palates. Between 2012 and 2013, the company, together with our partners and employees, donated two million baht to Operation Smile Thailand. The fund is expected to finance 140 surgeries and post operative care for children living in Rayong.



2. Prostheses Foundation

Dow Thailand has been supporting the Prostheses Foundation under the Patronage of the Princess Mother since 1996, having so far donated polyurethane at an amount that can be turned into over 30,000 prosthetic legs. Also, with our care for the quality of life and safety of the foundation's staff, Dow has organized training in safe chemical use and storage, use of personal protection equipment and making of safety plans for the management and the staff members of the foundation.

3. Natural Disaster Relief

- In late 2013, Dow and its employees around world, including Thailand, offered aid to the victims of Typhoon Haiyan, which caused devastation to the Philippines' central region. The immediate relief and long-term recovery consisted of cash and other tools and appliances worth over US\$200,000 in total (or about 6 million baht).
- In 2013, Dow Thailand offered help to flood victims in Prachinburi, giving away 300 survival bags worth over 150,000 baht as immediate relief. In addition, the Thai Red Cross Society also sent out the drinking water production units, which have been financed by Dow, to help 17,280 people produce 345,600 liters of water for drinking.







Awards and Recognition in 2013

In 2013, Dow Thailand earned numerous awards and recognition in various areas from local and international government and private agencies as follows.

Business Awards

• "Employer of Choice" in Thailand's Top Graduate Employers study and in another survey conducted by PROMPT Professional Resources & Services ir conjunction with leading companies and universities in Thailand.

Participanto 148 Total Respondent		-	Banks	Reality	See
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- Vendor Performance Awards 2012 from Mitsubishi Electric Group, the world's leading producer of home electric appliances.
- 2013 CSR-DIW Supply Chain Award from the Corporate Social Responsibility, Department of Industrial Works (CSR-DIW) project for the collaboration between Dow's SB latex plant and its major partner, Thai Union Paper Product Public Company Limited (of SCG Paper).

The project was organized by the Ministry of Industry's Department of Industrial Works and the Management System Certification Institute (Thailand).



Environmental and Safety Awards



Good Governance for Excellent Environmental Management and Social Responsibility Awards from the Industrial Estate Authority of Thailand. Nine plants were given Green Star awards and six plants were given Gold Star awards. The Gold Star awards were created to recognize those who had won the Green Star awards for six consecutive years.

- Green and Gold Star awards: the Polyol plant, the Synthetic Latex plant, the Polystyrene plant, the Ethylbenzene plant, the Styrene Monomer plant and the Polyethylene plant.
- Green Star awards: Coating I and II plants, the Propylene Oxide plant and the Power, Utilities & Infrastructure unit (PU&I) and the Specialty Elastomers plant.
- Green Industry Level II certificates for the Propylene Oxide and Specialty Elastomers plants. Awarded by the Ministry of Industry, the certification recognized the two plant's excellent environmental management, sustainable use of resources, environmental protection and communication of environmental policies among the company's employees.
- Gold Level Award from the 2013 Zero Accident Campaign, organized by the Ministry of Labour.

Social Awards

• 3 consecutive years for CSR Excellence Recognition Awards 2013 from the American Chamber of Commerce in Thailand and a certificate from the Thai-U.S. Creative Partnership for the creativity Dow Thailand demonstrated in its social activities.



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