

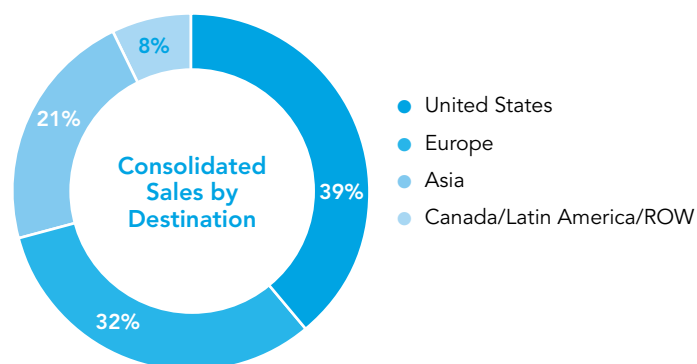
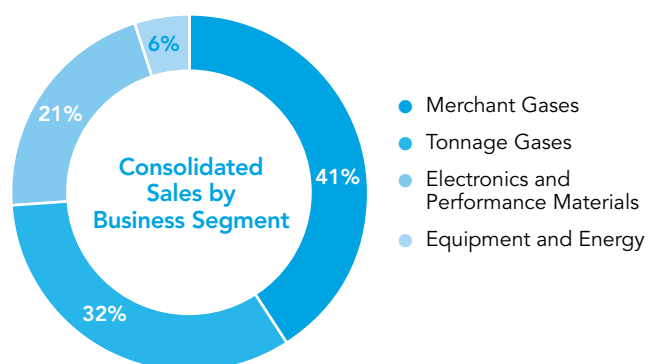


## 2010 ANNUAL REPORT



Celebrating the Innovation of the Past and Its Promise for the Future

## Financial Highlights



Millions of dollars, except per share

	2010	2009	Change
<b>FOR THE YEAR</b>			
Sales	\$9,026	\$8,256	9%
Operating income	1,389	846	64%
Operating income <sup>(A)</sup>	1,485	1,185	25%
Net income attributable to Air Products	1,029	631	63%
Capital expenditures <sup>(A)</sup>	1,298	1,475	(12)%
Return on capital employed <sup>(A)</sup>	12.4%	10.6%	
Return on average Air Products shareholders' equity <sup>(B)</sup>	19.9%	13.3%	
Operating margin	15.4%	10.3%	
Operating margin <sup>(A)</sup>	16.5%	14.3%	
<b>PER SHARE DOLLARS</b>			
Diluted earnings	4.74	2.96	60%
Diluted earnings <sup>(A)</sup>	5.02	4.06	24%
Dividends	1.92	1.79	7%
Book value	25.94	22.68	14%
<b>AT YEAR END</b>			
Air Products shareholders' equity	\$5,547	\$4,792	
Shares outstanding (in millions)	214	211	
Shareholders	8,300	8,600	
Employees <sup>(C)</sup>	18,300	18,900	

(A) Amounts are non-GAAP measures. See pages V and VI for reconciliation to GAAP results.

(B) Calculated using income and five-quarter average Air Products shareholders' equity from continuing operations.

(C) Includes full- and part-time employees from continuing and discontinued operations.

Return on Air Products Shareholders' Equity	Sales	Earnings per Share
Percentage using income and Air Products shareholders' equity from continuing operations	Billions of dollars	Dollars—diluted basis
2010 <b>19.9</b>	2010 <b>9.0</b>	2010 <b>4.74</b>
2009 13.3	2009 8.3	2009 2.96
2008 20.1	2008 10.4	2008 4.15
2007 19.5	2007 9.1	2007 4.64
2006 15.1	2006 7.9	2006 3.18

## Merchant Gases

Industrial and medical customers throughout the world depend on our oxygen, nitrogen, argon, helium, hydrogen, and medical and specialty gases for a wide array of applications. We supply most merchant gas in liquid form to small and larger customers—delivered by the Air Products tankers you see on the road. We provide smaller quantities of our “packaged” gases in cylinders and dewars for customers who require more exacting quantities for their processes. And we make available proprietary on-site gas generation devices (cryogenic and noncryogenic) to meet customers’ varying purity, pressure and flow rate requirements economically.

**2010 consolidated sales:** \$3.7 billion

**Major end markets:** glassmaking, steel, nonferrous, oil field services, pulp and paper, water systems, metal manufacturing, chemical processing, rubber and plastics, packaging, food and beverage, healthcare, medical, research and analytical, aerospace, and electronics

**2011 segment operating margin goal:** 20%



Air Products’ new combustion lab in Allentown, Pennsylvania, which serves customers in the glass, metals and energy industries.

## Tonnage Gases, Equipment and Energy

Through our Tonnage Gases segment, we supply hydrogen, carbon monoxide, synthesis gas, nitrogen and oxygen via large on-site facilities or pipeline systems to meet the needs of large-volume, or tonnage, industrial gas users. We either construct a gas plant adjacent to or near the customer’s facility or deliver product through a pipeline from a nearby location. In our Equipment and Energy segment, we design and manufacture cryogenic and gas processing equipment for air separation, hydrocarbon recovery and purification, and natural gas liquefaction (LNG); and equipment for helium distribution. We are pioneering technologies to serve the changing needs of future industrial and energy markets.

**2010 consolidated sales:** \$3.4 billion

**Major end markets:** petroleum refining, chemical and petrochemical manufacturing, oil and gas recovery and processing, steel and primary metals processing

**Anticipated long-term H<sub>2</sub> and O<sub>2</sub> growth:** 10%



Air Products’ CO<sub>2</sub> purification unit at Vattenfall AB’s Schwarze Pumpe, Germany, oxyfuel pilot plant facility.

## Electronics and Performance Materials

The electronic gases and materials and the related delivery equipment and services we provide enable the silicon and compound semiconductors and LCDs that power our digital world. We also supply critical materials and services to light-emitting diode (LED) and photovoltaics manufacturers. In our performance materials end markets, our expertise in surface chemistry is being put to work to develop better-performing products and eco-friendly formulations.

**2010 consolidated sales:** \$1.9 billion

**Major end markets:** silicon and compound semiconductors (ICs), thin-film transistor liquid crystal displays (TFT-LCDs), photovoltaic devices, LEDs, coatings, inks, adhesives, civil engineering, personal care, institutional and industrial cleaning, mining, oil field and polyurethane production

**2011 segment operating margin goal:** 15%



Air Products’ electronic materials help to enable next-generation smartphones and tablet computers.

Dear Shareholder,

October 1, 2010 marked the beginning of our fiscal year and the 70th anniversary of Air Products' founding, which we are commemorating with the theme, "Celebrating the Innovation of the Past and Its Promise for the Future." The resiliency of this 70-year-old Company is directly attributable to the creativity, passion and confidence of the Company's employees. These traits were evident in fiscal 2010 when, after two challenging years weathering the recession, we saw significant business improvement and announced a number of new investments and initiatives that will drive growth well into the future. Our employees' efforts are also why we remain on target to hit our goal of a 17 percent margin in fiscal 2011.



Air Products chairman John McGlade addresses employees at an event celebrating the company's 70th anniversary.

### Fiscal 2010 Results

We finished fiscal 2010 with \$9 billion in sales, a 9 percent increase from the prior year's \$8.3 billion. We delivered strong volume growth as the economy improved. Our growth was driven by our Electronics and Performance Materials business, and new investments and contracts in our Tonnage Gases segment.

This past year, we significantly increased our productivity and competitiveness. Earnings per share increased 24 percent to \$5.02. Our operating income increased 25 percent to \$1.5 billion and our operating margin grew 220 basis points to 16.5 percent, our highest margin in recent times. Our return on capital employed improved to 12.4 percent in fiscal 2010, almost 200 basis points higher than the prior year. Finally, we increased our dividend for the 28th straight year.

### Highlights from the Year

During the year, we announced a number of important projects, including world-scale hydrogen plants for Monsanto in Luling, Louisiana; ExxonMobil in Rotterdam, the Netherlands; and PetroChina in Sichuan, China. We also received the largest single air separation unit (ASU) on-site order ever committed to an industrial gas company. We will build, own and operate three ASU trains, producing over 8,200 tons per day (TPD) of oxygen and more than 3,100 TPD of nitrogen for Pucheng Clean Energy Co., Ltd.

Certain amounts and comparisons to the prior year in this letter are considered non-GAAP measures. Please see pages V and VI for the comparable GAAP amounts and reconciliations.

## Celebrating the Innovation of the Past and Its Promise for the Future

Our Electronics business signed a contract with Samsung to double the existing bulk gas supply of high-purity oxygen and nitrogen at the company's Austin, Texas, site. A significant amount of specialty gas and chemical delivery equipment will also be supplied.

Early in the fiscal year, we cut the ribbon on our new world-scale Performance Materials plant in Nanjing, China, significantly increasing this business's presence and capability within the high-growth Asia region.

Our Equipment business announced a sizable deal with Chevron to supply its Gorgon Project in western Australia with our proprietary liquefied natural gas (LNG) process technology and equipment for three process trains producing up to 15 million tons of LNG per year.

Of course, we also made a compelling offer to acquire Airgas, Inc. in February. We believe the combination of our global leadership and geographic positions in the liquid bulk and tonnage gas businesses combined with Airgas' leadership in the U.S. packaged gases business, will result in a global industrial gas leader with strengths and competencies across all distribution channels and geographies.

### **Celebrating the Innovation of the Past and Its Promise for the Future**

Since our founding, we've used our understanding of the industries and customers we serve to develop unique answers to their problems while driving profitable growth for our investors. Looking ahead, innovation remains an important element of our success. In the past year, we have undertaken a number of initiatives that we expect to pay dividends well into the future. In our tonnage business, our new hydrogen plants currently under construction feature technology advancements to maximize facility energy efficiency while reducing emissions. These enhanced designs target minimal loss of heat to the environment, which results in a reduction in the quantity of natural gas consumed.

Our work around carbon capture and purification continues to hold promise. Earlier this year, Air Products was selected by the U.S. Department of Energy to receive approximately \$250 million in funding under the Industrial Carbon Capture and Sequestration Program for our project in Port Arthur, Texas. We plan to design, construct and operate a state-of-the-art system to capture carbon dioxide (CO<sub>2</sub>) from our facilities located in Port Arthur. The recovered and purified CO<sub>2</sub> would then be used for injection into existing oil fields to improve oil production. Approximately one million tons of CO<sub>2</sub> will be recovered annually, purified and delivered via pipeline to nearby oil fields.

Our efforts don't end there. We are involved in a number of projects around the world. In fact, we are targeting the start-up of our pilot plant at Vattenfall AB, one of Europe's leading energy companies, by the end of December. Air Products is installing its proprietary CO<sub>2</sub> capture, purification and compression system at Vattenfall's research and development facility in Schwarze Pumpe, Germany, a project that is viewed as the preeminent CO<sub>2</sub> oxyfuel project in the world.

During the year, we also commissioned our new combustion lab, which is focused on clean energy. The lab will further enhance Air Products' ability to leverage its more than 40 years of knowledge in combustion, thus providing our customers in the glass, metals and refining businesses with the efficiency, productivity and environmental benefits they have come to expect from working with us.

Innovation has always been at the heart of what we do in our Electronics and Performance Materials businesses. Electronics introduced xenon difluoride (XeF<sub>2</sub>), a unique etching material used in the electronics industry. The business also introduced its EXTREMA® Precursors for next-generation memory applications, which help to enable the newest smartphones and tablet computers.

In Performance Materials, we introduced a number of new, environmentally friendly defoamers and surfactants for the coatings, graphic arts and adhesives markets. These new products help manufacturers reduce their environmental impact without sacrificing quality and performance.



Former Chairmen John Jones, Hap Wagner, Dexter Baker and Ed Donley join current Chairman John McGlade outside Air Products headquarters. The five chairmen came together to celebrate the company's 70th anniversary.

## Sustainability

We see sustainability as part of what we do and who we are. It has been and will continue to be a source of growth for us. In the area of environmental stewardship, we have set aggressive targets for our performance. As a socially responsible corporation, we strive to be a good employer and neighbor. We are committed to building relationships in the communities in which we operate. Our employees are engaged in their communities and help support our priorities of education, health and human services, community and economic development, arts and culture, and environment and safety.

As we mark the 70th anniversary of Air Products, global macro trends driven by societal demands, legislative changes, and demographic shifts are providing even more opportunities for us to grow.

## Outlook

As Air Products begins its eighth decade, we are excited by our opportunities and remain committed to delivering consistent, strong earnings growth along with improved margins and returns throughout the economic cycle. We expect our capital expenditures in 2011 to be in a range of \$1.5 to \$1.7 billion, excluding acquisitions, and we continue to be interested in acquiring captive plants from our customers like we did with MarkWest and Xingtai Steel. We remain focused on delivering the performance you have come to expect from us as a shareholder.

As we close out fiscal 2010 and look to the future, I want to thank our employees around the world for their hard work, focus and dedication. They created the momentum that will allow us to deliver on our 17 percent margin target in fiscal 2011 while driving double-digit EPS growth and continuing our return on capital improvements. Thank you for your continued support and investment in Air Products.

Very truly yours,

John E. McGlade  
Chairman, President and Chief Executive Officer

## Non-GAAP Measures

(Millions of dollars, except for share data)

The Financial Highlights and Letter to Shareholders contain non-GAAP measures. These measures adjust results to exclude the effect of several items that are detailed in the Notes to the consolidated financial statements. The presentation of non-GAAP measures is intended to enhance the usefulness of financial information by providing measures which the Company's management uses internally to evaluate the Company's baseline performance. Presented below is a reconciliation of reported GAAP results to non-GAAP measures.

Consolidated Results	Continuing Operations	
	Operating Income	Diluted EPS
<b>2010 GAAP</b>	<b>\$1,389.0</b>	<b>\$4.74</b>
2009 GAAP	846.3	3.00
<b>% Change GAAP</b>	64%	58%

<b>2010 GAAP</b>	<b>\$1,389.0</b>	<b>\$4.74</b>
Acquisition-related costs	<b>96.0</b>	<b>.28</b>
<b>2010 Non-GAAP Measure</b>	<b>\$1,485.0</b>	<b>\$5.02</b>

2009 GAAP	\$846.3	\$3.00
Global cost reduction plan	298.2	.94
Customer bankruptcy and asset actions	32.1	.10
Pension settlement	8.0	.02
<b>2009 Non-GAAP Measure</b>	<b>\$1,184.6</b>	<b>\$4.06</b>
<b>% Change Non-GAAP</b>	25%	24%

	Sales	Operating Income	Margin
<b>2010 GAAP</b>	<b>\$9,026.0</b>	<b>\$1,389.0</b>	<b>15.4%</b>
<b>2010 Non-GAAP</b>	<b>9,026.0</b>	<b>1,485.0</b>	<b>16.5%</b>
2009 GAAP	\$8,256.2	\$846.3	10.3%
2009 Non-GAAP	8,256.2	1,184.6	14.3%
<b>Basis Point Change GAAP</b>			510
<b>Basis Point Change Non-GAAP</b>			220

## Return on Capital Employed (ROCE)

ROCE is calculated as earnings after-tax divided by five-quarter average total capital. Earnings after-tax is defined as operating income and equity affiliates' income, after-tax, at the Company's quarterly effective tax rate. On a non-GAAP basis, operating income and taxes have been adjusted for the disclosed items detailed below. Total capital consists of total debt and total equity.

	2010	2009
Earnings before-tax GAAP	<b>\$1,515.9</b>	\$958.5
Acquisition-related costs	<b>96.0</b>	—
Global cost reduction plan	—	298.2
Customer bankruptcy and asset actions	—	32.1
Pension settlement	—	8.0
<b>Earnings Before-Tax Non-GAAP</b>	<b>\$1,611.9</b>	<b>\$1,296.8</b>

	2010	2009	Base Point Change
Earnings after-tax GAAP	<b>\$1,139.8</b>	\$748.8	
Five-quarter average total capital	<b>9,636.4</b>	9,134.7	
<b>ROCE GAAP</b>	<b>11.8%</b>	8.2%	360

	2010	2009	Base Point Change
Earnings after-tax non-GAAP	<b>\$1,198.8</b>	\$965.5	
Five-quarter average total capital	<b>9,636.4</b>	9,134.7	
<b>ROCE Non-GAAP</b>	<b>12.4%</b>	10.6%	180

## Capital Expenditures

The Company utilizes a non-GAAP measure in the computation of capital expenditures and includes spending associated with facilities accounted for as capital leases and purchases of noncontrolling interests. Certain facilities that are built to provide product to a specific customer are required to be accounted for as capital leases, and such spending is reflected as a use of cash within cash provided by operating activities. Additionally, the purchase of noncontrolling interests in a subsidiary is accounted for as an equity transaction and will be reflected as a financing activity in the consolidated statement of cash flows.

	2010	2009	Change
Capital expenditures – GAAP measure	\$1,133.8	\$1,236.3	(8)%
Capital lease expenditures	122.6	238.6	
Noncurrent liability related to purchase of shares from noncontrolling interests	42.0	—	
<b>Capital Expenditures – Non-GAAP Measure</b>	<b>\$1,298.4</b>	<b>\$1,474.9</b>	<b>(12)%</b>

	2011 Forecast
Capital expenditures – GAAP measure	\$1,400 to \$1,500
Capital lease expenditures	100 to 200
<b>Capital Expenditures – Non-GAAP Measure</b>	<b>\$1,500 to \$1,700</b>



# Shareholders' Information

## Common Stock Information

Ticker Symbol: APD  
Exchange Listing: New York Stock Exchange  
Transfer Agent and Registrar:  
American Stock Transfer and Trust Company  
59 Maiden Lane, New York, NY 10038  
Telephone: 800-937-5449  
Internet: [www.amstock.com](http://www.amstock.com)  
E-mail: [info@amstock.com](mailto:info@amstock.com)

## Publications for Shareholders

In addition to this Annual Report on Form 10-K for the fiscal year ended September 30, 2010, Air Products informs shareholders about Company news through:

Notice of Annual Meeting and Proxy Statement – made available to shareholders in mid-December and posted to the Company's website at [www.airproducts.com/invest/](http://www.airproducts.com/invest/).

Earnings information—shareholders and investors can obtain copies of earnings releases, Annual Reports, 10-Ks and news releases by visiting [www.airproducts.com/invest](http://www.airproducts.com/invest). Shareholders and investors can also register for e-mail updates at that website.

## Dividend Policy

Dividends on Air Products' common stock are declared by the board of directors and, when declared, usually will be paid during the sixth week after the close of the fiscal quarter. It is the Company's objective to pay dividends consistent with the reinvestment of earnings necessary for long-term growth.

## Direct Investment Program

Current shareholders and new investors can conveniently and economically purchase shares of Air Products' common stock and reinvest cash dividends through American Stock Transfer and Trust Company. Registered shareholders can purchase shares on American Stock Transfer and Trust's website, [www.investpower.com](http://www.investpower.com). New investors can obtain information on the website or by calling 877-322-4941 or 718-921-8200.

## Annual Meeting

The annual meeting of shareholders will be held on Thursday, January 27, 2011.

## Terminology

The term Air Products and Chemicals, Inc., as used in this Report, refers solely to the Delaware corporation of that name. The use of such terms as Air Products, Company, division, organization, we, us, our and its, when referring to either Air Products and Chemicals, Inc. and its consolidated subsidiaries or to its subsidiaries and affiliates, either individually or collectively, is only for convenience and is not intended to describe legal relationships. Significant subsidiaries are listed as an exhibit to the Form 10-K Report filed by Air Products and Chemicals, Inc. with the Securities and Exchange Commission. Groups, divisions or other business segments of Air Products and Chemicals, Inc. described in this Report are not corporate entities.

## Annual Certifications

The most recent certifications by our Chief Executive Officer and Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 are filed as exhibits to our Form 10-K. We have also filed with the New York Stock Exchange the most recent Annual CEO Certification as required by Section 303A.12(a) of the New York Stock Exchange Listed Company Manual.

## Additional Information

The forward-looking statements contained in this Report are qualified by reference to the section entitled "Forward-Looking Statements" on page 41 of the Form 10-K section.

## Board of Directors



**John E. McGlade**  
Chairman, President and Chief Executive Officer of Air Products.  
Director since 2007.



**Michael J. Donahue**  
Former Group Executive Vice President and Chief Operating Officer of BearingPoint, Inc.  
Director since 2001.



**Evert Henkes**  
Former Chief Executive Officer of Shell Chemicals Ltd.  
Director since 2006.



**Mario L. Baeza**  
Founder and Controlling Shareholder of Baeza & Co. and Founder and Executive Chairman of V-Me Media, Inc.  
Director since 1999.



**Ursula O. Fairbairn**  
President and Chief Executive Officer of Fairbairn Group, LLC.  
Director since 1998.



**Margaret G. McGlynn**  
Former President, Global Vaccine and Infectious Diseases Division of Merck & Co., Inc.  
Director since 2005.



**William L. Davis, III (Presiding Director)**  
Former Chairman, President and Chief Executive Officer of RR Donnelley.  
Director since 2005.



**W. Douglas Ford**  
Former Chief Executive, Refining and Marketing, of BP Amoco plc.  
Director since 2003.



**Lawrence S. Smith**  
Former Chief Financial Officer of Comcast Corporation.  
Director since 2004.



**Chadwick C. Deaton**  
Chairman and Chief Executive Officer, Baker Hughes Inc.  
Director since 2010.



**Edward E. Hagenlocker**  
Former Vice Chairman of Ford Motor Company and former Chairman of Visteon Automotive Systems.  
Director since 1997.

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## Corporate Executive Committee



**John E. McGlade**  
Chairman, President and Chief Executive Officer.



**Stephen J. Jones**  
Senior Vice President and General Manager—Tonnage Gases, Equipment and Energy.



**John D. Stanley**  
Senior Vice President and General Counsel.



**Robert D. Dixon**  
Senior Vice President and General Manager—Merchant Gases.



**John Marsland**  
Senior Vice President—Supply Chain.



**Paul E. Huck**  
Senior Vice President and Chief Financial Officer.



**Lynn C. Minella**  
Senior Vice President—Human Resources and Communications.

For more information about corporate governance practices at Air Products, visit our Corporate Responsibility website at [www.airproducts.com/responsibility](http://www.airproducts.com/responsibility).

**Corporate Headquarters**

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Allentown, PA 18195-1501  
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**Corporate Secretary's Office**

Tel 610-481-7067

**Investor Relations Office**

Simon Moore, Director  
Tel 610-481-5775

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[www.airproducts.com](http://www.airproducts.com)

