UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended 30 June 2023

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ______ to ______

Commission File Number 001-04534

AIR PRODUCTS AND CHEMICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**23-1274455**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

1940 Air Products Boulevard
Allentown, Pennsylvania 18106-5500
(Address of principal executive offices and Zip Code)

610-481-4911
(Registrant's telephone number, including area code)

Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $1.00 per share	APD	New York Stock Exchange
1.000% Euro Notes due 2025	APD25	New York Stock Exchange
0.500% Euro Notes due 2028	APD28	New York Stock Exchange
0.800% Euro Notes due 2032	APD32	New York Stock Exchange
4.000% Euro Notes due 2035	APD35	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐	Non-accelerated filer	☐	Smaller reporting company	☐	Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The number of shares of common stock, par value $1 per share, outstanding at 30 June 2023 was 222,148,761.

AIR PRODUCTS AND CHEMICALS, INC. and Subsidiaries
QUARTERLY REPORT ON FORM 10-Q
For the quarterly period ended 30 June 2023

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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains “forward-looking statements” within the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include all statements that do not relate solely to historical or current facts and can generally be identified by words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” "future," “goal,” “intend,” “may,” “outlook,” “plan,” “positioned,” “possible,” “potential,” “project,” “should,” “target,” “will,” “would,” and similar expressions or variations thereof, or the negative thereof, but these terms are not the exclusive means of identifying such statements. Forward-looking statements are based on management’s expectations and assumptions as of the date of this report and are not guarantees of future performance. You are cautioned not to place undue reliance on our forward-looking statements.

Forward-looking statements may relate to a number of matters, including expectations regarding revenue, margins, expenses, earnings, tax provisions, cash flows, pension obligations, share repurchases or other statements regarding economic conditions or our business outlook; statements regarding plans, projects, strategies and objectives for our future operations, including our ability to win new projects and execute the projects in our backlog; and statements regarding our expectations with respect to pending legal claims or disputes. While forward-looking statements are made in good faith and based on assumptions, expectations and projections that management believes are reasonable based on currently available information, actual performance and financial results may differ materially from projections and estimates expressed in the forward-looking statements because of many factors, including, without limitation:

- the duration and impacts of the COVID-19 global pandemic and efforts to contain its transmission, including the effect of these factors on our business, our customers, economic conditions and markets generally;
- changes in global or regional economic conditions, inflation, and supply and demand dynamics in the market segments we serve, including demand for technologies and projects to limit the impact of global climate change;
- changes in the financial markets that may affect the availability and terms on which we may obtain financing;
- the ability to implement price increases to offset cost increases;
- disruptions to our supply chain and related distribution delays and cost increases;
- risks associated with having extensive international operations, including political risks, risks associated with unanticipated government actions and risks of investing in developing markets;
- project delays, cost escalations, contract terminations, customer cancellations, or postponement of projects and sales;
- our ability to safely develop, operate, and manage costs of large-scale and technically complex projects;
- the future financial and operating performance of major customers, joint ventures, and equity affiliates;
- our ability to develop, implement, and operate new technologies and to market products produced utilizing new technologies;
- our ability to execute the projects in our backlog and refresh our pipeline of new projects;
- tariffs, economic sanctions and regulatory activities in jurisdictions in which we and our affiliates and joint ventures operate;
- the impact of environmental, tax, safety, or other legislation, as well as regulations and other public policy initiatives affecting our business and the business of our affiliates and related compliance requirements, including legislation, regulations, or policies intended to address global climate change;
- changes in tax rates and other changes in tax law;
- safety incidents relating to our operations;
- the timing, impact, and other uncertainties relating to acquisitions and divestitures, including our ability to integrate acquisitions and separate divested businesses, respectively;

FORWARD-LOOKING STATEMENTS (CONTINUED)

- risks relating to cybersecurity incidents, including risks from the interruption, failure or compromise of our information systems or those of our business partners or service providers;
- catastrophic events, such as natural disasters and extreme weather events, public health crises, acts of war, including Russia's invasion of Ukraine and the ongoing civil war in Yemen, or terrorism;
- the impact on our business and customers of price fluctuations in oil and natural gas and disruptions in markets and the economy due to oil and natural gas price volatility;
- costs and outcomes of legal or regulatory proceedings and investigations;
- asset impairments due to economic conditions or specific events;
- significant fluctuations in inflation, interest rates, and foreign currency exchange rates from those currently anticipated;
- damage to facilities, pipelines or delivery systems, including those we own or operate for third parties;
- availability and cost of electric power, natural gas, and other raw materials; and
- the success of productivity and operational improvement programs.

In addition to the foregoing factors, forward-looking statements contained herein are qualified with respect to the risks disclosed elsewhere in this document, including in Item 2, *Management's Discussion and Analysis of Financial Condition and Results of Operations*, and Item 3, *Quantitative and Qualitative Disclosures About Market Risk*, as well as with respect to the risks described in Item 1A, *Risk Factors*, to our Annual Report on Form 10-K for the fiscal year ended 30 September 2022. Any of these factors, as well as those not currently anticipated by management, could cause our results of operations, financial condition or liquidity to differ materially from what is expressed or implied by any forward-looking statement. Except as required by law, we disclaim any obligation or undertaking to update or revise any forward-looking statements contained herein to reflect any change in assumptions, beliefs, or expectations or any change in events, conditions, or circumstances upon which any such forward-looking statements are based.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED INCOME STATEMENTS
(Unaudited)

	Three Months Ended 30 June		Nine Months Ended 30 June	
(Millions of U.S. Dollars, except for share and per share data)	2023	2022	2023	2022
Sales	$3,033.9	$3,189.3	$9,408.7	$9,128.6
Cost of sales	2,070.7	2,342.1	6,625.8	6,717.3
Selling and administrative expense	238.7	216.9	724.3	676.7
Research and development expense	29.3	24.8	80.9	71.8
Business and asset actions	59.0	—	244.6	—
Other income (expense), net	8.0	21.9	22.9	49.5
Operating Income	644.2	627.4	1,756.0	1,712.3
Equity affiliates' income	165.0	116.1	440.9	384.7
Interest expense	47.4	32.7	129.5	95.5
Other non-operating income (expense), net	(11.7)	10.5	(26.2)	42.2
Income Before Taxes	750.1	721.3	2,041.2	2,043.7
Income tax provision	139.6	134.2	397.0	370.2
Net Income	610.5	587.1	1,644.2	1,673.5
Net income attributable to noncontrolling interests	14.9	5.0	36.6	0.5
Net Income Attributable to Air Products	$595.6	$582.1	$1,607.6	$1,673.0
Per Share Data *(U.S. Dollars per share)*				
Basic earnings per share attributable to Air Products	$2.68	$2.62	$7.23	$7.54
Diluted earnings per share attributable to Air Products	$2.67	$2.62	$7.22	$7.52
Weighted Average Common Shares *(in millions)*				
Basic	222.4	222.0	222.3	222.0
Diluted	222.8	222.5	222.7	222.5

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED COMPREHENSIVE INCOME STATEMENTS
(Unaudited)

	Three Months Ended 30 June	
(Millions of U.S. Dollars)	2023	2022
Net Income	$610.5	$587.1
Other Comprehensive Loss, net of tax:		
Translation adjustments, net of tax of ($5.0) and $27.7	(175.8)	(576.1)
Net gain (loss) on derivatives, net of tax of $5.8 and ($8.4)	40.8	(16.0)
Reclassification adjustments:		
Derivatives, net of tax of ($7.6) and $3.7	(24.4)	11.4
Pension and postretirement benefits, net of tax of $4.6 and $5.7	13.5	17.5
Total Other Comprehensive Loss	(145.9)	(563.2)
Comprehensive Income	464.6	23.9
Net Income Attributable to Noncontrolling Interests	14.9	5.0
Other Comprehensive Loss Attributable to Noncontrolling Interests	(4.4)	(18.2)
Comprehensive Income Attributable to Air Products	$454.1	$37.1

	Nine Months Ended 30 June	
(Millions of U.S. Dollars)	2023	2022
Net Income	$1,644.2	$1,673.5
Other Comprehensive Income (Loss), net of tax:		
Translation adjustments, net of tax of ($53.6) and $44.5	384.8	(594.3)
Net gain (loss) on derivatives, net of tax of $43.4 and ($34.8)	147.2	(55.9)
Pension and postretirement benefits, net of tax of $2.4 and $—	6.7	—
Reclassification adjustments:		
Currency translation adjustment	(0.3)	—
Derivatives, net of tax of ($27.4) and $18.4	(87.3)	56.1
Pension and postretirement benefits, net of tax of $13.0 and $16.6	39.8	49.4
Total Other Comprehensive Income (Loss)	490.9	(544.7)
Comprehensive Income	2,135.1	1,128.8
Net Income Attributable to Noncontrolling Interests	36.6	0.5
Other Comprehensive Income (Loss) Attributable to Noncontrolling Interests	9.6	(10.0)
Comprehensive Income Attributable to Air Products	$2,088.9	$1,138.3

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED BALANCE SHEETS
(Unaudited)

(Millions of U.S. Dollars, except for share and per share data)	30 June 2023	30 September 2022
Assets		
Current Assets		
Cash and cash items	$1,637.7	$2,711.0
Short-term investments	268.7	590.7
Trade receivables, net	1,934.2	1,794.4
Inventories	663.9	514.2
Prepaid expenses	179.2	156.8
Other receivables and current assets	670.3	515.8
Total Current Assets	5,354.0	6,282.9
Investment in net assets of and advances to equity affiliates	4,493.5	3,353.8
Plant and equipment, at cost	31,715.5	28,160.1
Less: accumulated depreciation	15,202.7	13,999.6
Plant and equipment, net	16,512.8	14,160.5
Goodwill, net	891.6	823.0
Intangible assets, net	358.9	347.5
Operating lease right-of-use assets, net	970.8	694.8
Noncurrent lease receivables	520.0	583.1
Financing receivables	817.2	—
Other noncurrent assets	1,010.7	947.0
Total Noncurrent Assets	25,575.5	20,909.7
Total Assets[(A)]	$30,929.5	$27,192.6
Liabilities and Equity		
Current Liabilities		
Payables and accrued liabilities	$3,062.2	$2,771.6
Accrued income taxes	108.8	135.2
Short-term borrowings	559.1	10.7
Current portion of long-term debt	217.6	548.3
Total Current Liabilities	3,947.7	3,465.8
Long-term debt	8,466.5	6,433.8
Long-term debt – related party	148.7	652.0
Noncurrent operating lease liabilities	635.5	592.1
Other noncurrent liabilities	1,144.6	1,099.1
Deferred income taxes	1,215.8	1,247.4
Total Noncurrent Liabilities	11,611.1	10,024.4
Total Liabilities[(A)]	15,558.8	13,490.2
Commitments and Contingencies - See Note 13		
Air Products Shareholders' Equity		
Common stock (par value $1 per share; issued 2023 and 2022 - 249,455,584 shares)	249.4	249.4
Capital in excess of par value	1,176.9	1,141.4
Retained earnings	16,986.9	16,520.3
Accumulated other comprehensive loss	(2,304.8)	(2,786.1)
Treasury stock, at cost (2023 - 27,306,823 shares; 2022 - 27,616,888 shares)	(1,970.4)	(1,981.0)
Total Air Products Shareholders' Equity	14,138.0	13,144.0
Noncontrolling Interests[(A)]	1,232.7	558.4
Total Equity	15,370.7	13,702.4
Total Liabilities and Equity	$30,929.5	$27,192.6

[(A)] Includes balances associated with a consolidated variable interest entity ("VIE"), including amounts reflected in "Total Assets" that can only be used to settle obligations of the VIE of $1,621.2 and $519.7 as of 30 June 2023 and 30 September 2022, respectively, as well as liabilities of the VIE reflected within "Total Liabilities" for which creditors do not have recourse to the general credit of Air Products of $496.6 and $506.8 as of 30 June 2023 and 30 September 2022, respectively. Refer to Note 3, *Variable Interest Entities*, for additional information.

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Nine Months Ended 30 June	
(Millions of U.S. Dollars)	2023	2022
Operating Activities		
Net income	$1,644.2	$1,673.5
Less: Net income (loss) attributable to noncontrolling interests	36.6	0.5
Net income attributable to Air Products	1,607.6	1,673.0
Adjustments to reconcile income to cash provided by operating activities:		
Depreciation and amortization	1,001.0	1,005.4
Deferred income taxes	(14.1)	69.0
Business and asset actions	244.6	—
Undistributed earnings of equity method investments	(130.1)	(184.8)
Gain on sale of assets and investments	(5.2)	(21.4)
Share-based compensation	45.8	37.0
Noncurrent lease receivables	60.9	65.5
Other adjustments	152.3	(139.2)
Working capital changes that provided (used) cash, excluding effects of acquisitions:		
Trade receivables	(49.2)	(389.7)
Inventories	(133.5)	(80.8)
Other receivables	(98.5)	(22.8)
Payables and accrued liabilities	(375.4)	320.1
Other working capital	(102.8)	(118.1)
Cash Provided by Operating Activities	2,203.4	2,213.2
Investing Activities		
Additions to plant and equipment, including long-term deposits	(3,163.5)	(2,139.1)
Acquisitions, less cash acquired	—	(65.1)
Investment in and advances to unconsolidated affiliates	(912.0)	(1,650.9)
Investment in financing receivables	(665.0)	—
Proceeds from sale of assets and investments	13.3	32.8
Purchases of investments	(443.4)	(1,247.9)
Proceeds from investments	766.0	2,219.2
Other investing activities	4.8	6.9
Cash Used for Investing Activities	(4,399.8)	(2,844.1)
Financing Activities		
Long-term debt proceeds	2,116.3	357.0
Payments on long-term debt	(605.8)	(400.0)
Net increase in commercial paper and short-term borrowings	567.3	255.0
Dividends paid to shareholders	(1,107.9)	(1,023.9)
Proceeds from stock option exercises	19.5	16.3
Investments by noncontrolling interests	188.8	21.0
Other financing activities	(79.3)	(37.5)
Cash Provided by (Used for) Financing Activities	1,098.9	(812.1)
Effect of Exchange Rate Changes on Cash	24.2	(68.5)
Decrease in cash and cash items	(1,073.3)	(1,511.5)
Cash and cash items – Beginning of year	2,711.0	4,468.9
Cash and Cash Items – End of Period	$1,637.7	$2,957.4

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF EQUITY
(Unaudited)

	Nine Months Ended 30 June 2023							
(Millions of U.S. Dollars, except for per share data)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Air Products Shareholders' Equity	Non-controlling Interests	Total Equity
Balance at 30 September 2022	$249.4	$1,141.4	$16,520.3	($2,786.1)	($1,981.0)	$13,144.0	$558.4	$13,702.4
Net income	—	—	1,607.6	—	—	1,607.6	36.6	1,644.2
Other comprehensive income	—	—	—	481.3	—	481.3	9.6	490.9
Dividends on common stock (per share $5.12)	—	—	(1,137.3)	—	—	(1,137.3)	—	(1,137.3)
Dividends to noncontrolling interests	—	—	—	—	—	—	(7.9)	(7.9)
Share-based compensation	—	42.3	—	—	—	42.3	—	42.3
Issuance of treasury shares for stock option and award plans	—	(7.2)	—	—	10.6	3.4	—	3.4
Investments by noncontrolling interests[(A)]	—	—	—	—	—	—	636.1	636.1
Other equity transactions	—	0.4	(3.7)	—	—	(3.3)	(0.1)	(3.4)
Balance at 30 June 2023	$249.4	$1,176.9	$16,986.9	($2,304.8)	($1,970.4)	$14,138.0	$1,232.7	$15,370.7

[(A)] Reflects noncash activity related to the NEOM Green Hydrogen Company joint venture. Refer to Note 3, *Variable Interest Entities*, for additional information.

	Nine Months Ended 30 June 2022							
(Millions of U.S. Dollars, except for per share data)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Air Products Shareholders' Equity	Non-controlling Interests	Total Equity
Balance at 30 September 2021	$249.4	$1,115.8	$15,678.3	($1,515.9)	($1,987.9)	$13,539.7	$548.3	$14,088.0
Net income	—	—	1,673.0	—	—	1,673.0	0.5	1,673.5
Other comprehensive income	—	—	—	(534.7)	—	(534.7)	(10.0)	(544.7)
Dividends on common stock (per share $4.74)	—	—	(1,051.2)	—	—	(1,051.2)	—	(1,051.2)
Dividends to noncontrolling interests	—	—	—	—	—	—	(1.0)	(1.0)
Share-based compensation	—	35.6	—	—	—	35.6	—	35.6
Issuance of treasury shares for stock option and award plans	—	(20.9)	—	—	4.3	(16.6)	—	(16.6)
Investments by noncontrolling interests	—	—	—	—	—	—	33.0	33.0
Purchase of noncontrolling interests	—	—	—	—	—	—	(1.9)	(1.9)
Other equity transactions	—	0.3	(2.2)	—	—	(1.9)	2.9	1.0
Balance at 30 June 2022	$249.4	$1,130.8	$16,297.9	($2,050.6)	($1,983.6)	$13,643.9	$571.8	$14,215.7

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF EQUITY (cont.)
(Unaudited)

	Three Months Ended 30 June 2023							
(Millions of U.S. Dollars, except for per share data)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Air Products Shareholders' Equity	Non-controlling Interests	Total Equity
Balance at 31 March 2023	$249.4	$1,163.4	$16,781.3	($2,163.3)	($1,972.5)	$14,058.3	$631.9	$14,690.2
Net income	—	—	595.6	—	—	595.6	14.9	610.5
Other comprehensive loss	—	—	—	(141.5)	—	(141.5)	(4.4)	(145.9)
Dividends on common stock (per share $1.75)	—	—	(388.8)	—	—	(388.8)	—	(388.8)
Dividends to noncontrolling interests	—	—	—	—	—	—	(2.3)	(2.3)
Share-based compensation	—	13.3	—	—	—	13.3	—	13.3
Issuance of treasury shares for stock option and award plans	—	0.1	—	—	2.1	2.2	—	2.2
Investments by noncontrolling interests[(A)]	—	—	—	—	—	—	563.3	563.3
Purchase of noncontrolling interests	—	—	—	—	—	—	—	—
Other equity transactions	—	0.1	(1.2)	—	—	(1.1)	29.3	28.2
Balance at 30 June 2023	$249.4	$1,176.9	$16,986.9	($2,304.8)	($1,970.4)	$14,138.0	$1,232.7	$15,370.7

[(A)] Reflects noncash activity related to the NEOM Green Hydrogen Company joint venture. Refer to Note 3, *Variable Interest Entities*, for additional information.

	Three Months Ended 30 June 2022							
(Millions of U.S. Dollars, except for per share data)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Air Products Shareholders' Equity	Non-controlling Interests	Total Equity
Balance at 31 March 2022	$249.4	$1,120.8	$16,075.9	($1,505.6)	($1,985.4)	$13,955.1	$555.6	$14,510.7
Net income	—	—	582.1	—	—	582.1	5.0	587.1
Other comprehensive loss	—	—	—	(545.0)	—	(545.0)	(18.2)	(563.2)
Dividends on common stock (per share $1.62)	—	—	(359.3)	—	—	(359.3)	—	(359.3)
Share-based compensation	—	9.9	—	—	—	9.9	—	9.9
Issuance of treasury shares for stock option and award plans	—	0.1	—	—	1.8	1.9	—	1.9
Investments by noncontrolling interests	—	—	—	—	—	—	29.4	29.4
Other equity transactions	—	—	(0.8)	—	—	(0.8)	—	(0.8)
Balance at 30 June 2022	$249.4	$1,130.8	$16,297.9	($2,050.6)	($1,983.6)	$13,643.9	$571.8	$14,215.7

The accompanying notes are an integral part of these statements.

Air Products and Chemicals, Inc. and Subsidiaries
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Millions of U.S. Dollars, unless otherwise indicated

1. BASIS OF PRESENTATION AND MAJOR ACCOUNTING POLICIES

Basis of Presentation

The interim consolidated financial statements of Air Products and Chemicals, Inc. and its subsidiaries (“we,” “our,” “us,” the “Company,” “Air Products,” or “registrant”) included herein have been prepared by us, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission (the "SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles ("GAAP") have been condensed or omitted pursuant to such rules and regulations. In our opinion, the accompanying statements reflect adjustments necessary to fairly present the financial position, results of operations, and cash flows for those periods indicated and contain adequate disclosures to make the information presented not misleading. Adjustments included herein are of a normal, recurring nature unless otherwise disclosed in the notes to the interim consolidated financial statements.

To fully understand the basis of presentation, the interim consolidated financial statements and related notes included herein should be read in conjunction with the consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the fiscal year ended 30 September 2022 (the "2022 Form 10-K"), which was filed with the SEC on 22 November 2022. Results of operations for interim periods are not necessarily indicative of the results of operations for a full year.

Major Accounting Policies

Refer to our 2022 Form 10-K for a description of major accounting policies. There have been no significant changes to these accounting policies during the first nine months of fiscal year 2023.

Risks and Uncertainties

We are subject to various risks and uncertainties, including, but not limited to, those resulting from inflationary pressures. Our results of operations for the periods covered by this report were not materially impacted by these events; however, there is uncertainty regarding how these events and others may affect our business, results of operations, and overall financial performance.

Reclassifications

Beginning in the first quarter of fiscal year 2023, we present "Operating lease right-of-use assets, net" and "Noncurrent operating lease liabilities" in separate captions on our consolidated balance sheets. These balances were previously presented within "Other noncurrent assets" and "Other noncurrent liabilities," respectively. Our balance sheet as of 30 September 2022 has been reclassified to conform to the fiscal year 2023 presentation.

2. NEW ACCOUNTING GUIDANCE

New Accounting Guidance to be Implemented

Government Assistance

In November 2021, the Financial Accounting Standards Board ("FASB") issued disclosure guidance to increase the transparency of transactions an entity has with a government that are accounted for by applying a grant or contribution accounting model. We are evaluating the impact this guidance will have on our annual disclosures to our consolidated financial statements. We will adopt this guidance prospectively in our Annual Report for fiscal year 2023.

Reference Rate Reform

In March 2020, the FASB issued an update to provide practical expedients and exceptions for applying GAAP to contracts, hedging relationships and other transactions affected by reference rate reform if certain criteria are met. This update is primarily applicable to our contracts and hedging relationships that reference the London Inter-Bank Offered Rate ("LIBOR"). In December 2022, the FASB extended the date through which the amendments may be applied to impacted contracts and hedges to 31 December 2024. We amended our remaining interest rate swaps that referenced LIBOR to use a daily compounded Secured Overnight Financing Rate. There were no financial statement impacts from the amendment.

3. VARIABLE INTEREST ENTITIES

We are the primary beneficiary of the NEOM Green Hydrogen Company joint venture ("NGHC"), which is a variable interest entity ("VIE") that is consolidated in our Middle East and India segment. We are not the primary beneficiary of any other material VIEs. We account for a VIE for which we exercise significant influence but are not the primary beneficiary, such as the Jazan Integrated Gasification and Power Company joint venture ("JIGPC"), as an equity method investment. For additional information on JIGPC, refer to Note 7, *Equity Affiliates*.

The table below summarizes balances associated with NGHC as reflected on our consolidated balance sheets. For additional information on this joint venture, refer to the "NEOM Green Hydrogen Project" section that follows.

	30 June 2023	30 September 2022
Assets		
Cash and cash items	$87.8	$274.7
Trade receivables, net	—	1.3
Prepaid expenses	5.0	0.1
Other receivables and current assets	108.5	23.3
Total current assets	**$201.3**	**$299.4**
Plant and equipment, net	1,031.4	218.8
Operating lease right-of-use assets, net	226.8	—
Other noncurrent assets	161.7	1.5
Total noncurrent assets	**$1,419.9**	**$220.3**
Total assets	**$1,621.2**	**$519.7**
Liabilities		
Payables and accrued liabilities	$474.7	$58.1
Accrued income taxes	0.1	—
Total current liabilities	**$474.8**	**$58.1**
Long-term debt – related party[(A)]	—	447.3
Noncurrent operating lease liabilities	17.9	—
Other noncurrent liabilities	2.6	1.4
Deferred income taxes	1.3	—
Total noncurrent liabilities	**$21.8**	**$448.7**
Total liabilities	**$496.6**	**$506.8**
Accumulated other comprehensive income	$4.0	$—
Noncontrolling interests[(A)]	605.1	30.0

[(A)] During the third quarter of fiscal year 2023, outstanding shareholder loans to NGHC were converted to equity in the entity. Accordingly, related party debt outstanding was reclassified to investments attributable to the noncontrolling partner of NGHC. This noncash activity is presented within “Investments by noncontrolling interests” on our consolidated statements of equity for the three and nine months ended 30 June 2023.

NEOM Green Hydrogen Project
In the fourth quarter of fiscal year 2020, we announced the NEOM Green Hydrogen Project (the "NEOM project"), a multi-billion dollar green hydrogen-based ammonia production facility that will be powered by renewable energy in the NEOM city of the Kingdom of Saudi Arabia. We, along with our joint venture partners, ACWA Power and NEOM Company, are equal owners in NGHC, which will develop, construct, own, operate, and finance the project.

During the third quarter of fiscal year 2022, we entered into an interim agreement with NGHC under which we commenced construction of the NEOM project. In addition, we executed an agreement with NGHC under which we will be the exclusive offtaker of green ammonia produced by the NEOM project under a long-term take-if-tendered agreement. In May 2023, NGHC finalized the $6.7 billion engineering, procurement, and construction ("EPC") agreement with Air Products named as the contractor and system integrator for the facility. The NEOM project is expected to be on-stream in 2026. We intend to transport green ammonia around the world to be dissociated to produce green hydrogen for transportation and industrial markets.

Air Products has one-third of the voting interests in the NGHC joint venture; however, substantially all the activities of the joint venture involve or are conducted on behalf of Air Products. Since we have disproportionately few voting rights relative to our economic interests in the joint venture, we determined that NGHC is a variable interest entity. In addition, we determined that we are the primary beneficiary of NGHC since we have the power to unilaterally direct certain significant activities, including key design and construction decisions, and we share power with our joint venture partners related to other activities that are significant to the economic performance of NGHC. Therefore, we consolidate NGHC within the Middle East and India segment.

In May 2023, NGHC secured non-recourse project financing of approximately $6.1 billion, which is expected to fund about 73% of the project over the construction period. Under this financing, the assets of NGHC can only be used to settle obligations of the joint venture, and creditors of NGHC do not have recourse to the general credit of Air Products. As of 30 June 2023, no borrowings were outstanding. However, we established an accrual of approximately $125 for financing fees that are eligible for deferral as a noncurrent asset on our balance sheet until borrowings are outstanding, at which time we will reclassify the unamortized balance as an offset to the debt. The recognition of deferred financing fees was a noncash transaction which had no impact on our consolidated statement of cash flows for the nine months ended 30 June 2023. In July 2023, the joint venture completed its first drawdown on the project financing of $1.3 billion.

As a condition of the project financing, Air Products issued performance guarantees that would require payment in the event of nonperformance in our role as EPC contractor. We estimate our maximum exposure to be approximately $1.2 billion, which will decline over time before expiring in November 2028.

The facility is being constructed on land owned by our joint venture partner, NEOM Company, for which NGHC signed a 50-year lease agreement. The land lease commenced during the third quarter of fiscal year 2023 due to completion of the project financing. Accordingly, we recorded an operating lease with a noncash right-of-use asset and corresponding liability of $223 for the lease, of which $209 is reflected within “Payables and accrued liabilities” for a lump-sum payment that we expect to complete in the fourth quarter of fiscal year 2023. Additional payments under the lease will occur after the first 30 years of the lease term.

4. BUSINESS AND ASSET ACTIONS

During the three and nine months ended 30 June 2023, we recorded charges of $59.0 ($51.2 attributable to Air Products after tax) and $244.6 ($204.9 attributable to Air Products after tax), respectively, for strategic business and asset actions intended to optimize costs and focus resources on our growth projects. These actions included position eliminations and restructuring of certain organizations globally as well as the exit from certain projects associated with our Asia and Europe segments that were previously under construction.

The charges for these periods, which were not recorded in segment results, included noncash charges of $32.0 and $217.6, respectively, to write-off certain assets, including those related to our withdrawal from coal gasification in Indonesia as well as a project in Ukraine that was permanently suspended due to Russia's invasion of the country. The charge also included an expense of $27.0 recorded during the third quarter for severance and other benefits payable to approximately 450 employees. The table below summarizes the carrying amount of the accrual for unpaid benefits as of 30 June 2023, which we expect to substantially pay over the next twelve months.

Charge for severance and other benefits	$27.0
Cash expenditures	(2.3)
Amount reflected in "Payables and accrued liabilities" as of 30 June 2023	$24.7

5. REVENUE RECOGNITION

The majority of our revenue is generated from our sale of gas customers within the regional industrial gases segments. We distribute gases through either our on-site or merchant supply mode depending on various factors, including the customer's volume requirements and location. We also design and manufacture equipment for air separation, hydrocarbon recovery and purification, natural gas liquefaction, and liquid helium and liquid hydrogen transport and storage. The Corporate and other segment serves our sale of equipment customers.

Disaggregation of Revenue

The tables below present our consolidated sales disaggregated by supply mode for each of our reportable segments for the third quarter and first nine months of fiscal years 2023 and 2022. We believe this presentation best depicts the nature, timing, type of customer, and contract terms for our sales.

	Three Months Ended 30 June 2023						
	Americas	Asia	Europe	Middle East and India	Corporate and other	Total	%
2023							
On-site	$704.1	$496.8	$220.5	$16.9	$—	$1,438.3	47 %
Merchant	556.6	326.1	486.1	22.8	—	1,391.6	46 %
Sale of equipment	—	—	—	—	204.0	204.0	7 %
Total	$1,260.7	$822.9	$706.6	$39.7	$204.0	$3,033.9	100 %

	Three Months Ended 30 June 2022						
	Americas	Asia	Europe	Middle East and India	Corporate and other	Total	%
2022							
On-site	$899.5	$446.2	$281.8	$18.8	$—	$1,646.3	51 %
Merchant	516.8	305.2	457.8	16.6	—	1,296.4	41 %
Sale of equipment	—	—	—	—	246.6	246.6	8 %
Total	$1,416.3	$751.4	$739.6	$35.4	$246.6	$3,189.3	100 %

	Nine Months Ended 30 June 2023						
	Americas	Asia	Europe	Middle East and India	Corporate and other	Total	%
2023							
On-site	$2,351.8	$1,444.8	$808.0	$58.5	$—	$4,663.1	50 %
Merchant	1,666.2	969.8	1,443.4	67.4	—	4,146.8	44 %
Sale of Equipment	—	—	—	—	598.8	598.8	6 %
Total	$4,018.0	$2,414.6	$2,251.4	$125.9	$598.8	$9,408.7	100 %

	Nine Months Ended 30 June 2022						
	Americas	Asia	Europe	Middle East and India	Corporate and other	Total	%
2022							
On-site	$2,432.1	$1,358.2	$899.4	$52.4	$—	$4,742.1	52 %
Merchant	1,394.9	924.8	1,323.0	35.6	—	3,678.3	40 %
Sale of Equipment	—	—	—	—	708.2	708.2	8 %
Total	$3,827.0	$2,283.0	$2,222.4	$88.0	$708.2	$9,128.6	100 %

Remaining Performance Obligations

As of 30 June 2023, the transaction price allocated to remaining performance obligations is estimated to be approximately $24 billion. This amount includes fixed-charge contract provisions associated with our on-site and sale of equipment supply modes. We estimate that approximately half of this revenue will be recognized over the next five years and the balance thereafter.

Our remaining performance obligations do not include (1) expected revenue associated with new on-site plants that are not yet on-stream; (2) consideration associated with contracts that have an expected duration of less than one year; and (3) variable consideration for which we recognize revenue at the amount to which we have the right to invoice, including energy cost pass-through to customers.

In the future, actual amounts will differ due to events outside of our control, including, but not limited to, inflationary price escalations; currency exchange rates; and amended, terminated, or renewed contracts.

Contract Balances

The table below details balances arising from contracts with customers:

	Balance Sheet Location	30 June 2023	30 September 2022
Assets			
Contract assets – current	Other receivables and current assets	$70.5	$69.0
Contract fulfillment costs – current	Other receivables and current assets	106.4	84.1
Liabilities			
Contract liabilities – current	Payables and accrued liabilities	$473.6	$439.1
Contract liabilities – noncurrent	Other noncurrent liabilities	132.1	67.2

Changes to our current contract balances primarily relate to our sale of equipment contracts. During the first nine months of fiscal year 2023, we recognized sales of approximately $250 associated with sale of equipment contracts that were included within our current contract liabilities as of 30 September 2022.

6. INVENTORIES

The components of inventories are as follows:

	30 June 2023	30 September 2022
Finished goods	$230.1	$162.0
Work in process	25.7	22.0
Raw materials, supplies, and other	408.1	330.2
Inventories	$663.9	$514.2

7. EQUITY AFFILIATES

Equity Affiliate Investment in Jazan Integrated Gasification and Power Company

On 27 October 2021, we made an initial investment of $1.6 billion to acquire a 55% ownership interest in the Jazan Integrated Gasification and Power Company ("JIGPC") joint venture, of which 4% is attributable to the noncontrolling partner of Air Products Qudra (“APQ”). We completed a second investment of $908 on 19 January 2023, which did not change our ownership interest. As of 30 June 2023, the carrying value of our investment totaled $2,756.8 and is presented as “Investments in net assets of and advances to equity affiliates” on our consolidated balance sheet. Our loss exposure is limited to our investment in the joint venture.

Our investments were made primarily in the form of shareholder loans that qualify as in-substance common stock in the joint venture and were executed according to the timing of the joint venture's purchase of project assets, which is being completed in phases. The amounts invested included approximately $130 and $73 received from the noncontrolling partner of APQ for the first and second investment, respectively. We expect to complete a remaining investment of approximately $115 for additional assets to be purchased by the joint venture later this calendar year.

We determined JIGPC is a variable interest entity for which we are not the primary beneficiary as we do not have the power to direct the activities that are most significant to the economic performance of the joint venture. Instead, these activities, including plant dispatch, operating and maintenance decisions, budgeting, capital expenditures, and financing, require unanimous approval of the owners or are controlled by the customer. Since we have the ability to exercise significant influence in the joint venture, we accounted for our investment in JIGPC under the equity method within the Middle East and India segment beginning in the first quarter of fiscal year 2022.

Certain shareholders receive a preferred cash distribution pursuant to the joint venture agreement, which specifies each shareholder’s share of income after considering the amount of cash available for distribution. As such, the earnings attributable to Air Products may not be proportionate to our ownership interest in the venture.

Additional information on the JIGPC joint venture is provided below.

JIGPC Joint Venture

JIGPC is a joint venture with Saudi Aramco Power Company (a subsidiary of Aramco), ACWA Power, and APQ in the Jazan Economic City, Saudi Arabia. On 27 September 2021, JIGPC signed definitive agreements for the acquisition of project assets from Aramco for $12 billion and entered into related project financing for the purchase of the project assets, which include power blocks, gasifiers, air separation units, syngas cleanup assets, and utilities, in multiple phases. The first phase was completed on 27 October 2021 for $7.39 billion, and the second phase was completed for $4.15 billion on 19 January 2023. We expect JIGPC to acquire additional assets totaling approximately $525 later this calendar year. JIGPC will commission, operate, and maintain the project assets to supply electricity, steam, hydrogen, and utilities to Aramco’s refinery and terminal complex under a 25-year agreement, which commenced in the first quarter of fiscal year 2022. JIGPC recorded financing receivables upon acquisition of the assets and is recognizing financing income over the supply term.

Jazan Gas Project Company

Jazan Gas Project Company ("JGPC"), a joint venture between Air Products and ACWA Holding, entered into a 20-year oxygen and nitrogen supply agreement in 2015 to supply Aramco's oil refinery and power plant in Jazan, Saudi Arabia.

In October 2021, the supply agreement between JGPC and Aramco was terminated, and JGPC sold its air separation units to Aramco. We initially sold these assets to JGPC and deferred profit proportionate to our ownership in the joint venture. With the termination of the supply agreement and sale of the air separation units complete, we recognized the remaining deferred profit, net of other project finalization costs, in equity affiliates' income in the first quarter of fiscal year 2022.

8. GOODWILL

Changes to the carrying amount of consolidated goodwill by segment for the nine months ended 30 June 2023 are as follows:

	Americas	Asia	Europe	Middle East and India	Corporate and other	Total
Goodwill, net at 30 September 2022	$143.2	$172.7	$457.5	$15.8	$33.8	$823.0
Currency translation and other	8.3	0.7	59.5	—	0.1	68.6
Goodwill, net at 30 June 2023	$151.5	$173.4	$517.0	$15.8	$33.9	$891.6

	30 June 2023	30 September 2022
Goodwill, gross	$1,222.8	$1,096.0
Accumulated impairment losses[(A)]	(331.2)	(273.0)
Goodwill, net	$891.6	$823.0

[(A)] Accumulated impairment losses are attributable to our Latin America reporting unit ("LASA") within the Americas segment and include the impact of currency translation.

We review goodwill for impairment annually in the fourth quarter of the fiscal year and whenever events or changes in circumstances indicate that the carrying value of goodwill might not be recoverable.

9. FINANCIAL INSTRUMENTS

Currency Price Risk Management

Our earnings, cash flows, and financial position are exposed to foreign currency risk from foreign currency-denominated transactions and net investments in foreign operations. It is our policy to seek to minimize our cash flow volatility from changes in currency exchange rates. This is accomplished by identifying and evaluating the risk that our cash flows will change in value due to changes in exchange rates and by executing strategies necessary to manage such exposures. Our objective is to maintain economically balanced currency risk management strategies that provide adequate downside protection.

Forward Exchange Contracts

We enter into forward exchange contracts to reduce the cash flow exposure to foreign currency fluctuations associated with highly anticipated cash flows and certain firm commitments, such as the purchase of plant and equipment. We also enter into forward exchange contracts to hedge the cash flow exposure on intercompany loans and third-party debt. This portfolio of forward exchange contracts consists primarily of Euros and U.S. Dollars. The maximum remaining term of any forward exchange contract currently outstanding and designated as a cash flow hedge at 30 June 2023 is 3.0 years.

Forward exchange contracts are also used to hedge the value of investments in certain foreign subsidiaries and affiliates by creating a liability in a currency in which we have a net equity position. The primary currency pair in this portfolio of forward exchange contracts is Euros and U.S. Dollars.

We also utilize forward exchange contracts that are not designated as hedges. These contracts are used to economically hedge foreign currency-denominated monetary assets and liabilities, primarily working capital. The primary objective of these forward exchange contracts is to protect the value of foreign currency-denominated monetary assets and liabilities from the effects of volatility in foreign exchange rates that might occur prior to their receipt or settlement. This portfolio of forward exchange contracts consists of many different foreign currency pairs, with a profile that changes from time to time depending on our business activity and sourcing decisions.

The table below summarizes our outstanding currency price risk management instruments:

	30 June 2023		30 September 2022	
	US$ Notional	Years Average Maturity	US$ Notional	Years Average Maturity
Forward Exchange Contracts:				
Cash flow hedges	$4,208.1	0.6	$4,525.0	0.7
Net investment hedges	860.9	2.7	542.2	2.2
Not designated	608.0	0.3	534.3	0.3
Total Forward Exchange Contracts	$5,677.0	0.9	$5,601.5	0.8

We also use foreign currency-denominated debt to hedge the foreign currency exposures of our net investment in certain foreign subsidiaries. The designated foreign currency-denominated debt and related accrued interest was €1,942.2 million ($2,118.7) at 30 June 2023 and €1,265.4 million ($1,240.4) at 30 September 2022. The designated foreign currency-denominated debt is presented within "Long-term debt" on the consolidated balance sheets.

Debt Portfolio Management

It is our policy to identify, on a continuing basis, the need for debt capital and to evaluate the financial risks inherent in funding the Company with debt capital. Reflecting the result of this ongoing review, we manage our debt portfolio and hedging program with the intent to (1) reduce funding risk with respect to borrowings made by us to preserve our access to debt capital and provide debt capital as required for funding and liquidity purposes, and (2) manage the aggregate interest rate risk and the debt portfolio in accordance with certain debt management parameters.

Interest Rate Management Contracts

We enter into interest rate swaps to change the fixed/variable interest rate mix of our debt portfolio in order to maintain the percentage of fixed- and variable-rate debt within the parameters set by management. In accordance with these parameters, the agreements are used to manage interest rate risks and costs inherent in our debt portfolio. Our interest rate management portfolio generally consists of fixed-to-floating interest rate swaps (which are designated as fair value hedges), pre-issuance interest rate swaps and treasury locks (which hedge the interest rate risk associated with anticipated fixed-rate debt issuances and are designated as cash flow hedges), and floating-to-fixed interest rate swaps (which are designated as cash flow hedges). As of 30 June 2023, the outstanding interest rate swaps were denominated in U.S. Dollars. The notional amount of the interest rate swap agreements is equal to or less than the designated debt being hedged. When interest rate swaps are used to hedge variable-rate debt, the indices of the swaps and the debt to which they are designated are the same. It is our policy not to enter into any interest rate management contracts which lever a move in interest rates on a greater than one-to-one basis. In May 2023, NGHC entered into floating-to-fixed interest rate swaps that are designated as cash flow hedges in connection with the non-recourse project financing secured by the joint venture. Refer to Note 3, Variable Interest Entities, for additional information.

Cross Currency Interest Rate Swap Contracts

We enter into cross currency interest rate swap contracts when our risk management function deems necessary. These contracts may entail both the exchange of fixed- and floating-rate interest payments periodically over the life of the agreement and the exchange of one currency for another currency at inception and at a specified future date. The contracts are used to hedge either certain net investments in foreign operations or non-functional currency cash flows related to intercompany loans. The current cross currency interest rate swap portfolio consists of fixed-to-fixed swaps primarily between the U.S. Dollar and each of the Chinese Renminbi, Indian Rupee, and Chilean Peso.

The table below summarizes our outstanding interest rate management contracts and cross currency interest rate swaps:

	30 June 2023				30 September 2022			
	US$ Notional	Average Pay %	Average Receive %	Years Average Maturity	US$ Notional	Average Pay %	Average Receive %	Years Average Maturity
Interest rate swaps (fair value hedge)	$800.0	Various	1.64 %	4.2	$800.0	Various	1.64 %	5.0
Interest rate swaps (cash flow hedge)	$1,006.7	2.82 %	SOFR	22.3	$—	— %	— %	0.0
Cross currency interest rate swaps (net investment hedge)	$152.8	3.92 %	3.02 %	0.8	$176.7	4.12 %	3.07 %	1.2
Cross currency interest rate swaps (cash flow hedge)	$630.3	4.75 %	3.05 %	2.1	$785.7	4.78 %	3.05 %	2.3
Cross currency interest rate swaps (not designated)	$17.6	5.39 %	3.54 %	0.5	$37.7	5.39 %	3.54 %	1.2

The table below provides the amounts recorded on the consolidated balance sheet related to cumulative basis adjustments for fair value hedges:

	Carrying amounts of hedged item		Cumulative hedging adjustment, included in carrying amount	
Balance Sheet Location	30 June 2023	30 September 2022	30 June 2023	30 September 2022
Long-term debt	$2,017.9	$2,012.9	($73.5)	($77.1)

The table below summarizes the fair value and balance sheet location of our outstanding derivatives:

	Balance Sheet Location	30 June 2023	30 September 2022	Balance Sheet Location	30 June 2023	30 September 2022
Derivatives Designated as Hedging Instruments:						
Forward exchange contracts	Other receivables and current assets	$76.7	$71.6	Payables and accrued liabilities	$64.9	$226.2
Interest rate management contracts	Other receivables and current assets	15.9	36.7	Payables and accrued liabilities	0.2	—
Forward exchange contracts	Other noncurrent assets	13.5	60.8	Other noncurrent liabilities	21.1	46.9
Interest rate management contracts	Other noncurrent assets	25.1	12.5	Other noncurrent liabilities	82.6	91.2
Total Derivatives Designated as Hedging Instruments		$131.2	$181.6		$168.8	$364.3
Derivatives Not Designated as Hedging Instruments:						
Forward exchange contracts	Other receivables and current assets	5.7	6.1	Payables and accrued liabilities	5.5	2.1
Interest rate management contracts	Other receivables and current assets	1.3	—	Payables and accrued liabilities	—	—
Forward exchange contracts	Other noncurrent assets	—	0.1	Other noncurrent liabilities	—	0.1
Interest rate management contracts	Other noncurrent assets	—	1.3	Other noncurrent liabilities	—	—
Total Derivatives Not Designated as Hedging Instruments		$7.0	$7.5		$5.5	$2.2
Total Derivatives		$138.2	$189.1		$174.3	$366.5

Refer to Note 10, *Fair Value Measurements*, which defines fair value, describes the method for measuring fair value, and provides additional disclosures regarding fair value measurements.

The tables below summarize gains (losses) recognized in other comprehensive income during the period related to our net investment and cash flow hedging relationships:

	Three Months Ended 30 June		Nine Months Ended 30 June	
	2023	2022	2023	2022
Net Investment Hedging Relationships				
Forward exchange contracts	($8.2)	$45.7	($70.6)	$56.0
Foreign currency debt	(14.2)	76.2	(165.1)	143.2
Cross currency interest rate swaps	4.4	13.1	(9.4)	3.4
Total Amount Recognized in OCI	(18.0)	135.0	(245.1)	202.6
Tax effects	4.4	(33.5)	60.2	(50.2)
Net Amount Recognized in OCI	($13.6)	$101.5	($184.9)	$152.4

	Three Months Ended 30 June		Nine Months Ended 30 June	
	2023	2022	2023	2022
Derivatives in Cash Flow Hedging Relationships				
Forward exchange contracts	$2.6	($89.4)	$196.7	($152.9)
Forward exchange contracts, excluded components	(7.2)	1.8	(18.7)	1.1
Other[(A)]	51.2	63.2	12.6	61.1
Total Amount Recognized in OCI	46.6	(24.4)	190.6	(90.7)
Tax effects	(5.8)	8.4	(43.4)	34.8
Net Amount Recognized in OCI	$40.8	($16.0)	$147.2	($55.9)

[(A)] Other primarily includes interest rate and cross currency interest rate swaps for which excluded components are recognized in “Payables and accrued liabilities” and “Other receivables and current assets” as a component of accrued interest payable and accrued interest receivable, respectively. These excluded components are recorded in “Other non-operating income (expense), net” over the life of the cross currency interest rate swap. Other also includes the recognition of our share of gains and losses, net of tax, related to interest rate swaps held by our equity affiliates.

The table below summarizes the location and amounts recognized in income related to our cash flow and fair value hedging relationships by contract type:

	Three Months Ended 30 June							
	Sales		Cost of Sales		Interest Expense		Other Non-Operating Income (Expense), Net	
	2023	2022	2023	2022	2023	2022	2023	2022
Total presented in consolidated income statements that includes effects of hedging below	$3,033.9	$3,189.3	$2,070.7	$2,342.1	$47.4	$32.7	($11.7)	$10.5
(Gain) Loss Effects of Cash Flow Hedging:								
Forward Exchange Contracts:								
Amount reclassified from OCI into income	($0.1)	$—	$0.4	$1.7	$—	$—	($10.1)	$69.9
Amount excluded from effectiveness testing recognized in earnings based on amortization approach	—	—	—	—	—	—	4.4	1.8
Other:								
Amount reclassified from OCI into income	—	—	—	—	1.4	1.5	(28.0)	(59.8)
Total (Gain) Loss Reclassified from OCI to Income	(0.1)	—	0.4	1.7	1.4	1.5	(33.7)	11.9
Tax effects	—	—	(0.1)	(0.4)	(0.4)	(0.5)	8.1	(2.8)
Net (Gain) Loss Reclassified from OCI to Income	($0.1)	$—	$0.3	$1.3	$1.0	$1.0	($25.6)	$9.1
(Gain) Loss Effects of Fair Value Hedging:								
Other:								
Hedged items	$—	$—	$—	$—	($13.6)	($20.9)	$—	$—
Derivatives designated as hedging instruments	—	—	—	—	13.6	20.9	—	—
Total (Gain) Loss Recognized in Income	$—	$—	$—	$—	$—	$—	$—	$—

	Nine Months Ended 30 June							
	Sales		Cost of Sales		Interest Expense		Other Non-Operating Income (Expense), Net	
	2023	2022	2023	2022	2023	2022	2023	2022
Total presented in consolidated income statements that includes effects of hedging below	$9,408.7	$9,128.6	$6,625.8	$6,717.3	$129.5	$95.5	($26.2)	$42.2
(Gain) Loss Effects of Cash Flow Hedging:								
Forward Exchange Contracts:								
Amount reclassified from OCI into income	$—	$0.7	$4.0	$2.0	$—	$—	($134.0)	$110.8
Amount excluded from effectiveness testing recognized in earnings based on amortization approach	—	—	—	—	—	—	9.7	4.2
Other:								
Amount reclassified from OCI into income	—	—	—	—	4.2	4.4	1.4	(47.6)
Total (Gain) Loss Reclassified from OCI to Income	—	0.7	4.0	2.0	4.2	4.4	(122.9)	67.4
Tax effects	—	(0.2)	(0.9)	(0.5)	(1.5)	(1.6)	29.8	(16.1)
Net (Gain) Loss Reclassified from OCI to Income	$—	$0.5	$3.1	$1.5	$2.7	$2.8	($93.1)	$51.3
(Gain) Loss Effects of Fair Value Hedging:								
Other:								
Hedged items	$—	$—	$—	$—	$3.6	($45.4)	$—	$—
Derivatives designated as hedging instruments	—	—	—	—	(3.6)	45.4	—	—
Total (Gain) Loss Recognized in Income	$—	$—	$—	$—	$—	$—	$—	$—

The tables below summarize the location and amounts recognized in income related to our derivatives not designated as hedging instruments by contract type:

	Three Months Ended 30 June			
	Other Income (Expense), Net		Other Non-Operating Income (Expense), Net	
	2023	2022	2023	2022
The Effects of Derivatives Not Designated as Hedging Instruments:				
Forward Exchange Contracts	$0.2	($1.9)	$0.7	($0.5)
Other	—	—	(1.0)	(0.3)
Total (Gain) Loss Recognized in Income	$0.2	($1.9)	($0.3)	($0.8)

	Nine Months Ended 30 June			
	Other Income (Expense), Net		Other Non-Operating Income (Expense), Net	
	2023	2022	2023	2022
The Effects of Derivatives Not Designated as Hedging Instruments:				
Forward Exchange Contracts	$1.5	($0.5)	($2.0)	($1.8)
Other	—	—	0.9	(0.1)
Total (Gain) Loss Recognized in Income	$1.5	($0.5)	($1.1)	($1.9)

The amount of unrealized gains and losses related to cash flow hedges as of 30 June 2023 that are expected to be reclassified to earnings in the next twelve months is not material.

The cash flows related to derivative contracts are generally reported in the operating activities section of the consolidated statements of cash flows.

Credit Risk-Related Contingent Features

Certain derivative instruments are executed under agreements that require us to maintain a minimum credit rating with both Standard & Poor's and Moody's. If our credit rating falls below this threshold, the counterparty to the derivative instruments has the right to request full collateralization on the derivatives' net liability position. The net liability position of derivatives with credit risk-related contingent features was $113.8 and $114.8 as of 30 June 2023 and 30 September 2022, respectively. Because our current credit rating is above the various pre-established thresholds, no collateral has been posted on these liability positions.

Counterparty Credit Risk Management

We execute financial derivative transactions with counterparties that are highly rated financial institutions, all of which are investment grade at this time. Some of our underlying derivative agreements give us the right to require the institution to post collateral if its credit rating falls below the pre-established thresholds with Standard & Poor's or Moody's. The collateral that the counterparties would be required to post was $50.0 and $62.8 as of 30 June 2023 and 30 September 2022, respectively. No financial institution is required to post collateral at this time as all have credit ratings at or above threshold.

10. FAIR VALUE MEASUREMENTS

Fair value is defined as an exit price, or the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as follows:

Level 1 — Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 — Inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the asset or liability.

Level 3 — Inputs that are unobservable for the asset or liability based on our own assumptions about the assumptions market participants would use in pricing the asset or liability.

The methods and assumptions used to measure the fair value of financial instruments are as follows:

Short-term Investments

Short-term investments primarily include time deposits with original maturities greater than three months and less than one year. We estimated the fair value of our short-term investments, which approximates carrying value as of the balance sheet date, using Level 2 inputs within the fair value hierarchy. Level 2 measurements were based on current interest rates for similar investments with comparable credit risk and time to maturity.

Derivatives

The fair value of our interest rate management contracts and forward exchange contracts are quantified using the income approach and are based on estimates using standard pricing models. These models consider the value of future cash flows as of the balance sheet date, discounted to a present value using discount factors that match both the time to maturity and currency of the underlying instruments. These standard pricing models utilize inputs that are derived from or corroborated by observable market data such as interest rate yield curves as well as currency spot and forward rates; therefore, the fair value of our derivatives is classified as a Level 2 measurement. On an ongoing basis, we randomly test a subset of our valuations against valuations received from the transaction's counterparty to validate the accuracy of our standard pricing models. Counterparties to these derivative contracts are highly rated financial institutions.

Refer to Note 9, *Financial Instruments*, for a description of derivative instruments, including details related to the balance sheet line classifications.

Long-term Debt, Including Related Party

The fair value of our debt is based on estimates using standard pricing models that consider the value of future cash flows as of the balance sheet date, discounted to a present value using discount factors that match both the time to maturity and currency of the underlying instruments. These standard valuation models utilize observable market data such as interest rate yield curves and currency spot rates; therefore, the fair value of our debt is classified as a Level 2 measurement.

The carrying values and fair values of financial instruments were as follows:

	30 June 2023		30 September 2022	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets				
Derivatives				
Forward exchange contracts	$95.9	$95.9	$138.6	$138.6
Interest rate management contracts	42.3	42.3	50.5	50.5
Liabilities				
Derivatives				
Forward exchange contracts	$91.5	$91.5	$275.3	$275.3
Interest rate management contracts	82.8	82.8	91.2	91.2
Long-term debt, including current portion and related party	8,832.8	8,084.2	7,634.1	6,721.2

The carrying amounts reported on the consolidated balance sheets for cash and cash items, short-term investments, trade receivables, payables and accrued liabilities, accrued income taxes, and short-term borrowings approximate fair value due to the short-term nature of these instruments. Accordingly, these items have been excluded from the above table.

The table below summarizes assets and liabilities on the consolidated balance sheets that are measured at fair value on a recurring basis:

	30 June 2023				30 September 2022			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
Assets at Fair Value								
Derivatives								
Forward exchange contracts	$95.9	$—	$95.9	$—	$138.6	$—	$138.6	$—
Interest rate management contracts	42.3	—	42.3	—	50.5	—	50.5	—
Total Assets at Fair Value	$138.2	$—	$138.2	$—	$189.1	$—	$189.1	$—
Liabilities at Fair Value								
Derivatives								
Forward exchange contracts	$91.5	$—	$91.5	$—	$275.3	$—	$275.3	$—
Interest rate management contracts	82.8	—	82.8	—	91.2	—	91.2	—
Total Liabilities at Fair Value	$174.3	$—	$174.3	$—	$366.5	$—	$366.5	$—

11. DEBT

Green Financing

On 3 March 2023, we issued our inaugural multi-currency green bonds under our new Green Finance Framework, which was established to further align our financings with our sustainability strategy. The offering included U.S. Dollar- and Euro-denominated fixed-rate notes with aggregate principal amounts of $600 and €700 million, respectively. The proceeds from these notes were reduced by deferred financing charges and discounts of approximately $15, which are being amortized over the life of the underlying bonds.

We intend to use the net proceeds to finance or refinance, in whole or in part, existing or future projects that are expected to have environmental benefits, including those related to pollution prevention and control, renewable energy generation and procurement, and sustainable aviation fuel. Pending full allocation of the net proceeds to such eligible projects, we may temporarily invest the balance of the net proceeds in cash, cash equivalents, or short-term investments, or repay a portion of outstanding indebtedness in line with our treasury management policies.

The interest rate, maturity, and carrying amount as of 30 June 2023 for each of the notes issued under our Green Finance Framework are summarized in the table below:

	Fiscal Year Maturities	30 June 2023
Payable in U.S. Dollars		
Note 4.800%	2033	$600.0
Payable in Euros		
Eurobonds 4.000%	2035	763.6
Total		$1,363.6

NEOM Green Hydrogen Project Financing

Refer to Note 3, *Variable Interest Entities*, for information regarding non-recourse project financing secured by the NGHC joint venture for construction of the NEOM Green Hydrogen project. As of 30 June 2023, no borrowings were outstanding under this arrangement.

Related Party Debt

Our related party debt includes loans with our joint venture partners. Total debt owed to related parties was $327.3 and $781.0 as of 30 June 2023 and 30 September 2022, respectively, of which $178.7 and $129.0, respectively, was reflected within "Current portion of long-term debt" on our consolidated balance sheets. During the third quarter of fiscal year 2023, outstanding shareholder loans to the NGHC joint venture were converted to equity in the entity. The remaining related party debt balance as of 30 June 2023 primarily includes a loan with Lu'An Clean Energy Company.

Other

We have credit facilities available to certain of our foreign subsidiaries totaling $1,621.8, of which $1,031.1 was borrowed and outstanding as of 30 June 2023. The amount borrowed and outstanding as of 30 September 2022 was $457.5. The increase from 30 September 2022 was driven by borrowings on a new variable-rate Saudi Riyal loan facility that matures in October 2026. The interest rate on the facility is based on the Saudi Arabian Interbank Offered Rate ("SAIBOR") plus an annual margin of 1.35%. We entered into this facility in October 2022 and utilized a portion of the proceeds to repay a variable-rate 4.10% Saudi Riyal Loan Facility of $195.6, which was presented within long-term debt on our consolidated balance sheet as of 30 September 2022.

12. RETIREMENT BENEFITS

The components of net periodic cost (benefit) for our defined benefit pension plans for the three and nine months ended 30 June 2023 and 2022 were as follows:

	Pension Benefits					
	2023			2022		
Three Months Ended 30 June	U.S.	International	Total	U.S.	International	Total
Service cost	$2.7	$3.0	$5.7	$4.6	$5.3	$9.9
Non-service cost (benefit):						
Interest cost	32.5	15.2	47.7	18.4	7.1	25.5
Expected return on plan assets	(31.7)	(12.6)	(44.3)	(42.0)	(16.6)	(58.6)
Prior service cost amortization	0.3	—	0.3	0.3	—	0.3
Actuarial loss amortization	14.9	3.1	18.0	16.6	3.6	20.2
Settlements	—	0.3	0.3	3.1	—	3.1
Other	—	0.2	0.2	—	0.2	0.2
Net Periodic Cost (Benefit)	$18.7	$9.2	$27.9	$1.0	($0.4)	$0.6

	Pension Benefits					
	2023			2022		
Nine Months Ended 30 June	U.S.	International	Total	U.S.	International	Total
Service cost	$8.2	$9.3	$17.5	$13.8	$16.5	$30.3
Non-service cost (benefit):						
Interest cost	97.5	44.5	142.0	55.2	22.3	77.5
Expected return on plan assets	(95.3)	(36.6)	(131.9)	(126.2)	(51.9)	(178.1)
Prior service cost amortization	0.9	0.1	1.0	0.9	—	0.9
Actuarial loss amortization	44.7	9.1	53.8	49.9	11.3	61.2
Settlements	0.9	0.5	1.4	4.9	0.2	5.1
Curtailments	—	(1.9)	(1.9)	—	—	—
Other	—	0.7	0.7	—	1.2	1.2
Net Periodic Cost (Benefit)	$56.9	$25.7	$82.6	($1.5)	($0.4)	($1.9)

Our service costs are primarily included within "Cost of sales" and "Selling and administrative expense" on our consolidated income statements. The amount of service costs capitalized in the first nine months of fiscal years 2023 and 2022 were not material. The non-service related impacts, including pension settlement losses and curtailment gains, are presented outside operating income within "Other non-operating income (expense), net."

For the nine months ended 30 June 2023 and 2022, our cash contributions to funded pension plans and benefit payments under unfunded pension plans were $22.0 and $31.7, respectively. Total contributions for fiscal year 2023 are expected to be approximately $25 to $35. During fiscal year 2022, total contributions were $44.7.

In December 2022, we amended an international defined benefit pension plan to move its participants to a defined contribution plan for future benefit accumulation. As a result of this amendment, we recognized a $1.9 curtailment gain for the write-off of prior service credits and remeasured the projected benefit obligations of the plan. This resulted in a net decrease to our projected benefit obligation and accumulated other comprehensive loss of $9.1 in the first quarter of fiscal year 2023. The impact of the remeasurement on fiscal year 2023 expense is not material.

During the three and nine months ended 30 June 2023, we recognized actuarial gain amortization of $0.5 and $1.5, respectively, for our other postretirement benefits plan. During the three and nine months ended 30 June 2022, we recognized actuarial gain amortization of $0.4 and $1.2, respectively, for our other postretirement benefits plan.

13. COMMITMENTS AND CONTINGENCIES

Litigation

We are involved in various legal proceedings, including commercial, competition, environmental, intellectual property, regulatory, product liability, and insurance matters. We do not currently believe there are any legal proceedings, individually or in the aggregate, that are reasonably possible to have a material impact on our financial condition, results of operations, or cash flows.

In September 2010, the Brazilian Administrative Council for Economic Defense ("CADE") issued a decision against our Brazilian subsidiary, Air Products Brasil Ltda., and several other Brazilian industrial gas companies for alleged anticompetitive activities. CADE imposed a civil fine of R$179.2 million (approximately $37 at 30 June 2023) on Air Products Brasil Ltda. This fine was based on a recommendation by a unit of the Brazilian Ministry of Justice, following an investigation beginning in 2003, which alleged violation of competition laws with respect to the sale of industrial and medical gases. The fines are based on a percentage of our total revenue in Brazil in 2003.

We have denied the allegations made by the authorities and filed an appeal in October 2010 with the Brazilian courts. On 6 May 2014, our appeal was granted and the fine against Air Products Brasil Ltda. was dismissed. CADE has appealed that ruling and the matter remains pending. We, with advice of our outside legal counsel, have assessed the status of this matter and have concluded that, although an adverse final judgment after exhausting all appeals is possible, such a judgment is not probable. As a result, no provision has been made in the consolidated financial statements. In the event of an adverse final judgment, we estimate the maximum possible loss to be the full amount of the fine of R$179.2 million (approximately $37 at 30 June 2023) plus interest accrued thereon until final disposition of the proceedings.

Additionally, in April 2023, we received a favorable ruling from a Texas state court in litigation involving disputed energy management charges related to Winter Storm Uri, a severe winter weather storm that impacted the U.S. Gulf Coast in February 2021. The ruling is subject to appeal and had no impact on our consolidated financial statements for the three and nine months ended 30 June 2023.

Environmental

In the normal course of business, we are involved in legal proceedings under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA," the federal Superfund law), Resource Conservation and Recovery Act ("RCRA"), and similar state and foreign environmental laws relating to the designation of certain sites for investigation or remediation. Presently, there are 27 sites on which a final settlement or remediation has not been achieved where we, usually along with others, have been designated a potentially responsible party by environmental authorities or are otherwise engaged in investigation or remediation, including cleanup activity at certain of our current and former manufacturing sites. We continually monitor these sites for which we have environmental exposure.

Accruals for environmental loss contingencies are recorded when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. The consolidated balance sheets at 30 June 2023 and 30 September 2022 included an accrual of $66.9 and $71.3, respectively, primarily as part of other noncurrent liabilities. The environmental liabilities will be paid over a period of up to 30 years. We estimate the exposure for environmental loss contingencies to range from $66 to a reasonably possible upper exposure of $80 as of 30 June 2023.

Actual costs to be incurred at identified sites in future periods may vary from the estimates, given inherent uncertainties in evaluating environmental exposures. Using reasonably possible alternative assumptions of the exposure level could result in an increase to the environmental accrual. Due to the inherent uncertainties related to environmental exposures, a significant increase to the reasonably possible upper exposure level could occur if a new site is designated, the scope of remediation is increased, a different remediation alternative is identified, or a significant increase in our proportionate share occurs. We do not expect that any sum we may have to pay in connection with environmental matters in excess of the amounts recorded or disclosed above would have a material adverse impact on our financial position or results of operations in any one year.

Pace

At 30 June 2023, $37.6 of the environmental accrual was related to the Pace facility.

In 2006, we sold our Amines business, which included operations at Pace, Florida, and recognized a liability for retained environmental obligations associated with remediation activities at Pace. We are required by the Florida Department of Environmental Protection ("FDEP") and the United States Environmental Protection Agency ("USEPA") to continue our remediation efforts. We recognized a before-tax expense of $42 in fiscal year 2006 in results from discontinued operations and recorded an environmental accrual of $42 in continuing operations on the consolidated balance sheets.

During the second quarter of fiscal year 2020, we completed an updated cost review of the environmental remediation status at the Pace facility. The review was completed in conjunction with requirements to maintain financial assurance per the Consent Order issued by the FDEP discussed below. Based on our review, we expect ongoing activities to continue for 30 years. Additionally, we will require near-term spending to install new groundwater recovery wells and ancillary equipment, in addition to future capital to consider the extended time horizon for remediation at the site. As a result of these changes, we increased our environmental accrual for this site by $19 in continuing operations on the consolidated balance sheets and recognized a before-tax expense of $19 in results from discontinued operations in the second quarter of fiscal year 2020. There have been no significant changes to the estimated exposure range related to the Pace facility since the second quarter of fiscal year 2020.

We have implemented many of the remedial corrective measures at the Pace facility required under 1995 Consent Orders issued by the FDEP and the USEPA. Contaminated soils have been bioremediated, and the treated soils have been secured in a lined on-site corrective action management unit. Several groundwater recovery systems have been installed to contain and remove contamination from groundwater. We completed an extensive assessment of the site to determine the efficacy of existing measures, what additional corrective measures may be needed, and whether newer remediation technologies that were not available in the 1990s might be suitable to more quickly and effectively remediate groundwater. Based on assessment results, we completed a focused feasibility study that has identified alternative approaches that may more effectively remove contaminants. We continue to review alternative remedial approaches with the FDEP and have completed additional field work during 2021 to support the design of an improved groundwater recovery network with the objective of targeting areas of higher contaminant concentration and avoiding areas of high groundwater iron which has proven to be a significant operability issue for the project. The design of the optimized recovery system has been initiated in fiscal year 2023 with construction to begin thereafter in fiscal years 2024 and 2025. In the first quarter of 2015, we entered into a new Consent Order with the FDEP requiring us to continue our remediation efforts at the Pace facility, along with the completion of a cost review every 5 years.

Piedmont

At 30 June 2023, $5.6 of the environmental accrual was related to the Piedmont site.

On 30 June 2008, we sold our Elkton, Maryland, and Piedmont, South Carolina, production facilities and the related North American atmospheric emulsions and global pressure sensitive adhesives businesses. In connection with the sale, we recognized a liability for retained environmental obligations associated with remediation activities at the Piedmont site. This site is under active remediation for contamination caused by an insolvent prior owner.

We are required by the South Carolina Department of Health and Environmental Control ("SCDHEC") to address both contaminated soil and groundwater. Numerous areas of soil contamination have been addressed, and contaminated groundwater is being recovered and treated. The SCDHEC issued its final approval to the site-wide feasibility study on 13 June 2017 and the Record of Decision for the site on 27 June 2018, after which we signed a Consent Agreement Amendment memorializing our obligations to complete the cleanup of the site. Remediation has started in accordance with the design, which includes in-situ chemical oxidation treatment, as well as soil vapor extraction to remove volatile organic compounds from the unsaturated soils beneath the impacted areas of the plant. We estimate that source area remediation and groundwater recovery and treatment will continue through 2029. Thereafter, we expect this site to go into a state of monitored natural attenuation through 2047.

We recognized a before-tax expense of $24 in 2008 as a component of income from discontinued operations and recorded an environmental liability of $24 in continuing operations on the consolidated balance sheets. There have been no significant changes to the estimated exposure.

Pasadena

At 30 June 2023, $10.5 of the environmental accrual was related to the Pasadena site.

During the fourth quarter of 2012, management committed to permanently shutting down our polyurethane intermediates ("PUI") production facility in Pasadena, Texas. In shutting down and dismantling the facility, we have undertaken certain obligations related to soil and groundwater contaminants. We have been pumping and treating groundwater to control off-site contaminant migration in compliance with regulatory requirements and under the approval of the Texas Commission on Environmental Quality ("TCEQ"). We estimate that the pump and treat system will continue to operate until 2042.

We continue to perform additional work to address other environmental obligations at the site. This additional work includes remediating, as required, impacted soils, investigating groundwater west of the former PUI facility, continuing post closure care for two closed RCRA surface impoundment units, and maintaining engineering controls. Additionally, we have conducted an interim corrective action to treat impacted soils as recommended in the TCEQ 2019 Annual Report. In 2012, we estimated the total exposure at this site to be $13. There have been no significant changes to the estimated exposure.

14. SHARE-BASED COMPENSATION

Our outstanding share-based compensation programs include deferred stock units and stock options. During the nine months ended 30 June 2023, we granted market-based and time-based deferred stock units. Under all programs, the terms of the awards are fixed at the grant date. We issue shares from treasury stock upon the payout of deferred stock units and the exercise of stock options. As of 30 June 2023, there were 1.2 million shares available for future grant under our Long-Term Incentive Plan ("LTIP").

Share-based compensation cost recognized on the consolidated income statements is summarized below:

	Three Months Ended 30 June		Nine Months Ended 30 June	
	2023	2022	2023	2022
Before-tax share-based compensation cost	$14.5	$10.7	$46.9	$38.0
Income tax benefit	(3.5)	(2.6)	(11.4)	(9.3)
After-tax share-based compensation cost	$11.0	$8.1	$35.5	$28.7

Before-tax share-based compensation cost is primarily included in "Selling and administrative expense" on our consolidated income statements. The amount of share-based compensation cost capitalized in the first nine months of fiscal years 2023 and 2022 was not material.

Deferred Stock Units

During the nine months ended 30 June 2023, we granted 85,612 market-based deferred stock units. The market-based deferred stock units are earned over the performance period beginning 1 October 2022 and ending 30 September 2025, conditioned on the level of our total shareholder return in relation to a defined peer group over the three-year performance period.

The market-based deferred stock units had an estimated grant-date fair value of $502.03 per unit, which was estimated using a Monte Carlo simulation model. The model utilizes multiple input variables that determine the probability of satisfying the market condition stipulated in the grant and calculates the fair value of the awards. We generally expense the grant-date fair value of these awards on a straight-line basis over the vesting period. The calculation of the fair value of market-based deferred stock units used the following assumptions:

Expected volatility	32.5 %
Risk-free interest rate	4.0 %
Expected dividend yield	2.4 %

In addition, during the nine months ended 30 June 2023, we granted 116,255 time-based deferred stock units at a weighted average grant-date fair value of $309.41.

15. ACCUMULATED OTHER COMPREHENSIVE LOSS

The tables below summarize changes in accumulated other comprehensive loss ("AOCL"), net of tax, attributable to Air Products for the three and nine months ended 30 June 2023:

	Derivatives qualifying as hedges	Foreign currency translation adjustments	Pension and postretirement benefits	Total
Balance at 31 March 2023	($26.5)	($1,527.9)	($608.9)	($2,163.3)
Other comprehensive income (loss) before reclassifications	40.8	(175.8)	—	(135.0)
Amounts reclassified from AOCL	(24.4)	—	13.5	(10.9)
Net current period other comprehensive income (loss)	16.4	(175.8)	13.5	(145.9)
Amount attributable to noncontrolling interests	11.4	(15.9)	0.1	(4.4)
Balance at 30 June 2023	($21.5)	($1,687.8)	($595.5)	($2,304.8)

	Derivatives qualifying as hedges	Foreign currency translation adjustments	Pension and postretirement benefits	Total
Balance at 30 September 2022	($71.9)	($2,072.4)	($641.8)	($2,786.1)
Other comprehensive income before reclassifications	147.2	384.8	6.7	538.7
Amounts reclassified from AOCL	(87.3)	(0.3)	39.8	(47.8)
Net current period other comprehensive income	59.9	384.5	46.5	490.9
Amount attributable to noncontrolling interests	9.5	(0.1)	0.2	9.6
Balance at 30 June 2023	($21.5)	($1,687.8)	($595.5)	($2,304.8)

The table below summarizes the reclassifications out of AOCL and the affected line item on the consolidated income statements:

	Three Months Ended 30 June		Nine Months Ended 30 June	
	2023	2022	2023	2022
(Gain) Loss on Cash Flow Hedges, net of tax				
Sales	($0.1)	$—	$—	$0.5
Cost of sales	0.3	1.3	3.1	1.5
Interest expense	1.0	1.0	2.7	2.8
Other non-operating income (expense), net	(25.6)	9.1	(93.1)	51.3
Total (Gain) Loss on Cash Flow Hedges, net of tax	($24.4)	$11.4	($87.3)	$56.1
Currency Translation Adjustment				
Business and asset actions	$—	$—	($0.3)	$—
Pension and Postretirement Benefits, net of tax[(A)]	$13.5	$17.5	$39.8	$49.4

[(A)] The components of net periodic benefit cost reclassified out of AOCL include items such as prior service cost amortization, actuarial loss amortization, settlements, and curtailments and are included in “Other non-operating income (expense), net” on the consolidated income statements. Refer to Note 12, *Retirement Benefits*, for additional information.

16. EARNINGS PER SHARE

The table below details the computation of basic and diluted earnings per share ("EPS"):

	Three Months Ended 30 June		Nine Months Ended 30 June	
	2023	2022	2023	2022
Numerator				
Net income attributable to Air Products	$595.6	$582.1	$1,607.6	$1,673.0
Denominator *(in millions)*				
Weighted average common shares — Basic	222.4	222.0	222.3	222.0
Effect of dilutive securities				
Employee stock option and other award plans	0.4	0.5	0.4	0.5
Weighted average common shares — Diluted	222.8	222.5	222.7	222.5
Per Share Data *(U.S. Dollars per share)*				
Basic EPS attributable to Air Products	$2.68	$2.62	$7.23	$7.54
Diluted EPS attributable to Air Products	$2.67	$2.62	$7.22	$7.52

For the three and nine months ended 30 June 2023 and 2022, there were no antidilutive outstanding share-based awards.

17. INCOME TAXES

Effective Tax Rate

Our effective tax rate was 18.6% and 19.4% for the three and nine months ended 30 June 2023, respectively, and 18.6% and 18.1% for the three and nine months ended 30 June 2022, respectively.

During the first nine months of fiscal year 2023, we recorded a charge for business and asset actions of $244.6 ($204.9 attributable to Air Products after tax). Refer to Note 4, *Business and Asset Actions*, for additional information. The charge included certain losses for which we could not recognize an income tax benefit and were subject to a valuation allowance of $36.0. Partially offsetting the valuation allowance cost was a $15.9 income tax benefit from a tax election related to a non-U.S. subsidiary.

Cash Paid for Taxes (Net of Cash Refunds)

Income tax payments, net of refunds, were $487.6 and $341.3 for the nine months ended 30 June 2023 and 2022, respectively.

18. SUPPLEMENTAL INFORMATION

Related Party Transactions

We have related party sales to some of our equity affiliates and joint venture partners as well as other income primarily from fees charged for use of Air Products' patents and technology. Sales to and other income from related parties totaled approximately $105 and $290 for the three and nine months ended 30 June 2023, respectively, and approximately $75 and $200 for the three and nine months ended 30 June 2022, respectively. Sales agreements with related parties include terms that are consistent with those that we believe would have been negotiated at an arm's length with an independent party. As of 30 June 2023 and 30 September 2022, our consolidated balance sheets included related party trade receivables of approximately $255 and $55, respectively.

Refer to Note 11, *Debt*, for information concerning debt owed to related parties.

Uzbekistan Asset Purchase

On 25 May 2023, we entered into an investment agreement with the Government of the Republic of Uzbekistan and Uzbekneftegaz JSC ("UNG") to purchase a natural gas-to-syngas processing facility in Qashqadaryo Province, Uzbekistan, for $1 billion. Under the agreement, Air Products will acquire, own, and operate the facility and supply all offtake products to UNG under a 15-year on-site contract, with UNG supplying the feedstock natural gas and utilities.

We are accounting for the transaction as a financing arrangement because UNG has the right to reacquire the facility at the end of the contract term. Accordingly, progress payments of approximately $800, of which $600 was completed during the third quarter of fiscal year 2023, are reflected within "Financing Receivables" on our consolidated balance sheet as of 30 June 2023. The progress payments made during the third quarter are reflected within "Investment in financing receivables" on our consolidated statement of cash flows. We will complete our investment prior to facility on-stream, which is expected in 2024.

Changes in Estimates

Changes in estimates on projects accounted for under the cost incurred input method are recognized as a cumulative adjustment for the inception-to-date effect of such change. We recorded changes to project cost estimates that unfavorably impacted operating income by approximately $45 and $105 for the three and nine months ended 30 June 2023, respectively, and approximately $30 in the first nine months of fiscal year 2022.

Lessee Accounting

During the nine months ended 30 June 2023, we recorded noncash right-of-use asset additions of approximately $320, including a land lease associated with the NGHC joint venture. Refer to Note 3, *Variable Interest Entities*, for additional information.

19. BUSINESS SEGMENT INFORMATION

Our reportable segments reflect the manner in which our chief operating decision maker assesses performance and allocates resources. Our reportable segments are as follows:

- Americas;
- Asia;
- Europe;
- Middle East and India; and
- Corporate and other

Except for the Corporate and other segment, each reportable segment meets the definition of an operating segment and does not include the aggregation of multiple operating segments. Our Corporate and other segment includes the aggregation of three operating segments that meet the aggregation criteria under GAAP.

Summary by Business Segment

	Americas	Asia	Europe	Middle East and India	Corporate and other	Total
Three Months Ended 30 June 2023						
Sales	$1,260.7	$822.9	$706.6	$39.7	$204.0	$3,033.9 (A)
Operating income (loss)	374.8	240.8	176.1	5.8	(94.3)	703.2 (B)
Depreciation and amortization	163.1	108.3	48.6	7.0	12.9	339.9
Equity affiliates' income	29.9	7.5	28.8	95.5	3.3	165.0
Three Months Ended 30 June 2022						
Sales	$1,416.3	$751.4	$739.6	$35.4	$246.6	$3,189.3 (A)
Operating income (loss)	298.9	210.6	137.4	6.9	(26.4)	627.4 (B)
Depreciation and amortization	160.5	107.6	48.9	6.8	13.4	337.2
Equity affiliates' income	21.4	5.7	20.6	67.2	1.2	116.1

(A) Sales relate to external customers only. All intersegment sales are eliminated in consolidation.
(B) Refer to the *Reconciliation to Consolidated Results* section below.

	Americas	Asia	Europe	Middle East and India	Corporate and other	Total
Nine Months Ended 30 June 2023						
Sales	$4,018.0	$2,414.6	$2,251.4	$125.9	$598.8	$9,408.7 (A)
Operating income (loss)	1,042.0	709.7	495.1	13.8	(260.0)	2,000.6 (B)
Depreciation and amortization	480.8	320.2	141.2	20.2	38.6	1,001.0
Equity affiliates' income	74.4	22.2	76.0	258.5	9.8	440.9
Nine Months Ended 30 June 2022						
Sales	$3,827.0	$2,283.0	$2,222.4	$88.0	$708.2	$9,128.6 (A)
Operating income (loss)	841.6	635.3	353.0	16.5	(134.1)	1,712.3 (B)
Depreciation and amortization	469.5	330.2	149.0	19.8	36.9	1,005.4
Equity affiliates' income	75.7	18.5	57.8	230.6	2.1	384.7
Total Assets						
30 June 2023	$9,547.9	$7,216.5	$4,597.0	$5,182.2	$4,385.9	$30,929.5
30 September 2022	8,237.7	6,968.7	3,645.1	2,980.7	5,360.4	27,192.6

(A) Sales relate to external customers only. All intersegment sales are eliminated in consolidation.
(B) Refer to the *Reconciliation to Consolidated Results* section below.

Reconciliation to Consolidated Results

The table below reconciles total operating income disclosed in the tables above to consolidated operating income as reflected on our consolidated income statements:

	Three Months Ended 30 June		Nine Months Ended 30 June	
Operating Income	2023	2022	2023	2022
Total	$703.2	$627.4	$2,000.6	$1,712.3
Business and asset actions	(59.0)	—	(244.6)	—
Consolidated Operating Income	$644.2	$627.4	$1,756.0	$1,712.3

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

As used in the discussion that follows, unless the context indicates otherwise, the terms "we," "our," "us," the "Company," "Air Products," or "registrant" include controlled subsidiaries and affiliates of Air Products. This discussion should be read in conjunction with the interim consolidated financial statements and the accompanying notes contained in this Quarterly Report on Form 10-Q. Unless otherwise stated, financial information is presented in millions of U.S. Dollars, except for per share data. Except for net income, which includes the results of discontinued operations, when applicable, financial information is presented on a continuing operations basis.

Comparisons of our results of operations and liquidity and capital resources are for the third quarter and first nine months of fiscal year 2023 versus ("vs.") the third quarter and first nine months of fiscal year 2022, respectively. The disclosures provided in this Quarterly Report on Form 10-Q are complementary to those made in our Annual Report on Form 10-K for the fiscal year ended 30 September 2022 (the "2022 Form 10-K"), which was filed with the SEC on 22 November 2022.

The financial measures discussed below are presented in accordance with U.S. generally accepted accounting principles ("GAAP"), except as noted. We present certain financial measures on an "adjusted" or "non-GAAP" basis because we believe such measures, when viewed together with financial results computed in accordance with GAAP, provide a more complete understanding of the factors and trends affecting our historical financial performance. For each non-GAAP financial measure, including adjusted diluted earnings per share ("EPS"), adjusted EBITDA, adjusted EBITDA margin, adjusted effective tax rate, and capital expenditures, we present a reconciliation to the most directly comparable financial measure calculated in accordance with GAAP. These reconciliations and explanations regarding the use of non-GAAP measures are presented under the "Reconciliations of Non-GAAP Financial Measures" section beginning on page 51.

For information concerning activity with our related parties, refer to Note 18, *Supplemental Information*, to the consolidated financial statements.

About Air Products

Air Products and Chemicals, Inc., a Delaware corporation originally founded in 1940, has built a reputation for its innovative culture, operational excellence, and commitment to safety and the environment. Our passionate, talented, and committed employees are from diverse backgrounds and together are driven by our higher purpose to create innovative solutions that benefit the environment, enhance sustainability, and address the challenges facing customers, communities, and the world. As of 30 September 2022, we had approximately 21,900 employees, of which over 90% were working full-time and 75% were located outside the United States. For information on our product, service, and solution offerings, refer to our 2022 Form 10-K.

We manage our operations, assess performance, and report earnings under five reportable segments: Americas, Asia, Europe, Middle East and India, and Corporate and other. This Management's Discussion and Analysis discusses our results based on these operations.

THIRD QUARTER 2023 VS. THIRD QUARTER 2022

THIRD QUARTER 2023 IN SUMMARY

- Sales of $3,033.9 decreased 5%, or $155.4, as higher pricing of 4% and higher volumes of 3% were more than offset by lower energy cost pass-through to customers of 11% and an unfavorable impact from currency of 1%.

- Operating income of $644.2 increased 3%, or $16.8, as our pricing actions and higher volumes more than offset higher costs, a charge of $59.0 for business and asset actions, and unfavorable currency. Operating margin of 21.2% increased 150 basis points ("bp") primarily due to the impact of our pricing actions.

- Equity affiliates' income of $165.0 increased 42%, or $48.9, primarily due to a higher contribution from the JIGPC joint venture, which completed the second phase of the asset purchase associated with the Jazan gasification and power project in January 2023, as well as higher income from our affiliates in Mexico and Italy.

- Net income of $610.5 increased 4%, or $23.4, as the impact of our pricing actions and higher equity affiliates' income were partially offset by the charge for business and asset actions, higher non-service pension costs, and higher other costs. Net income margin of 20.1% increased 170 bp.

- Adjusted EBITDA of $1,208.1 increased 12%, or $127.4, and adjusted EBITDA margin of 39.8% increased 590 bp.

- Diluted EPS of $2.67 increased 2%, or $0.05 per share, and included unfavorable impacts from business and asset actions as well as non-service related pension costs. Adjusted diluted EPS of $2.98 increased 16%, or $0.40 per share. A summary table of changes in diluted EPS is presented below.

Changes in Diluted EPS Attributable to Air Products

The per share impacts presented in the tables below were calculated independently and do not sum to the total change in diluted EPS due to rounding.

	Three Months Ended 30 June		Increase
	2023	2022	(Decrease)
Diluted EPS	**$2.67**	**$2.62**	**$0.05**
Operating Impacts			
Underlying business			
Volume			0.09
Price, net of variable costs			0.52
Other costs			(0.27)
Currency			(0.06)
Business and asset actions			(0.23)
Total operating impacts			**$0.05**
Other Impacts			
Equity affiliates' income			$0.18
Interest expense			(0.05)
Other non-operating income/expense, net, excluding discrete item below			0.03
Non-service pension cost/benefit, net			(0.10)
Noncontrolling interests			(0.04)
Total other impacts			**$0.02**
Total change in diluted EPS			**$0.05**
% Change from prior year			**2 %**

The table below summarizes the diluted per share impact of our non-GAAP adjustments for the third quarter of fiscal years 2023 and 2022:

	Three Months Ended 30 June		Increase
	2023	2022	(Decrease)
Diluted EPS	**$2.67**	**$2.62**	**$0.05**
Business and asset actions	0.23	—	0.23
Non-service pension cost (benefit), net	0.07	(0.03)	0.10
Adjusted Diluted EPS	**$2.98**	**$2.58**	**$0.40**
% Change from prior year			**16 %**

THIRD QUARTER 2023 RESULTS OF OPERATIONS

Discussion of Third Quarter Consolidated Results

	Three Months Ended 30 June		Changes	
	2023	2022	$	%/bp
GAAP Measures				
Sales	$3,033.9	$3,189.3	($155.4)	(5 %)
Operating income	644.2	627.4	16.8	3 %
Operating margin	21.2 %	19.7 %		150 bp
Equity affiliates' income	$165.0	$116.1	$48.9	42 %
Net income	610.5	587.1	23.4	4 %
Net income margin	20.1 %	18.4 %		170 bp
Non-GAAP Measures				
Adjusted EBITDA	$1,208.1	$1,080.7	$127.4	12 %
Adjusted EBITDA margin	39.8 %	33.9 %		590 bp

Sales

The table below summarizes the major factors that impacted consolidated sales for the periods presented:

Volume	3 %
Price	4 %
Energy cost pass-through to customers	(11 %)
Currency	(1 %)
Total consolidated sales change	(5 %)

Sales of $3,033.9 decreased 5%, or $155.4, as lower energy cost pass-through to customers of 11% and an unfavorable impact from currency of 1% were partially offset by higher pricing of 4% and higher volumes of 3%. Lower energy cost pass-through to our on-site customers was driven by lower natural gas prices in the Americas and Europe segments. Pricing actions in our merchant business to recover higher costs improved sales across each of our regional segments. The volume improvement was primarily attributable to our on-site business in the Americas and Asia segments.

Cost of Sales and Gross Margin

Cost of sales of $2,070.7 decreased 12%, or $271.4, due to lower energy cost pass-through to customers of $356 and a favorable impact from currency of $25, partially offset by higher costs associated with sales volumes of $88 and unfavorable other costs of $22, which were driven by inflation and project development activities. Gross margin of 31.7% increased 510 bp from 26.6% in the prior year, primarily due to positive impacts from lower energy cost pass-through to customers as well as our pricing actions.

Selling and Administrative Expense

Selling and administrative expense of $238.7 increased 10%, or $21.8, primarily due to additional costs to support growth, higher incentive compensation, and inflation. Selling and administrative expense as a percentage of sales increased to 7.9% from 6.8% in the prior year.

Research and Development Expense

Research and development expense of $29.3 increased 18%, or $4.5. Research and development expense as a percentage of sales increased to 1.0% from 0.8% in the prior year.

Business and Asset Actions

Our consolidated income statement for the three months ended 30 June 2023 reflects a charge of $59.0 ($51.2 attributable to Air Products after tax, or $0.23 per share) for strategic business and asset actions intended to optimize costs and focus resources on our growth projects. The charge, which was not recorded in segment results, included a noncash charge of $32.0 to write off assets related to our exit from certain projects previously under construction as well as an expense of $27.0 for severance and other benefits payable to approximately 450 employees as a result of position eliminations and the restructuring of certain organizations. Refer to Note 4, *Business and Asset Actions*, to the consolidated financial statements for additional information.

Other Income (Expense), Net

Other income of $8.0 decreased 63%, or $13.9, primarily due to lower income from the sale of assets and an unfavorable foreign exchange impact.

Operating Income and Operating Margin

Operating income of $644.2 increased 3%, or $16.8, as positive pricing, net of power and fuel costs, of $142 and higher volumes of $24 were partially offset by higher costs of $74, a charge of $59 for business and asset actions, and an unfavorable currency impact of $16. The higher costs were driven by inflation as well as project development and other costs related to the execution of our growth strategy. Operating margin of 21.2% increased 150 bp from 19.7% in the prior year primarily due to our pricing actions and lower energy cost-pass through, partially offset by higher costs.

Equity Affiliates' Income

Equity affiliates' income of $165.0 increased 42%, or $48.9, primarily due to a higher contribution from the JIGPC joint venture, which completed the second phase of the asset purchase associated with the Jazan gasification and power project in January 2023, as well as higher income from our affiliates in Mexico and Italy.

Interest Expense

	Three Months Ended 30 June	
	2023	2022
Interest incurred	$77.8	$42.0
Less: Capitalized interest	30.4	9.3
Interest expense	$47.4	$32.7

Interest incurred increased 85%, or $35.8, driven by a higher average interest rate on variable-rate instruments in our debt portfolio as well as a higher debt balance from the U.S. Dollar- and Euro-denominated fixed-rate notes issued in March 2023 under our new Green Finance Framework. Capitalized interest increased $21.1 due to a higher carrying value of projects under construction.

Other Non-Operating Income (Expense), Net

Other non-operating expense was $11.7 versus income of $10.5 in the prior year primarily due to higher non-service pension costs in 2023, which were driven by higher interest cost and lower expected returns on plan assets for the U.S. salaried pension plan and the U.K. pension plan. This impact was partially offset by higher interest income on cash and cash items due to higher interest rates.

Net Income and Net Income Margin

Net income of $610.5 increased 4%, or $23.4, as higher pricing, net of power and fuel costs, and higher equity affiliates' income were partially offset by the charge for business and asset actions, higher non-service pension costs, and higher other costs. Net income margin of 20.1% increased 170 bp, which also included a positive impact from lower energy cost pass-through.

Adjusted EBITDA and Adjusted EBITDA Margin

Adjusted EBITDA of $1,208.1 increased 12%, or $127.4, as higher pricing, net of power and fuel costs, and higher equity affiliates' income were partially offset by higher costs. Adjusted EBITDA margin of 39.8% increased 590 bp, which also included a positive impact from lower energy cost pass-through.

Effective Tax Rate

The effective tax rate equals the income tax provision divided by income before taxes. Equity affiliates' income is primarily included net of income taxes within "Income Before Taxes" on our consolidated income statements. Our effective tax rate was 18.6% for both the three months ended 30 June 2023 and 2022. Our adjusted effective tax rate, which does not include the impact of our business and asset actions or non-service pension costs, was 18.4% and 18.5% for the three months ended 30 June 2023 and 2022, respectively.

Discussion of Third Quarter Results by Business Segment

Americas

	Three Months Ended 30 June		Changes	
	2023	2022	$	%/bp
Sales	$1,260.7	$1,416.3	($155.6)	(11 %)
Operating income	374.8	298.9	75.9	25 %
Operating margin	29.7 %	21.1 %		860 bp
Equity affiliates' income	$29.9	$21.4	$8.5	40 %
Adjusted EBITDA	567.8	480.8	87.0	18 %
Adjusted EBITDA margin	45.0 %	33.9 %		1,110 bp

The table below summarizes the major factors that impacted sales in the Americas segment for the periods presented:

Volume	6 %
Price	4 %
Energy cost pass-through to customers	(21 %)
Currency	— %
Total Americas sales change	(11 %)

Sales of $1,260.7 decreased 11%, or $155.6, due to lower energy cost pass-through to customers of 21%, partially offset by higher volumes of 6% and higher pricing of 4%. Lower energy cost pass-through to our on-site customers was driven by lower natural gas prices. The volume improvement was primarily attributable to our on-site business, which benefited from higher demand for hydrogen. Additionally, we recovered higher costs in our merchant business through continued focus on pricing actions. Currency was flat versus the prior year.

Operating income of $374.8 increased 25%, or $75.9, primarily due to positive pricing, net of power and fuel costs, of $68 and favorable volumes of $29, partially offset by higher costs of $20 driven by inflation and planned maintenance. Operating margin of 29.7% increased 860 bp from 21.1% in the prior year, primarily due to lower energy cost pass-through to customers and the pricing improvement, partially offset by the impact of higher costs.

Equity affiliates' income of $29.9 increased 40%, or $8.5, driven by our Mexico affiliate.

Asia

	Three Months Ended 30 June		Changes	
	2023	2022	$	%/bp
Sales	$822.9	$751.4	$71.5	10 %
Operating income	240.8	210.6	30.2	14 %
Operating margin	29.3 %	28.0 %		130 bp
Equity affiliates' income	$7.5	$5.7	$1.8	32 %
Adjusted EBITDA	356.6	323.9	32.7	10 %
Adjusted EBITDA margin	43.3 %	43.1 %		20 bp

The table below summarizes the major factors that impacted sales in the Asia segment for the periods presented:

Volume	8 %
Price	4 %
Energy cost pass-through to customers	3 %
Currency	(5 %)
Total Asia sales change	10 %

Sales of $822.9 increased 10%, or $71.5, due to higher volumes of 8%, higher pricing of 4%, and higher energy cost pass-through to customers of 3%, partially offset by an unfavorable impact from currency of 5%. The volume improvement was primarily driven by our on-site business, including new plants brought on-stream. Higher power costs across the region were recovered by our merchant pricing actions. In our on-site business, the higher power costs increased energy cost pass-through to our customers. The unfavorable currency impact was primarily attributable to the strengthening of the U.S. Dollar against the Chinese Renminbi, New Taiwan Dollar, and South Korean Won.

Operating income of $240.8 increased 14%, or $30.2, due to higher volumes of $29 and positive pricing, net of power and fuel costs, of $16, partially offset by unfavorable currency impacts of $10 and higher costs of $5. Operating margin of 29.3% increased 130 bp from 28.0% in the prior year due to the volume improvement and positive pricing, partially offset by higher costs.

Equity affiliates' income of $7.5 increased 32%, or $1.8.

Europe

	Three Months Ended 30 June		Changes	
	2023	2022	$	%/bp
Sales	$706.6	$739.6	($33.0)	(4 %)
Operating income	176.1	137.4	38.7	28 %
Operating margin	24.9 %	18.6 %		630 bp
Equity affiliates’ income	$28.8	$20.6	$8.2	40 %
Adjusted EBITDA	253.5	206.9	46.6	23 %
Adjusted EBITDA margin	35.9 %	28.0 %		790 bp

The table below summarizes the major factors that impacted sales in the Europe segment for the periods presented:

Volume	1 %
Price	6 %
Energy cost pass-through to customers	(13 %)
Currency	2 %
Total Europe sales change	(4 %)

Sales of $706.6 decreased 4%, or $33.0, due to lower energy cost pass-through to customers of 13%, partially offset by higher pricing of 6%, a favorable impact from currency of 2%, and higher volumes of 1%. We recovered higher costs in our merchant business through continued focus on pricing actions. Currency positively impacted sales due to the weakening of the U.S. Dollar against the Euro. Higher volumes in our on-site business driven by improvement in hydrogen were mostly offset by weaker demand for merchant products. Energy cost pass-through to our on-site customers was lower, reflecting lower natural gas prices across the region.

Operating income of $176.1 increased 28%, or $38.7, primarily due to higher pricing, net of power and fuel costs, of $57 and higher volumes of $13, partially offset by higher costs of $33 driven by inflation and higher incentive compensation. Operating margin of 24.9% increased 630 bp from 18.6% in the prior year primarily due to the pricing improvement and lower energy cost pass-through to customers.

Equity affiliates’ income of $28.8 increased 40%, or $8.2, driven by an affiliate in Italy.

Middle East and India

	Three Months Ended 30 June		Changes	
	2023	2022	$	%
Sales	$39.7	$35.4	$4.3	12 %
Operating income	5.8	6.9	(1.1)	(16 %)
Equity affiliates' income	95.5	67.2	28.3	42 %
Adjusted EBITDA	108.3	80.9	27.4	34 %

Sales of $39.7 increased 12%, or $4.3, primarily due to higher merchant volumes. Despite higher sales, operating income of $5.8 decreased 16%, or $1.1, primarily due to higher business development costs. Equity affiliates' income of $95.5 increased 42%, or $28.3, due to a higher contribution from the JIGPC joint venture, which completed the second phase of the asset purchase associated with the Jazan gasification and power project in January 2023.

Corporate and other

	Three Months Ended 30 June		Changes	
	2023	2022	$	%
Sales	$204.0	$246.6	($42.6)	(17 %)
Operating loss	(94.3)	(26.4)	(67.9)	(257 %)
Adjusted EBITDA	(78.1)	(11.8)	(66.3)	(562 %)

Sales of $204.0 decreased 17%, or $42.6, and operating loss of $94.3 increased $67.9, primarily due to lower project activity in our sale of equipment business. Our Corporate and other segment also incurs costs to provide corporate support functions and global management activities that benefit all segments, which have increased to support our growth strategy.

FIRST NINE MONTHS 2023 VS. FIRST NINE MONTHS 2022

FIRST NINE MONTHS 2023 IN SUMMARY

- Sales of $9,408.7 increased 3%, or $280.1, as higher pricing of 6% and higher volumes of 4% were partially offset by an unfavorable impact from currency of 4% and lower energy cost pass-through to customers of 3%.
- Operating income of $1,756.0 increased 3%, or $43.7, as our pricing actions and higher volumes were partially offset by a charge of $244.6 for business and asset actions, higher other costs, and unfavorable currency. Despite higher operating income, operating margin of 18.7% decreased 10 bp as the impact of our pricing actions was offset by the charge for business and asset actions and higher other costs.
- Equity affiliates' income of $440.9 increased 15%, or $56.2, primarily due to a higher contribution from the JIGPC joint venture, which completed the second phase of the asset purchase associated with the Jazan gasification and power project in January 2023, as well as higher income from our affiliate in Italy. These impacts were partially offset by the prior year recognition of the remaining deferred profit associated with air separation units previously sold to Jazan Gas Project Company, net of other project finalization costs.
- Net income of $1,644.2 decreased 2%, or $29.3, primarily due to the charge for business and asset actions, higher non-service pension costs, and higher other costs, partially offset by higher pricing, net of power and fuel costs. Net income margin of 17.5% decreased 80 bp.
- Adjusted EBITDA of $3,442.5 increased 11%, or $340.1, and adjusted EBITDA margin of 36.6% increased 260 bp.
- Diluted EPS of $7.22 decreased 4%, or $0.30 per share, and included unfavorable impacts from business and asset actions as well as non-service related pension costs. Adjusted diluted EPS of $8.36 increased 13%, or $0.95 per share. A summary table of changes in diluted EPS is presented below.
- In January 2023, the Board of Directors declared a quarterly dividend of $1.75 per share, representing an 8% increase, or $0.13 per share, from the prior quarterly dividend of $1.62 per share. This is the 41st consecutive year that we have increased our quarterly dividend.

Changes in Diluted EPS Attributable to Air Products

The per share impacts presented in the tables below were calculated independently and may not sum to the total change in diluted EPS due to rounding.

	Nine Months Ended 30 June		Increase
	2023	2022	(Decrease)
Diluted EPS	**$7.22**	**$7.52**	**($0.30)**
Operating Impacts			
Underlying business			
Volume			$0.24
Price, net of variable costs			1.95
Other costs			(0.83)
Currency			(0.30)
Business and asset actions			(0.92)
Total operating impacts			**$0.14**
Other Impacts			
Equity affiliates' income			$0.21
Interest expense			(0.13)
Other non-operating income/expense, net, excluding discrete item below			0.11
Non-service pension cost/benefit, net			(0.33)
Change in effective tax rate			(0.11)
Noncontrolling interests			(0.18)
Weighted average diluted shares			(0.01)
Total other impacts			**($0.44)**
Total change in diluted EPS			**($0.30)**
% Change from prior year			**(4 %)**

Upon completion of the first phase of the Jazan gasification and power project in the first quarter of fiscal year 2022, we recognized a net benefit from the recognition of previously deferred profits, net of other project finalization costs, related to the Jazan Gas Project Company joint venture within "Equity affiliates' income." Our noncontrolling partner's share of the project finalization costs favorably impacted EPS within "Noncontrolling interests." Diluted earnings per share for the first nine months of fiscal year 2022 reflects a total net benefit from this event of approximately $0.20 per share.

The table below summarizes the diluted per share impact of our non-GAAP adjustments for the first nine months of fiscal years 2023 and 2022:

	Nine Months Ended 30 June		Increase
	2023	2022	(Decrease)
Diluted EPS	**$7.22**	**$7.52**	**($0.30)**
Business and asset actions	0.92	—	0.92
Non-service pension cost (benefit), net	0.22	(0.11)	0.33
Adjusted Diluted EPS	**$8.36**	**$7.41**	**$0.95**
% Change from prior year			**13 %**

FIRST NINE MONTHS 2023 RESULTS OF OPERATIONS

Discussion of First Nine Months Consolidated Results

	Nine Months Ended 30 June		Changes	
	2023	2022	$	%/bp
GAAP Measures				
Sales	$9,408.7	$9,128.6	$280.1	3 %
Operating income	1,756.0	1,712.3	43.7	3 %
Operating margin	18.7 %	18.8 %		(10) bp
Equity affiliates' income	$440.9	$384.7	$56.2	15 %
Net income	1,644.2	1,673.5	(29.3)	(2 %)
Net income margin	17.5 %	18.3 %		(80) bp
Non-GAAP Measures				
Adjusted EBITDA	$3,442.5	$3,102.4	$340.1	11 %
Adjusted EBITDA margin	36.6 %	34.0 %		260 bp

Sales

The table below summarizes the major factors that impacted consolidated sales for the periods presented:

Sales % Change from Prior Year	
Volume	4 %
Price	6 %
Energy cost pass-through to customers	(3 %)
Currency	(4 %)
Total Consolidated Sales Change	3 %

Sales of $9,408.7 increased 3%, or $280.1, as higher pricing of 6% and higher volumes of 4% were partially offset by an unfavorable impact from currency of 4% and lower energy cost pass-through to customers of 3%. Pricing actions to recover higher costs in our merchant business improved sales across each of our regional segments, primarily in the Americas and Europe. Higher volumes were driven by our on-site business, partially offset by lower sale of equipment project activity. Currency was unfavorable as the U.S. Dollar strengthened against most major currencies.

Cost of Sales and Gross Margin

Cost of sales of $6,625.8 decreased 1%, or $91.5, due to lower energy cost pass-through to customers of $316 and a favorable impact from currency of $246, partially offset by higher costs associated with sales volumes of $291 and unfavorable other costs of $180, which were driven by inflation, power for our merchant business, project development activities, and planned maintenance. Gross margin of 29.6% increased 320 bp from 26.4% in the prior year, primarily due to the positive impact of our pricing actions and lower energy cost pass-through to customers, partially offset by the unfavorable costs.

Selling and Administrative Expense

Selling and administrative expense of $724.3 increased 7%, or $47.6, primarily due to higher incentive compensation, inflation, and additional costs to support growth, partially offset by a favorable impact from currency. Selling and administrative expense as a percentage of sales increased to 7.7% from 7.4% in the prior year.

Research and Development Expense

Research and development expense of $80.9 increased 13%, or $9.1. Research and development expense as a percentage of sales increased to 0.9% from 0.8% in the prior year.

Business and Asset Actions

Our consolidated income statement for the nine months ended 30 June 2023 reflects a charge of $244.6 ($204.9 attributable to Air Products after tax, or $0.92 per share) for strategic business and asset actions intended to optimize costs and focus resources on our growth projects. The charge, which was not recorded in segment results, included a noncash charge of $217.6 to write off assets related to our exit from certain projects previously under construction as well as an expense of $27.0 for severance and other benefits payable to approximately 450 employees as a result of position eliminations and the restructuring of certain organizations. Refer to Note 4, *Business and Asset Actions*, to the consolidated financial statements for additional information.

Other Income (Expense), Net

Other income of $22.9 decreased 54%, or $26.6, primarily due to lower income from the sale of assets and an unfavorable foreign exchange impact.

Operating Income and Operating Margin

Operating income of $1,756.0 increased 3%, or $43.7, as positive pricing, net of power and fuel costs, of $531 and higher volumes of $65 were partially offset by a charge of $245 for business and asset actions, higher other costs of $225, and an unfavorable currency impact of $82. Higher other costs were driven by inflation, planned maintenance, and incentive compensation, as well as project development and other costs related to the execution of our growth strategy. Despite higher operating income, operating margin of 18.7% decreased 10 bp as the impact of our pricing actions was offset by the charge for business and asset actions and higher other costs.

Equity Affiliates' Income

Equity affiliates' income of $440.9 increased 15%, or $56.2, primarily due to a higher contribution from the JIGPC joint venture, which completed the second phase of the asset purchase associated with the Jazan gasification and power project in January 2023, as well as higher income from our affiliate in Italy. These impacts were partially offset by the prior year recognition of the remaining deferred profit associated with air separation units previously sold to Jazan Gas Project Company, net of other project finalization costs.

Interest Expense

	Nine Months Ended 30 June	
	2023	2022
Interest incurred	$198.2	$123.4
Less: Capitalized interest	68.7	27.9
Interest expense	$129.5	$95.5

Interest incurred increased 61%, or $74.8, driven by a higher average interest rate on variable-rate instruments in our debt portfolio as well as a higher debt balance from U.S. Dollar- and Euro-denominated fixed-rate notes issued in March 2023 under our new Green Finance Framework. Capitalized interest increased $40.8 due to a higher carrying value of projects under construction.

Other Non-Operating Income (Expense), net

Other non-operating expense was $26.2 versus income of $42.2 in the prior year primarily due to higher non-service pension costs in 2023, which were driven by higher interest cost and lower expected returns on plan assets for the U.S. salaried pension plan and the U.K. pension plan. This impact was partially offset by higher interest income on cash and cash items due to higher interest rates.

Net Income and Net Income Margin

Net income of $1,644.2 decreased 2%, or $29.3, primarily due to the charge for business and asset actions, higher non-service pension costs, and higher other costs, partially offset by higher pricing, net of power and fuel costs. Net income margin of 17.5% decreased 80 bp.

Adjusted EBITDA and Adjusted EBITDA Margin

Adjusted EBITDA of $3,442.5 increased 11%, or $340.1, primarily due to higher pricing, net of power and fuel costs, partially offset by higher costs. Adjusted EBITDA margin of 36.6% increased 260 bp.

Effective Tax Rate

Our effective tax rate was 19.4% and 18.1% for the nine months ended 30 June 2023 and 2022, respectively.

During the first nine months of fiscal year 2023, we recorded a charge for business and asset actions of $244.6 ($204.9 attributable to Air Products after tax). Refer to Note 4, *Business and Asset Actions*, to the consolidated financial statements for additional information. The charge included certain losses for which we could not recognize an income tax benefit and were subject to a valuation allowance of $36.0. Partially offsetting the valuation allowance cost was a $15.9 income tax benefit from a tax election related to a non-U.S. subsidiary.

Our effective tax rate for the current year was higher due to lower excess tax benefits on share-based compensation and the discrete tax impact of our business and asset actions discussed above. In addition, certain recurring income tax benefits had a lower impact on our effective tax rate in the current year as they did not increase in proportion to the increase to income. Our current rate is also higher due to nonrecurring benefits in several foreign jurisdictions due to the impact of tax rate changes and productivity credit claims in the prior year.

Our adjusted effective tax rate, which does not include the impact of our business and asset actions discussed above, was 19.1% and 18.0% for the nine months ended 30 June 2023 and 2022, respectively.

Discussion of First Nine Months Results by Business Segment

Americas

	Nine Months Ended 30 June		Changes	
	2023	2022	$	%/bp
Sales	$4,018.0	$3,827.0	$191.0	5 %
Operating income	1,042.0	841.6	200.4	24 %
Operating margin	25.9 %	22.0 %		390 bp
Equity affiliates’ income	$74.4	$75.7	($1.3)	(2 %)
Adjusted EBITDA	1,597.2	1,386.8	210.4	15 %
Adjusted EBITDA margin	39.8 %	36.2 %		360 bp

The table below summarizes the major factors that impacted sales in the Americas segment for the periods presented:

Volume	7 %
Price	7 %
Energy cost pass-through to customers	(8 %)
Currency	(1 %)
Total Americas sales change	5 %

Sales of $4,018.0 increased 5%, or $191.0, due to higher volumes of 7% and higher pricing of 7%, partially offset by lower energy cost pass-through to customers of 8% and an unfavorable currency impact of 1%. The volume improvement was primarily attributable to our on-site business, including better demand for hydrogen. Additionally, we recovered higher costs in our merchant business through continued focus on pricing actions. Energy cost pass-through to our on-site customers was lower driven by lower natural gas prices.

Operating income of $1,042.0 increased 24%, or $200.4, due to positive pricing, net of power and fuel costs, of $244 and favorable volumes of $58, partially offset by higher costs of $95 and an unfavorable currency impact of $7. Higher costs were driven by inflation, planned maintenance, and higher incentive compensation. Operating margin of 25.9% increased 390 bp from 22.0% in the prior year, primarily due to the pricing improvement and lower energy cost pass-through to customers, partially offset by the impact of higher costs.

Equity affiliates’ income of $74.4 decreased 2%, or $1.3.

Asia

	Nine Months Ended 30 June		Changes	
	2023	2022	$	%/bp
Sales	$2,414.6	$2,283.0	$131.6	6 %
Operating income	709.7	635.3	74.4	12 %
Operating margin	29.4 %	27.8 %		160 bp
Equity affiliates' income	$22.2	$18.5	$3.7	20 %
Adjusted EBITDA	1,052.1	984.0	68.1	7 %
Adjusted EBITDA margin	43.6 %	43.1 %		50 bp

The table below summarizes the major factors that impacted sales in the Asia segment for the periods presented:

Volume	7 %
Price	3 %
Energy cost pass-through to customers	3 %
Currency	(7 %)
Total Asia sales change	6 %

Sales of $2,414.6 increased 6%, or $131.6, due to higher volumes of 7%, higher pricing of 3%, and higher energy cost pass-through to customers of 3%, partially offset by an unfavorable currency impact of 7%. The volume improvement was primarily driven by our on-site business, including several traditional industrial gas plants that were brought on-stream across the region. Higher power costs across the region were recovered by our merchant pricing actions. In our on-site business, the higher power costs increased energy cost pass-through to our customers. The unfavorable currency impact was primarily attributable to the strengthening of the U.S. Dollar against the Chinese Renminbi and the South Korean Won.

Operating income of $709.7 increased 12%, or $74.4, due to higher volumes of $83 and positive pricing, net of power and fuel costs, of $56, partially offset by an unfavorable currency impact of $48 and higher costs of $17 driven by project development, higher planned maintenance, and inflation. Operating margin of 29.4% increased 160 bp from 27.8% in the prior year due to the volume improvement and positive pricing, partially offset by higher costs.

Equity affiliates' income of $22.2 increased 20%, or $3.7.

Europe

	Nine Months Ended 30 June		Changes	
	2023	2022	$	%/bp
Sales	$2,251.4	$2,222.4	$29.0	1 %
Operating income	495.1	353.0	142.1	40 %
Operating margin	22.0 %	15.9 %		610 bp
Equity affiliates' income	$76.0	$57.8	$18.2	31 %
Adjusted EBITDA	712.3	559.8	152.5	27 %
Adjusted EBITDA margin	31.6 %	25.2 %		640 bp

The table below summarizes the major factors that impacted sales in the Europe segment for the periods presented:

Volume	(1 %)
Price	10 %
Energy cost pass-through to customers	(3 %)
Currency	(5 %)
Total Europe sales change	1 %

Sales of $2,251.4 increased 1%, or $29.0, due to higher pricing of 10%, partially offset by an unfavorable impact from currency of 5%, lower energy cost pass-through to customers of 3%, and lower volumes of 1%. We recovered higher costs in our merchant business through continued focus on pricing actions. Currency negatively impacted sales due to the strengthening of the U.S. Dollar against the Euro and the British Pound Sterling. Energy cost pass-through to our on-site customers was lower, reflecting lower natural gas prices across the region. Volumes declined slightly as lower demand for merchant products was partially offset by improvement in hydrogen in our on-site business.

Operating income of $495.1 increased 40%, or $142.1, as higher pricing, net of power and fuel costs, of $224 was partially offset by higher costs of $58 driven by inflation, higher incentive compensation, and planned maintenance, an unfavorable currency impact of $18, and lower volumes of $6. Operating margin of 22.0% increased 610 bp from 15.9% in the prior year primarily due to the pricing improvement, partially offset by higher costs.

Equity affiliates' income of $76.0 increased 31%, or $18.2, driven by an affiliate in Italy.

Middle East and India

	Nine Months Ended 30 June		Changes	
	2023	2022	$	%
Sales	$125.9	$88.0	$37.9	43 %
Operating income	13.8	16.5	(2.7)	(16 %)
Equity affiliates' income	258.5	230.6	27.9	12 %
Adjusted EBITDA	292.5	266.9	25.6	10 %

Sales of $125.9 increased 43%, or $37.9, driven by higher merchant volumes. Despite higher sales, operating income of $13.8 decreased 16%, or $2.7, primarily due to higher costs for business development and planned maintenance. Equity affiliates' income of $258.5 increased 12%, or $27.9. In January 2023, we made an additional investment in the JIGPC joint venture, which completed the second phase of the asset purchase associated with the Jazan gasification and power project. The resulting higher contribution from JIGPC was partially offset by a prior year net benefit recognized for the remaining deferred profit associated with air separation units previously sold to Jazan Gas Project Company, net of other project finalization costs.

Corporate and other

	Nine Months Ended 30 June		Changes	
	2023	2022	$	%
Sales	$598.8	$708.2	($109.4)	(15 %)
Operating loss	(260.0)	(134.1)	(125.9)	(94 %)
Adjusted EBITDA	(211.6)	(95.1)	(116.5)	(123 %)

Sales of $598.8 decreased 15%, or $109.4, and operating loss of $260.0 increased $125.9, primarily due to lower project activity in our sale of equipment business. Our Corporate and other segment also incurs costs to provide corporate support functions and global management activities that benefit all segments, which have increased to support our growth strategy.

RECONCILIATIONS OF NON-GAAP FINANCIAL MEASURES

(Millions of U.S. Dollars unless otherwise indicated, except for per share data)

We present certain financial measures, other than in accordance with U.S. generally accepted accounting principles ("GAAP"), on an "adjusted" or "non-GAAP" basis. On a consolidated basis, these measures include adjusted diluted earnings per share ("EPS"), adjusted EBITDA, adjusted EBITDA margin, the adjusted effective tax rate, and capital expenditures. On a segment basis, these measures include adjusted EBITDA and adjusted EBITDA margin. In addition to these measures, we also present certain supplemental non-GAAP financial measures to help the reader understand the impact that certain disclosed items, or "non-GAAP adjustments," have on the calculation of our adjusted diluted EPS. For each non-GAAP financial measure, we present a reconciliation to the most directly comparable financial measure calculated in accordance with GAAP.

In many cases, non-GAAP financial measures are determined by adjusting the most directly comparable GAAP measure to exclude non-GAAP adjustments that we believe are not representative of our underlying business performance. For example, we exclude the impact of the non-service components of net periodic benefit/cost for our defined benefit pension plans as further discussed below. Additionally, we may exclude certain expenses associated with cost reduction actions, impairment charges, and gains on disclosed transactions. The reader should be aware that we may recognize similar losses or gains in the future.

When applicable, the tax impact of our pre-tax non-GAAP adjustments reflects the expected current and deferred income tax impact of our non-GAAP adjustments. These tax impacts are primarily driven by the statutory tax rate of the various relevant jurisdictions and the taxability of the adjustments in those jurisdictions.

We provide these non-GAAP financial measures to allow investors, potential investors, securities analysts, and others to evaluate the performance of our business in the same manner as our management. We believe these measures, when viewed together with financial results computed in accordance with GAAP, provide a more complete understanding of the factors and trends affecting our historical financial performance and projected future results. However, we caution readers not to consider these measures in isolation or as a substitute for the most directly comparable measures calculated in accordance with GAAP. Readers should also consider the limitations associated with these non-GAAP financial measures, including the potential lack of comparability of these measures from one company to another.

NON-GAAP ADJUSTMENT FOR NON-SERVICE PENSION COST (BENEFIT), NET

Effective beginning in the first quarter of fiscal year 2023, our adjusted EPS and the adjusted effective tax rate exclude the impact of non-service related components of net periodic benefit/cost for our defined benefit pension plans. The prior year non-GAAP financial measures presented below have been recast accordingly to conform to the fiscal year 2023 presentation. Non-service related components are recurring, non-operating items that include interest cost, expected returns on plan assets, prior service cost amortization, actuarial loss amortization, as well as special termination benefits, curtailments, and settlements. The net impact of non-service related components is reflected within “Other non-operating income (expense), net” on our consolidated income statements. Adjusting for the impact of non-service pension components provides management and users of our financial statements with a more accurate representation of our underlying business performance because these components are driven by factors that are unrelated to our operations, such as recent changes to the allocation of our pension plan assets associated with de-risking as well as volatility in equity and debt markets. Further, non-service related components are not indicative of our defined benefit plans’ future contribution needs due to the funded status of the plans.

ADJUSTED DILUTED EPS

The table below provides a reconciliation to the most directly comparable GAAP measure for each of the major components used to calculate adjusted diluted EPS from continuing operations, which we view as a key performance metric. In periods that we have non-GAAP adjustments, we believe it is important for the reader to understand the per share impact of each such adjustment because management does not consider these impacts when evaluating underlying business performance. Per share impacts are calculated independently and may not sum to total diluted EPS and total adjusted diluted EPS due to rounding.

	Three Months Ended 30 June					
Q3 2023 vs. Q3 2022	Operating Income	Equity Affiliates' Income	Other Non-Operating Income/Expense, Net	Income Tax Provision	Net Income Attributable to Air Products	Diluted EPS
Q3 2023 GAAP	$644.2	$165.0	($11.7)	$139.6	$595.6	$2.67
Q3 2022 GAAP	627.4	116.1	10.5	134.2	582.1	2.62
$ Change GAAP						$0.05
% Change GAAP						2 %
Q3 2023 GAAP	$644.2	$165.0	($11.7)	$139.6	$595.6	$2.67
Business and asset actions	59.0	—	—	7.8	51.2	0.23
Non-service pension cost, net	—	—	22.0	5.4	16.6	0.07
Q3 2023 Non-GAAP ("Adjusted")	$703.2	$165.0	$10.3	$152.8	$663.4	$2.98
Q3 2022 GAAP	$627.4	$116.1	$10.5	$134.2	$582.1	$2.62
Non-service pension benefit, net	—	—	(9.5)	(2.3)	(7.2)	(0.03)
Q3 2022 Non-GAAP ("Adjusted")	$627.4	$116.1	$1.0	$131.9	$574.9	$2.58
$ Change Non-GAAP ("Adjusted")						$0.40
% Change Non-GAAP ("Adjusted")						16 %

2023 vs. 2022	Nine Months Ended 30 June Operating Income	Equity Affiliates' Income	Other Non-Operating Income/Expense, Net	Income Tax Provision	Net Income Attributable to Air Products	Diluted EPS
2023 GAAP	$1,756.0	$440.9	($26.2)	$397.0	$1,607.6	$7.22
2022 GAAP	1,712.3	384.7	42.2	370.2	1,673.0	7.52
$ Change GAAP						($0.30)
% Change GAAP						(4 %)
2023 GAAP	$1,756.0	$440.9	($26.2)	$397.0	$1,607.6	$7.22
Business and asset actions[(A)]	244.6	—	—	34.7	204.9	0.92
Non-service pension cost, net	—	—	64.4	16.0	48.4	0.22
2023 Non-GAAP ("Adjusted")	$2,000.6	$440.9	$38.2	$447.7	$1,860.9	$8.36
2022 GAAP	$1,712.3	$384.7	$42.2	$370.2	$1,673.0	$7.52
Non-service pension benefit, net	—	—	(33.4)	(8.1)	(25.3)	(0.11)
2022 Non-GAAP ("Adjusted")	$1,712.3	$384.7	$8.8	$362.1	$1,647.7	$7.41
$ Change Non-GAAP ("Adjusted")						$0.95
% Change Non-GAAP ("Adjusted")						13 %

(A) Charge includes $5.0 attributable to noncontrolling interests.

ADJUSTED EBITDA AND ADJUSTED EBITDA MARGIN

We define adjusted EBITDA as net income less income from discontinued operations, net of tax, and excluding non-GAAP adjustments, which we do not believe to be indicative of underlying business trends, before interest expense, other non-operating income (expense), net, income tax provision, and depreciation and amortization expense. Adjusted EBITDA and adjusted EBITDA margin provide useful metrics for management to assess operating performance. Margins are calculated independently for each period by dividing each line item by consolidated sales for the respective period and may not sum to total margin due to rounding.

The tables below present consolidated sales and a reconciliation of net income on a GAAP basis to adjusted EBITDA and net income margin on a GAAP basis to adjusted EBITDA margin:

	Three Months Ended 30 June				Nine Months Ended 30 June			
	2023		2022		2023		2022	
	$	Margin	$	Margin	$	Margin	$	Margin
Sales	$3,033.9		$3,189.3		$9,408.7		$9,128.6	
Net income and net income margin	$610.5	20.1 %	$587.1	18.4 %	$1,644.2	17.5 %	$1,673.5	18.3 %
Add: Interest expense	47.4	1.6 %	32.7	1.0 %	129.5	1.4 %	95.5	1.0 %
Less: Other non-operating income (expense), net	(11.7)	(0.4 %)	10.5	0.3 %	(26.2)	(0.3 %)	42.2	0.5 %
Add: Income tax provision	139.6	4.6 %	134.2	4.2 %	397.0	4.2 %	370.2	4.1 %
Add: Depreciation and amortization	339.9	11.2 %	337.2	10.6 %	1,001.0	10.6 %	1,005.4	11.0 %
Add: Business and asset actions	59.0	1.9 %	—	— %	244.6	2.6 %	—	— %
Adjusted EBITDA and adjusted EBITDA margin	$1,208.1	39.8 %	$1,080.7	33.9 %	$3,442.5	36.6 %	$3,102.4	34.0 %

	Three Months Ended 30 June	Nine Months Ended 30 June
Change GAAP		
Net income $ change	$23.4	($29.3)
Net income % change	4%	(2%)
Net income margin change	170 bp	(80) bp
Change Non-GAAP		
Adjusted EBITDA $ change	$127.4	$340.1
Adjusted EBITDA % change	12%	11%
Adjusted EBITDA margin change	590 bp	260 bp

The tables below present sales and a reconciliation of operating income and operating margin by segment to adjusted EBITDA and adjusted EBITDA margin for the three and nine months ended 30 June 2023 and 2022:

Americas

	Three Months Ended				Nine Months Ended			
	30 June		Changes vs. Prior Year		30 June		Changes vs. Prior Year	
	2023	2022	$	%/bp	2023	2022	$	%/bp
Sales	$1,260.7	$1,416.3	($155.6)	(11 %)	$4,018.0	$3,827.0	$191.0	5 %
Operating income	$374.8	$298.9	$75.9	25 %	$1,042.0	$841.6	$200.4	24 %
Operating margin	29.7 %	21.1 %		860 bp	25.9 %	22.0 %		390 bp
Reconciliation of GAAP to Non-GAAP:								
Operating income	$374.8	$298.9			$1,042.0	$841.6		
Add: Depreciation and amortization	163.1	160.5			480.8	469.5		
Add: Equity affiliates' income	29.9	21.4			74.4	75.7		
Adjusted EBITDA	$567.8	$480.8	$87.0	18 %	$1,597.2	$1,386.8	$210.4	15 %
Adjusted EBITDA margin	45.0 %	33.9 %		1,110 bp	39.8 %	36.2 %		360 bp

Asia

	Three Months Ended				Nine Months Ended			
	30 June		Changes vs. Prior Year		30 June		Changes vs. Prior Year	
	2023	2022	$	%/bp	2023	2022	$	%/bp
Sales	$822.9	$751.4	$71.5	10 %	$2,414.6	$2,283.0	$131.6	6 %
Operating income	$240.8	$210.6	$30.2	14 %	$709.7	$635.3	$74.4	12 %
Operating margin	29.3 %	28.0 %		130 bp	29.4 %	27.8 %		160 bp
Reconciliation of GAAP to Non-GAAP:								
Operating income	$240.8	$210.6			$709.7	$635.3		
Add: Depreciation and amortization	108.3	107.6			320.2	330.2		
Add: Equity affiliates' income	7.5	5.7			22.2	18.5		
Adjusted EBITDA	$356.6	$323.9	$32.7	10 %	$1,052.1	$984.0	$68.1	7 %
Adjusted EBITDA margin	43.3 %	43.1 %		20 bp	43.6 %	43.1 %		50 bp

Europe

	Three Months Ended				Nine Months Ended			
	30 June		Changes vs. Prior Year		30 June		Changes vs. Prior Year	
	2023	2022	$	%/bp	2023	2022	$	%/bp
Sales	$706.6	$739.6	($33.0)	(4 %)	$2,251.4	$2,222.4	$29.0	1 %
Operating income	$176.1	$137.4	$38.7	28 %	$495.1	$353.0	$142.1	40 %
Operating margin	24.9 %	18.6 %		630 bp	22.0 %	15.9 %		610 bp
Reconciliation of GAAP to Non-GAAP:								
Operating income	$176.1	$137.4			$495.1	$353.0		
Add: Depreciation and amortization	48.6	48.9			141.2	149.0		
Add: Equity affiliates' income	28.8	20.6			76.0	57.8		
Adjusted EBITDA	$253.5	$206.9	$46.6	23 %	$712.3	$559.8	$152.5	27 %
Adjusted EBITDA margin	35.9 %	28.0 %		790 bp	31.6 %	25.2 %		640 bp

Middle East and India

	Three Months Ended				Nine Months Ended			
	30 June		Changes vs. Prior Year		30 June		Changes vs. Prior Year	
	2023	2022	$	%/bp	2023	2022	$	%/bp
Sales	$39.7	$35.4	$4.3	12 %	$125.9	$88.0	$37.9	43 %
Operating income	$5.8	$6.9	($1.1)	(16 %)	$13.8	$16.5	($2.7)	(16 %)
Reconciliation of GAAP to Non-GAAP:								
Operating income	$5.8	$6.9			$13.8	$16.5		
Add: Depreciation and amortization	7.0	6.8			20.2	19.8		
Add: Equity affiliates' income	95.5	67.2			258.5	230.6		
Adjusted EBITDA	$108.3	$80.9	$27.4	34 %	$292.5	$266.9	$25.6	10 %

Corporate and other

	Three Months Ended				Nine Months Ended			
	30 June		Changes vs. Prior Year		30 June		Changes vs. Prior Year	
	2023	2022	$	%/bp	2023	2022	$	%/bp
Sales	$204.0	$246.6	($42.6)	(17 %)	$598.8	$708.2	($109.4)	(15 %)
Operating loss	($94.3)	($26.4)	($67.9)	(257 %)	($260.0)	($134.1)	($125.9)	(94 %)
Reconciliation of GAAP to Non-GAAP:								
Operating loss	($94.3)	($26.4)			($260.0)	($134.1)		
Add: Depreciation and amortization	12.9	13.4			38.6	36.9		
Add: Equity affiliates' income	3.3	1.2			9.8	2.1		
Adjusted EBITDA	($78.1)	($11.8)	($66.3)	(562 %)	($211.6)	($95.1)	($116.5)	(123 %)

ADJUSTED EFFECTIVE TAX RATE

The effective tax rate equals the income tax provision divided by income before taxes. We calculate our adjusted effective tax rate by adjusting the numerator and denominator to exclude the tax and before tax impacts of our non-GAAP adjustments, respectively. The table below presents a reconciliation of the GAAP effective tax rate to our adjusted effective tax rate:

	Three Months Ended 30 June		Nine Months Ended 30 June	
	2023	2022	2023	2022
Income tax provision	$139.6	$134.2	$397.0	$370.2
Income before taxes	750.1	721.3	2,041.2	2,043.7
Effective tax rate	18.6 %	18.6 %	19.4 %	18.1 %
Income tax provision	$139.6	$134.2	$397.0	$370.2
Business and asset actions	7.8	—	34.7	—
Non-service pension tax impact	5.4	(2.3)	16.0	(8.1)
Adjusted income tax provision	$152.8	$131.9	$447.7	$362.1
Income before taxes	$750.1	$721.3	$2,041.2	$2,043.7
Business and asset actions	59.0	—	244.6	—
Non-service pension cost (benefit), net	22.0	(9.5)	64.4	(33.4)
Adjusted income before taxes	$831.1	$711.8	$2,350.2	$2,010.3
Adjusted effective tax rate	18.4 %	18.5 %	19.1 %	18.0 %

CAPITAL EXPENDITURES

We define capital expenditures as cash flows for additions to plant and equipment, including long-term deposits, acquisitions (less cash acquired), investment in and advances to unconsolidated affiliates, and investment in financing receivables on our consolidated statement of cash flows. Beginning in fiscal year 2023, we adjust capital expenditures to exclude NEOM Green Hydrogen Company ("NGHC") spending reflected in "Additions to plant and equipment, including long-term deposits" that is ultimately funded through our joint venture partners' equity contributions to NGHC as well as non-recourse project financing obtained by NGHC. We believe adjusting for NGHC expenditures not funded by Air Products' equity to arrive at capital expenditures provides users of our financial statements with a better understanding of the investment on which we expect to make a return.

A reconciliation of cash used for investing activities to our reported capital expenditures is provided below:

	Nine Months Ended 30 June	
	2023	2022
Cash used for investing activities	$4,399.8	$2,844.1
Proceeds from sale of assets and investments	13.3	32.8
Purchases of investments	(443.4)	(1,247.9)
Proceeds from investments	766.0	2,219.2
Other investing activities	4.8	6.9
NGHC expenditures not funded by Air Products' equity	(656.0)	—
Capital expenditures	$4,084.5	$3,855.1

LIQUIDITY AND CAPITAL RESOURCES

Our cash balance and cash flows from operations are our primary sources of liquidity and are generally sufficient to meet our liquidity needs. In addition, we have the flexibility to access capital through a variety of financing activities, including accessing the capital markets, drawing upon our credit facility, or alternatively, accessing the commercial paper markets. During the second quarter of fiscal year 2023, we issued U.S. Dollar- and Euro-denominated fixed-rate notes with aggregate principal amounts of $600 and €700 million, respectively, under our new Green Finance Framework. We intend to use the net proceeds to finance or refinance, in whole or in part, existing or future projects that are expected to have environmental benefits, including those related to pollution prevention and control, renewable energy generation and procurement, and sustainable aviation fuel. At this time, we have not utilized, nor do we expect to access, our credit facility for additional liquidity.

As of 30 June 2023, we had $1,533.4 of foreign cash and cash items compared to total cash and cash items of $1,637.7. We do not expect that a significant portion of the earnings of our foreign subsidiaries and affiliates will be subject to U.S. income tax upon repatriation to the U.S. Depending on the country in which the subsidiaries and affiliates reside, the repatriation of these earnings may be subject to foreign withholding and other taxes. However, since we have significant current investment plans outside the U.S., it is our intent to permanently reinvest the majority of our foreign cash and cash items that would be subject to additional taxes outside the U.S.

Cash Flows From Operations

Nine Months Ended 30 June	2023	2022
Net income attributable to Air Products	$1,607.6	$1,673.0
Adjustments to reconcile income to cash provided by operating activities:		
Depreciation and amortization	1,001.0	1,005.4
Deferred income taxes	(14.1)	69.0
Business and asset actions	244.6	—
Undistributed earnings of equity method investments	(130.1)	(184.8)
Gain on sale of assets and investments	(5.2)	(21.4)
Share-based compensation	45.8	37.0
Noncurrent lease receivables	60.9	65.5
Other adjustments	152.3	(139.2)
Changes in working capital accounts	(759.4)	(291.3)
Cash Provided by Operating Activities	$2,203.4	$2,213.2

For the first nine months of fiscal year 2023, cash provided by operating activities was $2,203.4. Business and asset actions of $244.6 includes noncash charges to write off assets related to our exit from certain projects previously under construction as well as an expense for severance and other benefits. Refer to Note 4, *Business and Asset Actions*, to the consolidated financial statements for additional information. Other adjustments of $152.3 primarily included adjustments for noncash currency impacts of intercompany balances. The working capital accounts were a use of cash of $759.4, primarily driven by $375.4 from payables and accrued liabilities, $133.5 from inventories, $98.5 from other receivables, $102.8 from other working capital, and $49.2 from trade receivables, less allowances. The use of cash within payables and accrued liabilities primarily resulted from the impact of lower prices for the purchase of natural gas, a decrease in value of derivatives that hedge intercompany loans, and payments for incentive compensation under the fiscal year 2022 plan. The use of cash within inventories primarily relates to purchases of helium. The use of cash within other working capital primarily relates to the timing of income tax payments. The use of cash within trade receivables primarily relates to the timing of milestone invoices on sale of equipment projects.

For the first nine months of fiscal year 2022, cash provided by operating activities was $2,213.2. The working capital accounts were a use of cash of $291.3, primarily driven by a use of cash of $389.7 from trade receivables, less allowances, $118.1 from other working capital, and $80.8 from inventory partially offset by a source of cash of $320.1 from payables and accrued liabilities. The use of cash within trade receivables includes the impacts of higher underlying sales and higher natural gas costs passed through to our on-site customers. The source of cash within payables and accrued liabilities primarily resulted from customer advances for sale of equipment projects and higher natural gas costs. The use of cash within other working capital primarily relates to contract fulfillment costs and the timing of income tax payments.

Cash Flows From Investing Activities

Nine Months Ended 30 June	2023	2022
Additions to plant and equipment, including long-term deposits	($3,163.5)	($2,139.1)
Acquisitions, less cash acquired	—	(65.1)
Investment in and advances to unconsolidated affiliates	(912.0)	(1,650.9)
Investment in financing receivables	(665.0)	—
Proceeds from sale of assets and investments	13.3	32.8
Purchases of investments	(443.4)	(1,247.9)
Proceeds from investments	766.0	2,219.2
Other investing activities	4.8	6.9
Cash Used for Investing Activities	**($4,399.8)**	**($2,844.1)**

For the first nine months of fiscal year 2023, cash used for investing activities was $4,399.8. The use of cash primarily resulted from additions to plant and equipment, including long-term deposits, of $3,163.5, investment in and advances to unconsolidated affiliates of $912.0, and an investment in financing receivables of $665.0. Refer to the *Capital Expenditures* section below for further detail. Proceeds from investments of $766.0 resulted from maturities of time deposits and treasury securities with terms greater than three months but less than one year and exceeded purchases of investments of $443.4.

For the first nine months of fiscal year 2022, cash used for investing activities was $2,844.1. Capital expenditures primarily included $2,139.1 for additions to plant and equipment, including long-term deposits and $1,650.9 for investment in and advances to unconsolidated affiliates. Proceeds from investments of $2,219.2 resulted from maturities of time deposits and treasury securities with terms greater than three months but less than one year and exceeded purchases of investments of $1,247.9.

Capital Expenditures

We define capital expenditures as cash flows for additions to plant and equipment, including long-term deposits, acquisitions (less cash acquired), investment in and advances to unconsolidated affiliates, and investment in financing receivables on our consolidated statement of cash flows. Beginning in fiscal year 2023, we adjust capital expenditures to exclude NEOM Green Hydrogen Company ("NGHC") spending reflected in "Additions to plant and equipment, including long-term deposits" that is ultimately funded through our joint venture partners' equity contributions to NGHC as well as non-recourse project financing obtained by NGHC. The components of our capital expenditures are detailed in the table below. We also present a reconciliation of our capital expenditures to cash used for investing activities on page 57.

	Nine Months Ended 30 June	
	2023	2022
Additions to plant and equipment, including long-term deposits	$3,163.5	$2,139.1
Acquisitions, less cash acquired	—	65.1
Investment in and advances to unconsolidated affiliates	912.0	1,650.9
Investment in financing receivables	665.0	—
NGHC expenditures not funded by Air Products' equity	(656.0)	—
Capital Expenditures	$4,084.5	$3,855.1

Capital expenditures for the first nine months of fiscal year 2023 totaled $4,084.5 compared to $3,855.1 for the first nine months of fiscal year 2022. The prior year included our initial investment of $1.6 billion in JIGPC, which included approximately $130 from a noncontrolling partner in one of our subsidiaries, in the first quarter of fiscal year 2022. In the second quarter of fiscal year 2023, we made an additional investment of $908 toward the second phase of the Jazan gasification and power project. This investment included $73 received from our noncontrolling partner. We expect to complete a remaining investment of approximately $115 later this calendar year. Refer to Note 7, *Equity Affiliates*, to the consolidated financial statements for additional information. The investment in financing receivables of $665.0 primarily includes progress payments towards the purchase of a natural gas-to-syngas processing facility in Uzbekistan. Refer to Note 18, *Supplemental Information*, to the consolidated financial statements for additional information.

Outlook for Investing Activities

It is not possible, without unreasonable efforts, to reconcile our forecasted capital expenditures to future cash used for investing activities because we are unable to identify the timing or occurrence of our future investment activity, which is driven by our assessment of competing opportunities at the time we enter into transactions. These decisions, either individually or in the aggregate, could have a significant effect on our cash used for investing activities.

We expect capital expenditures for fiscal year 2023 to be approximately $5.0 billion to $5.5 billion.

Cash Flows From Financing Activities

Nine Months Ended 30 June	2023	2022
Long-term debt proceeds	$2,116.3	$357.0
Payments on long-term debt	(605.8)	(400.0)
Net increase in commercial paper and short-term borrowings	567.3	255.0
Dividends paid to shareholders	(1,107.9)	(1,023.9)
Proceeds from stock option exercises	19.5	16.3
Investments by noncontrolling interests	188.8	21.0
Other financing activities	(79.3)	(37.5)
Cash Provided by (Used for) Financing Activities	$1,098.9	($812.1)

For the first nine months of fiscal year 2023, cash provided by financing activities was $1,098.9. The source of cash was primarily driven by long-term debt proceeds of $2,116.3, and an increase in commercial paper and short-term borrowings of $567.3, partially offset by dividend payments to shareholders of $1,107.9 and payments on long-term debt of $605.8. Refer to the *Credit Facilities* section below and Note 11, *Debt*, to the consolidated financial statements for additional information.

For the first nine months of fiscal year 2022, cash used for financing activities was $812.1. The use of cash was primarily driven by dividend payments to shareholders of $1,023.9 and payments on long-term debt of $400.0 for the repayment of a 3.0% Senior Note. These uses of cash were partially offset by long-term debt proceeds and short-term borrowings of $357.0 and $255.0, respectively.

Financing and Capital Structure

Debt

Capital needs in the first nine months of fiscal year 2023 were satisfied with our cash balance, cash from operations, commercial paper and long-term borrowings. Total debt increased from $7,644.8 as of 30 September 2022 to $9,391.9 as of 30 June 2023, primarily due to U.S. Dollar- and Euro-denominated fixed-rate notes that were issued in the second quarter of fiscal year 2023 and an increase in outstanding commercial paper. Total debt includes related party debt of $327.3 and $781.0 as of 30 June 2023 and 30 September 2022, respectively.

Various debt agreements to which we are a party include financial covenants and other restrictions, including restrictions pertaining to the ability to create property liens and enter into certain sale and leaseback transactions. As of 30 June 2023, we are in compliance with all of the financial and other covenants under our debt agreements.

Credit Facilities

We have a five-year $2,750 revolving credit agreement maturing 31 March 2026 with a syndicate of banks (the “2021 Credit Agreement”), under which senior unsecured debt is available to us and certain of our subsidiaries. The 2021 Credit Agreement provides a source of liquidity and supports our commercial paper program. The only financial covenant in the 2021 Credit Agreement is a maximum ratio of total debt to total capitalization (equal to total debt plus total equity) not to exceed 70%. Total debt as of 30 June 2023 and 30 September 2022, expressed as a percentage of total capitalization, was 37.9% and 35.8%, respectively. No borrowings were outstanding under the 2021 Credit Agreement as of 30 June 2023.

We also have credit facilities available to certain of our foreign subsidiaries totaling $1,621.8, of which $1,031.1 was borrowed and outstanding as of 30 June 2023. The amount borrowed and outstanding as of 30 September 2022 was $457.5. The increase from 30 September 2022 was driven by borrowings on a new variable-rate Saudi Riyal loan facility that matures in October 2026. The interest rate on the facility is based on the Saudi Arabian Interbank Offered Rate ("SAIBOR") plus an annual margin of 1.35%. We entered into this facility in October 2022 and utilized a portion of the proceeds to repay a variable-rate 4.10% Saudi Riyal Loan Facility of $195.6, which was presented within long-term debt on our consolidated balance sheet as of 30 September 2022.

In May 2023, NGHC secured non-recourse project financing of approximately $6.1 billion, which is expected to fund about 73% of the NEOM Green Hydrogen project over the construction period. Under this financing, the assets of NGHC can only be used to settle obligations of the joint venture, and creditors of NGHC do not have recourse to the general credit of Air Products. As of 30 June 2023, no borrowings were outstanding. In July 2023, the joint venture completed its first drawdown on the project financing of $1.3 billion. Refer to Note 3, *Variable Interest Entities*, to the consolidated financial statements for additional information.

Equity Securities

On 15 September 2011, the Board of Directors authorized the repurchase of up to $1,000 of our outstanding common stock. We did not purchase any of our outstanding shares in the first nine months of fiscal years 2023 or 2022. As of 30 June 2023, $485.3 in share repurchase authorization remained.

Dividends

The Board of Directors determines whether to declare cash dividends on our common stock and the timing and amount based on financial condition and other factors it deems relevant. In January 2023, the Board of Directors approved an increase to our quarterly dividend of 8%, or $0.13 per share, marking the 41st consecutive year that we have increased our quarterly dividend. We expect to continue to pay cash dividends in the future at comparable or increased levels.

Dividends are paid quarterly, usually during the sixth week after the close of the fiscal quarter. On 21 July 2023, the Board of Directors declared a quarterly dividend of $1.75 per share that is payable on 13 November 2023 to shareholders of record at the close of business on 2 October 2023.

PENSION BENEFITS

We and certain of our subsidiaries sponsor defined benefit pension plans and defined contribution plans that cover a substantial portion of our worldwide employees. The principal defined benefit pension plans are the U.S. salaried pension plan and the U.K. pension plan. These plans were closed to new participants in 2005, after which defined contribution plans were offered to new employees. The shift to defined contribution plans is expected to continue to reduce volatility of both plan expense and contributions. For additional information, refer to Note 12, *Retirement Benefits*, to the consolidated financial statements.

Net Periodic Cost (Benefit)

The table below summarizes the components of net periodic cost (benefit) for our U.S. and international defined benefit pension plans:

	Three Months Ended 30 June		Nine Months Ended 30 June	
	2023	2022	2023	2022
Service cost	$5.7	$9.9	$17.5	$30.3
Non-service cost (benefit)	22.0	(9.5)	64.4	(33.4)
Other	0.2	0.2	0.7	1.2
Net Periodic Cost (Benefit)	$27.9	$0.6	$82.6	($1.9)

Net periodic cost was $27.9 and $82.6 for the three and nine months ended 30 June 2023, respectively, versus a cost (benefit) of $0.6 and ($1.9) for the three and nine months ended 30 June 2022, respectively. The increased costs from the prior year were primarily attributable to higher non-service costs, which were driven by higher interest cost and lower expected returns on plan assets due to a smaller beginning balance of plan assets. Fiscal year 2023 non-service items also include a $1.9 curtailment gain recorded in the first quarter for the write-off of prior service credits in an amended international defined benefit pension plan. Non-service related components of net periodic cost (benefit) are reflected within "Other non-operating income (expense), net" on our consolidated income statements.

Service costs result from benefits earned by active employees and are reflected as operating expenses primarily within "Cost of sales" and "Selling and administrative expense" on our consolidated income statements. The amount of service costs capitalized in the first nine months of fiscal years 2023 and 2022 was not material.

Company Contributions

Management considers various factors when making pension funding decisions, including tax, cash flow, and regulatory implications. For the nine months ended 30 June 2023 and 2022, our cash contributions to funded pension plans and benefit payments for unfunded pension plans were $22.0 and $31.7, respectively.

Total contributions for fiscal year 2023 are expected to be approximately $25 to $35. During fiscal year 2022, total contributions were $44.7.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

A description of our major accounting policies, including those that we consider to be the most critical to understanding our financial statements, is included in our 2022 Form 10-K. There were no changes to our accounting policies during the first nine months of fiscal year 2023.

Management's Discussion and Analysis of our financial condition and results of operations is based on the consolidated financial statements and accompanying notes that have been prepared in accordance with GAAP. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. These estimates reflect our best judgment about current and/or future economic and market conditions and their effect based on information available as of the date of our consolidated financial statements. If conditions change, actual results may differ materially from these estimates.

Judgments and estimates of uncertainties are required to apply our accounting policies in many areas. However, application of policies that management has identified as critical places significant importance on management's judgment, often as the result of the need to make estimates about the effects of matters that are inherently uncertain. As discussed in Note 4, *Business and Asset Actions*, to the consolidated financial statements, we concluded that we will not proceed with certain projects and wrote down the full carrying value of related assets. Additionally, we recorded changes to project cost estimates on certain projects accounted for under the cost incurred input method. Accordingly, we recorded a cumulative effect adjustment that unfavorably impacted operating income by approximately $45 and $105 for the three and nine months ended 30 June 2023. There were no other changes to our estimates during the first nine months of fiscal year 2023 that had a significant impact on our financial condition, change in financial condition, liquidity, or results of operations.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Information on our utilization of financial instruments and an analysis of the sensitivity of these instruments to selected changes in market rates and prices is included in our 2022 Form 10-K.

Our net financial instrument position increased from a liability of $6,898.6 at 30 September 2022 to a liability of $8,120.3 at 30 June 2023. The increase was primarily due to the issuance of U.S. Dollar- and Euro-denominated fixed-rate notes during the second quarter of fiscal year 2023.

Interest Rate Risk

The sensitivity analysis related to the interest rate risk on the fixed portion of our debt portfolio assumes an instantaneous 100 bp move in interest rates from the level at 30 June 2023, with all other variables held constant. A 100 bp increase in market interest rates would result in a decrease of $791 and $364 in the net liability position of financial instruments at 30 June 2023 and 30 September 2022, respectively. A 100 bp decrease in market interest rates would result in an increase of $922 and $425 in the net liability position of financial instruments at 30 June 2023 and 30 September 2022, respectively. The increased sensitivity to market interest rates was due to the higher notional balance of interest rate swaps designated as cash flow hedges and the issuance of U.S. Dollar- and Euro-denominated fixed-rate notes during the fiscal year.

There were no material changes to the sensitivity analysis related to the variable portion of our debt portfolio since 30 September 2022.

Foreign Currency Exchange Rate Risk

The sensitivity analysis related to foreign currency exchange rates assumes an instantaneous 10% change in foreign currency exchange rates from their levels at 30 June 2023, with all other variables held constant. A 10% strengthening or weakening of the functional currency of an entity versus all other currencies would result in a decrease or increase, respectively, of $296 and $165 in the net liability position of financial instruments at 30 June 2023 and 30 September 2022, respectively. The increase in sensitivity is primarily due to the issuance of Euro-denominated fixed-rate notes during the second quarter of fiscal year 2023.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

We maintain a comprehensive set of disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Under the supervision of the Chief Executive Officer and Chief Financial Officer, our management conducted an evaluation of the effectiveness of our disclosure controls and procedures as of 30 June 2023. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of 30 June 2023, our disclosure controls and procedures were effective.

Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended 30 June 2023 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings

In April 2023, we received a favorable ruling from a Texas state court in litigation involving disputed energy management charges related to Winter Storm Uri, a severe winter weather storm that impacted the U.S. Gulf Coast in February 2021. The ruling is subject to appeal and had no impact on our consolidated financial statements for the three and nine months ended 30 June 2023.

Item 5. Other Information

During the three months ended 30 June 2023, none of the Company’s directors or Section 16 reporting officers adopted or terminated any Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement (as such terms are defined in Item 408 of Regulation S-K).

Item 6. Exhibits.

(a) Exhibits required by Item 601 of Regulation S-K

Exhibit No.	Description
(3)	Articles of Incorporation and Bylaws
3.1	Restated Certificate of Incorporation of the Company, dated 21 July 2023.
(10)	Material Contracts
10.1	Amended and Restated Employment Agreement, dated 17 May 2023, between Air Products and Chemicals, Inc. and Seifollah Ghasemi (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on 18 May 2023).
(31)	Rule 13a-14(a)/15d-14(a) Certifications
31.1	Certification by the Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification by the Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
(32)	Section 1350 Certifications
32.1	Certification by the Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. †
(101)	Interactive Data Files
101.INS	Inline XBRL Instance Document. The XBRL Instance Document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
104	Cover Page Interactive Data File, formatted in Inline XBRL (included in Exhibit 101).

† The certification attached as Exhibit 32.1 that accompanies this Quarterly Report on Form 10-Q is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Air Products and Chemicals, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Form 10-Q, irrespective of any general incorporation language contained in such filing.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

	Air Products and Chemicals, Inc.
	(Registrant)
By:	/s/ Melissa N. Schaeffer
	Melissa N. Schaeffer Senior Vice President and Chief Financial Officer (Principal Financial Officer)
Date:	3 August 2023

RESTATED CERTIFICATE OF INCORPORATION

OF

AIR PRODUCTS AND CHEMICALS, INC.

The original Certificate of Incorporation of Air Products and Chemicals, Inc. was filed with the Secretary of State of the State of Delaware on May 25, 1961, restated by the filing of a Restated Certificate of Incorporation with the Secretary of State of the State of Delaware on April 7, 1987, amended by the filing of a Certificate of Amendment to the Restated Certificate of Incorporation with the Secretary of State of the State of Delaware on January 25, 1996, and further amended by the filing of a Certificate of Amendment to the Restated Certificate of Incorporation with the Secretary of State of the State of Delaware on January 29, 2014. The following Restated Certificate of Incorporation only restates and integrates and does not further amend the provisions of the Certificate of Incorporation as heretofore amended or supplemented, and there is no discrepancy between those provisions and the provisions of this Restated Certificate of Incorporation.

FIRST. The name of the corporation (hereinafter referred to as the "Corporation") is Air Products and Chemicals, Inc.

SECOND. The Corporation's registered office in the State of Delaware is located at 1209 Orange Street, Wilmington, New Castle County, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD. The purpose of the Corporation is to engage in any lawful activity for which corporations may be organized under the General Corporation Law of the State of Delaware (the "Delaware General Corporation Law").

FOURTH. The total number of shares of stock which the Corporation shall have the authority to issue is three hundred twenty-five million (325,000,000) shares, consisting of three hundred million (300,000,000) shares of common stock having a par value of $1 per share and twenty-five million (25,000,000) shares of preferred stock having a par value of $1 per share.

The Board of Directors is authorized, subject to limitations prescribed by law and the provisions of this Article Fourth, to provide for the issuance of the preferred shares in series, and by filing a certificate pursuant to the Delaware General Corporation Law, to establish the number of shares to be included in each such series, and to fix the designation, rights, preferences and limitations of the shares of each such series. The authority of the Board with respect to each series shall include, but not be limited to, determination of the following:

(a) the number of shares constituting that series and the distinctive designation of that series;

(b) the dividend rate on the shares of that series, whether dividends shall be cumulative, and, if so, from which date or dates, and the relative rights of priority, if any, of payment of dividends on shares of that series;

(c) whether that series shall have voting rights, in addition to the voting rights provided by law, and, if so, the terms of such voting rights;

(d) whether that series shall have conversion privileges, and, if so, the terms and conditions of such conversion, including provision for adjustment of the conversion rate in such events as the Board of Directors shall determine;

(e) whether or not the shares of that series shall be redeemable, and, if so, the terms and conditions of such redemption, including the date or dates upon or after which they shall be redeemable, and the amount per share payable in case of redemption, which amount may vary under different conditions and at different redemption dates;

(f) whether that series shall have a sinking fund for the redemption or purchase of shares of that series, and, if so, the terms and amount of such sinking fund;

(g) the rights of the shares of that series in the event of voluntary or involuntary liquidation, dissolution or winding up of the Corporation, and the relative rights of priority, if any, of payment of shares of that series; and

(h) any other relative rights, preferences and limitations of that series.

Dividends on outstanding preferred shares shall be declared and paid, or set apart for payment, before any dividends shall be declared and paid, or set apart for payment, on the common shares with respect to the same dividend period.

FIFTH. Unless and except to the extent that the Bylaws of the Corporation shall so require, the election of directors of the Corporation need not be by written ballot.

In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors is expressly authorized and empowered:

(a) to make, alter and repeal the Bylaws of the Corporation; and

(b) to exercise all such powers and to do all such acts and things as may be exercised and done by the Corporation; subject, nevertheless, to the provisions of said laws, of this Certificate of Incorporation as from time to time amended, and of the Bylaws of the Corporation.

SIXTH. No holder of any stock of the Corporation of any class whatsoever, whether now or hereafter authorized, shall have any right, preemptive or otherwise, as such holder (other than such right, if any, as the Board of Directors in its discretion may determine) to purchase, subscribe for or otherwise acquire any shares of stock of the Corporation of any class whatsoever, whether now or hereafter authorized, or any securities convertible into or exchangeable for any such shares, or any warrants or other instruments evidencing rights or options to subscribe for, purchase, or otherwise acquire any such shares, whether such shares, securities, warrants or other instruments be unissued, or issued and thereafter acquired by the Corporation.

SEVENTH. Whenever a compromise or arrangement is proposed between the Corporation and its creditors or any class of them and/or between the Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of the Corporation or of any creditor or stockholder thereof, or on the application of any receiver or receivers appointed for the Corporation under the provisions of Section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for the Corporation under the provisions of Section 279 of Title 8 of the Delaware Code, order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of the Corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of the Corporation, as the case may be, and also on the Corporation.

EIGHTH. The Corporation reserves the right at any time and from time to time to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted, in the manner now or hereafter prescribed by law; and all rights, preferences and privileges of whatsoever nature conferred upon stockholders, directors or any other person whomsoever by or pursuant to this Certificate of Incorporation in its present form or as hereafter amended are granted subject to the right reserved in this Article.

NINTH. Section 1. A director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the director derived any improper personal benefit. If the Delaware General Corporation Law is amended after approval by the stockholders of this article to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Any repeal or modification of the foregoing paragraph by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification.

Section 2. (a) *Right to Indemnification*. Each person who was or is made a party or is threatened to be made a party to or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he or she is or was a director, officer or employee of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans (hereinafter an "indemnitee"), whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee or agent or in any other capacity while serving as a director, officer, employee or agent, shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the

Delaware General Corporation Law, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), against all expense, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such indemnitee in connection therewith and such indemnification shall continue as to an indemnitee who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the indemnitee's heirs, executors and administrators; *provided, however*, that, except as provided in paragraph (b) hereof with respect to proceedings to enforce rights to indemnification, the Corporation shall indemnify any such indemnitee in connection with a proceeding (or part thereof) initiated by such indemnitee only if such proceeding (or part thereof) was authorized by the Board of Directors of the Corporation. The right to indemnification conferred in this Section shall be a contract right and shall include the right to be paid by the Corporation the expenses incurred in defending any such proceeding in advance of its final disposition (hereinafter an "advancement of expenses"); *provided, however*, that, if the Delaware General Corporation Law requires, an advancement of expenses incurred by an indemnitee in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that such indemnitee is not entitled to be indemnified for such expenses under this Section or otherwise (hereinafter an "undertaking").

(b) *Right of Indemnitee to Bring Suit.* If a claim under paragraph (a) of this Section is not paid in full by the Corporation within sixty days after a written claim has been received by the Corporation, except in the case of a claim for an advancement of expenses, in which case the applicable period shall be twenty days, the indemnitee may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim. If successful in whole or in part in any such suit or in a suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the indemnitee shall be entitled to be paid also the expense of prosecuting or defending such suit. In (i) any suit brought by the indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the indemnitee to enforce a right to an advancement of expenses) it shall be a defense that, and (ii) any suit by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking the Corporation shall be entitled to recover such expenses upon a final adjudication that, the indemnitee has not met the applicable standard of conduct set forth in the Delaware General Corporation Law. Neither the failure of the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) to have made a determination prior to the commencement of such suit that indemnification of the indemnitee is proper in the circumstances because the indemnitee has met the applicable standard of conduct set forth in the Delaware General Corporation Law, nor an actual determination by the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) that the indemnitee has not met such applicable standard of conduct, shall create a presumption that the indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the indemnitee, be a defense to such suit. In any suit brought by the indemnitee to enforce a right hereunder, or by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the indemnitee is not entitled to be indemnified or to such advancement of expenses under this Section or otherwise shall be on the Corporation.

(c) *Non-Exclusivity of Rights.* The rights to indemnification and to the advancement of expenses conferred in this Section shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, this Certificate of Incorporation, Bylaw, agreement, vote of stockholders or disinterested directors or otherwise.

(d) *Insurance.* The Corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the Delaware General Corporation Law.

(e) *Indemnification of Agents of the Corporation.* The Corporation may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification and to the advancement of expenses, to any agent of the Corporation to the fullest extent of the provisions of this Section with respect to the indemnification and advancement of expenses of directors, officers and employees of the Corporation.

TENTH. Section 1. The number of directors which shall constitute the whole Board of Directors of the Corporation shall be the number from time to time fixed by or in the manner provided in the Bylaws of the Corporation, but not less than five nor more than fifteen.

Section 2. Subject to the rights of the holders of any preferred stock, or series thereof, to elect directors, directors elected at the Corporation's annual meeting of stockholders shall be elected for a term expiring at the next annual meeting of stockholders and may be removed by the stockholders of the Corporation with or without cause. Each director elected at any annual meeting of stockholders shall hold office until such director's successor shall have been duly elected and qualified.

Section 3. Any vacancy or newly created directorship on the Board of Directors, whether arising through death, resignation, retirement or removal of a director or through an increase in the number of directors, shall be filled only by a majority vote of all of the remaining directors, even though less than a quorum, or by a sole remaining director.

ELEVENTH. Any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly called annual or special meeting of the stockholders of the Corporation and may not be effected by any consent in writing.

This Restated Certificate of Incorporation was duly adopted by the Board of Directors in accordance with the provisions of Section 245 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said Air Products and Chemicals, Inc. has caused its corporate seal to be hereunto affixed and this Restated Certificate of Incorporation to be signed by Seifi Ghasemi, its Chairman of the Board, President and Chief Executive Officer, and attested to by Sean D. Major, its Executive Vice President, General Counsel and Secretary, this 21st day of July 2023.

AIR PRODUCTS AND CHEMICALS, INC.

By: /s/ Seifi Ghasemi
Name: Seifi Ghasemi
Title: Chairman of the Board, President and Chief Executive Officer

Attest:

By: /s/ Sean D. Major
Name: Sean D. Major
Title: Executive Vice President, General Counsel and Secretary

Exhibit 31.1

PRINCIPAL EXECUTIVE OFFICER'S CERTIFICATION

I, Seifi Ghasemi, certify that:

1. I have reviewed this Quarterly Report of Air Products and Chemicals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: 3 August 2023

/s/ Seifi Ghasemi

Seifi Ghasemi

Chairman, President and Chief Executive Officer

Exhibit 31.2

PRINCIPAL FINANCIAL OFFICER'S CERTIFICATION

I, Melissa N. Schaeffer, certify that:

1. I have reviewed this Quarterly Report of Air Products and Chemicals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: 3 August 2023

/s/ Melissa N. Schaeffer

Melissa N. Schaeffer
Senior Vice President and Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE
SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Air Products and Chemicals, Inc. (the “Company”) on Form 10-Q for the period ending 30 June 2023, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), we, Seifi Ghasemi, Chairman, President, and Chief Executive Officer of the Company, and Melissa N. Schaeffer, Senior Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: 3 August 2023

/s/ Seifi Ghasemi
Seifi Ghasemi
Chairman, President, and Chief Executive Officer

/s/ Melissa N. Schaeffer
Melissa N. Schaeffer
Senior Vice President and Chief Financial Officer