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 September 30, 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: 001-34726

LYONDELLBASELL INDUSTRIES N.V.

(Exact name of registrant as specified in its charter)

Netherlands	**98-0646235**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

1221 McKinney St.,	**4th Floor, One Vine Street**	
Suite 300	**London**	**Delftseplein 27E**
Houston, Texas	**W1J0AH**	**3013AA Rotterdam**
USA 77010	**United Kingdom**	**Netherlands**

(Addresses of registrant's principal executive offices) (Zip code)

(713) 309-7200	**+44 (0) 207 220 2600**	**+31 (0) 10 2755 500**

(Registrant's telephone numbers, including area codes)

____

(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	Name of Each Exchange On Which Registered
Ordinary Shares, €0.04 Par Value	**LYB**	**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 x No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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	x	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 x

The registrant had 324,361,773 ordinary shares, €0.04 par value, outstanding at October 25, 2023 (excluding 16,060,725 treasury shares).

LYONDELLBASELL INDUSTRIES N.V.

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PART I. FINANCIAL INFORMATION

ITEM 1. CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

LYONDELLBASELL INDUSTRIES N.V.
CONSOLIDATED STATEMENTS OF INCOME

Millions of dollars, except earnings per share	Three Months Ended September 30, 2023	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022
Sales and other operating revenues:				
Trade	$ 10,477	$ 12,044	$ 30,702	$ 39,443
Related parties	148	206	476	802
	10,625	12,250	31,178	40,245
Operating costs and expenses:				
Cost of sales	9,177	11,088	26,909	34,491
Impairments	25	—	277	69
Selling, general and administrative expenses	378	319	1,158	976
Research and development expenses	31	31	96	95
	9,611	11,438	28,440	35,631
Operating income	1,014	812	2,738	4,614
Interest expense	(125)	(70)	(356)	(202)
Interest income	37	7	88	13
Other (expense) income, net	(31)	4	(33)	(63)
Income from continuing operations before equity investments and income taxes	895	753	2,437	4,362
Income (loss) from equity investments	6	(26)	11	25
Income from continuing operations before income taxes	901	727	2,448	4,387
Provision for income taxes	153	154	508	848
Income from continuing operations	748	573	1,940	3,539
Loss from discontinued operations, net of tax	(1)	(1)	(4)	(3)
Net income	747	572	1,936	3,536
Dividends on redeemable non-controlling interests	(2)	(2)	(5)	(5)
Net income attributable to the Company shareholders	$ 745	$ 570	$ 1,931	$ 3,531
Earnings per share:				
Net income (loss) attributable to the Company shareholders —				
Basic				
Continuing operations	$ 2.29	$ 1.75	$ 5.93	$ 10.77
Discontinued operations	—	—	(0.01)	(0.01)
	$ 2.29	$ 1.75	$ 5.92	$ 10.76
Diluted				
Continuing operations	$ 2.29	$ 1.75	$ 5.91	$ 10.75
Discontinued operations	—	—	(0.01)	(0.01)
	$ 2.29	$ 1.75	$ 5.90	$ 10.74

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Millions of dollars	Three Months Ended September 30, 2023	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022
Net income	$ 747	$ 572	$ 1,936	$ 3,536
Other comprehensive income (loss), net of tax –				
Financial derivatives	17	23	24	213
Defined benefit pension and other postretirement benefit plans	2	51	6	134
Foreign currency translations	(86)	(169)	(58)	(355)
Total other comprehensive loss, net of tax	(67)	(95)	(28)	(8)
Comprehensive income	680	477	1,908	3,528
Dividends on redeemable non-controlling interests	(2)	(2)	(5)	(5)
Comprehensive income attributable to the Company shareholders	$ 678	$ 475	$ 1,903	$ 3,523

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

CONSOLIDATED BALANCE SHEETS

Millions of dollars	**September 30, 2023**	**December 31, 2022**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 2,833	$ 2,151
Restricted cash	11	5
Accounts receivable:		
Trade, net	3,704	3,392
Related parties	137	201
Inventories	4,911	4,804
Prepaid expenses and other current assets	1,632	1,292
Total current assets	13,228	11,845
Operating lease assets	1,509	1,725
Property, plant and equipment	24,221	23,724
Less: Accumulated depreciation	(9,027)	(8,337)
Property, plant and equipment, net	15,194	15,387
Equity investments	4,056	4,295
Goodwill	1,604	1,827
Intangible assets, net	642	662
Other assets	642	624
Total assets	$ 36,875	$ 36,365

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

CONSOLIDATED BALANCE SHEETS

Millions of dollars, except shares and par value data	September 30, 2023	December 31, 2022
LIABILITIES, REDEEMABLE NON-CONTROLLING INTERESTS AND EQUITY		
Current liabilities:		
Current maturities of long-term debt	$ 781	$ 432
Short-term debt	112	349
Accounts payable:		
Trade	3,121	3,106
Related parties	453	477
Accrued and other current liabilities	2,533	2,396
Total current liabilities	7,000	6,760
Long-term debt	10,213	10,540
Operating lease liabilities	1,397	1,510
Other liabilities	2,003	1,954
Deferred income taxes	2,929	2,858
Commitments and contingencies		
Redeemable non-controlling interests	114	114
Shareholders' equity:		
Ordinary shares, €0.04 par value, 1,275 million shares authorized, 324,359,296 and 325,723,567 shares outstanding, respectively	19	19
Additional paid-in capital	6,130	6,119
Retained earnings	9,917	9,195
Accumulated other comprehensive loss	(1,400)	(1,372)
Treasury stock, at cost, 16,063,202 and 14,698,931 ordinary shares, respectively	(1,461)	(1,346)
Total Company share of shareholders' equity	13,205	12,615
Non-controlling interests	14	14
Total equity	13,219	12,629
Total liabilities, redeemable non-controlling interests and equity	$ 36,875	$ 36,365

See Notes to the Consolidated Financial Statements.

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LYONDELLBASELL INDUSTRIES N.V.

CONSOLIDATED STATEMENTS OF CASH FLOWS

Millions of dollars	Nine Months Ended September 30, 2023	2022
Cash flows from operating activities:		
Net income	$ 1,936	$ 3,536
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	1,154	933
Impairments	277	69
Amortization of debt-related costs	7	11
Share-based compensation	71	54
Equity investments—		
Equity income	(11)	(25)
Distributions of earnings, net of tax	109	219
Deferred income tax provision	48	83
Changes in assets and liabilities that provided (used) cash:		
Accounts receivable	(282)	134
Inventories	(196)	(601)
Accounts payable	31	200
Other, net	294	(98)
Net cash provided by operating activities	3,438	4,515
Cash flows from investing activities:		
Expenditures for property, plant and equipment	(1,047)	(1,417)
Proceeds from settlement of net investment hedges	612	614
Payments for settlement of net investment hedges	(550)	(501)
Other, net	(186)	(129)
Net cash used in investing activities	(1,171)	(1,433)
Cash flows from financing activities:		
Repurchases of Company ordinary shares	(211)	(420)
Dividends paid - common stock	(1,204)	(2,859)
Issuance of long-term debt	500	—
Payments of debt issuance costs	(5)	—
Repayment of long-term debt	(425)	—
Net (repayments of) proceeds from commercial paper	(200)	96
Collateral received from interest rate derivatives	—	238
Other, net	—	16
Net cash used in financing activities	(1,545)	(2,929)
Effect of exchange rate changes on cash	(34)	(144)
Increase in cash and cash equivalents and restricted cash	688	9
Cash and cash equivalents and restricted cash at beginning of period	2,156	1,477
Cash and cash equivalents and restricted cash at end of period	$ 2,844	$ 1,486

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

Millions of dollars	Ordinary Shares Issued	Ordinary Shares Treasury	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Company Share of Shareholders' Equity	Non-Controlling Interests
Balance, June 30, 2023	$ 19	$ (1,446)	$ 6,111	$ 9,580	$ (1,333)	$ 12,931	$ 14
Net income	—	—	—	747	—	747	—
Other comprehensive loss	—	—	—	—	(67)	(67)	—
Share-based compensation	—	23	19	(1)	—	41	—
Dividends - common stock ($1.25 per share)	—	—	—	(407)	—	(407)	—
Dividends - redeemable non-controlling interests ($15.00 per share)	—	—	—	(2)	—	(2)	—
Repurchases of Company ordinary shares	—	(38)	—	—	—	(38)	—
Balance, September 30, 2023	$ 19	$ (1,461)	$ 6,130	$ 9,917	$ (1,400)	$ 13,205	$ 14

Millions of dollars	Ordinary Shares Issued	Ordinary Shares Treasury	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Company Share of Shareholders' Equity	Non-Controlling Interests
Balance, June 30, 2022	$ 19	$ (1,200)	$ 6,077	$ 9,050	$ (1,716)	$ 12,230	$ 14
Net income	—	—	—	572	—	572	—
Other comprehensive loss	—	—	—	—	(95)	(95)	—
Share-based compensation	—	2	22	7	—	31	—
Dividends - common stock ($1.19 per share)	—	—	—	(395)	—	(395)	—
Dividends - redeemable non-controlling interests ($15.00 per share)	—	—	—	(2)	—	(2)	—
Repurchases of Company ordinary shares	—	(150)	—	—	—	(150)	—
Balance, September 30, 2022	$ 19	$ (1,348)	$ 6,099	$ 9,232	$ (1,811)	$ 12,191	$ 14

LYONDELLBASELL INDUSTRIES N.V.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

Millions of dollars	Ordinary Shares Issued	Ordinary Shares Treasury	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Company Share of Shareholders' Equity	Non-Controlling Interests
Balance, December 31, 2022	$ 19	$ (1,346)	$ 6,119	$ 9,195	$ (1,372)	$ 12,615	$ 14
Net income	—	—	—	1,936	—	1,936	—
Other comprehensive loss	—	—	—	—	(28)	(28)	—
Share-based compensation	—	96	11	(5)	—	102	—
Dividends - common stock ($3.69 per share)	—	—	—	(1,204)	—	(1,204)	—
Dividends - redeemable non-controlling interests ($45.00 per share)	—	—	—	(5)	—	(5)	—
Repurchases of Company ordinary shares	—	(211)	—	—	—	(211)	—
Balance, September 30, 2023	$ 19	$ (1,461)	$ 6,130	$ 9,917	$ (1,400)	$ 13,205	$ 14

Millions of dollars	Ordinary Shares Issued	Ordinary Shares Treasury	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Company Share of Shareholders' Equity	Non-Controlling Interests
Balance, December 31, 2021	$ 19	$ (965)	$ 6,044	$ 8,563	$ (1,803)	$ 11,858	$ 14
Net income	—	—	—	3,536	—	3,536	—
Other comprehensive loss	—	—	—	—	(8)	(8)	—
Share-based compensation	—	23	55	(3)	—	75	—
Dividends - common stock ($3.51 per share)	—	—	—	(1,155)	—	(1,155)	—
Special dividends - common stock ($5.20 per share)	—	—	—	(1,704)	—	(1,704)	—
Dividends - redeemable non-controlling interests ($45.00 per share)	—	—	—	(5)	—	(5)	—
Repurchases of Company ordinary shares	—	(406)	—	—	—	(406)	—
Balance, September 30, 2022	$ 19	$ (1,348)	$ 6,099	$ 9,232	$ (1,811)	$ 12,191	$ 14

See Notes to the Consolidated Financial Statements.

LYONDELLBASELL INDUSTRIES N.V.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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LYONDELLBASELL INDUSTRIES N.V.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. Basis of Presentation

LyondellBasell Industries N.V. is a limited liability company (Naamloze Vennootschap) incorporated under Dutch law by deed of incorporation dated October 15, 2009. Unless otherwise indicated, the “Company,” “we,” “us,” “our” or similar words are used to refer to LyondellBasell Industries N.V. together with its consolidated subsidiaries (“LyondellBasell N.V.”). LyondellBasell N.V. is a worldwide manufacturer of chemicals and polymers, a refiner of crude oil, a producer of gasoline blending components and a developer and licensor of technologies for the production of polymers.

The accompanying unaudited Consolidated Financial Statements have been prepared from the books and records of LyondellBasell N.V. in accordance with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X for interim financial information. Certain notes and other information have been condensed or omitted from the interim financial statements included in this report. Accordingly, they do not include all of the information and notes required by accounting principles generally accepted in the United States (“U.S. GAAP”) for complete financial statements. These Consolidated Financial Statements should be read in conjunction with the Consolidated Financial Statements and notes thereto included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2022. In the opinion of management, all adjustments, including normal recurring adjustments, considered necessary for a fair statement have been included. These statements contain some amounts that are based upon management estimates and judgments. Future actual results could differ from such current estimates. The results for interim periods are not necessarily indicative of results for the entire year.

Effective January 1, 2023, our *Catalloy* and polybutene-1 businesses were moved from our Advanced Polymer Solutions segment and reintegrated into our Olefins and Polyolefins-Americas and Olefins and Polyolefins-Europe, Asia, International segments. This move allows the Advanced Polymer Solutions team to focus on our compounding and solutions business, and to develop a more agile operating model with meaningful regional and segment growth strategies. Segment information provided throughout the report has been revised for all periods presented to reflect these changes.

In March 2023, we announced our new strategy, which included a strategic pillar focused on growing and upgrading our core assets. At that time, we also announced our decision to explore strategic options for our U.S. Gulf Coast-based ethylene oxide & derivatives (“EO&D”) business, which had been identified as a non-core business within our Intermediates and Derivatives segment.

During the third quarter of 2023, we determined that a sale of the EO&D business is the best strategic option and approved a plan to proceed accordingly. As such, we have classified the associated assets and liabilities as held for sale as of September 30, 2023. Assets held for sale and liabilities held for sale are presented within Prepaid expenses and other current assets and Accrued and other current liabilities, respectively, in our Consolidated Balance Sheets.

2. Accounting and Reporting Changes

Recently Adopted Guidance

Supplier Finance Program—In September 2022, the FASB issued ASU 2022-04, *Liabilities—Supplier Finance Programs (Subtopic 405-50)*: *Disclosure of Supplier Finance Program Obligations*. The guidance requires an entity that uses supplier finance programs in connection with the purchase of goods and services to disclose certain qualitative and quantitative information about its programs including the key terms and conditions, activity during the period, and potential magnitude. The guidance is effective retrospectively for the year ending December 31, 2023, including interim periods, with disclosures required for each period for which a balance sheet is presented, except for the disclosure of roll forward information, which is effective for fiscal years beginning after December 15, 2023. The adoption of this guidance did not have a material impact on our Consolidated Financial Statements.

Accounting Guidance Issued But Not Adopted as of September 30, 2023

Fair Value Measurement—In June 2022, the FASB issued ASU 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*. The guidance clarifies that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security because it is a characteristic of the entity holding the equity security rather than a characteristic of the security and is not considered in measuring its fair value. The guidance is effective prospectively for the year ending December 31, 2024, including the interim periods, with the impact of adoption reflected in earnings. Early adoption is permitted. The adoption of this guidance will not have a material impact on our Consolidated Financial Statements.

3. Revenues

Contract Balances—Contract liabilities were $126 million and $167 million at September 30, 2023 and December 31, 2022, respectively. Revenue recognized in each reporting period that was included in the contract liability balance at the beginning of the period was immaterial.

Disaggregation of Revenues—Effective January 1, 2023, our *Catalloy* and polybutene-1 businesses were moved from our Advanced Polymer Solutions segment and reintegrated into our Olefins and Polyolefins-Americas and Olefins and Polyolefins-Europe, Asia, International segments. See Note 12 for additional detail regarding the change in segments. Consistent with this change, we have updated the disclosure of revenue disaggregated by key products for all periods presented.

The following table presents our revenues disaggregated by key products:

	Three Months Ended September 30,		Nine Months Ended September 30,	
Millions of dollars	**2023**	**2022**	**2023**	**2022**
Sales and other operating revenues:				
Olefins and co-products	$ 868	$ 1,281	$ 2,658	$ 3,835
Polyethylene	1,814	2,329	5,750	7,785
Polypropylene	1,347	1,688	4,326	6,139
Propylene oxide and derivatives	558	721	1,737	2,537
Oxyfuels and related products	1,734	1,563	4,269	4,370
Intermediate chemicals	675	917	2,187	3,228
Compounding and solutions	897	1,049	2,848	3,297
Refined products	2,510	2,506	6,860	8,467
Other	222	196	543	587
Total	$ 10,625	$ 12,250	$ 31,178	$ 40,245

The following table presents our revenues disaggregated by geography, based upon the location of the customer:

	Three Months Ended September 30,		Nine Months Ended September 30,	
Millions of dollars	2023	2022	2023	2022
Sales and other operating revenues:				
United States	$ 5,301	$ 5,966	$ 15,185	$ 19,465
Germany	601	822	2,006	2,892
China	526	647	1,573	1,989
Mexico	439	482	1,258	1,522
Japan	391	800	1,182	1,684
Italy	353	387	1,075	1,426
France	272	312	838	1,145
Poland	231	270	693	1,039
The Netherlands	154	261	627	995
Other	2,357	2,303	6,741	8,088
Total	$ 10,625	$ 12,250	$ 31,178	$ 40,245

4. Accounts Receivable

Accounts receivable are reflected in the Consolidated Balance Sheets, net of allowance for credit losses of $6 million as of September 30, 2023 and December 31, 2022.

5. Inventories

Inventories consisted of the following components:

Millions of dollars	September 30, 2023	December 31, 2022
Finished goods	$ 3,154	$ 3,027
Work-in-process	264	227
Raw materials and supplies	1,493	1,550
Total inventories	$ 4,911	$ 4,804

6. Debt

Long-term loans, notes and other debt, net of unamortized discount and debt issuance cost, consisted of the following:

Millions of dollars	September 30, 2023	December 31, 2022
Senior Notes due 2024, $1,000 million, 5.75% ($1 million of debt issuance cost)	$ 774	$ 774
Senior Notes due 2055, $1,000 million, 4.625% ($15 million of discount; $11 million of debt issuance cost)	974	974
Guaranteed Notes due 2027, $300 million, 8.1%	300	300
Issued by LYB International Finance B.V.:		
Guaranteed Notes due 2023, $750 million, 4.0%	—	424
Guaranteed Notes due 2043, $750 million, 5.25% ($19 million of discount; $6 million of debt issuance cost)	725	725
Guaranteed Notes due 2044, $1,000 million, 4.875% ($10 million of discount; $8 million of debt issuance cost)	982	982
Issued by LYB International Finance II B.V.:		
Guaranteed Notes due 2026, €500 million, 0.875% ($1 million of discount; $2 million of debt issuance cost)	516	518
Guaranteed Notes due 2027, $1,000 million, 3.5% ($2 million of discount; $2 million of debt issuance cost)	580	587
Guaranteed Notes due 2031, €500 million, 1.625% ($4 million of discount; $3 million of debt issuance cost)	511	516
Issued by LYB International Finance III LLC:		
Guaranteed Notes due 2025, $500 million, 1.25% ($1 million of discount; $1 million of debt issuance cost)	477	475
Guaranteed Notes due 2030, $500 million, 3.375% ($1 million of debt issuance cost)	117	120
Guaranteed Notes due 2030, $500 million, 2.25% ($3 million of discount; $3 million of debt issuance cost)	467	469
Guaranteed Notes due 2033, $500 million, 5.625% ($5 million of debt issuance cost)	495	—
Guaranteed Notes due 2040, $750 million, 3.375% ($2 million of discount; $7 million of debt issuance cost)	741	741
Guaranteed Notes due 2049, $1,000 million, 4.2% ($14 million of discount; $10 million of debt issuance cost)	976	976
Guaranteed Notes due 2050, $1,000 million, 4.2% ($6 million of discount; $10 million of debt issuance cost)	973	971
Guaranteed Notes due 2051, $1,000 million, 3.625% ($2 million of discount; $10 million of debt issuance cost)	884	897
Guaranteed Notes due 2060, $500 million, 3.8% ($4 million of discount; $6 million of debt issuance cost)	477	481
Other	25	42
Total	10,994	10,972
Less current maturities	(781)	(432)
Long-term debt	$ 10,213	$ 10,540

Fair value hedging adjustments associated with the fair value hedge accounting of our fixed-for-floating interest rate swaps for the applicable periods are as follows:

	Gains (Losses)				Cumulative Fair Value Hedging Adjustments Included in Carrying Amount of Debt	
	Three Months Ended September 30,		Nine Months Ended September 30,		September 30,	December 31,
Millions of dollars	2023	2022	2023	2022	2023	2022
Guaranteed Notes due 2025, 1.25%	$ —	$ 3	$ (1)	$ 12	$ 13	$ 14
Guaranteed Notes due 2026, 0.875%	(1)	3	(2)	10	11	13
Guaranteed Notes due 2027, 3.5%	4	15	7	44	7	—
Guaranteed Notes due 2030, 3.375%	3	8	3	24	24	21
Guaranteed Notes due 2030, 2.25%	4	7	3	23	27	24
Guaranteed Notes due 2031, 1.625%	2	7	1	10	12	11
Guaranteed Notes due 2050, 4.2%	(1)	5	(2)	10	11	13
Guaranteed Notes due 2051, 3.625%	12	41	14	95	104	90
Guaranteed Notes due 2060, 3.8%	3	8	4	10	13	9
Total	$ 26	$ 97	$ 27	$ 238	$ 222	$ 195

Fair value adjustments are recognized in Interest expense in the Consolidated Statements of Income.

Short-term loans, notes and other debt consisted of the following:

Millions of dollars	September 30, 2023	December 31, 2022
U.S. Receivables Facility	$ —	$ —
Commercial paper	—	200
Precious metal financings	112	131
Other	—	18
Total Short-term debt	$ 112	$ 349

Long-Term Debt

Senior Revolving Credit Facility—Our $3,250 million senior unsecured revolving credit facility (the “Senior Revolving Credit Facility”), which expires in November 2026, may be used for dollar and euro denominated borrowings. The facility has a $200 million sub-limit for dollar and euro denominated letters of credit, a $1,000 million uncommitted accordion feature and supports our commercial paper program. In May 2023, we amended our Senior Revolving Credit Facility to update the interest rate benchmark to reference the secured overnight financing rate (“SOFR”) rather than the London Interbank Offered Rate (“LIBOR”). Borrowings under the facility bear interest at either a base rate, SOFR or EURIBOR rate, plus an applicable margin. Additional fees are incurred for the average daily unused commitments. At September 30, 2023, we had no borrowings or letters of credit outstanding and $3,250 million of unused availability under this facility.

Guaranteed Notes due 2033—In May 2023, LYB International Finance III, LLC (“LYB Finance III”), a wholly owned finance subsidiary of LyondellBasell Industries N.V., as defined in Rule 13-01 of Regulation S-X, issued $500 million of 5.625% guaranteed notes due 2033 (the “2033 Notes”) at a discounted price of 99.895%. Net proceeds from the sale of the notes totaled $495 million, after deducting underwriting discounts and offering expenses.

The 2033 Notes are the first green financing instruments we have issued related to our green financing framework. Net proceeds from the sale of the 2033 Notes will be used to finance or refinance, in whole or in part, new or existing eligible green projects in the areas of circular economy, renewable energy, pollution prevention and control, and energy efficiency. Pending the full allocation of the net proceeds, any portion that has not been allocated to eligible green projects will be managed in accordance with our normal liquidity management practices.

These unsecured notes, which are fully and unconditionally guaranteed by LyondellBasell Industries N.V., rank equally in right of payment to all of LYB Finance III's and LyondellBasell Industries N.V.'s existing and future senior unsecured indebtedness and will rank senior in right of payment to any future subordinated indebtedness that LYB Finance III or LyondellBasell Industries N.V. incurs. There are no significant restrictions that would impede LyondellBasell Industries N.V., as guarantor, from obtaining funds by dividend or loan from its subsidiaries.

The indenture governing these notes contains limited covenants, including those restricting our ability, and the ability of our subsidiaries, to incur indebtedness secured by significant property or by capital stock of subsidiaries that own significant property, enter into certain sale and lease-back transactions with respect to any significant property or enter into consolidations, mergers or sales of all or substantially all of our assets.

The 2033 Notes may be redeemed at any time in whole, or from time to time in part, prior to the scheduled maturity date, at a redemption price equal to the greater of (i) the sum of the present values of the remaining scheduled payments of principal and interest (discounted at the treasury rate plus the applicable basis points) less interest accrued on the notes to be redeemed, and (ii) 100% of the principal amount of the notes redeemed; plus, in either case, accrued and unpaid interest thereon to, but excluding, the redemption date. The 2033 Notes may also be redeemed at any time, on or after the date that is three months prior to the scheduled maturity date of the notes at a redemption price equal to 100% of the principal amount of the notes to be redeemed plus accrued and unpaid interest thereon to, but excluding, the redemption date. The notes are also redeemable upon certain tax events.

Guaranteed Notes due 2023—In July 2023, we repaid the $425 million remaining outstanding principal of our 4.0% guaranteed notes due 2023 at maturity.

Short-Term Debt

U.S. Receivables Facility—Our U.S. Receivables Facility, which expires in June 2024, has a purchase limit of $900 million in addition to a $300 million uncommitted accordion feature. This facility provides liquidity through the sale or contribution of trade receivables by certain of our U.S. subsidiaries to a wholly owned, bankruptcy-remote subsidiary on an ongoing basis and without recourse. We pay variable interest rates on our secured borrowings. Additional fees are incurred for the average daily unused commitments. In May 2023, we amended our U.S. Receivables Facility to update the interest rate benchmark to reference SOFR rather than LIBOR. This facility also provides for the issuance of letters of credit up to $200 million. At September 30, 2023, we had no borrowings or letters of credit outstanding and $900 million unused availability under this facility.

Commercial Paper Program—We have a commercial paper program under which we may issue up to $2,500 million of privately placed, unsecured, short-term promissory notes ("commercial paper"). At September 30, 2023, we had no borrowings of outstanding commercial paper.

Weighted Average Interest Rate—At September 30, 2023 and December 31, 2022, our weighted average interest rates on outstanding Short-term debt were 2.2% and 3.7%, respectively.

Additional Information

Debt Compliance—As of September 30, 2023, we are in compliance with our debt covenants.

Supply Chain Finance Arrangements

We facilitate a voluntary supply chain finance program that provides suppliers, at their sole discretion, the opportunity to sell their receivables due from us to a participating financial intermediary in order to be paid earlier than our contracted payment terms. We are not a party to any agreement between our suppliers and the financial intermediary. When a supplier utilizes the program and receives an early payment from the financial intermediary, the supplier takes a discount on the invoice. We pay the financial intermediary the full amount of the invoice on the contractually agreed upon due date. The majority of the suppliers using the program are on 90-day payment terms. There is no economic impact to the Company from a supplier’s decision to take an early payment. No guarantees are provided by us or any of our subsidiaries under the program.

As of September 30, 2023 and December 31, 2022, Accounts payable-Trade included $64 million and $53 million, respectively, payable to suppliers who have elected to participate in the supply chain financing program.

7. Financial Instruments and Fair Value Measurements

We are exposed to market risks, such as changes in commodity pricing, interest rates and currency exchange rates. To manage the volatility related to these exposures, we selectively enter into derivative contracts pursuant to our risk management policies.

Financial Instruments Measured at Fair Value on a Recurring Basis—The following table summarizes financial instruments outstanding for the periods presented that are measured at fair value on a recurring basis:

	September 30, 2023	December 31, 2022	
Millions of dollars	Fair Value	Fair Value	Balance Sheet Classification
Assets–			
Derivatives designated as hedges:			
Commodities	$ 1	$ —	Prepaid expenses and other current assets
Commodities	1	—	Other assets
Foreign currency	107	109	Prepaid expenses and other current assets
Foreign currency	121	133	Other assets
Interest rates	68	16	Prepaid expenses and other current assets
Interest rates	—	25	Other assets
Derivatives not designated as hedges:			
Commodities	12	27	Prepaid expenses and other current assets
Commodities	3	—	Other assets
Foreign currency	4	—	Prepaid expenses and other current assets
Total	$ 317	$ 310	
Liabilities–			
Derivatives designated as hedges:			
Commodities	$ 9	$ 14	Accrued and other current liabilities
Commodities	12	—	Other liabilities
Foreign currency	27	15	Accrued and other current liabilities
Foreign currency	4	8	Other liabilities
Interest rates	29	23	Accrued and other current liabilities
Interest rates	251	229	Other liabilities
Derivatives not designated as hedges:			
Commodities	51	11	Accrued and other current liabilities
Commodities	4	3	Other liabilities
Foreign currency	2	6	Accrued and other current liabilities
Total	$ 389	$ 309	

The financial instruments in the table above are classified as Level 2. We present the gross assets and liabilities of our derivative financial instruments on the Consolidated Balance Sheets.

Financial Instruments Not Measured at Fair Value on a Recurring Basis—The following table presents the carrying value and estimated fair value of our Short-term precious metal financings and Long-term debt:

	September 30, 2023		December 31, 2022	
Millions of dollars	Carrying Value	Fair Value	Carrying Value	Fair Value
Precious metal financings	$ 112	$ 113	$ 131	$ 113
Long-term debt	10,195	8,274	10,517	8,882
Total	$ 10,307	$ 8,387	$ 10,648	$ 8,995

The financial instruments in the table above are classified as Level 2. Our other financial instruments classified within Current assets and Current liabilities have a short maturity and their carrying value generally approximates fair value.

Derivative Instruments:

Commodity Prices—The following table presents the notional amounts of our outstanding commodity derivative instruments:

	September 30, 2023	December 31, 2022		
Millions of units	Notional Amount	Notional Amount	Unit of Measure	Maturity Date
Derivatives designated as hedges:				
Natural gas	68	5	MMBtu	2023 to 2026
Ethane	4	—	Bbl	2024
Power	1	—	MWhs	2023 to 2025
Derivatives not designated as hedges:				
Crude oil	14	2	Bbl	2023 to 2024
Refined products	18	2	Bbl	2023 to 2024
Precious metals	1	1	Troy Ounces	2023 to 2024
Renewable Identification Numbers	68	—	RINs	2023 to 2024

Interest Rates—The following table presents the notional amounts of our outstanding interest rate derivative instruments:

	September 30, 2023	December 31, 2022	
Millions of dollars	Notional Amount	Notional Amount	Maturity Date
Cash flow hedges	$ 200	$ 400	2024
Fair value hedges	2,162	2,164	2025 to 2031

Foreign Currency Rates—The following table presents the notional amounts of our outstanding foreign currency derivative instruments:

Millions of dollars	September 30, 2023 Notional Amount	December 31, 2022 Notional Amount	Maturity Date
Net investment hedges	$ 3,306	$ 3,128	2023 to 2030
Cash flow hedges	1,150	1,150	2024 to 2027
Not designated	450	396	2023 to 2024

Impact on Earnings and Other Comprehensive Income—The following tables summarize the pre-tax effect of derivative instruments recorded in Accumulated other comprehensive loss (“AOCI”), the gains (losses) reclassified from AOCI to earnings and additional gains (losses) recognized directly in earnings:

	Effects of Financial Instruments						
	Three Months Ended September 30,						
	Balance Sheet				Income Statement		
	Gain (Loss) Recognized in AOCI		Gain (Loss) Reclassified to Income from AOCI		Additional Gain (Loss) Recognized in Income		
Millions of dollars	2023	2022	2023	2022	2023	2022	Income Statement Classification
Derivatives designated as hedges:							
Commodities	$ (24)	$ 10	$ 6	$ (22)	$ —	$ —	Cost of sales
Foreign currency	83	285	(27)	(67)	18	20	Interest expense
Interest rates	39	29	1	1	(47)	(94)	Interest expense
Derivatives not designated as hedges:							
Commodities	—	—	—	—	10	(16)	Sales and other operating revenues
Commodities	—	—	—	—	(34)	(28)	Cost of sales
Foreign currency	—	—	—	—	5	(15)	Other expense, net
Total	$ 98	$ 324	$ (20)	$ (88)	$ (48)	$ (133)	

	Effects of Financial Instruments						
	Nine Months Ended September 30,						
	Balance Sheet				Income Statement		
	Gain (Loss) Recognized in AOCI		Gain (Loss) Reclassified to Income from AOCI		Additional Gain (Loss) Recognized in Income		Income Statement
Millions of dollars	2023	2022	2023	2022	2023	2022	Classification
Derivatives designated as hedges:							
Commodities	$ (32)	$ 40	$ 25	$ (54)	$ —	$ —	Cost of sales
Foreign currency	20	607	(13)	(169)	56	51	Interest expense
Interest rates	37	287	4	4	(77)	(221)	Interest expense
Derivatives not designated as hedges:							
Commodities	—	—	—	—	(24)	66	Sales and other operating revenues
Commodities	—	—	—	—	(7)	(17)	Cost of sales
Foreign currency	—	—	—	—	(19)	(54)	Other expense, net
Total	$ 25	$ 934	$ 16	$ (219)	$ (71)	$ (175)	

As of September 30, 2023, on a pre-tax basis, $5 million is scheduled to be reclassified from Accumulated other comprehensive loss as an increase to Interest expense over the next twelve months.

Other Financial Instruments:

Cash and Cash Equivalents—At September 30, 2023 and December 31, 2022, we had marketable securities classified as Cash and cash equivalents of $1,928 million and $1,191 million, respectively.

8. Income Taxes

For interim tax reporting, we estimate an annual effective tax rate which is applied to the year-to-date ordinary income. Tax effects of significant, unusual, or infrequently occurring items are excluded from the estimated annual effective tax rate calculation and recognized in the interim period in which they occur. Our effective income tax rate fluctuates based on, among other factors, changes in pre-tax income in countries with varying statutory tax rates, changes in valuation allowances, changes in foreign exchange gains or losses, the amount of exempt income, changes in unrecognized tax benefits associated with uncertain tax positions and changes in tax laws.

Our exempt income primarily includes interest income, export incentives, and equity earnings of joint ventures. Interest income earned by certain of our subsidiaries through intercompany financings is taxed at rates substantially lower than the U.S. statutory rate. Export incentives relate to tax benefits derived from elections and structures available for U.S. exports. Equity earnings attributable to the earnings of our joint ventures, when paid through dividends to certain European subsidiaries, are exempt from all or portions of normal statutory income tax rates. We currently anticipate the favorable treatment for interest income, dividends, and export incentives to continue in the near term; however, this treatment is based on current law. We continue to monitor the Organization for Economic Cooperation and Development's Pillar One and Two legislation which focus on taxing rights and minimum taxes in countries where we operate, including the United Kingdom. On July 11, 2023, as part of the Finance (No. 2) Act 2023, legislation was enacted in the United Kingdom which introduced an Income Inclusion Rule, known locally as the multinational top-up tax, and domestic minimum top-up tax. This legislation is applicable to periods after December 31, 2023. We continue to assess and monitor legislative changes, however, we do not expect the impact to be material based on the legislation enacted at this stage.

Our effective income tax rate for the third quarter of 2023 was 17.0% compared to 21.2% for the third quarter of 2022. The lower effective tax rate for the third quarter of 2023 is primarily attributable to fluctuations in exempt income as a result of the relative impact of earnings of 5.9% coupled with changes in return to accrual adjustments and foreign exchange gains or losses of 2.9% and 0.8%, respectively. These decreases were partially offset by changes in pre-tax income in countries with varying statutory tax rates of 6.2%.

Our effective income tax rate for the first nine months of 2023 was 20.8% compared to 19.3% for the first nine months of 2022. The higher effective tax rate for the first nine months of 2023 was primarily due to the first quarter 2023 goodwill impairment, for which there is no tax benefit, of 1.7% coupled with an audit settlement during the second quarter 2023 of 1.6%. These increases were partially offset by a 1.4% decrease in our effective income tax rate due to the increased relative impact of exempt income due to lower earnings.

9. Commitments and Contingencies

Commitments—We have various purchase commitments for materials, supplies and services incidental to the ordinary conduct of business, generally for quantities required for our businesses and at prevailing market prices. These commitments are designed to assure sources of supply and are not expected to be in excess of normal requirements. Additionally, we have capital expenditure commitments, which we incur in our normal course of business.

Financial Assurance Instruments—We have obtained letters of credit, performance and surety bonds and have issued financial and performance guarantees to support trade payables, potential liabilities and other obligations. Considering the frequency of claims made against the financial instruments we use to support our obligations, and the magnitude of those financial instruments in light of our current financial position, management does not expect that any claims against or draws on these instruments would have a material adverse effect on our Consolidated Financial Statements. We have not experienced any unmanageable difficulties in obtaining the required financial assurance instruments for our current operations.

Environmental Remediation—Our accrued liability for future environmental remediation costs at current and former plant sites and other remediation sites totaled $119 million and $127 million as of September 30, 2023 and December 31, 2022, respectively. At September 30, 2023, the accrued liabilities for individual sites range from less than $1 million to $24 million. The remediation expenditures are expected to occur over a number of years and are not concentrated in any single year. In our opinion, it is reasonably possible that losses in excess of the liabilities recorded may have been incurred. However, we cannot estimate any amount or range of such possible additional losses. New information about sites, new technology or future developments, such as involvement in investigations by regulatory agencies, could require us to reassess our potential exposure related to environmental matters.

Indemnification—We are parties to various indemnification arrangements, including arrangements entered into in connection with acquisitions, divestitures and the formation and dissolution of joint ventures. Pursuant to these arrangements, we provide indemnification to and/or receive indemnification from other parties in connection with liabilities that may arise in connection with the transactions and in connection with activities prior to completion of the transactions. These indemnification arrangements typically include provisions pertaining to third-party claims relating to environmental and tax matters and various types of litigation. As of September 30, 2023, we had not accrued any significant amounts for our indemnification obligations, and we are not aware of other circumstances that would likely lead to significant future indemnification obligations. We cannot determine with certainty the potential amount of future payments under the indemnification arrangements until events arise that would trigger a liability under the arrangements.

As part of our technology licensing contracts, we give indemnifications to our licensees for liabilities arising from possible patent infringement claims with respect to certain proprietary licensed technologies. Such indemnifications have a stated maximum amount and generally cover a period of 5 to 10 years.

Legal Proceedings—We are subject to various lawsuits and claims, including but not limited to, matters involving contract disputes, environmental damages, personal injury and property damage. We vigorously defend ourselves and prosecute these matters as appropriate.

Our legal organization applies its knowledge, experience and professional judgment to the specific characteristics of our cases, employing a litigation management process to manage and monitor legal proceedings in which we are a party. Our process facilitates the early evaluation and quantification of potential exposures in individual cases. This process also enables us to track those cases that have been scheduled for trial, mediation or other resolution. We regularly assess the adequacy of legal accruals based on our professional judgment, experience and the information available regarding our cases.

Based on consideration of all relevant facts and circumstances, we do not believe the ultimate outcome of any currently pending lawsuit against us will have a material adverse effect upon our operations, financial condition or Consolidated Financial Statements.

10. Shareholders' Equity and Redeemable Non-controlling Interests

Shareholders' Equity

Dividend Distributions—The following table summarizes the quarterly dividends paid in the periods presented:

Millions of dollars, except per share amounts	Dividend Per Ordinary Share	Aggregate Dividends Paid	Date of Record
March 2023	$ 1.19	$ 389	March 6, 2023
June 2023	1.25	408	May 30, 2023
September 2023	1.25	407	August 28, 2023
	$ 3.69	$ 1,204	

Share Repurchase Authorization—In May 2023, our shareholders approved a proposal to authorize us to repurchase up to 34.0 million ordinary shares, through November 19, 2024 ("2023 Share Repurchase Authorization"), which superseded any prior repurchase authorizations. The timing and amount of these repurchases, which are determined based on our evaluation of market conditions and other factors, may be executed from time to time through open market or privately negotiated transactions. The repurchased shares, which are recorded at cost, are classified as Treasury stock and may be retired or used for general corporate purposes, including for various employee benefit and compensation plans.

The following table summarizes our share repurchase activity for the periods presented:

Millions of dollars, except shares and per share amounts	Shares Repurchased	Average Purchase Price	Total Purchase Price, Including Commissions and Fees
For nine months ended September 30, 2023:			
2022 Share Repurchase Authorization	1,365,898	$ 88.98	$ 122
2023 Share Repurchase Authorization	983,309	90.99	89
	2,349,207	$ 89.82	$ 211
For nine months ended September 30, 2022:			
2021 Share Repurchase Authorization	2,111,538	$ 97.72	$ 206
2022 Share Repurchase Authorization	2,286,216	87.50	200
	4,397,754	$ 92.41	$ 406

Total cash paid for share repurchases for the nine months ended September 30, 2023 and 2022 was $211 million and $420 million, respectively. Cash payments made during the reporting period may differ from the total purchase price, including commissions and fees, due to the timing of payments.

Ordinary Shares—The changes in the outstanding amounts of ordinary shares are as follows:

	Nine Months Ended September 30,	
	2023	2022
Ordinary shares outstanding:		
Beginning balance	325,723,567	329,536,389
Share-based compensation	746,727	273,943
Employee stock purchase plan	238,209	210,504
Purchase of ordinary shares	(2,349,207)	(4,397,754)
Ending balance	324,359,296	325,623,082

Treasury Shares—The changes in the amounts of treasury shares held by the Company are as follows:

	Nine Months Ended September 30,	
	2023	2022
Ordinary shares held as treasury shares:		
Beginning balance	14,698,931	10,675,605
Share-based compensation	(746,727)	(273,943)
Employee stock purchase plan	(238,209)	—
Purchase of ordinary shares	2,349,207	4,397,754
Ending balance	16,063,202	14,799,416

Accumulated Other Comprehensive Loss—The components of, and after-tax changes in, Accumulated other comprehensive loss as of and for the nine months ended September 30, 2023 and 2022 are presented in the following tables:

Millions of dollars	Financial Derivatives	Defined Benefit Pension and Other Postretirement Benefit Plans	Foreign Currency Translation Adjustments	Total
Balance – December 31, 2022	$ (146)	$ (182)	$ (1,044)	$ (1,372)
Other comprehensive income (loss) before reclassifications	13	—	(54)	(41)
Tax expense before reclassifications	(2)	—	(4)	(6)
Amounts reclassified from accumulated other comprehensive loss	16	8	—	24
Tax expense	(3)	(2)	—	(5)
Net other comprehensive income (loss)	24	6	(58)	(28)
Balance – September 30, 2023	$ (122)	$ (176)	$ (1,102)	$ (1,400)

Millions of dollars	Financial Derivatives	Defined Benefit Pension and Other Postretirement Benefit Plans	Foreign Currency Translation Adjustments	Total
Balance – December 31, 2021	$ (354)	$ (528)	$ (921)	$ (1,803)
Other comprehensive income (loss) before reclassifications	490	53	(236)	307
Tax expense before reclassifications	(113)	(12)	(119)	(244)
Amounts reclassified from accumulated other comprehensive loss	(219)	121	—	(98)
Tax (expense) benefit	55	(28)	—	27
Net other comprehensive income (loss)	213	134	(355)	(8)
Balance – September 30, 2022	$ (141)	$ (394)	$ (1,276)	$ (1,811)

The amounts reclassified out of each component of Accumulated other comprehensive loss are as follows:

Millions of dollars	Three Months Ended September 30, 2023	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022	Affected Line Item on the Consolidated Statements of Income
Reclassification adjustments for:					
Financial derivatives:					
Commodities	$ 6	$ (22)	$ 25	$ (54)	Cost of sales
Foreign currency	(27)	(67)	(13)	(169)	Interest expense
Interest rates	1	1	4	4	Interest expense
Income tax (expense) benefit	6	22	(3)	55	Provision for income taxes
Financial derivatives, net of tax	(14)	(66)	13	(164)	
Amortization of defined pension items:					
Settlement loss	—	6	—	100	Other expense, net
Actuarial loss	3	5	6	18	Other expense, net
Prior service cost	—	1	2	3	Other expense, net
Income tax expense	(1)	(2)	(2)	(28)	Provision for income taxes
Defined pension items, net of tax	2	10	6	93	
Total reclassifications, before tax	(17)	(76)	24	(98)	
Income tax (expense) benefit	5	20	(5)	27	Provision for income taxes
Total reclassifications, after tax	$ (12)	$ (56)	$ 19	$ (71)	Amount included in net income

Redeemable Non-controlling Interests

Our redeemable non-controlling interests relate to shares of cumulative perpetual special stock ("redeemable non-controlling interest stock") issued by a consolidated subsidiary. As of September 30, 2023 and December 31, 2022, we had 113,290 and 113,471 shares of redeemable non-controlling interest stock outstanding, respectively. These shares may be redeemed at any time at the discretion of the holders.

In February, May and August 2023, we paid cash dividends of $15.00 per share to our redeemable non-controlling interest shareholders of record as of January 15, 2023, April 15, 2023 and July 15, 2023. Dividends totaled $5 million for each of the nine months ended September 30, 2023 and 2022.

11. Per Share Data

Basic earnings per share is based upon the weighted average number of shares of common stock outstanding during the period. Diluted earnings per share includes the effect of certain stock option and other equity-based compensation awards. Our unvested restricted stock units contain non-forfeitable rights to dividend equivalents and are considered participating securities. We compute basic and diluted earnings per share under the two-class method.

Earnings per share data is as follows:

	Three Months Ended September 30,			
	2023		2022	
Millions of dollars	Continuing Operations	Discontinued Operations	Continuing Operations	Discontinued Operations
Net income (loss)	$ 748	$ (1)	$ 573	$ (1)
Dividends on redeemable non-controlling interests	(2)	—	(2)	—
Net income attributable to participating securities	(2)	—	—	—
Net income (loss) attributable to ordinary shareholders – basic and diluted	$ 744	$ (1)	$ 571	$ (1)
Millions of shares, except per share amounts				
Basic weighted average common stock outstanding	324	324	326	326
Effect of dilutive securities	1	1	1	1
Potential dilutive shares	325	325	327	327
Earnings per share:				
Basic	$ 2.29	$ —	$ 1.75	$ —
Diluted	$ 2.29	$ —	$ 1.75	$ —

	Nine Months Ended September 30,			
	2023		2022	
Millions of dollars	Continuing Operations	Discontinued Operations	Continuing Operations	Discontinued Operations
Net income (loss)	$ 1,940	$ (4)	$ 3,539	$ (3)
Dividends on redeemable non-controlling interests	(5)	—	(5)	—
Net income attributable to participating securities	(7)	—	(9)	—
Net income (loss) attributable to ordinary shareholders – basic and diluted	$ 1,928	$ (4)	$ 3,525	$ (3)
Millions of shares, except per share amounts				
Basic weighted average common stock outstanding	325	325	327	327
Effect of dilutive securities	1	1	1	1
Potential dilutive shares	326	326	328	328
Earnings per share:				
Basic	$ 5.93	$ (0.01)	$ 10.77	$ (0.01)
Diluted	$ 5.91	$ (0.01)	$ 10.75	$ (0.01)

12. Segment and Related Information

Our operations are managed by senior executives who report to our Chief Executive Officer, the chief operating decision maker. Discrete financial information is available for each of the segments, and our Chief Executive Officer uses the operating results of each of the operating segments for performance evaluation and resource allocation.

The activities of each of our segments from which they earn revenues and incur expenses are described below:

- *Olefins and Polyolefins-Americas ("O&P-Americas")*. Our O&P-Americas segment produces and markets olefins and co-products, polyethylene and polypropylene.

- *Olefins and Polyolefins-Europe, Asia, International ("O&P-EAI")*. Our O&P-EAI segment produces and markets olefins and co-products, polyethylene and polypropylene.

- *Intermediates and Derivatives* ("*I&D*"). Our I&D segment produces and markets propylene oxide and its derivatives; oxyfuels and related products; and intermediate chemicals such as styrene monomer, acetyls, ethylene oxide and ethylene glycol.

- *Advanced Polymer Solutions ("APS")*. Our APS segment produces and markets compounding and solutions, such as polypropylene compounds, engineered plastics, masterbatches, engineered composites, colors and powders.

- *Refining*. Our Refining segment refines heavy, high-sulfur crude oils and other crude oils of varied types and sources available on the U.S. Gulf Coast into refined products, including gasoline and distillates.

- *Technology*. Our Technology segment develops and licenses chemical and polyolefin process technologies and manufactures and sells polyolefin catalysts.

Our chief operating decision maker uses EBITDA as the primary measure for reviewing profitability of our segments, and therefore, we have presented EBITDA for all segments. We define EBITDA as earnings from continuing operations before interest, income taxes, and depreciation and amortization.

"Other" includes intersegment eliminations and items that are not directly related or allocated to business operations, such as foreign exchange gains or losses and components of pension and other postretirement benefit costs other than service costs. Sales between segments are made at prices approximating prevailing market prices.

Summarized financial information concerning reportable segments is shown in the following tables for the periods presented:

	Three Months Ended September 30, 2023							
Millions of dollars	O&P–Americas	O&P–EAI	I&D	APS	Refining	Technology	Other	Total
Sales and other operating revenues:								
Customers	$ 1,717	$ 2,324	$ 2,985	$ 897	$ 2,510	$ 192	$ —	$ 10,625
Intersegment	1,164	122	96	2	155	26	(1,565)	—
	2,881	2,446	3,081	899	2,665	218	(1,565)	10,625
Income (loss) from equity investments	6	(3)	3	—	—	—	—	6
EBITDA	479	(45)	708	18	76	146	(26)	1,356
Capital expenditures	156	67	120	18	10	18	5	394

LYONDELLBASELL INDUSTRIES N.V.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS-(Continued)

	Three Months Ended September 30, 2022							
Millions of dollars	**O&P–Americas**	**O&P–EAI**	**I&D**	**APS**	**Refining**	**Technology**	**Other**	**Total**
Sales and other operating revenues:								
Customers	$ 2,413	$ 2,899	$ 3,229	$ 1,049	$ 2,506	$ 154	$ —	$ 12,250
Intersegment	1,277	210	54	—	246	19	(1,806)	—
	3,690	3,109	3,283	1,049	2,752	173	(1,806)	12,250
Income (loss) from equity investments	19	(39)	(6)	—	—	—	—	(26)
EBITDA	588	(74)	360	28	106	92	8	1,108
Capital expenditures	70	52	245	19	22	25	6	439

	Nine Months Ended September 30, 2023							
Millions of dollars	**O&P-Americas**	**O&P-EAI**	**I&D**	**APS**	**Refining**	**Technology**	**Other**	**Total**
Sales and other operating revenues:								
Customers	$ 5,200	$ 7,569	$ 8,255	$ 2,848	$ 6,860	$ 446	$ —	$ 31,178
Intersegment	3,216	498	170	8	454	65	(4,411)	—
	8,416	8,067	8,425	2,856	7,314	511	(4,411)	31,178
Income (loss) from equity investments	41	(21)	(8)	(1)	—	—	—	11
EBITDA	1,699	116	1,606	(174)	369	298	(44)	3,870
Capital expenditures	340	186	403	49	12	50	7	1,047

	Nine Months Ended September 30, 2022							
Millions of dollars	**O&P–Americas**	**O&P–EAI**	**I&D**	**APS**	**Refining**	**Technology**	**Other**	**Total**
Sales and other operating revenues:								
Customers	$ 7,576	$ 10,221	$ 10,219	$ 3,297	$ 8,467	$ 465	$ —	$ 40,245
Intersegment	4,086	711	169	4	793	83	(5,846)	—
	11,662	10,932	10,388	3,301	9,260	548	(5,846)	40,245
Income (loss) from equity investments	81	(39)	(17)	—	—	—	—	25
EBITDA	2,481	326	1,581	141	672	307	1	5,509
Capital expenditures	312	250	673	43	48	81	10	1,417

The following assets are summarized and reconciled to consolidated totals in the following table:

Millions of dollars	**O&P-Americas**	**O&P-EAI**	**I&D**	**APS**	**Refining**	**Technology**	**Total**
September 30, 2023							
Property, plant and equipment, net	$ 6,370	$ 1,983	$ 5,615	$ 596	$ 140	$ 490	$ 15,194
Equity investments	2,012	1,513	529	2	—	—	4,056
December 31, 2022							
Property, plant and equipment, net	$ 6,378	$ 1,880	$ 5,728	$ 636	$ 255	$ 510	$ 15,387
Equity investments	2,053	1,655	585	2	—	—	4,295

Segment Structure Changes and Related Goodwill Impairment—Effective January 1, 2023, our *Catalloy* and polybutene-1 businesses were moved from our APS segment and reintegrated into our O&P-Americas and O&P-EAI segments. Accordingly, on January 1, 2023, we allocated goodwill from our APS segment to our O&P-Americas and O&P-EAI segments of $315 million and $269 million, respectively, based on the relative fair values of the businesses that were reintegrated compared to the fair value of the APS segment.

As of December 31, 2022, goodwill included in our APS reporting unit was $1,370 million, the majority of which related to the 2018 acquisition of A. Schulman. As of December 31, 2022, a large portion of the APS reporting unit's fair value was derived from our *Catalloy* and polybutene-1 businesses, which had disproportionately low carrying values in comparison to the remaining assets of the reporting unit, which had relatively higher carrying values due to the 2018 purchase price allocation associated with the acquisition of A. Schulman. As a result of the reallocation of goodwill and the change in both fair value and carrying value among reporting units, we recognized a non-cash goodwill impairment charge of $252 million in the first quarter of 2023 in our APS segment. Fair values were determined utilizing a discounted cash flow method under the income approach and assumptions including management's view on long-term growth rates in our industry, discount rates and other assumptions based on a market participant perspective, which are inherently subjective. The fair value of the reporting unit is Level 3 within the fair value hierarchy. The charge is reflected as Impairments in our Consolidated Statements of Income.

Exit of Houston Refinery Operations—In April 2022 we announced our decision to cease operation of our Houston refinery no later than the end of 2023 after determining that exiting the refining business is our best strategic and financial path forward. In May 2023 we announced our decision to extend the operations of our Houston refinery to no later than the end of the first quarter of 2025. Favorable inspections and consistent performance have given us confidence to continue safe and reliable operations. The extension will minimize workforce impacts as we continue to develop future options for the site and will enable a smoother transition between the shutdown and the implementation of the retrofitting and circular projects.

Costs incurred for the planned exit from the refinery business are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
Millions of dollars	**2023**	**2022**	**2023**	**2022**
Accelerated lease amortization costs	$ 11	$ 36	$ 100	$ 36
Personnel costs	16	48	59	48
Asset retirement obligation accretion	2	—	6	—
Asset retirement cost depreciation	20	8	119	8
Refinery exit costs	$ 49	$ 92	$ 284	$ 92

In subsequent periods, we expect to incur additional costs primarily consisting of accelerated amortization of operating lease assets of $10 million to $70 million, personnel costs of $35 million to $110 million and other charges of $50 million to $100 million. Additionally, we estimate that the Houston refinery's asset retirement obligations are in the range of $150 million to $450 million. As of September 30, 2023, we recorded asset retirement obligations of $257 million representing our best estimate. We do not anticipate any material cash payments related to the exit of the refinery business to be made in 2023.

Disposal of Australia Facility—In the second quarter of 2022 we sold our ownership interest in our polypropylene manufacturing facility located in Geelong, Australia, LyondellBasell Australia (Holdings) Pty Ltd, for consideration of $38 million. In connection with this sale, we assessed the net assets of the disposal group for impairment and determined that the carrying value exceeded the fair value less costs to sell. As a result, we recognized a non-cash impairment charge in the second quarter of 2022 of $69 million in the operating results of our O&P-EAI segment. The fair value measurement for the disposal group is based on expected consideration and classified as Level 3 within the fair value hierarchy. The charge is reflected as Impairments in our Consolidated Statements of Income.

A reconciliation of EBITDA to Income from continuing operations before income taxes is shown in the following table for each of the periods presented:

	Three Months Ended September 30,		Nine Months Ended September 30,	
Millions of dollars	**2023**	**2022**	**2023**	**2022**
EBITDA:				
Total segment EBITDA	$ 1,382	$ 1,100	$ 3,914	$ 5,508
Other EBITDA	(26)	8	(44)	1
Less:				
Depreciation and amortization expense	(367)	(318)	(1,154)	(933)
Interest expense	(125)	(70)	(356)	(202)
Add:				
Interest income	37	7	88	13
Income from continuing operations before income taxes	$ 901	$ 727	$ 2,448	$ 4,387

Item 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

GENERAL

This discussion should be read in conjunction with the information contained in our Consolidated Financial Statements, and the accompanying notes elsewhere in this report. Unless otherwise indicated, the “Company,” “we,” “us,” “our” or similar words are used to refer to LyondellBasell Industries N.V. together with its consolidated subsidiaries (“LyondellBasell N.V.”).

Effective January 1, 2023, our *Catalloy* and polybutene-1 businesses were moved from the Advanced Polymer Solutions (“APS”) segment and reintegrated into the Olefins and Polyolefins-Americas (“O&P-Americas”) and Olefins and Polyolefins-Europe, Asia, International (“O&P-EAI”) segments. This move will allow the APS team to focus on our compounding and solutions business, and to develop a more agile operating model with meaningful regional and segment growth strategies. The segment information provided herein has been revised for all periods presented to reflect these changes.

OVERVIEW

Results for the third quarter of 2023 decreased slightly compared to the second quarter of 2023. Our O&P-Americas and O&P-EAI segment results decreased as global olefins and polyolefins margins were compressed by higher feedstock costs, tepid polymer demand in both the U.S. and Europe, and new industry capacity. These decreases were partially offset by an increase in North American polyethylene export volumes as global trade flows continued to normalize toward pre-pandemic levels. Intermediates and Derivatives (“I&D”) results improved significantly as a result of strong oxyfuels margins. Additionally, higher licensing revenues from contracts reaching significant milestones resulted in an improvement in Technology results.

Results for the first nine months of 2023 decreased compared to the first nine months of 2022. Global polyolefins margins decreased primarily due to a decline in average sales prices resulting in lower O&P-Americas and O&P-EAI segment results. APS segment results decreased primarily as a result of the impact of the first quarter 2023 goodwill impairment. Refining results declined primarily as a result of decreased margins.

During the first nine months of 2023 we generated $3,438 million in cash from operating activities. We remain committed to a disciplined approach to capital allocation, spending $1,047 million for capital expenditures and returning $1,415 million to shareholders through dividends and share repurchases.

Results of operations for the periods discussed are presented in the table below:

Millions of dollars	Three Months Ended September 30, 2023	Three Months Ended June 30, 2023	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022
Sales and other operating revenues	$ 10,625	$ 10,306	$ 31,178	$ 40,245
Cost of sales	9,177	8,868	26,909	34,491
Impairments	25	—	277	69
Selling, general and administrative expenses	378	395	1,158	976
Research and development expenses	31	32	96	95
Operating income	1,014	1,011	2,738	4,614
Interest expense	(125)	(115)	(356)	(202)
Interest income	37	28	88	13
Other expense, net	(31)	(7)	(33)	(63)
Income (loss) from equity investments	6	(12)	11	25
Income from continuing operations before income taxes	901	905	2,448	4,387
Provision for income taxes	153	188	508	848
Income from continuing operations	748	717	1,940	3,539
Loss from discontinued operations, net of tax	(1)	(2)	(4)	(3)
Net income	747	715	1,936	3,536
Other comprehensive income (loss), net of tax –				
Financial derivatives	17	3	24	213
Defined benefit pension and other postretirement benefit plans	2	2	6	134
Foreign currency translations	(86)	(31)	(58)	(355)
Total other comprehensive loss, net of tax	(67)	(26)	(28)	(8)
Comprehensive income	$ 680	$ 689	$ 1,908	$ 3,528

RESULTS OF OPERATIONS

Revenues—Revenues increased by $319 million, or 3%, in the third quarter of 2023 compared to the second quarter of 2023. Higher volumes primarily in our O&P-Americas and I&D Segments driven by higher demand resulted in a 2% increase in revenues. Average sales prices in the third quarter of 2023 were higher for our Refining and I&D segments, as sales prices generally correlate with crude oil prices, which increased relative to the second quarter of 2023. These price impacts resulted in a 1% increase in revenues.

Revenues decreased by $9,067 million, or 23%, in the first nine months of 2023 compared to the first nine months of 2022. Average sales prices were lower for many of our products as sales prices generally correlate with crude oil prices, which decreased relative to the first nine months of 2022. These lower prices led to the 23% decrease in revenues.

Cost of Sales—Cost of sales increased by $309 million, or 3% in the third quarter of 2023 compared to the second quarter of 2023 primarily driven by higher feedstock and energy costs. Cost of sales decreased by $7,582 million, or 22%, in the first nine months of 2023 compared to the first nine months of 2022, primarily driven by lower feedstock and energy costs.

Impairments—During the first nine months of 2023 we recognized a non-cash goodwill impairment charge of $252 million in our APS segment after the effect of moving our *Catalloy* and polybutene-1 businesses from our APS segment and reintegrating into our O&P-Americas and O&P-EAI segments. Additionally, we recognized a non-cash impairment charge of $25 million related to capital project costs in our O&P-Americas segment. During the first nine months of 2022 we recognized a non-cash impairment charge of $69 million related to the sale of our Australian polypropylene manufacturing facility. See Note 12 to our Consolidated Financial Statements for additional information.

SG&A Expenses—Selling, general and administrative (“SG&A”) expenses remained relatively unchanged in the third quarter of 2023 compared to the second quarter of 2023. SG&A expenses increased by $182 million, or 19%, in the first nine months of 2023 compared to the first nine months of 2022. Approximately 60% of this increase was attributable to higher employee-related expenses and the remaining increase was primarily driven by professional fees incurred for strategic projects.

Operating Income—Operating income remained relatively unchanged in the third quarter of 2023 compared to the second quarter of 2023. Operating income in our I&D, Technology and Refinery segments increased by $250 million, $64 million and $54 million, respectively. These increases were offset by decreases in our O&P-Americas, O&P-EAI and APS segments of $198 million, $149 million and $15 million, respectively.

Operating income decreased by $1,876 million, or 41%, in the first nine months of 2023 compared to the first nine months of 2022. Operating income in our O&P-Americas, Refining, APS, O&P-EAI, I&D and Technology segments decreased by $768 million, $434 million, $310 million, $251 million, $101 million and $16 million, respectively.

Results for each of our business segments are discussed further in the “Segment Analysis” section below.

Interest Expense—Interest expense remained relatively unchanged in the third quarter of 2023 compared to the second quarter of 2023. Interest expense increased by $154 million, or 76%, in the first nine months of 2023 compared to the first nine months of 2022. Approximately half of this increase was attributable to lower capitalized interest associated with our new PO/TBA plant which started-up in the first quarter of 2023. The remaining increase was primarily due to the impact of our fixed-for-floating interest rate swaps driven by higher interest rates in current year.

Income Taxes—Our effective income tax rate for the third quarter of 2023 was 17.0% compared to 20.8% for the second quarter of 2023. The lower effective income tax rate for the third quarter of 2023 is primarily attributable to an audit settlement recognized during the second quarter of 4.8%. Additionally, fluctuations in foreign exchange gains or losses, pre-tax income in countries with varying tax rates, and uncertain tax positions decreased the effective income tax rate by 0.9%, 0.8%, and 0.7%, respectively. These decreases were partially offset by a 4.4% increase in our effective income tax rate due to decreased exempt income.

Our effective income tax rate for the first nine months of 2023 was 20.8% compared to 19.3% for the first nine months of 2022. The higher effective tax rate for the first nine months of 2023 was primarily due to the first quarter 2023 goodwill impairment, for which there is no tax benefit, of 1.7% coupled with an audit settlement during the second quarter 2023 of 1.6%. These increases were partially offset by a 1.4% decrease in our effective income tax rate due to the increased relative impact of exempt income due to lower earnings.

Our income tax results are discussed further in Note 8 to the Consolidated Financial Statements.

Comprehensive Income—Comprehensive income decreased by $9 million in the third quarter of 2023 compared to the second quarter of 2023, primarily due to the net unfavorable impacts of unrealized changes in foreign currency translation adjustments partially offset by the increase in Net income. Comprehensive income decreased by $1,620 million in the first nine months of 2023 compared to the first nine months of 2022, primarily due to the decrease in Net income. The components of Other comprehensive income (loss) are discussed below.

Financial derivatives designated as cash flow hedges, primarily our forward-starting interest rate swaps, led to a decrease in Comprehensive income of $189 million in the first nine months of 2023 compared to the first nine months of 2022 due to periodic changes in the benchmark interest rates combined with a decrease in notional outstanding.

Defined pension and postretirement benefit plans led to a decrease of Comprehensive income of $128 million in the first nine months of 2023 compared to the first nine months of 2022, primarily due to pre-tax pension settlements in the second quarter of 2022.

Foreign currency translations decreased Comprehensive income by $55 million in the third quarter of 2023 compared to the second quarter of 2023, primarily due to the strengthening of the U.S. dollar relative to the euro, offset by the effective portion of our net investment hedges. Foreign currency translation increased Comprehensive income by $297 million in the first nine months of 2023 compared to the first nine months of 2022, primarily due to the strengthening of the U.S. dollar relative to the euro in the first nine months of 2022, offset by the effective portion of our net investment hedges.

See Notes 7 and 10 to our Consolidated Financial Statements for further discussions.

Segment Analysis

We use earnings from continuing operations before interest, income taxes, and depreciation and amortization (“EBITDA”) as our measure of profitability for segment reporting purposes. This measure of segment operating results is used by our chief operating decision maker to assess the performance of and allocate resources to our operating segments. Intersegment eliminations and items that are not directly related or allocated to business operations, such as foreign exchange gains or losses and components of pension and other postretirement benefits other than service costs are included in “Other”. See table below for a reconciliation of EBITDA to its nearest generally accepted accounting principles (“GAAP”) measure.

The following table presents the reconciliation of Net Income to EBITDA for each of the periods presented:

	Three Months Ended		Nine Months Ended	
Millions of U.S. dollars	September 30, 2023	June 30, 2023	September 30, 2023	September 30, 2022
Net income	$ 747	$ 715	$ 1,936	$ 3,536
Loss from discontinued operations, net of tax	1	2	4	3
Income from continuing operations	748	717	1,940	3,539
Provision for income taxes	153	188	508	848
Depreciation and amortization	367	391	1,154	933
Interest expense, net	88	87	268	189
EBITDA	$ 1,356	$ 1,383	$ 3,870	$ 5,509

Our continuing operations are managed through six reportable segments: O&P-Americas, O&P-EAI, I&D, APS, Refining and Technology. Revenues and the components of EBITDA for the periods presented are reflected in the tables below by segment:

	Three Months Ended		Nine Months Ended	
Millions of dollars	September 30, 2023	June 30, 2023	September 30, 2023	September 30, 2022
Sales and other operating revenues:				
O&P-Americas segment	$ 2,881	$ 2,727	$ 8,416	$ 11,662
O&P-EAI segment	2,446	2,729	8,067	10,932
I&D segment	3,081	2,662	8,425	10,388
APS segment	899	960	2,856	3,301
Refining segment	2,665	2,459	7,314	9,260
Technology segment	218	154	511	548
Other, including intersegment eliminations	(1,565)	(1,385)	(4,411)	(5,846)
Total	$ 10,625	$ 10,306	$ 31,178	$ 40,245
Operating income (loss):				
O&P-Americas segment	$ 326	$ 524	$ 1,221	$ 1,989
O&P-EAI segment	(95)	54	(20)	231
I&D segment	611	361	1,292	1,393
APS segment	(6)	9	(244)	66
Refining segment	51	(3)	234	668
Technology segment	134	70	265	281
Other, including intersegment eliminations	(7)	(4)	(10)	(14)
Total	$ 1,014	$ 1,011	$ 2,738	$ 4,614
Depreciation and amortization:				
O&P-Americas segment	$ 147	$ 144	$ 435	$ 442
O&P-EAI segment	53	47	148	136
I&D segment	106	117	333	245
APS segment	24	24	70	71
Refining segment	25	49	135	11
Technology segment	12	10	33	28
Total	$ 367	$ 391	$ 1,154	$ 933

Millions of dollars	Three Months Ended September 30, 2023	Three Months Ended June 30, 2023	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022
Income (loss) from equity investments:				
O&P-Americas segment	$ 6	$ 12	$ 41	$ 81
O&P-EAI segment	(3)	(19)	(21)	(39)
I&D segment	3	(5)	(8)	(17)
APS segment	—	—	(1)	—
Total	$ 6	$ (12)	$ 11	$ 25
Other (expense) income, net:				
O&P-Americas segment	$ —	$ (1)	$ 2	$ (31)
O&P-EAI segment	—	2	9	(2)
I&D segment	(12)	(1)	(11)	(40)
APS segment	—	1	1	4
Refining segment	—	1	—	(7)
Technology segment	—	(1)	—	(2)
Other, including intersegment eliminations	(19)	(8)	(34)	15
Total	$ (31)	$ (7)	$ (33)	$ (63)
EBITDA:				
O&P-Americas segment	$ 479	$ 679	$ 1,699	$ 2,481
O&P-EAI segment	(45)	84	116	326
I&D segment	708	472	1,606	1,581
APS segment	18	34	(174)	141
Refining segment	76	47	369	672
Technology segment	146	79	298	307
Other, including intersegment eliminations	(26)	(12)	(44)	1
Total	$ 1,356	$ 1,383	$ 3,870	$ 5,509

Olefins and Polyolefin-Americas Segment

Overview—EBITDA decreased in the third quarter of 2023 compared to the second quarter of 2023 and in the first nine months of 2023 relative to the first nine months of 2022 primarily driven by lower polyolefin margins.

Ethylene Raw Materials—Ethylene and its co-products are produced from two major raw material groups:

- natural gas liquids (“NGLs”), principally ethane and propane, the prices of which are generally affected by natural gas prices; and
- crude oil-based liquids (“liquids” or “heavy liquids”), including naphtha, condensates and gas oils, the prices of which are generally related to crude oil prices.

We have flexibility to vary the raw material mix and process conditions in our U.S. olefins plants in order to maximize profitability as market prices fluctuate for both feedstocks and products. Although prices of crude-based liquids and natural gas liquids are generally related to crude oil and natural gas prices, during specific periods the relationships among these materials and benchmarks may vary significantly. In the third and second quarter of 2023, and the first nine months of 2023 and 2022, approximately 70% to 80% of the raw materials used in our North American crackers was ethane.

The following table sets forth selected financial information for the O&P-Americas segment including Income from equity investments, which is a component of EBITDA:

	Three Months Ended		Nine Months Ended	
Millions of dollars	**September 30, 2023**	**June 30, 2023**	**September 30, 2023**	**September 30, 2022**
Sales and other operating revenues	$ 2,881	$ 2,727	$ 8,416	$ 11,662
Income from equity investments	6	12	41	81
EBITDA	479	679	1,699	2,481

Revenue—Revenues for our O&P-Americas segment increased by $154 million, or 6% in the third quarter of 2023 compared to the second quarter of 2023 and decreased by $3,246 million, or 28%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—Revenue increased by 8% as a result of higher volumes driven by improved export demand for polyethylene. Lower average sales prices driven by increased polyolefin market supply led to a 2% decrease in revenue.

First nine months of 2023 versus first nine months of 2022—Lower average sales prices across all products resulted in a 27% decrease in revenue primarily driven by increased market supply. Lower volumes resulted in a 1% decrease in revenue.

EBITDA—EBITDA decreased by $200 million, or 29%, in the third quarter of 2023 compared to the second quarter of 2023 and by $782 million, or 32%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—Lower polyethylene results led to a 16% decrease in EBITDA due to lower integrated margins driven by higher feedstock costs and new industry capacity. Lower olefins results led to a 4% decrease in EBITDA primarily due to lower ethylene volumes resulting from planned maintenance.

First nine months of 2023 versus first nine months of 2022—Lower polyolefins results led to a 32% decrease in EBITDA primarily driven by lower margins as a result of lower average sales prices reflecting tepid demand and new industry capacity.

Olefins and Polyolefin-Europe, Asia, International Segment

Overview—EBITDA decreased in the third quarter of 2023 compared to the second quarter of 2023, primarily due to lower margins across most businesses. EBITDA decreased in the first nine months of 2023 relative to the first nine months of 2022 primarily as a result of lower polymer margins partially offset by higher olefins volumes.

Quality Circular Polymers—In April 2023, we acquired the remaining 50% interest in Quality Circular Polymers (“QCP”). As a result of the acquisition, QCP became a wholly owned subsidiary and is included in our O&P-EAI consolidated results prospectively from the acquisition date.

Ethylene Raw Materials—In Europe, naphtha is the primary raw material for our ethylene production and represented approximately 55% to 65% of the raw materials used in the third and second quarter of 2023, and the first nine months of 2023 and 2022.

The following table sets forth selected financial information for the O&P-EAI segment including Loss from equity investments, which is a component of EBITDA:

	Three Months Ended		Nine Months Ended	
Millions of dollars	**September 30, 2023**	**June 30, 2023**	**September 30, 2023**	**September 30, 2022**
Sales and other operating revenues	$ 2,446	$ 2,729	$ 8,067	$ 10,932
Loss from equity investments	(3)	(19)	(21)	(39)
EBITDA	(45)	84	116	326

Revenue—Revenues decreased by $283 million, or 10%, in the third quarter of 2023 compared to the second quarter of 2023 and by $2,865 million, or 26%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—Lower average sales prices resulted in a 6% decrease in revenue from weak demand despite crude oil prices, which, on average, increased compared to the second quarter of 2023. Lower volumes resulted in a revenue decrease of 4% primarily due to a decline in demand.

First nine months of 2023 versus first nine months of 2022—Lower average sales prices resulted in a 25% decrease in revenue as sales prices generally correlate with crude oil prices, which, on average, decreased compared to the first nine months of 2022. Lower volumes resulted in a revenue decrease of 2% primarily due to a decline in demand. Favorable foreign exchange impacts resulted in a revenue increase of 1%.

EBITDA—EBITDA decreased by $129 million, or 154%, in the third quarter of 2023 compared to the second quarter of 2023 and by $210 million, or 64%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—Lower olefins results led to an 83% decrease in EBITDA primarily driven by lower margins as a result of weak demand and higher naphtha costs. Lower polymer results led to a 69% decrease in EBITDA primarily driven by lower margins due to decreased demand as European markets remain challenging.

First nine months of 2023 versus first nine months of 2022—Lower polymer results led to a 117% decrease in EBITDA primarily driven by decreased margins resulting from lower average sales prices reflecting weak demand. Higher olefins results led to a 30% increase in EBITDA primarily driven by higher volumes resulting from the absence of planned and unplanned downtime. During the first nine months of 2022, we recognized a $69 million non-cash impairment charge in conjunction with the sale of our polypropylene manufacturing facility located in Australia. The absence of a similar charge in the first nine months of 2023 resulted in a 21% change in EBITDA. See Note 12 to the Consolidated Financial Statements for additional information.

Intermediates and Derivatives Segment

Overview—EBITDA increased in the third quarter of 2023 compared to the second quarter of 2023, primarily driven by margin improvements for oxyfuels and related products. EBITDA increased in the first nine months of 2023 compared to the first nine months of 2022, primarily driven by an increase in volumes for oxyfuels and related products, partially offset by lower margins for propylene oxide and derivatives.

The following table sets forth selected financial information for the I&D segment including Income (loss) from equity investments, which is a component of EBITDA:

	Three Months Ended		Nine Months Ended	
Millions of dollars	**September 30, 2023**	**June 30, 2023**	**September 30, 2023**	**September 30, 2022**
Sales and other operating revenues	$ 3,081	$ 2,662	$ 8,425	$ 10,388
Income (loss) from equity investments	3	(5)	(8)	(17)
EBITDA	708	472	1,606	1,581

Revenue—Revenues increased by $419 million, or 16%, in the third quarter of 2023 compared to the second quarter of 2023 and decreased by $1,963 million, or 19%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—Higher average sales prices resulted in a 10% increase in revenue driven primarily by oxyfuels and related products resulting from tight industry supply. Sales volumes improved resulting in a 6% increase in revenue driven by improved demand.

First nine months of 2023 versus first nine months of 2022—Lower average sales prices resulted in a 22% decrease in revenue driven by lower pricing as a result of lower demand. Sales volumes increased resulting in a 2% increase in revenue due to additional PO/TBA capacity. Favorable foreign exchange impacts resulted in a revenue increase of 1%.

EBITDA—EBITDA increased by $236 million, or 50%, in the third quarter of 2023 compared to the second quarter of 2023 and by $25 million, or 2%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—Oxyfuels and related products results increased EBITDA by 51% primarily driven by margin improvement as a result of higher sales prices reflecting tight supply from industry downtime.

First nine months of 2023 versus first nine months of 2022—Improved oxyfuels and related products results led to an EBITDA increase of 27% driven primarily by higher volumes as a result of strong demand and increased PO/TBA capacity. Propylene oxide and derivatives results drove a 23% decrease in EBITDA as margins declined due to lower demand.

Advanced Polymer Solutions Segment

Overview—EBITDA decreased in the third quarter of 2023 relative to the second quarter of 2023 driven by reduced demand. EBITDA decreased in the first nine months of 2023 compared to the first nine months of 2022 primarily due to the recognition of a non-cash goodwill impairment charge in the first quarter of 2023.

The following table sets forth selected financial information for the APS segment including Loss from equity investments, which is a component of EBITDA:

	Three Months Ended		Nine Months Ended	
Millions of dollars	**September 30, 2023**	**June 30, 2023**	**September 30, 2023**	**September 30, 2022**
Sales and other operating revenues	$ 899	$ 960	$ 2,856	$ 3,301
Loss from equity investments	—	—	(1)	—
EBITDA	18	34	(174)	141

Revenue—Revenues decreased by $61 million, or 6%, in the third quarter of 2023 compared to the second quarter of 2023 and by $445 million, or 13%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—Average sales prices decreased resulting in a 6% decrease in revenue.

First nine months of 2023 versus first nine months of 2022—Average sales price decreased resulting in an 11% decrease in revenue. Sales volumes decreased resulting in a 3% decrease in revenue stemming from lower demand. Favorable foreign exchange impacts resulted in a revenue increase of 1%.

EBITDA—EBITDA decreased by $16 million or 47% in the third quarter of 2023 compared to the second quarter of 2023 and by $315 million or 223% in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—The decline in EBITDA was primarily driven by reduced demand.

First nine months of 2023 versus first nine months of 2022—During the first nine months of 2023 we recognized a non-cash goodwill impairment charge of $252 million after the effect of moving our *Catalloy* and polybutene-1 businesses from our APS segment and reintegrating them into our O&P-Americas and O&P-EAI segments. This impairment charge resulted in a 179% decrease in EBITDA. See Note 12 to our Consolidated Financial Statements for additional information. Lower volumes resulted in a 31% decrease in EBITDA as a result of a decline in demand. Margins declined resulting in a 16% decrease in EBITDA primarily as a result of increased manufacturing costs.

Refining Segment

Overview—EBITDA increased in the third quarter of 2023 compared to the second quarter of 2023 primarily due to a decrease in costs related to our planned exit from the refining business. EBITDA decreased in the first nine months of 2023 compared to the first nine months of 2022 due to lower margins and an increase in costs incurred related to the planned exit from the refining business.

The following table sets forth selected financial information and heavy crude oil processing rates for the Refining segment and the U.S. refining market margins for the applicable periods. “Brent” is a light sweet crude oil and is one of the main benchmark prices for purchases of oil worldwide. “Maya” is a heavy sour crude oil grade produced in Mexico that is a relevant benchmark for heavy sour crude oils in the U.S. Gulf Coast market. References to industry benchmarks for refining market margins are to industry prices reported by Platts, a division of S&P Global.

	Three Months Ended		Nine Months Ended	
Millions of dollars	**September 30, 2023**	**June 30, 2023**	**September 30, 2023**	**September 30, 2022**
Sales and other operating revenues	$ 2,665	$ 2,459	$ 7,314	$ 9,260
EBITDA	76	47	369	672
Thousands of barrels per day				
Heavy crude oil processing rates	248	245	240	241
Market margins, dollars per barrel				
Brent - 2-1-1	$ 32.19	$ 25.11	$ 28.91	$ 34.45
Brent - Maya differential	8.53	14.34	14.09	9.95
Total Maya 2-1-1	$ 40.72	$ 39.45	$ 43.00	$ 44.40

Revenue—Revenues increased by $206 million, or 8%, in the third quarter of 2023 compared to the second quarter of 2023 and decreased by $1,946 million, or 21%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 second first quarter of 2023—Higher product prices led to a revenue increase of 11% due to an average Brent crude oil price increase of approximately $7.94 per barrel. Sales volumes decreased due to planned outages resulting in a 3% decrease in revenue.

First nine months of 2023 versus first nine months of 2022—Lower product prices led to a revenue decrease of 23% due to an average Brent crude oil price decrease of approximately $20.27 per barrel. Sales volumes increased 2% due to higher operating rates at our downstream units.

EBITDA—EBITDA increased by $29 million, or 62%, in the third quarter of 2023 compared to the second quarter of 2023 and decreased by $303 million, or 45%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—A decrease in costs related to our planned exit from the refining business, driven by our decision to extend the operations of our Houston refinery to no later than the end of the first quarter of 2025, resulted in an 81% increase in EBITDA. Despite an increase in the Maya 2-1-1 industry crack spread of approximately $2 per barrel to $41 per barrel in the third quarter, margin declined due to the impact of commodity hedges resulting in a 32% decrease in EBITDA.

First nine months of 2023 versus first nine months of 2022—Lower margins drove a 33% decrease in EBITDA primarily due to lower operating yields of higher-value refined products. An increase in costs incurred related to our planned exit from the refining business in the first nine months of 2023 compared to the first nine months of 2023 resulted in a 12% decrease in EBITDA. See Note 12 to the Consolidated Financial Statements for additional information regarding our planned exit of the refining business.

Technology Segment

Overview—EBITDA increased in the third quarter of 2023 compared to the second quarter of 2023 primarily due to higher licensing revenues as contracts reached significant milestones. EBITDA decreased in the first nine months of 2023 relative to the first nine months of 2022 primarily driven by lower catalyst volumes partially offset by higher catalyst margins.

The following table sets forth selected financial information for the Technology segment:

	Three Months Ended		Nine Months Ended	
Millions of dollars	**September 30, 2023**	**June 30, 2023**	**September 30, 2023**	**September 30, 2022**
Sales and other operating revenues	$ 218	$ 154	$ 511	$ 548
EBITDA	146	79	298	307

Revenue—Revenues increased by $64 million, or 42%, in the third quarter of 2023 compared to the second quarter of 2023 and decreased by $37 million, or 7%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—Licensing revenues increased by 31% as contracts reached significant milestones during the quarter. Higher catalyst volumes resulted in a 7% increase in revenues. Higher average catalyst sales price resulted in a 4% increase in revenues.

First nine months of 2023 versus first nine months of 2022—Lower catalyst volumes resulted in a 12% decrease in revenue primarily driven by lower demand. Higher licensing revenues resulting from contracts reaching significant milestones drove a 3% increase in revenue. Favorable foreign exchange impact increased revenue by 2%.

EBITDA—EBITDA increased by $67 million, or 85%, in the third quarter of 2023 compared to the second quarter of 2023 and decreased by $9 million, or 3%, in the first nine months of 2023 compared to the first nine months of 2022.

Third quarter of 2023 versus second quarter of 2023—Licensing revenues increased primarily due to contracts reaching significant milestone resulting in a 63% increase in EBITDA. Higher catalyst results increased EBITDA 21% driven by higher demand.

First nine months of 2023 versus first nine months of 2022—Lower catalyst volumes driven by lower demand resulted in a 17% decrease in EBITDA. Higher catalyst margins resulted in a 7% increase in EBITDA. Higher licensing revenues from contracts reaching significant milestones resulted in a 3% increase in EBITDA. Favorable foreign exchange impact increased EBITDA by 2%.

FINANCIAL CONDITION

Operating, investing and financing activities of continuing operations, which are discussed below, are presented in the following table:

Millions of dollars	Nine Months Ended September 30, 2023	2022
Cash provided by (used in):		
Operating activities	$ 3,438	$ 4,515
Investing activities	(1,171)	(1,433)
Financing activities	(1,545)	(2,929)

Operating Activities—Cash provided by operating activities of $3,438 million in the first nine months of 2023 primarily reflected earnings adjusted for non-cash items and cash used by the main components of working capital—Accounts receivable, Inventories, and Accounts payable.

In the first nine months of 2023, the main components of working capital used $447 million of cash driven primarily by increases in Accounts receivable and Inventories. The increase in Accounts receivable was primarily driven by higher average sales prices in our I&D and Refining segments. The increase in Inventories was primarily to support operating rates and industry demand for our O&P-Americas and Refining segments, partially offset by lower inventory in our APS segment driven by lower average costs and volumes.

Cash provided by operating activities of $4,515 million in the first nine months of 2022 primarily reflected earnings adjusted for non-cash items and cash used by the main components of working capital.

In the first nine months of 2022, the main components of working capital used $267 million of cash driven primarily by an increase in Inventories partially offset by a decrease in Accounts receivable and an increase in Accounts payable. The increase in Inventories was primarily due to inventory build following planned and unplanned outages. The decrease in Accounts receivable was driven by lower revenues across most businesses primarily as a result of lower average sales prices and lower sales volume. The increase in Accounts payable was primarily driven by higher energy costs and higher raw material costs for our Refining and I&D segments.

Investing Activities—Capital expenditures in the first nine months of 2023 totaled $1,047 million compared to $1,417 million in the first nine months of 2022. Approximately 35% and 50% of our capital expenditures in the first nine months of 2023 and 2022, respectively, was for profit-generating growth projects, primarily our PO/TBA plant, with the remaining expenditures supporting sustaining maintenance. See Note 12 to the Consolidated Financial Statements for additional information regarding capital expenditures by segment.

In the first nine months of 2023, foreign currency contracts with an aggregate notional value of €500 million expired. Upon settlement of these foreign currency contracts, we paid €500 million ($550 million at the expiry spot rate) to our counterparties and received $612 million from our counterparties.

In the first nine months of 2022, foreign currency contracts with an aggregate notional value of €500 million expired. Upon settlement of these foreign currency contracts, we paid €500 million ($501 million at the expiry spot rate) to our counterparties and received $614 million from our counterparties.

Financing Activities—We made dividend payments totaling $1,204 million and $2,859 million, which included a special dividend of $5.20 per share totaling $1,704 million paid in June 2022, in the first nine months of 2023 and 2022, respectively. Additionally, in the first nine months of 2023 and 2022, we made payments of $211 million and $420 million to repurchase outstanding ordinary shares, respectively.

In May 2023, we issued $500 million of 5.625% guaranteed notes due 2033. For additional detail see Note 6 to the Consolidated Financial Statements.

In July 2023, we repaid the $425 million remaining of outstanding principal on our 4.0% guaranteed notes due 2023.

Through the repurchase and issuance of commercial paper instruments under our commercial paper program, we made net repayments of $200 million in the first nine months of 2023 and received net proceeds of $96 million in the first nine months of 2022.

In the first nine months of 2022, we received a return of collateral of $238 million, related to the positions held with our counterparties for certain forward-starting interest rate swaps.

Liquidity and Capital Resources

Overview

We plan to fund our working capital, capital expenditures, debt service, dividends and other cash requirements with our current available liquidity and cash from operations, which could be affected by general economic, financial, competitive, legislative, regulatory, business and other factors, many of which are beyond our control. Debt repayment, and the purchase of shares under our share repurchase authorization, may be funded from cash and cash equivalents, cash from our short-term investments, cash from operating activities, proceeds from the issuance of debt, or a combination thereof.

As part of our overall capital allocation strategy, we plan to provide returns to shareholders in the form of dividends and share repurchases. Barring any significant or unforeseen business challenges, mergers or acquisitions, over the long-term, we are targeting shareholder returns of 70% of free cash flow, defined as net cash provided by operating activities less capital expenditures. We intend to continue to declare and pay quarterly dividends, with the goal of increasing the dividend over time, after giving consideration to our cash balances and expected results from operations. Our focus on funding our dividends while remaining committed to a strong investment grade balance sheet continues to be the foundation of our capital allocation strategy.

Cash and Liquid Investments

As of September 30, 2023, we had Cash and cash equivalents totaling $2,833 million, which includes $1,638 million in jurisdictions outside of the U.S., the majority of which is held within the European Union and the United Kingdom. There are currently no legal or economic restrictions that would materially impede our transfers of cash.

Credit Arrangements

At September 30, 2023, we had total debt, including current maturities, of $11,106 million. Additionally, we had $192 million of outstanding letters of credit, bank guarantees and surety bonds issued under uncommitted credit facilities to support trade payables and other obligations.

We had total unused availability under our credit facilities of $4,150 million at September 30, 2023, which included the following:

- $3,250 million under our $3,250 million Senior Revolving Credit Facility, which backs our $2,500 million commercial paper program. Availability under this facility is net of outstanding borrowings, outstanding letters of credit provided under the facility and notes issued under our commercial paper program. At September 30, 2023, we had no outstanding commercial paper and no borrowings or letters of credit outstanding under this facility; and

- $900 million under our $900 million U.S. Receivables Facility. Availability under this facility is subject to a borrowing base of eligible receivables, which is reduced by outstanding borrowings and letters of credit, if any. At September 30, 2023, we had no borrowings or letters of credit outstanding under this facility.

At any time and from time to time, we may repay or redeem our outstanding debt, including purchases of our outstanding bonds in the open market, through privately negotiated transactions or a combination thereof, in each case using cash and cash equivalents, cash from our short-term investments, cash from operating activities, proceeds from the issuance of debt or proceeds from asset divestitures. Any repayment or redemption of our debt will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors. In connection with such repurchases or redemptions, we may incur cash and non-cash charges, which could be material in the period in which they are incurred.

Share Repurchases

In May 2023, our shareholders approved a proposal to authorize us to repurchase up to 34.0 million ordinary shares, through November 19, 2024, which superseded any prior repurchase authorizations. Our share repurchase authorization does not have a stated dollar amount, and purchases may be made through open market purchases, private market transactions or other structured transactions. Repurchased shares could be retired or used for general corporate purposes, including for various employee benefit and compensation plans. The maximum number of shares that may yet be purchased is not necessarily an indication of the number of shares that will ultimately be purchased. In the first nine months of 2023, we purchased approximately 2.3 million shares under our share repurchase authorizations for $211 million.

As of October 25, 2023, we had approximately 33.1 million shares remaining under the current authorization. The timing and amounts of additional shares repurchased, if any, will be determined based on our evaluation of market conditions and other factors, including any additional authorizations approved by our shareholders. For additional information related to our share repurchase authorizations, see Note 10 to the Consolidated Financial Statements.

Capital Budget

In 2023, we are planning to invest approximately $1.7 billion in capital expenditures. Approximately 70% of the 2023 budget is planned for sustaining maintenance, with the remaining budget supporting profit-generating growth projects.

CURRENT BUSINESS OUTLOOK

In the fourth quarter of 2023, we expect seasonally softer demand across most businesses. Higher feedstock costs, new industry capacity and the slow pace of Chinese demand growth continue to pressure global olefins and polyolefins margins. Oxyfuels and refining margins are expected to decrease following the conclusion of the summer driving season. Nonetheless, oxyfuels margins are expected to remain well above historical averages. During the fourth quarter, we expect to operate our assets in line with market demand with average operating rates of 85% for our O&P-Americas assets, 75% for European O&P-EAI assets and 70% for I&D assets.

Value Enhancement Program

During 2022, we introduced our value enhancement program that is anticipated to generate approximately $575 million in recurring annual Net income improvement by the end of 2025, which, after adding back income taxes and depreciation and amortization of $140 million and $35 million, respectively, results in $750 million of recurring annual EBITDA.

Our value enhancement program is progressing ahead of schedule. As a result, during the second quarter we announced that the program’s near-term target was increased by approximately 30% to $150 million of Net income and $200 million of recurring annual EBITDA by year end 2023. EBITDA excludes income taxes and depreciation and amortization of approximately $35 million and $15 million, respectively. Management expects to exceed this target.

We estimated incurring costs of $150 million in 2023 to achieve this milestone. Net income and recurring annual EBITDA for the value enhancement program is estimated based on 2017 through 2019 mid-cycle margins and modest inflation relative to a 2021 baseline year.

CRITICAL ACCOUNTING POLICIES

Goodwill Impairment—We evaluate the recoverability of the carrying value of goodwill annually or more frequently if events or changes in circumstances indicate that the carrying amount of the goodwill of a reporting unit may not be fully recoverable.

Effective January 1, 2023, our *Catalloy* and polybutene-1 businesses were moved from our APS segment and reintegrated into our O&P-Americas and O&P-EAI segments. When moved, a portion of the APS reporting unit's goodwill was allocated to the O&P-Americas and O&P-EAI segments based on the businesses' relative fair values compared to the reportable segment.

In the first quarter of 2023, we evaluated goodwill for impairment immediately before and after the transfer of these businesses. Our evaluation resulted in the recognition of a non-cash goodwill impairment of $252 million recognized in our APS segment. Refer to Note 12 to our Consolidated Financial Statements.

Fair values were determined utilizing a discounted cash flow method under the income approach and assumptions including management's view on long-term growth rates in our industry, discount rates and other assumptions based on a market participant perspective, which are inherently subjective. Discount rates utilized in our cash flow model were based on a variety of factors, including market and economic conditions, the risk and nature of the cash flows and the rate of return required by market participants. We believe our fair value estimates of projected financial information are reasonable and consistent with those used in our planning, capital investment and business performance reviews. However, actual results may differ from these projections.

An estimate of the sensitivity to net income resulting from impairment calculations is not practicable, given the numerous assumptions, including pricing, volumes and discount rates, which could materially affect our estimates. That is, unfavorable adjustments to some of the above listed assumptions may be offset by favorable adjustments in other assumptions.

ACCOUNTING AND REPORTING CHANGES

For a discussion of the potential impact of new accounting pronouncements on our Consolidated Financial Statements, see Note 2 to the Consolidated Financial Statements.

CAUTIONARY STATEMENT FOR THE PURPOSES OF THE "SAFE HARBOR" PROVISIONS OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995

This report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934 (the "Exchange Act"). You can identify our forward-looking statements by the words "anticipate," "estimate," "believe," "continue," "could," "intend," "may," "plan," "potential," "predict," "should," "will," "expect," "objective," "projection," "forecast," "goal," "guidance," "outlook," "effort," "target" and similar expressions.

We based forward-looking statements on our current expectations, estimates and projections of our business and the industries in which we operate. We caution you that these statements are not guarantees of future performance. They involve assumptions about future events that, while made in good faith, may prove to be incorrect, and involve risks and uncertainties we cannot predict. Our actual outcomes and results may differ materially from what we have expressed or forecast in the forward-looking statements. Any differences could result from a variety of factors, including the following:

- the cost of raw materials represents a substantial portion of our operating expenses, and energy costs generally follow price trends of crude oil, natural gas liquids and/or natural gas; price volatility can significantly affect our results of operations and we may be unable to pass raw material and energy cost increases on to our customers due to the significant competition that we face, the commodity nature of our products and the time required to implement pricing changes;
- our operations in the United States ("U.S.") have benefited from low-cost natural gas and natural gas liquids; decreased availability of these materials (for example, from their export or regulations impacting hydraulic fracturing in the U.S.) could reduce the current benefits we receive;
- if crude oil prices are low relative to U.S. natural gas prices, we could see less benefit from low-cost natural gas and natural gas liquids and it could have a negative effect on our results of operations;
- industry production capacities and operating rates may lead to periods of oversupply and low profitability;
- we may face unplanned operating interruptions (including leaks, explosions, fires, weather-related incidents, mechanical failures, unscheduled downtime, supplier disruptions, labor shortages, strikes, work stoppages or other labor difficulties, transportation interruptions, spills and releases and other environmental incidents) at any of our facilities, which would negatively impact our operating results;
- changes in general economic, business, political and regulatory conditions in the countries or regions in which we operate could increase our costs, restrict our operations and reduce our operating results;
- our ability to execute our organic growth plans may be negatively affected by our ability to complete projects on time and on budget;
- our ability to acquire or dispose of product lines or businesses could disrupt our business and harm our financial condition;
- our ability to successfully implement initiatives identified pursuant to our value enhancement program and generate anticipated earnings;
- uncertainties associated with worldwide economies could create reductions in demand and pricing, as well as increased counterparty risks, which could reduce liquidity or cause financial losses resulting from counterparty default;
- the negative outcome of any legal, tax and environmental proceedings or changes in laws or regulations regarding legal, tax and environmental matters may increase our costs, reduce demand for our products, or otherwise limit our ability to achieve savings under current regulations;

- any loss or non-renewal of favorable tax treatment under tax agreements or tax treaties, or changes in tax laws, regulations or treaties, may substantially increase our tax liabilities;
- we may be required to reduce production or idle certain facilities because of the cyclical and volatile nature of the supply-demand balance in the chemical and refining industries, which would negatively affect our operating results;
- we rely on continuing technological innovation, and an inability to protect our technology, or others' technological developments could negatively impact our competitive position;
- we may be unable to continue operations until the shutdown of the Houston refinery within the expected timeframe or without incurring additional charges or expenses;
- we have significant international operations, and fluctuations in exchange rates, valuations of currencies and our possible inability to access cash from operations in certain jurisdictions on a tax-efficient basis, if at all, could negatively affect our liquidity and our results of operations;
- we are subject to the risks of doing business at a global level, including wars, terrorist activities, political and economic instability and disruptions and changes in governmental policies, which could cause increased expenses, decreased demand or prices for our products and/or disruptions in operations, all of which could reduce our operating results;
- if we are unable to achieve our emission reduction, circularity, or other sustainability targets, it could result in reputational harm, changing investor sentiment regarding investment in our stock or a negative impact on our access to and cost of capital;
- if we are unable to comply with the terms of our credit facilities, indebtedness and other financing arrangements, those obligations could be accelerated, which we may not be able to repay; and
- we may be unable to incur additional indebtedness or obtain financing on terms that we deem acceptable, including for refinancing of our current obligations; higher interest rates and costs of financing would increase our expenses.

Any of these factors, or a combination of these factors, could materially affect our future results of operations and the ultimate accuracy of the forward-looking statements. Our management cautions against putting undue reliance on forward-looking statements or projecting any future results based on such statements or present or prior earnings levels.

All subsequent written and oral forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section and any other cautionary statements that may accompany such forward-looking statements. Except as otherwise required by applicable law, we disclaim any duty to update any forward-looking statements.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our exposure to market and regulatory risks is described in Item 7A of our Annual Report on Form 10-K for the year ended December 31, 2022. Our exposure to such risks has not changed materially in the nine months ended September 30, 2023.

Item 4. CONTROLS AND PROCEDURES

As of September 30, 2023, with the participation of our management, our Chief Executive Officer (principal executive officer) and our Chief Financial Officer (principal financial and accounting officer) carried out an evaluation, pursuant to Rule 13a-15(b) of the Securities Exchange Act of 1934, as amended (the “Act”), of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Act). Based upon that evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were effective as of September 30, 2023.

There have been no changes in our internal controls over financial reporting, as defined in Rule 13a-15(f) of the Act, in the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS

Information regarding our litigation and legal proceedings can be found in Note 9 to the Consolidated Financial Statements, which is incorporated into this Item 1 by reference.

In February 2020, the State of Texas filed suit against Houston Refining, LP, a subsidiary of LyondellBasell, in Travis County District Court seeking civil penalties and injunctive relief for violations of the Texas Clean Air Act related to several emission events. In July 2020, Harris County, Texas petitioned to intervene in the lawsuit and the State added additional claims to its petition relating to self-reported deviations of Houston Refining's air operating permit. In May 2023, we agreed with the State to settle the matter for $2.6 million, inclusive of attorney's fees. In September 2023, the court entered judgment and the fine was paid.

On July 27, 2021, approximately 160,000 pounds of liquid process material containing primarily acetic acid was released from a reactor at the La Porte acetic acid unit. In October 2021, the Texas Commission on Environmental Quality ("TCEQ") issued a Notice of Enforcement for the incident. In November 2021, the State of Texas filed a petition on behalf of the TCEQ seeking injunctive relief and civil penalties for unauthorized air pollution and regulatory nuisance related to the incident. We have agreed to a settlement of $1.1 million, inclusive of attorney's fees, and final judgment was entered by the court. In August 2023, the fine was paid.

Additional information about our environmental proceedings can be found in Part I, Item 3 of our 2022 Annual Report on Form 10-K, which is incorporated into this Item 1 by reference.

Item 1A. RISK FACTORS

There have been no material changes to the risk factors associated with our business previously disclosed in "Item 1A. Risk Factors," in our Annual Report on Form 10-K for the year ended December 31, 2022.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased		Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Authorizations	Maximum Number of Shares That May Yet Be Purchased Under the Plans or Authorizations
July 1 - July 31	330,048	$	92.43	330,048	33,136,158
August 1 - August 31	77,217	$	97.14	77,217	33,058,941
September 1 - September 30	—	$	—	—	33,058,941
Total	407,265	$	93.32	407,265	33,058,941

On May 19, 2023, our shareholders approved a share repurchase authorization of up to 34,042,250 shares of our ordinary shares, through November 19, 2024, which superseded any prior repurchase authorizations. The maximum number of shares that may yet be purchased is not necessarily an indication of the number of shares that will ultimately be purchased.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

Item 5. OTHER INFORMATION

During the three months ended September 30, 2023, none of our officers or directors adopted or terminated any contract, instruction or written plan for the purchase or sale of our securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) or any “non-Rule 10b5-1 trading arrangement.”

Item 6. EXHIBITS

Exhibit Number	Description
31.1*	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934
31.2*	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934
32*	Certifications pursuant to 18 U.S.C. Section 1350
101.INS*	XBRL Instance Document–The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	XBRL Schema Document
101.CAL*	XBRL Calculation Linkbase Document
101.DEF*	XBRL Definition Linkbase Document
101.LAB*	XBRL Labels Linkbase Document
101.PRE*	XBRL Presentation Linkbase Document
104*	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* Filed herewith

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.

LYONDELLBASELL INDUSTRIES N.V.

Date: October 27, 2023

/s/ Chukwuemeka A. Oyolu
Chukwuemeka A. Oyolu
Senior Vice President,
Chief Accounting Officer and Investor Relations
(Principal Accounting Officer)

CERTIFICATION

I, Peter Vanacker, certify that:

1. I have reviewed this quarterly report on Form 10-Q of LyondellBasell Industries N.V.;

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 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 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.

October 27, 2023

/s/ Peter Vanacker
Peter Vanacker
Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION

I, Michael C. McMurray, certify that:

1. I have reviewed this quarterly report on Form 10-Q of LyondellBasell Industries N.V.;

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 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 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.

October 27, 2023

/s/ Michael C. McMurray
Michael C. McMurray
Executive Vice President and
Chief Financial Officer
(Principal Financial Officer)

CERTIFICATIONS PURSUANT TO 18 U.S.C. SECTION 1350

In connection with the Quarterly Report of LyondellBasell Industries N.V. (the Company) on Form 10-Q for the period ended September 30, 2023, as filed with the U.S. Securities and Exchange Commission on the date hereof (the Report), each of the undersigned hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to their knowledge:

(1) The Report fully complies with the requirements of Sections 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.

October 27, 2023

/s/ Peter Vanacker
Peter Vanacker
Chief Executive Officer
(Principal Executive Officer)

/s/ Michael C. McMurray
Michael C. McMurray
Executive Vice President and
Chief Financial Officer
(Principal Financial Officer)